

Power Systems

*Finding parts, locations, and addresses*

**IBM**



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**Note**

Before using this information and the product it supports, read the information in “Safety notices” on page v, “Notices” on page 313, the *IBM Systems Safety Notices* manual, G229-9054, and the *IBM Environmental Notices and User Guide*, Z125-5823.

This edition applies to IBM Power Systems servers that contain the POWER7 processor and to all associated models.

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## Safety notices

Safety notices may be printed throughout this guide:

- **DANGER** notices call attention to a situation that is potentially lethal or extremely hazardous to people.
- **CAUTION** notices call attention to a situation that is potentially hazardous to people because of some existing condition.
- **Attention** notices call attention to the possibility of damage to a program, device, system, or data.

### World Trade safety information

Several countries require the safety information contained in product publications to be presented in their national languages. If this requirement applies to your country, safety information documentation is included in the publications package (such as in printed documentation, on DVD, or as part of the product) shipped with the product. The documentation contains the safety information in your national language with references to the U.S. English source. Before using a U.S. English publication to install, operate, or service this product, you must first become familiar with the related safety information documentation. You should also refer to the safety information documentation any time you do not clearly understand any safety information in the U.S. English publications.

Replacement or additional copies of safety information documentation can be obtained by calling the IBM Hotline at 1-800-300-8751.

### German safety information

Das Produkt ist nicht für den Einsatz an Bildschirmarbeitsplätzen im Sinne § 2 der Bildschirmarbeitsverordnung geeignet.

### Laser safety information

IBM® servers can use I/O cards or features that are fiber-optic based and that utilize lasers or LEDs.

#### Laser compliance

IBM servers may be installed inside or outside of an IT equipment rack.

## DANGER

When working on or around the system, observe the following precautions:

Electrical voltage and current from power, telephone, and communication cables are hazardous. To avoid a shock hazard:

- Connect power to this unit only with the IBM provided power cord. Do not use the IBM provided power cord for any other product.
- Do not open or service any power supply assembly.
- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- The product might be equipped with multiple power cords. To remove all hazardous voltages, disconnect all power cords.
- Connect all power cords to a properly wired and grounded electrical outlet. Ensure that the outlet supplies proper voltage and phase rotation according to the system rating plate.
- Connect any equipment that will be attached to this product to properly wired outlets.
- When possible, use one hand only to connect or disconnect signal cables.
- Never turn on any equipment when there is evidence of fire, water, or structural damage.
- Disconnect the attached power cords, telecommunications systems, networks, and modems before you open the device covers, unless instructed otherwise in the installation and configuration procedures.
- Connect and disconnect cables as described in the following procedures when installing, moving, or opening covers on this product or attached devices.

To Disconnect:

1. Turn off everything (unless instructed otherwise).
2. Remove the power cords from the outlets.
3. Remove the signal cables from the connectors.
4. Remove all cables from the devices.

To Connect:

1. Turn off everything (unless instructed otherwise).
2. Attach all cables to the devices.
3. Attach the signal cables to the connectors.
4. Attach the power cords to the outlets.
5. Turn on the devices.

(D005)

## DANGER



Observe the following precautions when working on or around your IT rack system:

- Heavy equipment—personal injury or equipment damage might result if mishandled.
- Always lower the leveling pads on the rack cabinet.
- Always install stabilizer brackets on the rack cabinet.
- To avoid hazardous conditions due to uneven mechanical loading, always install the heaviest devices in the bottom of the rack cabinet. Always install servers and optional devices starting from the bottom of the rack cabinet.
- Rack-mounted devices are not to be used as shelves or work spaces. Do not place objects on top of rack-mounted devices.



- Each rack cabinet might have more than one power cord. Be sure to disconnect all power cords in the rack cabinet when directed to disconnect power during servicing.
- Connect all devices installed in a rack cabinet to power devices installed in the same rack cabinet. Do not plug a power cord from a device installed in one rack cabinet into a power device installed in a different rack cabinet.
- An electrical outlet that is not correctly wired could place hazardous voltage on the metal parts of the system or the devices that attach to the system. It is the responsibility of the customer to ensure that the outlet is correctly wired and grounded to prevent an electrical shock.

#### CAUTION

- Do not install a unit in a rack where the internal rack ambient temperatures will exceed the manufacturer's recommended ambient temperature for all your rack-mounted devices.
- Do not install a unit in a rack where the air flow is compromised. Ensure that air flow is not blocked or reduced on any side, front, or back of a unit used for air flow through the unit.
- Consideration should be given to the connection of the equipment to the supply circuit so that overloading of the circuits does not compromise the supply wiring or overcurrent protection. To provide the correct power connection to a rack, refer to the rating labels located on the equipment in the rack to determine the total power requirement of the supply circuit.
- *(For sliding drawers.)* Do not pull out or install any drawer or feature if the rack stabilizer brackets are not attached to the rack. Do not pull out more than one drawer at a time. The rack might become unstable if you pull out more than one drawer at a time.
- *(For fixed drawers.)* This drawer is a fixed drawer and must not be moved for servicing unless specified by the manufacturer. Attempting to move the drawer partially or completely out of the rack might cause the rack to become unstable or cause the drawer to fall out of the rack.

(R001)

**CAUTION:**

Removing components from the upper positions in the rack cabinet improves rack stability during relocation. Follow these general guidelines whenever you relocate a populated rack cabinet within a room or building:

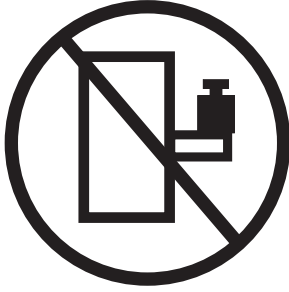
- Reduce the weight of the rack cabinet by removing equipment starting at the top of the rack cabinet. When possible, restore the rack cabinet to the configuration of the rack cabinet as you received it. If this configuration is not known, you must observe the following precautions:
  - Remove all devices in the 32U position and above.
  - Ensure that the heaviest devices are installed in the bottom of the rack cabinet.
  - Ensure that there are no empty U-levels between devices installed in the rack cabinet below the 32U level.
- If the rack cabinet you are relocating is part of a suite of rack cabinets, detach the rack cabinet from the suite.
- Inspect the route that you plan to take to eliminate potential hazards.
- Verify that the route that you choose can support the weight of the loaded rack cabinet. Refer to the documentation that comes with your rack cabinet for the weight of a loaded rack cabinet.
- Verify that all door openings are at least 760 x 230 mm (30 x 80 in.).
- Ensure that all devices, shelves, drawers, doors, and cables are secure.
- Ensure that the four leveling pads are raised to their highest position.
- Ensure that there is no stabilizer bracket installed on the rack cabinet during movement.
- Do not use a ramp inclined at more than 10 degrees.
- When the rack cabinet is in the new location, complete the following steps:
  - Lower the four leveling pads.
  - Install stabilizer brackets on the rack cabinet.
  - If you removed any devices from the rack cabinet, repopulate the rack cabinet from the lowest position to the highest position.
- If a long-distance relocation is required, restore the rack cabinet to the configuration of the rack cabinet as you received it. Pack the rack cabinet in the original packaging material, or equivalent. Also lower the leveling pads to raise the casters off of the pallet and bolt the rack cabinet to the pallet.

(R002)

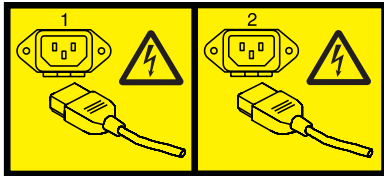
(L001)



(L002)



(L003)



or



All lasers are certified in the U.S. to conform to the requirements of DHHS 21 CFR Subchapter J for class 1 laser products. Outside the U.S., they are certified to be in compliance with IEC 60825 as a class 1 laser product. Consult the label on each part for laser certification numbers and approval information.

**CAUTION:**

This product might contain one or more of the following devices: CD-ROM drive, DVD-ROM drive, DVD-RAM drive, or laser module, which are Class 1 laser products. Note the following information:

- Do not remove the covers. Removing the covers of the laser product could result in exposure to hazardous laser radiation. There are no serviceable parts inside the device.
- Use of the controls or adjustments or performance of procedures other than those specified herein might result in hazardous radiation exposure.

(C026)

**CAUTION:**

Data processing environments can contain equipment transmitting on system links with laser modules that operate at greater than Class 1 power levels. For this reason, never look into the end of an optical fiber cable or open receptacle. (C027)

**CAUTION:**

This product contains a Class 1M laser. Do not view directly with optical instruments. (C028)

**CAUTION:**

Some laser products contain an embedded Class 3A or Class 3B laser diode. Note the following information: laser radiation when open. Do not stare into the beam, do not view directly with optical instruments, and avoid direct exposure to the beam. (C030)

**CAUTION:**

The battery contains lithium. To avoid possible explosion, do not burn or charge the battery.

*Do Not:*

- \_\_\_ Throw or immerse into water
- \_\_\_ Heat to more than 100°C (212°F)
- \_\_\_ Repair or disassemble

Exchange only with the IBM-approved part. Recycle or discard the battery as instructed by local regulations. In the United States, IBM has a process for the collection of this battery. For information, call 1-800-426-4333. Have the IBM part number for the battery unit available when you call. (C003)

## **Power and cabling information for NEBS (Network Equipment-Building System) GR-1089-CORE**

The following comments apply to the IBM servers that have been designated as conforming to NEBS (Network Equipment-Building System) GR-1089-CORE:

The equipment is suitable for installation in the following:

- Network telecommunications facilities
- Locations where the NEC (National Electrical Code) applies

The intrabuilding ports of this equipment are suitable for connection to intrabuilding or unexposed wiring or cabling only. The intrabuilding ports of this equipment *must not* be metallically connected to the interfaces that connect to the OSP (outside plant) or its wiring. These interfaces are designed for use as intrabuilding interfaces only (Type 2 or Type 4 ports as described in GR-1089-CORE) and require isolation from the exposed OSP cabling. The addition of primary protectors is not sufficient protection to connect these interfaces metallically to OSP wiring.

**Note:** All Ethernet cables must be shielded and grounded at both ends.

The ac-powered system does not require the use of an external surge protection device (SPD).

The dc-powered system employs an isolated DC return (DC-I) design. The DC battery return terminal *shall not* be connected to the chassis or frame ground.

---

## Finding parts, locations, and addresses

Locate physical part locations and identify parts with system diagrams.

You can identify the enclosure in which a field replaceable unit (FRU) is plugged by its location code. The first character of the location code is always U followed by a 4-character feature code or enclosure type as shown in the following example: U789C.001.10ABCDE-P3-C31 In this example, the enclosure type is **789C**.

The next 3 characters of the location code indicate the model of the enclosure (**001** in the example). The next string of characters provides the enclosure serial number (**10ABCDE** in the example).

Using this information, locate the enclosure with the FRU you want to replace. Find the enclosure type in the following table and go to the service guide for that enclosure.

Enclosure number	System
U78AA.001	8202-E4B or 8205-E6B
U78AA.001	8202-E4C, 8202-E4D, 8205-E6C, or 8205-E6D
U78AB.001	8231-E2B
U78AB.001	8231-E1C, 8231-E1D, 8231-E2C, 8231-E2D, or 8268-E1D
U78A0.001	8233-E8B or 8236-E8C
U78C5.001	8248-L4T, 8408-E8D, or 9109-RMD
U78C0.001	9117-MMB or 9179-MHB
U78C0.001, U497B.001, or U2C4E.001	8412-EAD, 9117-MMC, 9117-MMD, 9179-MHC, or 9179-MHD
U78A2.001	9119-FHB
U78A9.001	9125-F2C
U5786.001	5786
U5787.001	5787
U7031.T24	7031-T24
U7031.D24	7031-D24
U5796.001	5796
U7314.G30	7314-G30
U5802.001	5802
U5877.001	5877
U5886.001	5886
U5887.001	5887
U5888.001	5888 PCIe storage enclosure
UEDR1.001	EDR1 PCIe storage enclosure

### Locate the FRU

The string of characters following the enclosure serial number identifies the FRU location within the enclosure: U7879.001.10ABCDE-P3-C31 In this example, **P3-C31** is the location of the FRU to be replaced. Use the graphics and tables to locate the FRU and link to its removal and replacement procedure.

---

## What's new in parts, locations, and addresses

Read about new or significantly changed information in parts, locations, and addresses since the previous update of this topic collection.

### September 2013

The following updates are made to the content:

- Added information for 8412-EAD locations.
- Added information for 8412-EAD addresses.
- Added information for 8412-EAD system parts.

### August 2013

The following updates are made to the content:

- Added information for 8248-L4T locations.
- Added information for 8248-L4T system parts.

### June 2013

The following updates are made to the content:

- Added information for 8268-E1D locations.
- Added information for 8268-E1D addresses.
- Added information for 8268-E1D system parts.

### March 2013

The following updates are made to the content:

- Added information for 8408-E8D and 9109-RMD locations.
- Added information for 8408-E8D and 9109-RMD addresses.
- Added information for 8408-E8D and 9109-RMD system parts.
- Added information for 8231-E1D and 8231-E2D locations.
- Added information for 8231-E1D and 8231-E2D addresses.
- Added information for 8231-E1D and 8231-E2D system parts.

### October 2012

The following updates are made to the content:

- Added information for EDR1 PCIe storage enclosure locations, 9117-MMD, and 9179-MHD locations.
- Added information for EDR1 PCIe storage enclosure addresses, 9117-MMD, and 9179-MHD addresses.
- Added information for EDR1 PCIe storage enclosure system parts, 9117-MMD, and 9179-MHD system parts.

### May 2012

The following updates are made to the content:

- Added information for 5888 locations.
- Added information for 5888 addresses.
- Added information for 5888 system parts.

## October 2011

The following updates are made to the content:

- Added information for 8202-E4C, 8205-E6C, 8231-E1C, 8231-E2C, 9117-MMC, and 9179-MHC locations.
- Added information for 8202-E4C, 8205-E6C, 8231-E1C, 8231-E2C, 9117-MMC, and 9179-MHC addresses.
- Added information for 8202-E4C, 8205-E6C, 8231-E1C, 8231-E2C, 9117-MMC, and 9179-MHC system parts.

## August 2011

The following updates are made to the content:

- Added information for 9125-F2C locations.
- Added information for 9125-F2C system parts.

## September 2010

The following updates are made to the content:

- Added information for 8202-E4B, 8205-E6B, 8231-E2B, and 9119-FHB locations.
- Added information for 8202-E4B, 8205-E6B, and 8231-E2B addresses.
- Added information for 8202-E4B, 8205-E6B, 8231-E2B, and 9119-FHB system parts.

## March 2010

The following updates are made to the content:

- Added information for 9117-MMB and 9179-MHB locations.
- Added information for 9117-MMB and 9179-MHB addresses.
- Added information for 9117-MMB and 9179-MHB system parts.

## February 2010

Added information for IBM Power Systems™ servers that contain the POWER7® processor.

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## Part locations and location codes

You can find part locations by using location codes. Illustrations are provided to help you map a location code to a position on the server or expansion unit.

### 8202-E4B or 8205-E6B

The information provided in this topic defines specific sections of a location code string. Use this information to understand the meaning of a location code.

### Using location codes

Use the following table to link to a specific topic that you need additional information about when reading your location code.

Location code topics	Description
"Location code overview" on page 4	Contains background information on the use of location codes.
"Physical location codes" on page 4	Provides a definition for physical location code.
"Logical location codes" on page 4	Provides a definition of what a logical location code is.

Location code topics	Description
"Location code format" on page 5	Provides descriptive information of the $U_n$ value in the location code string. For example, U789C.001.
"Location code labels" on page 6	Provides a table that identifies and defines the location code labels. The location code labels begin with an alphabetic character and follow the system serial number. For example, U789C.001.10ABCDE-P3-C31-T2-L23. The system serial number is 10ABCDE in the previous example. P3, C31, T2, and L23 all contain an alphabetic character that is identified in the Location code labels table.
"Worldwide unique identifier" on page 6	Provides a definition for the world unique identifier. This group of digits follows the resource code labels and always begins with the letter <i>W</i> .

## Location code overview

Servers (system unit and expansion units) use physical location codes to provide mapping of replaceable units. Location codes are produced by the server's firmware, which structures them so that they can be used to identify specific parts in a system. The location code format is the same for all servers.

If you are working with a specific location code, the unit type and model immediately follow the first character (*Utttt.mmm*). Match the unit type and model to a link, as shown in the Unit type and locations table.

If the location code ends with *-Txx-Lxx*, the server's firmware could not identify the physical location. When a physical location cannot be identified, a logical location code is provided. Where logical location codes occur in enclosures, the locations topic for the enclosure has the known conversions listed. For logical location codes with no conversion, contact your next level of support.

If the location code begins with *UTMPx*, the expansion I/O unit's machine type, model, and serial number have not been set yet and this is a temporary unit identifier. To identify the unit, examine the display panels on all of the expansion I/O units that are connected to the server until you find one with the same characters in the first 5 digits of the top line in the unit's display. Record the unit's real machine type and model from the unit label. Match the unit's machine type and model in the Unit type and locations table and follow the link to determine the service information.

**Note:** Locations for units that are not in the preceding list are either not supported or there is a problem in the firmware. Contact your next level of support.

## Physical location codes

Physical location codes provide a mapping of logical functions and components (such as backplanes, removable modules, connectors, ports, cables, and devices) to their specific locations within the physical structure of the server.

## Logical location codes

If the physical location cannot be mapped to a physical location code, the server's firmware generates a logical location code. A logical location code is a sequence of location labels that identifies the path that the system uses to communicate with a given resource.

**Note:** A resource has as many logical location codes as it has logical connections to the system. For example, an external tape device connected to two I/O adapters has two logical location codes.



An example of a logical location code is:

U789C.001.10ABCDE-P3-C31-T2-L23

The first part of the location code (through the T2 label) represents the physical location code for the resource that communicates with the target resource. The remainder of the logical location code (L23) represents exactly which resource is indicated.

## Location code format

The location code is an alphanumeric string of variable length, consisting of a series of location identifiers, separated by a dash. An example of a physical location for a fan is  $U_n-A1$ .

The first position, represented by  $U_n$  (where  $n$  is equal to any string contained between the U and the hyphen) in the preceding example, is displayed in one of the forms in the following table.

**Note:** In location codes the U is a constant digit; however, the numbered positions that follow the U are variables and are dependent on your server. Each column defines the numbers that follow the U in the beginning of the location code.

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
$Utttt.mmm.sssssss-A1$	$Uffff.ccc.sssssss-A1$
The leftmost code is always U.	The leftmost code is always U.
$tttt$ represents the unit type of the enclosure (drawer or node).	$ffff$ represents the feature code of the enclosure (drawer or node).
$mmm$ represents the model of the enclosure.	$ccc$ represents the sequence number of the enclosure .
$ssssss$ represents the serial number for the enclosure.	$ssssss$ represents the serial number of the enclosure.
<p><b>Note:</b> The <math>mmm</math> or <math>ccc</math> number might not be displayed on all location codes for all servers. If the <math>mmm</math> value is not displayed, the location code is displayed in one of the following forms:</p> <ul style="list-style-type: none"> <li><math>Utttt.sssssss-A1</math></li> <li><math>Uffff.sssssss-A1</math></li> </ul>	

The location code is hierarchical; that is, each location identifier in the string represents a physical part. The order (from left to right), in which each identifier is shown, allows you to determine which parts contain other parts in the string.

The dash (-) separator character represents a relationship between two components in the unit. In the example of the fan, whose location code is  $U_n-A1$ , the dash shows that the fan (A1) is contained in the base unit (or  $U_n$ ). Modules, adapters, cables, and devices are all parts that are plugged into another part. Their location codes always show that they are plugged into another part as components of the server. Another example follows:  $U_n-P1-C9$  is a memory DIMM (C9) that is plugged into a backplane (P1), which is inside the unit ( $U_n$ ).

**Note:** For devices, certain error conditions might cause an IBM i device to display the device location in an AIX® format.

Table 1. Unit type and locations

Unit type (Utttt.mmm)	Link to location information
U8202.E4B or U8205.E6B	8202-E4B or 8205-E6B Locations

## Location code labels

The location code label represents a physical part of the server. The following table describes the prefixes of location code labels.

**Note:** These labels apply to system units only.

*Table 2. Prefixes of location code labels for system units*

Prefix	Description	Example
A	Air-moving device	Fan, blower
C	Card connector	IOP, IOA, DIMM, processor card
D	Device	Diskette, control panel
E	Electrical	Battery, power supply, ac charger
L	Logical path SAS target	Integrated drive electronics (IDE) address, Fibre Channel LUN
N	Horizontal placement for an empty rack location	
P	Planar	System backplane
T	Port, external cable	
U	Unit	
V	Virtual planar	
W	Worldwide unique ID	
X	EIA value for an empty rack location	
Y	Firmware FRU	

## Worldwide unique identifier

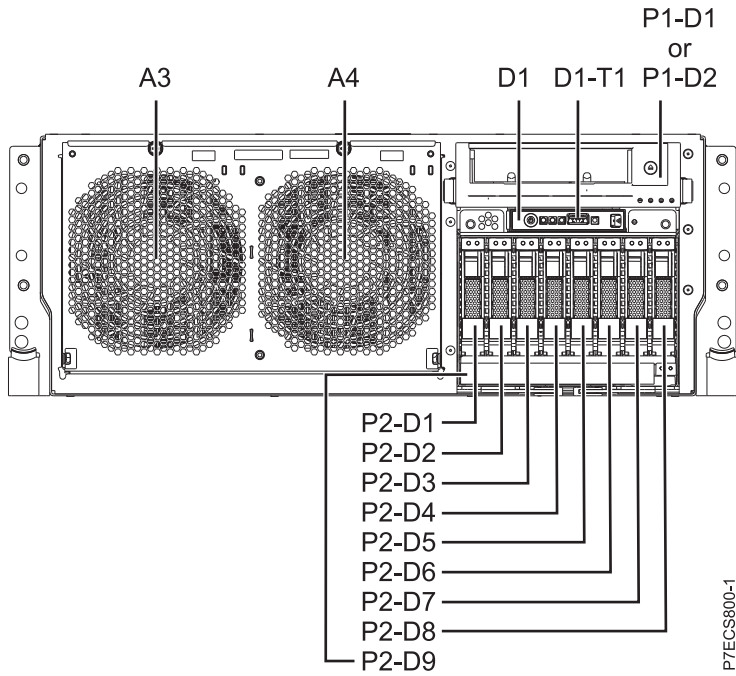
The location code label for the worldwide unique identifier consists of the prefix W followed by a maximum of 16 uppercase hexadecimal digits with no leading zeros. A location code might not consist of a worldwide unique identifier. When present, the worldwide unique identifier location label follows the location label of the resource that interfaces with the resource that has the worldwide unique identifier, usually a port.

## 8202-E4B or 8205-E6B locations

Use this information to help you map a location code to a position on the unit.

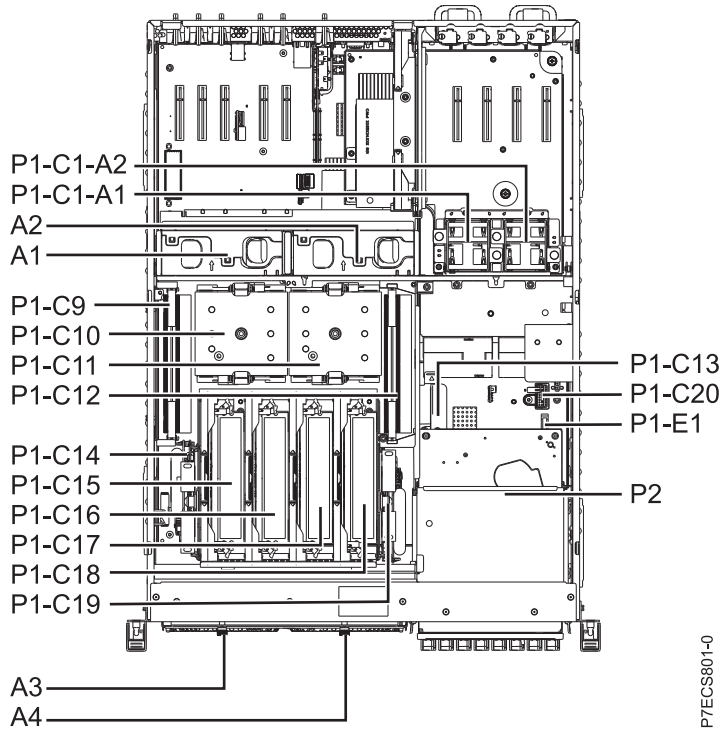
The following diagrams show field replaceable unit (FRU) layouts in the system. Use these diagrams with the following tables.

## Rack views



P7ECS800-1

Figure 1. Rack front view



P7ECS801-0

Figure 2. Rack top view

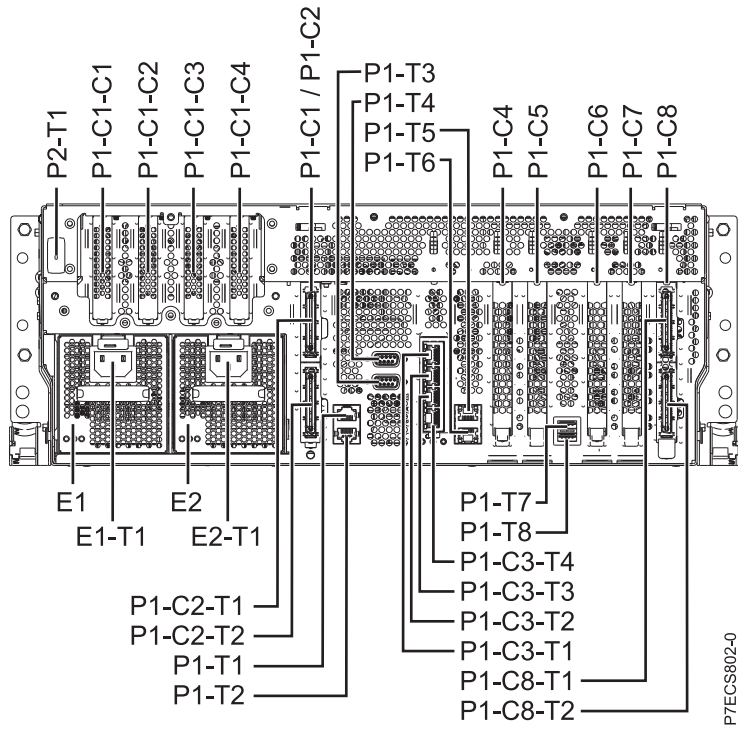


Figure 3. Rack rear view

**Stand-alone views**

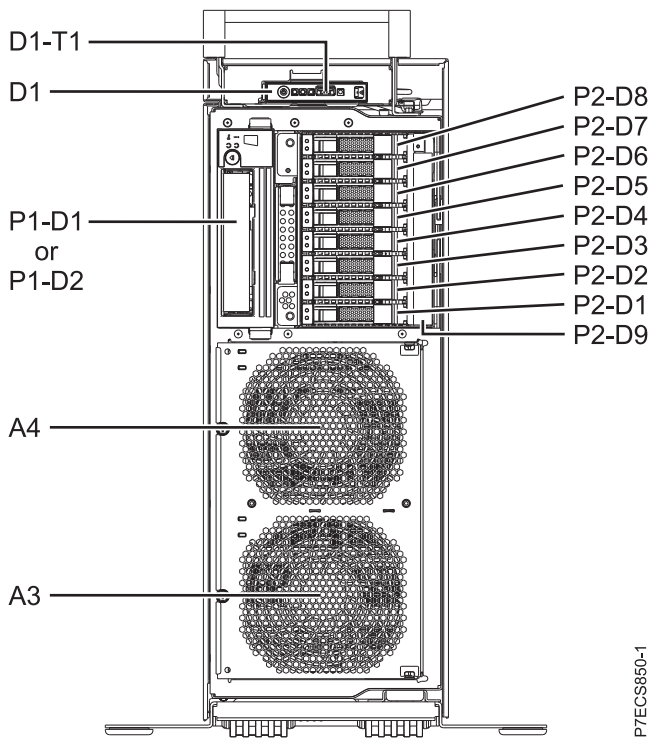


Figure 4. Stand-alone front view

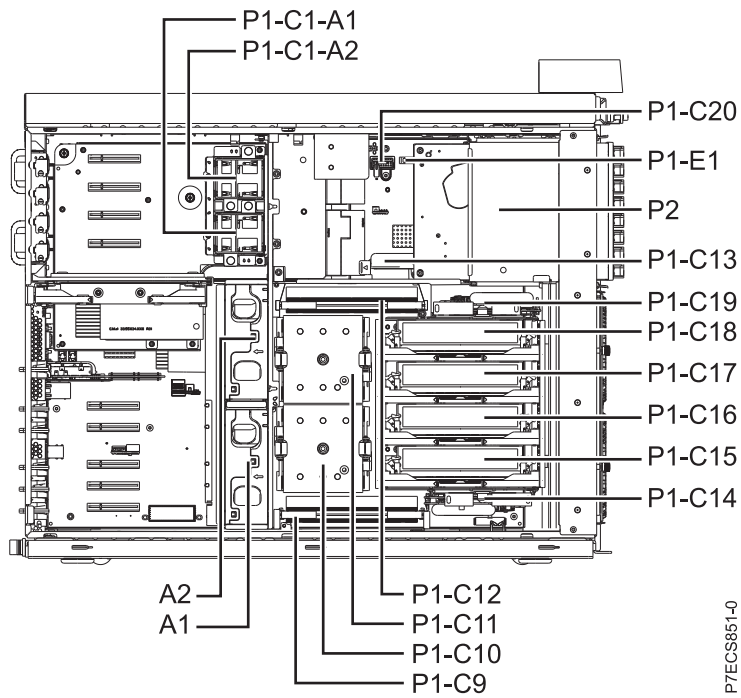


Figure 5. Stand-alone side view

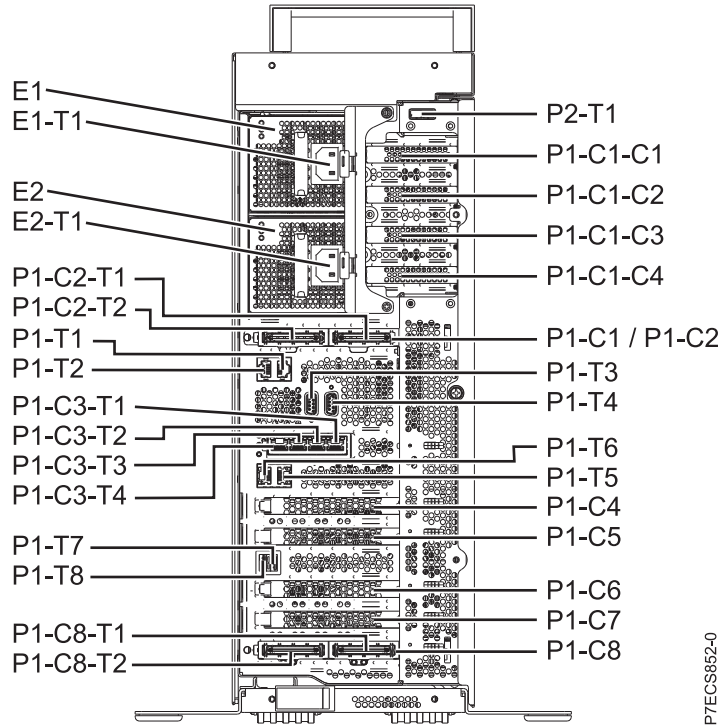


Figure 6. Stand-alone rear view

### Memory card locations

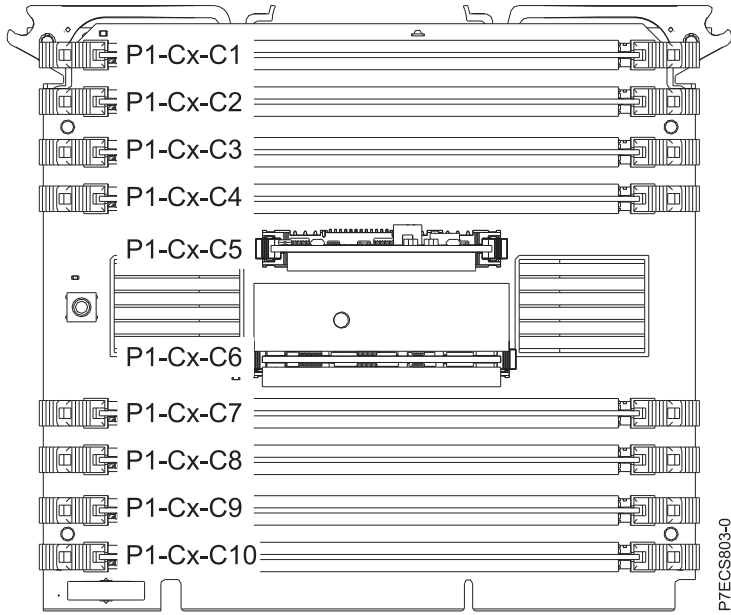


Figure 7. Memory card locations

### PCIe SAS RAID and SSD adapter locations

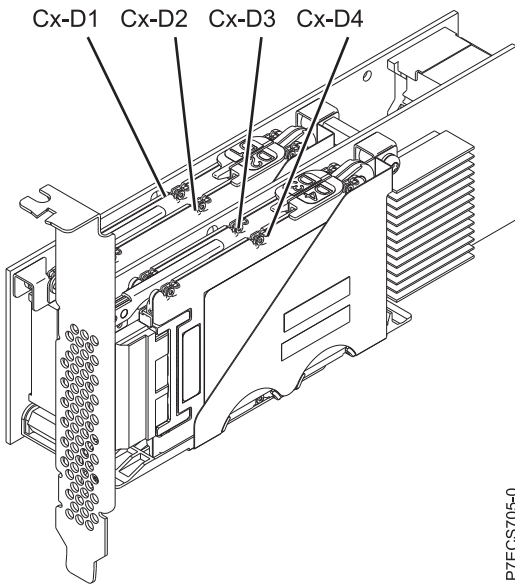


Figure 8. PCIe SAS RAID and SSD adapter locations

The following table provides location codes for parts that comprise the server.

Table 3. FRU location

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
System unit	U $n$		

Table 3. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
<b>Fans</b>			
Fan 1	Un-A1	Yes	See Fans.
Fan 2	Un-A2	Yes	
Fan 3	Un-A3	Yes	
Fan 4	Un-A4	Yes	
<b>Power supplies</b>			
Power supply 1	Un-E1	Yes	See Power supply.
Power supply 1 - Cord connector	Un-E1-T1	Yes	
Power supply 2	Un-E2	Yes	
Power supply 2 - Cord connector	Un-E2-T1	Yes	
<b>Backplanes</b>			
System backplane	Un-P1	Yes	See System backplane.
Time-of-day	Un-P1		
Time-of-day battery	Un-P1-E1		See Time-of-day battery.
Disk drive backplane	Un-P2	Yes	See Disk drive backplane.
<b>Ports</b>			
System port 1	Un-P1-T1	No	
System port 2	Un-P1-T2	No	
SPCN port 1	Un-P1-T3	No	
SPCN port 2	Un-P1-T4	No	
HMC port 1	Un-P1-T5	No	
HMC port 2	Un-P1-T6	No	
USB port 1	Un-P1-T7	No	
USB port 2	Un-P1-T8	No	
<b>Processor and processor regulator</b>			
POWER7 processor module 1	Un-P1-C11	Yes	See System processor module.
POWER7 processor module 2	Un-P1-C10	Yes	
POWER7 processor module 1 VRM	Un-P1-C12	Yes	See Voltage regulator module.
POWER7 processor module 2 VRM	Un-P1-C9	Yes	
<b>Adapters</b>			
PCIe riser	Un-P1-C1	No	
PCIe expansion feature - PCIe x8 slot 5	Un-P1-C1-C1	No	
PCIe expansion feature - PCIe x8 slot 6	Un-P1-C1-C2	No	
PCIe expansion feature - PCIe x8 slot 7	Un-P1-C1-C3	No	
PCIe expansion feature - PCIe x8 slot 8	Un-P1-C1-C4	No	

Table 3. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Host Ethernet Adapter slot	Un-P1-C3	Yes	See Host Ethernet adapter.
Host Ethernet Adapter 4-Port 1 Gb card - Port 1	Un-P1-C3-T1	Yes	
Host Ethernet Adapter 4-Port 1 Gb card - Port 2	Un-P1-C3-T2	Yes	
Host Ethernet Adapter 4-Port 1 Gb card - Port 3	Un-P1-C3-T3	Yes	
Host Ethernet Adapter 4-Port 1 Gb card - Port 4	Un-P1-C3-T4	Yes	
Host Ethernet Adapter 2-Port 10 Gb card - Port 1	Un-P1-C3-T1	Yes	
Host Ethernet Adapter 2-Port 10 Gb card - Port 2	Un-P1-C3-T2	Yes	
PCIe slot 1	Un-P1-C4	No	See PCI Adapters.
PCIe slot 2	Un-P1-C5	No	
PCIe slot 3	Un-P1-C6	No	
PCIe slot 4	Un-P1-C7	No	
GX Dual-Port 12X Channel Attach adapter	Un-P1-C8	Yes	See GX++ 12X channel adapters.
GX Dual-Port 12X Channel Attach adapter <b>Note:</b> You can either install the GX Dual-Port 12X Channel Attach adapter in Un-P1-C2 or the PCIe riser in Un-P1-C1, but not both at the same time.	Un-P1-C2		
GX Dual-Port 12X Channel Attach adapter IB-2 card - Port 1	Un-P1-C8-T1	Yes	
GX Dual-Port 12X Channel Attach adapter IB-2 card - Port 2	Un-P1-C8-T2	Yes	
PCIe expansion feature - Fan 1	Un-P1-C1-A1	Yes	
PCIe expansion feature - Fan 2	Un-P1-C1-A2	Yes	
System VPD card	Un-P1-C20		
RAID enablement card for system backplane	Un-P1-C13	Yes	See SAS RAID enablement and cache battery pack.
Cache battery card	Un-P1-C14	Yes	
Battery on cache battery card	Un-P1-C14-E1	Yes	
RAID storage controller or RAID and cache storage controller	Un-P1-C19	Yes	
Battery on RAID and cache storage controller	Un-P1-C19-E1	Yes	
<b>Memory modules</b>			



Table 3. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Memory card 1	Un-P1-C18	Yes	See Memory modules.
Memory card 1 - DIMM 1	Un-P1-C18-C1	Yes	
Memory card 1 - DIMM 2	Un-P1-C18-C2	Yes	
Memory card 1 - DIMM 3	Un-P1-C18-C3	Yes	
Memory card 1 - DIMM 4	Un-P1-C18-C4	Yes	
Memory card 1 - DIMM 5	Un-P1-C18-C7	Yes	
Memory card 1 - DIMM 6	Un-P1-C18-C8	Yes	
Memory card 1 - DIMM 7	Un-P1-C18-C9	Yes	
Memory card 1 - DIMM 8	Un-P1-C18-C10	Yes	
Memory card 1 - 20A memory VRM	Un-P1-C18-C5	Yes	
Memory card 1 - 80A memory VRM	Un-P1-C18-C6	Yes	
Memory card 2	Un-P1-C17	Yes	See Memory modules.
Memory card 2 - DIMM 1	Un-P1-C17-C1	Yes	
Memory card 2 - DIMM 2	Un-P1-C17-C2	Yes	
Memory card 2 - DIMM 3	Un-P1-C17-C3	Yes	
Memory card 2 - DIMM 4	Un-P1-C17-C4	Yes	
Memory card 2 - DIMM 5	Un-P1-C17-C7	Yes	
Memory card 2 - DIMM 6	Un-P1-C17-C8	Yes	
Memory card 2 - DIMM 7	Un-P1-C17-C9	Yes	
Memory card 2 - DIMM 8	Un-P1-C17-C10	Yes	
Memory card 2 - 20A memory VRM	Un-P1-C17-C5	Yes	
Memory card 2 - 80A memory VRM	Un-P1-C17-C6	Yes	
Memory card 3	Un-P1-C16	Yes	See Memory modules.
Memory card 3 - DIMM 1	Un-P1-C16-C1	Yes	
Memory card 3 - DIMM 2	Un-P1-C16-C2	Yes	
Memory card 3 - DIMM 3	Un-P1-C16-C3	Yes	
Memory card 3 - DIMM 4	Un-P1-C16-C4	Yes	
Memory card 3 - DIMM 5	Un-P1-C16-C7	Yes	
Memory card 3 - DIMM 6	Un-P1-C16-C8	Yes	
Memory card 3 - DIMM 7	Un-P1-C16-C9	Yes	
Memory card 3 - DIMM 8	Un-P1-C16-C10	Yes	

Table 3. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Memory card 3 - 20A memory VRM	Un-P1-C16-C5	Yes	See Memory voltage regulator module for the 8202-E4B or 8205-E6B.
Memory card 3 - 80A memory VRM	Un-P1-C16-C6	Yes	
Memory card 4	Un-P1-C15	Yes	See Memory modules.
Memory card 4 - DIMM 1	Un-P1-C15-C1	Yes	
Memory card 4 - DIMM 2	Un-P1-C15-C2	Yes	
Memory card 4 - DIMM 3	Un-P1-C15-C3	Yes	
Memory card 4 - DIMM 4	Un-P1-C15-C4	Yes	
Memory card 4 - DIMM 5	Un-P1-C15-C7	Yes	
Memory card 4 - DIMM 6	Un-P1-C15-C8	Yes	
Memory card 4 - DIMM 7	Un-P1-C15-C9	Yes	
Memory card 4 - DIMM 8	Un-P1-C15-C10	Yes	See Memory voltage regulator module for the 8202-E4B or 8205-E6B.
Memory card 4 - 20A memory VRM	Un-P1-C15-C5	Yes	
Memory card 4 - 80A memory VRM	Un-P1-C15-C6	Yes	
<b>Device physical locations</b>			
Tape drive (SAS)	Un-P1-D1	No	
Tape drive (USB)	Un-P1-D2	No	
Disk drive 1	Un-P2-D1	Yes	See Disk drives.
Disk drive 2	Un-P2-D2	Yes	
Disk drive 3	Un-P2-D3	Yes	
Disk drive 4	Un-P2-D4	Yes	
Disk drive 5	Un-P2-D5	Yes	
Disk drive 6	Un-P2-D6	Yes	
Disk drive 7	Un-P2-D7	Yes	
Disk drive 8	Un-P2-D8	Yes	
Solid-state disk drive 1 on PCIe SAS RAID and SSD adapter	Un -P1-Cx-D1 or Un -P1-C1-Cx-D1	No	
Solid-state disk drive 2 on PCIe SAS RAID and SSD adapter	Un -P1-Cx-D2 or Un -P1-C1-Cx-D2	No	
Solid-state disk drive 3 on PCIe SAS RAID and SSD adapter	Un -P1-Cx-D3 or Un -P1-C1-Cx-D3	No	
Solid-state disk drive 4 on PCIe SAS RAID and SSD adapter	Un -P1-Cx-D4 or Un -P1-C1-Cx-D4	No	
DVD	Un-P2-D9	Yes	
SAS port	Un-P2-T1	No	
Embedded SAS controller	Un-P1-T9	No	

Table 3. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
<b>Control panel</b>			
Control panel	Un -D1	No	See Control panel and signal cables for the 8202-E4B or 8205-E6B systems.
Temperature sensor	Un -D1	No	
Control panel - USB port	Un -D1-T1	No	
<b>Server firmware</b>			
Server firmware	Um-Y1		

**Related reference:**

8202-E4B or 8205-E6B system parts

Indexed drawings show system part numbers for each part.

**8202-E4C, 8202-E4D, 8205-E6C, or 8205-E6D**

The information provided in this topic defines specific sections of a location code string. Use this information to understand the meaning of a location code.

**Using location codes**

Use the following table to link to a specific topic that you need additional information about when reading your location code.

Location code topics	Description
“Location code overview” on page 16	Contains background information on the use of location codes.
“Physical location codes” on page 16	Provides a definition for physical location code.
“Logical location codes” on page 16	Provides a definition of what a logical location code is.
“Location code format” on page 16	Provides descriptive information of the Un value in the location code string. For example, U789C.001.
“Location code labels” on page 17	Provides a table that identifies and defines the location code labels. The location code labels begin with an alphabetic character and follow the system serial number. For example, U789C.001.10ABCDE-P3-C31-T2-L23. The system serial number is 10ABCDE in the previous example. P3, C31, T2, and L23 all contain an alphabetic character that is identified in the Location code labels table.
“Worldwide unique identifier” on page 18	Provides a definition for the world unique identifier. This group of digits follows the resource code labels and always begins with the letter W.

## Location code overview

Servers (system unit and expansion units) use physical location codes to provide mapping of replaceable units. Location codes are produced by the server's firmware, which positions them so that they can be used to identify specific parts in a system. The location code format is the same for all servers.

If you are working with a specific location code, the unit type and model immediately follow the first character (*Utttt.mmm*). Match the unit type and model to a link, as shown in the Unit type and locations table.

If the location code ends with *-Txx-Lxx*, the server's firmware could not identify the physical location. When a physical location cannot be identified, a logical location code is provided. Where logical location codes occur in enclosures, the locations topic for the enclosure has the known conversions listed. For logical location codes with no conversion, contact your next level of support.

If the location code begins with *UTMPx*, the machine type, model, and serial number of the expansion I/O unit have not been set yet, and this is a temporary unit identifier. To identify the unit, examine the display panels on all of the expansion I/O units that are connected to the server until you find one with the same characters in the first 5 digits of the top line in the unit's display. Record the unit's real machine type and model from the unit label. Match the unit's machine type and model in the Unit type and locations table and follow the link to determine the service information.

**Note:** Locations for units that are not in the preceding list are either not supported or there is a problem in the firmware. Contact your next level of support.

## Physical location codes

Physical location codes provide a mapping of logical functions and components (such as backplanes, removable modules, connectors, ports, cables, and devices) to their specific locations within the physical structure of the server.

## Logical location codes

If the physical location cannot be mapped to a physical location code, the server's firmware generates a logical location code. A logical location code is a sequence of location labels that identifies the path that the system uses to communicate with a given resource.

**Note:** A resource has as many logical location codes as it has logical connections to the system. For example, an external tape device connected to two I/O adapters has two logical location codes.

An example of a logical location code is:

```
U789C.001.10ABCDE-P3-C31-T2-L23
```

The first part of the location code (through the T2 label) represents the physical location code for the resource that communicates with the target resource. The remainder of the logical location code (L23) represents which resource is indicated.

## Location code format

The location code is an alphanumeric string of variable length, consisting of a series of location identifiers, separated by a dash. An example of a physical location for a fan is *Un-A1*.

The first position, represented by *Un* (where *n* is equal to any string contained between the U and the hyphen) in the preceding example, is displayed in one of the forms in the following table.

**Note:** In location codes the U is a constant digit; however, the numbered positions that follow the U are variables and are dependent on your server. Each column defines the numbers that follow the U in the beginning of the location code.

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
Utttt.mmm.ssssss-A1	Uffff.ccc.ssssss-A1
The leftmost code is always U.	The leftmost code is always U.
tttt represents the unit type of the enclosure (drawer or node).	ffff represents the feature code of the enclosure (drawer or node).
mmm represents the model of the enclosure.	ccc represents the sequence number of the enclosure .
ssssss represents the serial number for the enclosure.	ssssss represents the serial number of the enclosure.
<p><b>Note:</b> The <i>mmm</i> or <i>ccc</i> number might not be displayed on all location codes for all servers. If the <i>mmm</i> value is not displayed, the location code is displayed in one of the following forms:</p> <ul style="list-style-type: none"> <li>• Utttt.ssssss-A1</li> <li>• Uffff.ssssss-A1</li> </ul>	

The location code is hierarchical; that is, each location identifier in the string represents a physical part. The order (from left to right), in which each identifier is shown, helps you determine which parts contain other parts in the string.

The dash (-) separator character represents a relationship between two components in the unit. In the example of the fan, whose location code is Un-A1, the dash shows that the fan (A1) is contained in the base unit (or Un). Modules, adapters, cables, and devices are all parts that are plugged into another part. Their location codes always show that they are plugged into another part as components of the server. Another example follows: Un-P1-C9 is a memory DIMM (C9) that is plugged into a backplane (P1), which is inside the unit (Un).

**Note:** For devices, certain error conditions might cause an IBM i device to display the device location in an AIX format.

Table 4. Unit type and locations

Unit type (Utttt.mmm)	Link to location information
U78AA.001	8202-E4C, 8202-E4D, 8205-E6C, or 8205-E6D locations

## Location code labels

The location code label represents a physical part of the server. The following table describes the prefixes of location code labels.

**Note:** These labels apply to system units only.

Table 5. Prefixes of location code labels for system units

Prefix	Description	Example
A	Air-moving device	Fan, blower
C	Card connector	IOP, IOA, DIMM, processor card
D	Device	Diskette, control panel
E	Electrical	Battery, power supply, ac charger
L	Logical path SAS target	Integrated drive electronics (IDE) address, Fibre Channel LUN
N	Horizontal placement for an empty rack location	

Table 5. Prefixes of location code labels for system units (continued)

Prefix	Description	Example
P	Planar	System backplane
T	Port, external cable	
U	Unit	
V	Virtual planar	
W	Worldwide unique ID	
X	EIA value for an empty rack location	
Y	Firmware FRU	

## Worldwide unique identifier

The location code label for the worldwide unique identifier consists of the prefix W followed by a maximum of 16 uppercase hexadecimal digits with no leading zeros. A location code might not consist of a worldwide unique identifier. When present, the worldwide unique identifier location label follows the location label of the resource that interfaces with the resource that has the worldwide unique identifier, usually a port.

## 8202-E4C, 8202-E4D, 8205-E6C, or 8205-E6D locations

Use this information to help you map a location code to a position on the unit.

The following diagrams show field replaceable unit (FRU) layouts in the system. Use these diagrams with the following tables.

## Rack views

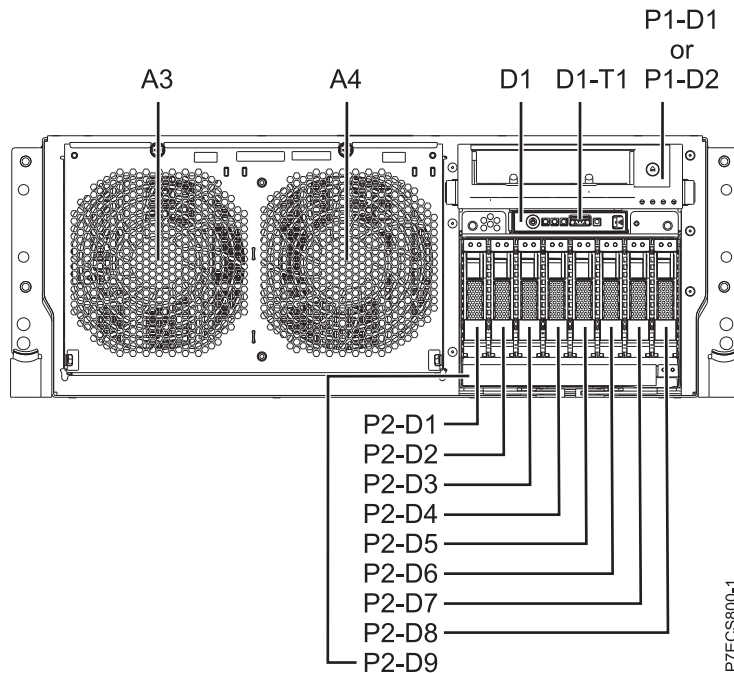
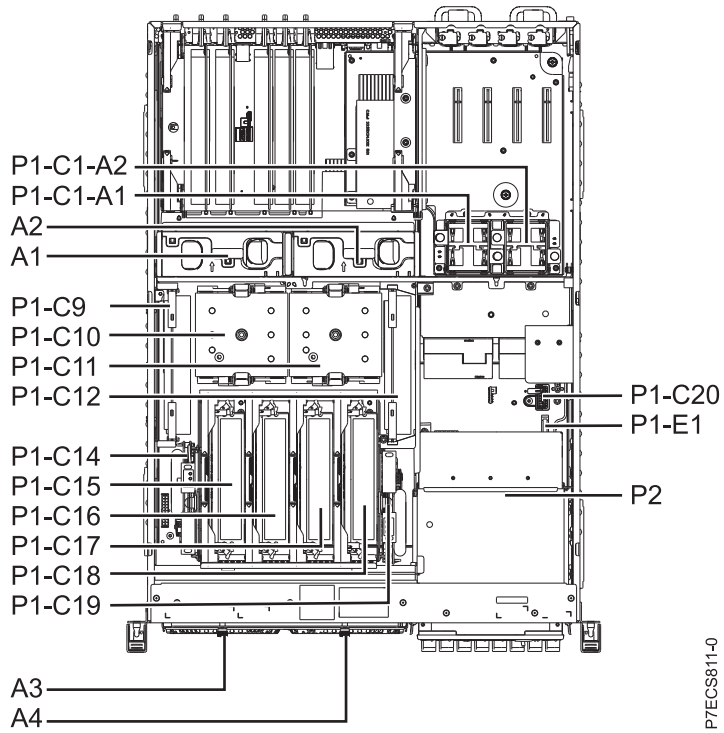
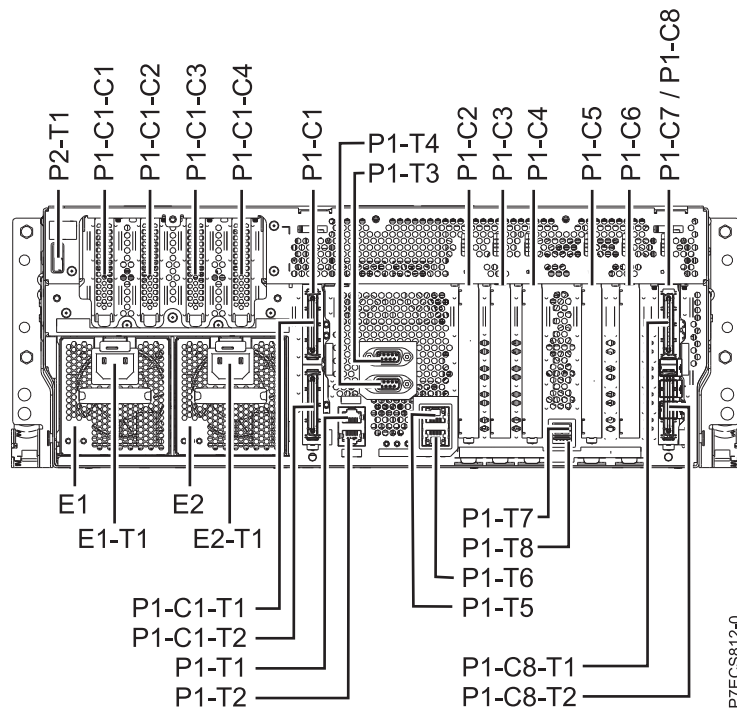


Figure 9. Rack front view



P7ECS811-0

Figure 10. Rack upper view



P7ECS812-0

Figure 11. Rack rear view

**Stand-alone views for the 8202-E4C or 8205-E6D**

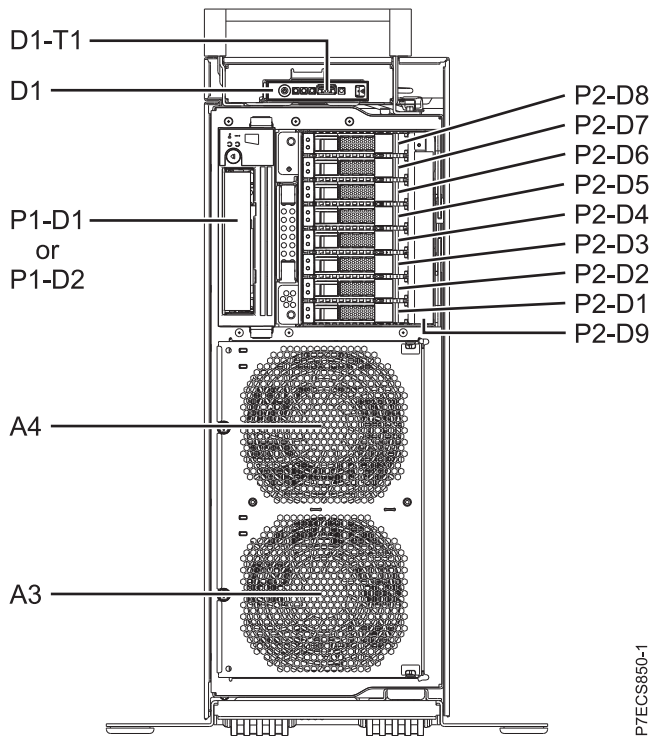


Figure 12. Stand-alone front view

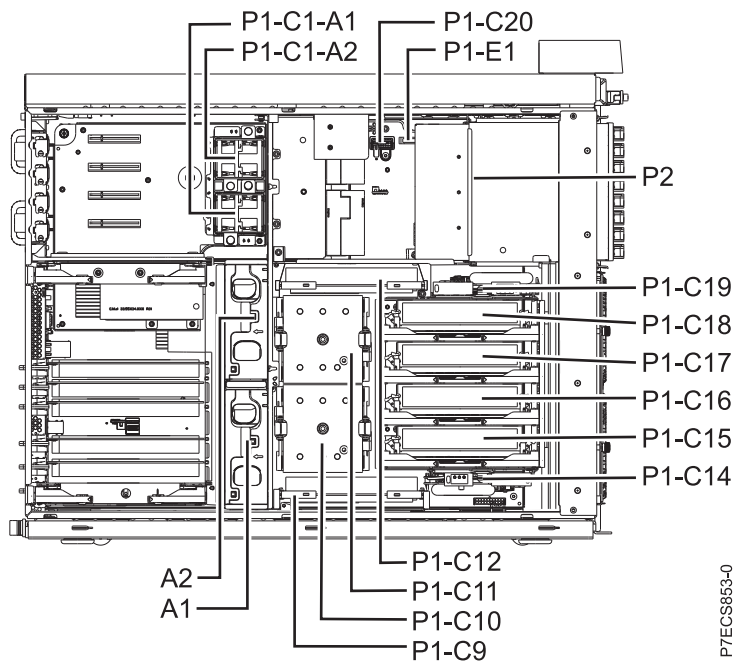


Figure 13. Stand-alone side view



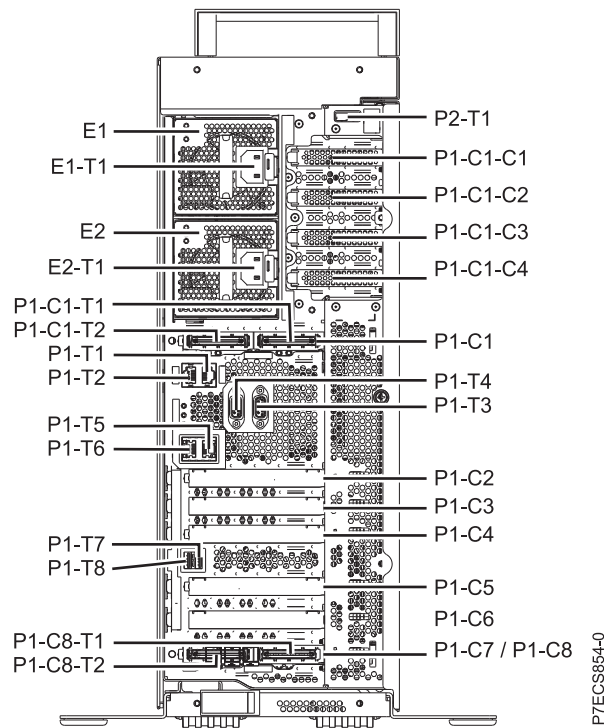


Figure 14. Stand-alone rear view

### Memory card locations

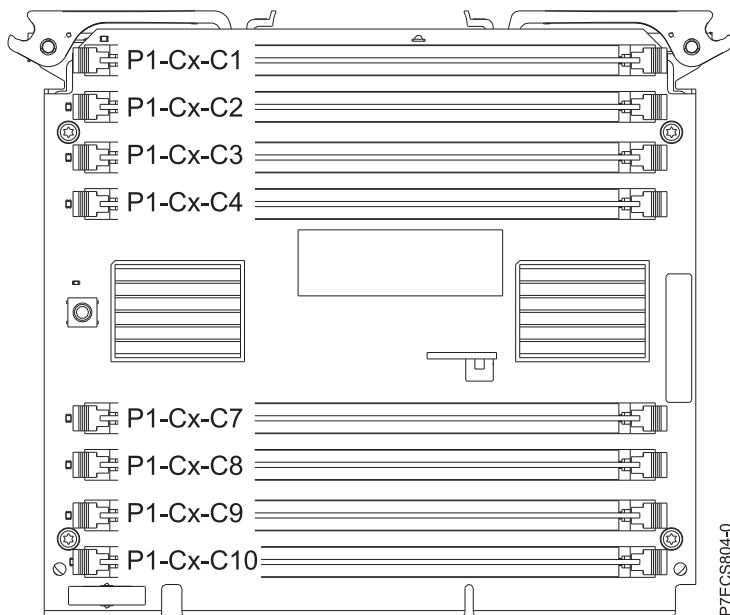


Figure 15. Memory card locations

### PCIe SAS RAID and SSD adapter locations

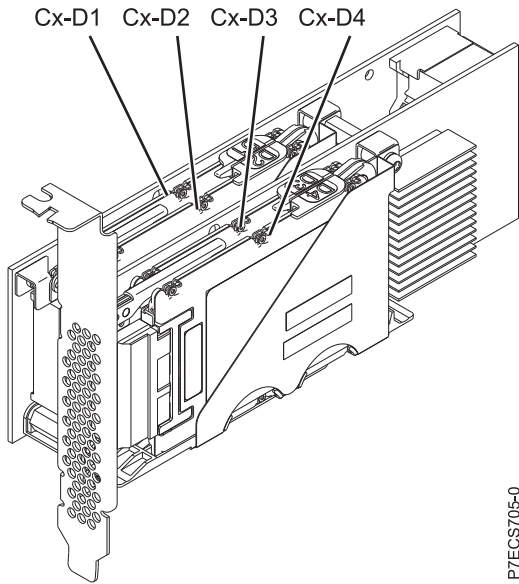


Figure 16. PCIe SAS RAID and SSD adapter locations

The following table provides location codes for parts that comprise the server.

Table 6. FRU location

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
System unit	Un		
<b>Fans</b>			
Fan 1	Un-A1	Yes	See Fans and fan cages.
Fan 2	Un-A2	Yes	
Fan 3	Un-A3	Yes	
Fan 4	Un-A4	Yes	
<b>Power supplies</b>			
Power supply 1	Un-E1	Yes	See Power supply.
Power supply 1 - Cord connector	Un-E1-T1	Yes	
Power supply 2	Un-E2	Yes	
Power supply 2 - Cord connector	Un-E2-T1	Yes	
<b>Backplanes</b>			
System backplane	Un-P1	Yes	See System backplane.
Time-of-day	Un-P1		
Time-of-day battery	Un-P1-E1		See Time-of-day battery.
Disk drive backplane	Un-P2	Yes	See Disk drive backplane.
<b>Ports</b>			
System port 1	Un-P1-T1	No	

Table 6. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
System port 2	Un-P1-T2	No	
SPCN port 1	Un-P1-T3	No	
SPCN port 2	Un-P1-T4	No	
HMC port 1	Un-P1-T5	No	
HMC port 2	Un-P1-T6	No	
USB port 1	Un-P1-T7	No	
USB port 2	Un-P1-T8	No	
<b>Processor and processor regulator</b>			
POWER7 processor module 1	Un-P1-C11	Yes	See System processor module.
POWER7 processor module 2	Un-P1-C10	Yes	
POWER7 processor module 1 VRM	Un-P1-C12	Yes	See Voltage regulator module.
POWER7 processor module 2 VRM	Un-P1-C9	Yes	
<b>Adapters</b>			
PCIe riser (Optional card at GX++ slot 1 location)	Un-P1-C1	Yes	See PCI Adapters.
PCIe expansion feature - PCIe x8 slot 7	Un-P1-C1-C1	Yes	
PCIe expansion feature - PCIe x8 slot 8	Un-P1-C1-C2	Yes	
PCIe expansion feature - PCIe x8 slot 9	Un-P1-C1-C3	Yes	
PCIe expansion feature - PCIe x8 slot 10	Un-P1-C1-C4	Yes	
PCIe x8 G2 slot 1	Un-P1-C2	Yes	
PCIe x8 G2 slot 2	Un-P1-C3	Yes	
PCIe x8 G2 slot 3	Un-P1-C4	Yes	
PCIe x8 G2 slot 4	Un-P1-C5	Yes	
PCIe x8 G2 slot 5	Un-P1-C6	Yes	
PCIe x8 G2 slot 6	Un-P1-C7	Yes	

Table 6. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures	
GX Dual-Port 12X Channel Attach adapter slot 1	Un-P1-C1	Yes	See GX++ 12X channel adapters.	
GX Dual-Port 12X Channel Attach adapter slot 1 IB-2 card - Port 1	Un-P1-C1-T1	Yes		
GX Dual-Port 12X Channel Attach adapter slot 1 IB-2 card - Port 2	Un-P1-C1-T2	Yes		
GX Dual-Port 12X Channel Attach adapter slot 1 card - Port 1	Un-P1-C1-T1	Yes		
GX Dual-Port 12X Channel Attach adapter slot 1 card - Port 2	Un-P1-C1-T2	Yes		
GX Dual-Port 12X Channel Attach adapter slot 2 <b>Note:</b> You can either install the GX Dual-Port 12X Channel Attach adapter in Un-P1-C2 or the PCIe riser in Un-P1-C1, but not both at the same time.	Un-P1-C8	Yes		
GX Dual-Port 12X Channel Attach adapter slot 2 IB-2 card - Port 1	Un-P1-C8-T1	Yes		
GX Dual-Port 12X Channel Attach adapter slot 2 IB-2 card - Port 2	Un-P1-C8-T2	Yes		
GX Dual-Port 12X Channel Attach adapter slot 2 card - Port 1	Un-P1-C8-T1	Yes		
GX Dual-Port 12X Channel Attach adapter slot 2 card - Port 2	Un-P1-C8-T2	Yes		
PCIe expansion feature - Fan 1	Un-P1-C1-A1	Yes		
PCIe expansion feature - Fan 2	Un-P1-C1-A2	Yes		
System VPD card	Un-P1-C20			
Cache battery card	Un-P1-C14	Yes	See SAS RAID enablement and cache battery pack.	
Battery on cache battery card	Un-P1-C14-E1	Yes		
RAID storage controller or RAID and cache storage controller	Un-P1-C19	Yes		
Battery on RAID and cache storage controller	Un-P1-C19-E1	Yes		
<b>Memory modules</b>				
Memory card 1	Un-P1-C18	Yes	See Memory modules.	
Memory card 1 - DIMM 1	Un-P1-C18-C1	Yes		

Table 6. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures	
Memory card 1 - DIMM 2	Un-P1-C18-C2	Yes	<b>Note:</b> The DIMM fault and identify LED is not visible when the system is in the service position.	
Memory card 1 - DIMM 3	Un-P1-C18-C3	Yes		
Memory card 1 - DIMM 4	Un-P1-C18-C4	Yes		
Memory card 1 - DIMM 5	Un-P1-C18-C7	Yes		
Memory card 1 - DIMM 6	Un-P1-C18-C8	Yes		
Memory card 1 - DIMM 7	Un-P1-C18-C9	Yes		
Memory card 1 - DIMM 8	Un-P1-C18-C10	Yes		
Memory card 2	Un-P1-C17	Yes	See Memory modules.	
Memory card 2 - DIMM 1	Un-P1-C17-C1	Yes	<b>Note:</b> The DIMM fault and identify LED is not visible when the system is in the service position.	
Memory card 2 - DIMM 2	Un-P1-C17-C2	Yes		
Memory card 2 - DIMM 3	Un-P1-C17-C3	Yes		
Memory card 2 - DIMM 4	Un-P1-C17-C4	Yes		
Memory card 2 - DIMM 5	Un-P1-C17-C7	Yes		
Memory card 2 - DIMM 6	Un-P1-C17-C8	Yes		
Memory card 2 - DIMM 7	Un-P1-C17-C9	Yes		
Memory card 2 - DIMM 8	Un-P1-C17-C10	Yes	<b>Note:</b> The DIMM fault and identify LED is not visible when the system is in the service position.	
Memory card 3	Un-P1-C16	Yes		
Memory card 3 - DIMM 1	Un-P1-C16-C1	Yes		
Memory card 3 - DIMM 2	Un-P1-C16-C2	Yes		
Memory card 3 - DIMM 3	Un-P1-C16-C3	Yes		
Memory card 3 - DIMM 4	Un-P1-C16-C4	Yes		
Memory card 3 - DIMM 5	Un-P1-C16-C7	Yes		
Memory card 3 - DIMM 6	Un-P1-C16-C8	Yes		
Memory card 3 - DIMM 7	Un-P1-C16-C9	Yes	<b>Note:</b> The DIMM fault and identify LED is not visible when the system is in the service position.	
Memory card 3 - DIMM 8	Un-P1-C16-C10	Yes		
Memory card 4	Un-P1-C15	Yes		
Memory card 4 - DIMM 1	Un-P1-C15-C1	Yes		
Memory card 4 - DIMM 2	Un-P1-C15-C2	Yes		
Memory card 4 - DIMM 3	Un-P1-C15-C3	Yes		
Memory card 4 - DIMM 4	Un-P1-C15-C4	Yes		
Memory card 4 - DIMM 5	Un-P1-C15-C7	Yes		
Memory card 4 - DIMM 6	Un-P1-C15-C8	Yes	<b>Note:</b> The DIMM fault and identify LED is not visible when the system is in the service position.	
Memory card 4 - DIMM 7	Un-P1-C15-C9	Yes		
Memory card 4 - DIMM 8	Un-P1-C15-C10	Yes		
<b>Device physical locations</b>				
Tape drive (SAS)	Un-P1-D1	No		

Table 6. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Tape drive (USB)	Un-P1-D2	No	
Disk drive 1	Un-P2-D1	Yes	See Disk drives.
Disk drive 2	Un-P2-D2	Yes	
Disk drive 3	Un-P2-D3	Yes	
Disk drive 4	Un-P2-D4	Yes	
Disk drive 5	Un-P2-D5	Yes	
Disk drive 6	Un-P2-D6	Yes	
Disk drive 7	Un-P2-D7	Yes	
Disk drive 8	Un-P2-D8	Yes	
Solid-state disk drive 1 on PCIe SAS RAID and SSD adapter	Un -P1-Cx-D1 or Un -P1-C1-Cx-D1	No	
Solid-state disk drive 2 on PCIe SAS RAID and SSD adapter	Un -P1-Cx-D2 or Un -P1-C1-Cx-D2	No	
Solid-state disk drive 3 on PCIe SAS RAID and SSD adapter	Un -P1-Cx-D3 or Un -P1-C1-Cx-D3	No	
Solid-state disk drive 4 on PCIe SAS RAID and SSD adapter	Un -P1-Cx-D4 or Un -P1-C1-Cx-D4	No	
DVD	Un-P2-D9	Yes	
SAS port	Un-P2-T1	No	
Embedded SAS controller	Un-P1-T9	No	
<b>Control panel</b>			
Control panel	Un -D1	No	See Control panel and signal cables for the 8202-E4B or 8205-E6B systems.
Temperature sensor	Un -D1	No	
Control panel - USB port	Un -D1-T1	No	
<b>Server firmware</b>			
Server firmware	Um-Y1		

**Related reference:**

8202-E4B or 8205-E6B system parts  
 Indexed drawings show system part numbers for each part.

**8231-E2B**

The information provided in this topic defines specific sections of a location code string. Use this information to understand the meaning of a location code.

**Using location codes**

Use the following table to link to a specific topic that you need additional information about when reading your location code.

Location code topics	Description
"Location code overview"	Contains background information on the use of location codes.
"Physical location codes"	Provides a definition for physical location code.
"Logical location codes" on page 28	Provides a definition of what a logical location code is.
"Location code format" on page 28	Provides descriptive information of the <i>Un</i> value in the location code string. For example, U789C.001.
"Location code labels" on page 29	Provides a table that identifies and defines the location code labels. The location code labels begin with an alphabetic character and follow the system serial number. For example, U789C.001.10ABCDE-P3-C31-T2-L23. The system serial number is 10ABCDE in the previous example. P3, C31, T2, and L23 all contain an alphabetic character that is identified in the Location code labels table.
"Worldwide unique identifier" on page 29	Provides a definition for the world unique identifier. This group of digits follows the resource code labels and always begins with the letter <i>W</i> .

## Location code overview

Servers (system unit and expansion units) use physical location codes to provide mapping of replaceable units. Location codes are produced by the server's firmware, which structures them so that they can be used to identify specific parts in a system. The location code format is the same for all servers.

If you are working with a specific location code, the unit type and model immediately follow the first character (*Utttt.mmm*). Match the unit type and model to a link, as shown in the Unit type and locations table.

If the location code ends with **-Txx-Lxx**, the server's firmware could not identify the physical location. When a physical location cannot be identified, a logical location code is provided. Where logical location codes occur in enclosures, the locations topic for the enclosure lists the known conversions. For logical location codes with no conversion, contact your next level of support.

If the location code begins with **UTMPx**, the expansion I/O unit's machine type, model, and serial number have not been set yet and this is a temporary unit identifier. To identify the unit, examine the display panels on all of the expansion I/O units that are connected to the server until you find one with the same characters in the first 5 digits of the top line in the unit's display. Record the unit's real machine type and model from the unit label. Match the unit's machine type and model in the Unit type and locations table and follow the link to determine the service information.

**Note:** Locations for units that are not in the preceding list are either not supported or have a problem in the firmware. Contact your next level of support.

## Physical location codes

Physical location codes provide a mapping of logical functions and components (such as backplanes, removable modules, connectors, ports, cables, and devices) to their specific locations within the physical structure of the server.

## Logical location codes

If the physical location cannot be mapped to a physical location code, the server's firmware generates a logical location code. A logical location code is a sequence of location labels that identifies the path that the system uses to communicate with a given resource.

**Note:** A resource has as many logical location codes as it has logical connections to the system. For example, an external tape device connected to two I/O adapters has two logical location codes.

An example of a logical location code is:

U789C.001.10ABCDE-P3-C31-T2-L23

The first part of the location code (through the T2 label) represents the physical location code for the resource that communicates with the target resource. The remainder of the logical location code (L23) represents exactly which resource is indicated.

## Location code format

The location code is an alphanumeric string of variable length, consisting of a series of location identifiers, separated by a dash. An example of a physical location for a fan is  $U_n-A1$ .

The first position, represented by  $U_n$  (where  $n$  is equal to any string contained between the U and the hyphen) in the preceding example, is displayed in one of the forms in the following table.

**Note:** In location codes, the U is a constant digit; however, the numbered positions that follow the U are variables and are dependent on your server. Each column defines the numbers that follow the U in the beginning of the location code.

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
$Utttt.mmm.ssssss-A1$	$Uffff.ccc.ssssss-A1$
The leftmost code is always U.	The leftmost code is always U.
$tttt$ represents the unit type of the enclosure (drawer or node).	$ffff$ represents the feature code of the enclosure (drawer or node).
$mmm$ represents the model of the enclosure.	$ccc$ represents the sequence number of the enclosure.
$ssssss$ represents the serial number for the enclosure.	$ssssss$ represents the serial number of the enclosure.
<b>Note:</b> The $mmm$ or $ccc$ number might not be displayed on all location codes for all servers. If the $mmm$ value is not displayed, the location code is displayed in one of the following forms:	
<ul style="list-style-type: none"><li>• <math>Utttt.ssssss-A1</math></li><li>• <math>Uffff.ssssss-A1</math></li></ul>	

The location code is hierarchical; that is, each location identifier in the string represents a physical part. The order (from left to right) in which each identifier is shown helps you determine which parts contain other parts in the string.

The dash (-) separator character represents a relationship between two components in the unit. In the example of the fan, whose location code is  $U_n-A1$ , the dash shows that the fan (A1) is contained in the base unit (or  $U_n$ ). Modules, adapters, cables, and devices are all parts that are plugged into another part. Their location codes always show that they are plugged into another part as components of the server. Another example follows:  $U_n-P1-C9$  is a memory DIMM (C9) that is plugged into a backplane (P1), which is inside the unit ( $U_n$ ).



Table 7. Unit type and locations

Unit type (Utttt.mmm)	Link to location information
U8231.E2B	8231-E2B Locations

## Location code labels

The location code label represents a physical part of the server. The following table describes the prefixes of location code labels.

**Note:** These labels apply to system units only.

Table 8. Prefixes of location code labels for system units

Prefix	Description	Example
A	Air-moving device	Fan, blower
C	Card connector	IOP, IOA, DIMM, processor card
D	Device	Diskette, control panel
E	Electrical	Battery, power supply, ac charger
L	Logical path SAS target	Integrated drive electronics (IDE) address, Fibre Channel LUN
N	Horizontal placement for an empty rack location	
P	Planar	System backplane
T	Port, external cable	
U	Unit	
V	Virtual planar	
W	Worldwide unique ID	
X	EIA value for an empty rack location	
Y	Firmware FRU	

## Worldwide unique identifier

The location code label for the worldwide unique identifier consists of the prefix W followed by a maximum of 16 uppercase hexadecimal digits with no leading zeros. A location code might not consist of a worldwide unique identifier. When present, the worldwide unique identifier location label follows the location label of the resource that interfaces with the resource that has the worldwide unique identifier, usually a port.

## 8231-E2B locations

Use this information to help you map a location code to a position on the unit.

The following diagrams show field replaceable unit (FRU) layouts in the system. Use these diagrams with the following tables.

## Rack views

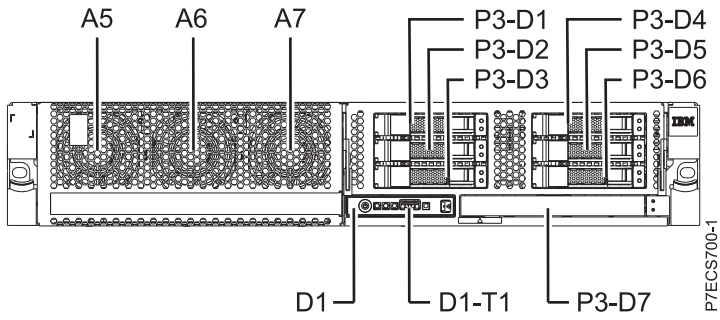


Figure 17. Front view of base model with six small-form factor (SFF) bays

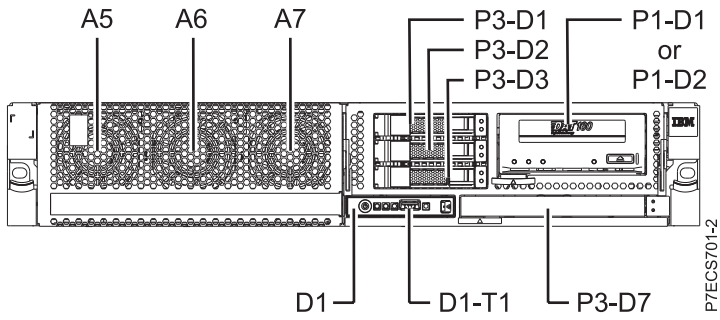


Figure 18. Front view of model with three SFF bays (optional)

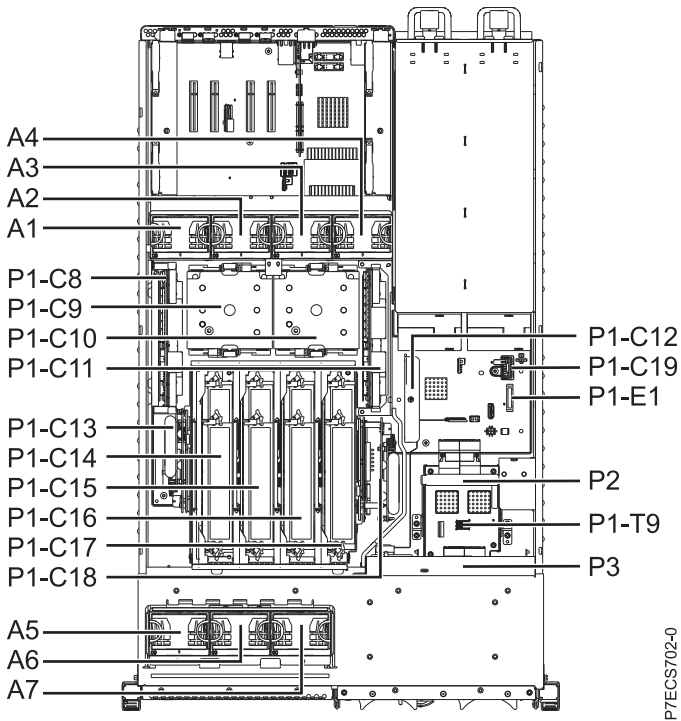


Figure 19. Top view

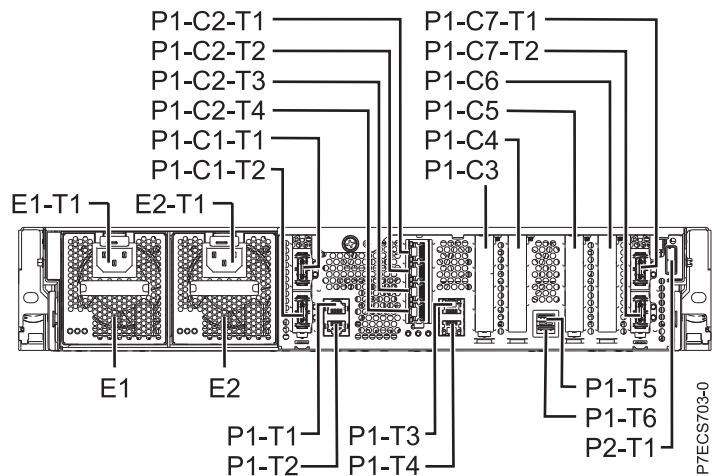


Figure 20. Rear view

### Memory card locations

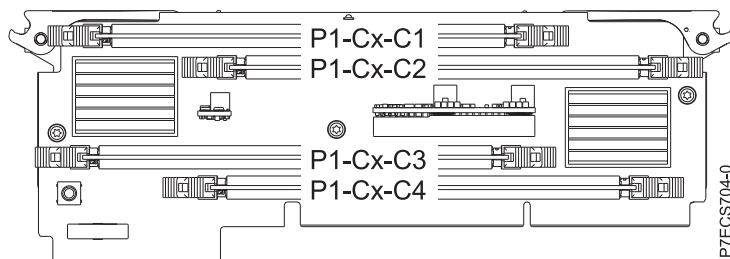


Figure 21. Memory card locations

### PCIe SAS RAID and SSD adapter locations

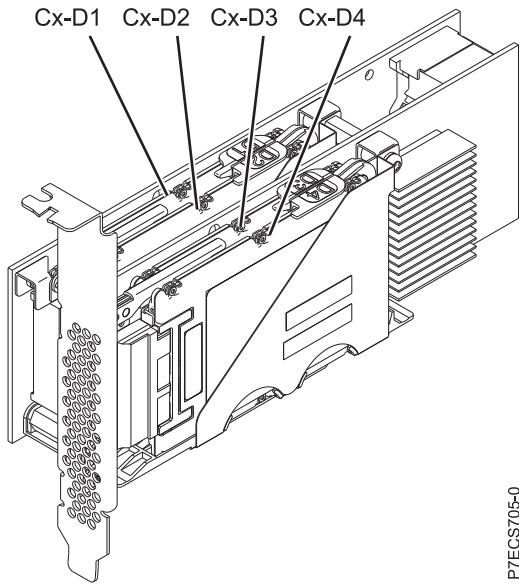


Figure 22. PCIe SAS RAID and SSD adapter locations

The following table provides location codes for parts that comprise the server.

Table 9. FRU location table

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
System unit	Un		
<b>Fans</b>			
Fan 1	Un-P1-A1	Yes	See Fans.
Fan 2	Un-P1-A2	Yes	
Fan 3	Un-P1-A3	Yes	
Fan 4	Un-P1-A4	Yes	
Fan 5	Un-P1-A5	Yes	
Fan 6	Un-P1-A6	Yes	
Fan 7	Un-P1-A7	Yes	
<b>Power supplies</b>			
Power supply 1	Un-E1	Yes	See Power supply.
Power supply 1 - Cord connector	Un-E1-T1	Yes	
Power supply 2	Un-E2	Yes	
Power supply 2 - Cord connector	Un-E2-T1	Yes	
<b>Backplanes</b>			
System backplane	Un-P1	Yes	See System backplane.
Time-of-day	Un-P1		
Time-of-day battery	Un-P1-E1		See Time-of-day battery.
Storage backplane interposer	Un-P2	Yes	

Table 9. FRU location table (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Disk drive backplane	Un-P3	Yes	See Disk drive backplane.
<b>Ports</b>			
System port 1	Un-P1-T1	No	
System port 2	Un-P1-T2	No	
HMC port 1	Un-P1-T3	No	
HMC port 2	Un-P1-T4	No	
USB port 1	Un-P1-T5	No	
USB port 2	Un-P1-T6	No	
<b>Processor and processor regulator</b>			
POWER7 processor module 1	Un-P1-C10	Yes	See System processor module.
POWER7 processor module 2	Un-P1-C9	Yes	
POWER7 processor module 1 VRM	Un-P1-C11	Yes	See Voltage regulator module.
POWER7 processor module 2 VRM	Un-P1-C8	Yes	
<b>Adapters</b>			
Host Ethernet Adapter slot	Un-P1-C2	Yes	See Host Ethernet adapter.
Host Ethernet Adapter 4-Port 1 Gb card - Port 1	Un-P1-C2-T1	Yes	
Host Ethernet Adapter 4-Port 1 Gb card - Port 2	Un-P1-C2-T2	Yes	
Host Ethernet Adapter 4-Port 1 Gb card - Port 3	Un-P1-C2-T3	Yes	
Host Ethernet Adapter 4-Port 1 Gb card - Port 4	Un-P1-C2-T4	Yes	
Host Ethernet Adapter 2-Port 10 Gb card - Port 1	Un-P1-C2-T1	Yes	
Host Ethernet Adapter 2-Port 10 Gb card - Port 2	Un-P1-C2-T2	Yes	
PCIe LP slot 1	Un-P1-C3	No	
PCIe LP slot 2	Un-P1-C4	No	
PCIe LP slot 3	Un-P1-C5	No	
PCIe LP slot 4	Un-P1-C6	No	

Table 9. FRU location table (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
GX++ 4X channel attach adapter slot 1	Un-P1-C1	Yes	GX++ 4X channel adapters.
GX++ 4X channel attach adapter slot 1 IB-2 card - Port 1	Un-P1-C1-T1	Yes	
GX++ 4X channel attach adapter slot 1 IB-2 card - Port 2	Un-P1-C1-T2	Yes	
GX++ 4X channel attach adapter slot 2	Un-P1-C7	Yes	
GX++ 4X channel attach adapter slot 2 IB-2 card - Port 1	Un-P1-C7-T1	Yes	
GX++ 4X channel attach adapter slot 2 IB-2 card - Port 1	Un-P1-C7-T2	Yes	
System VPD card	Un-P1-C19		
RAID enablement card for system backplane	Un-P1-C12	Yes	See SAS RAID enablement and cache battery pack.
Cache battery card	Un-P1-C13	Yes	
Battery on cache battery card	Un-P1-C13-E1	Yes	
RAID and cache storage controller	Un-P1-C18	Yes	
Battery on RAID and cache storage controller	Un-P1-C18-E1	Yes	
<b>Memory modules</b>			
Memory card 1	Un-P1-C17		See Memory modules.
Memory card 1 - DIMM 1	Un-P1-C17-C1	Yes	
Memory card 1 - DIMM 2	Un-P1-C17-C2	Yes	
Memory card 1 - DIMM 3	Un-P1-C17-C3	Yes	
Memory card 1 - DIMM 4	Un-P1-C17-C4	Yes	
Memory card 2	Un-P1-C16	Yes	
Memory card 2 - DIMM 1	Un-P1-C16-C1	Yes	
Memory card 2 - DIMM 2	Un-P1-C16-C2	Yes	
Memory card 2 - DIMM 3	Un-P1-C16-C3	Yes	
Memory card 2 - DIMM 4	Un-P1-C16-C4	Yes	
Memory card 3	Un-P1-C15	Yes	
Memory card 3 - DIMM 1	Un-P1-C15-C1	Yes	
Memory card 3 - DIMM 2	Un-P1-C15-C2	Yes	
Memory card 3 - DIMM 3	Un-P1-C15-C3	Yes	
Memory card 3 - DIMM 4	Un-P1-C15-C4	Yes	
Memory card 4	Un-P1-C14	Yes	
Memory card 4 - DIMM 1	Un-P1-C14-C1	Yes	
Memory card 4 - DIMM 2	Un-P1-C14-C2	Yes	
Memory card 4 - DIMM 3	Un-P1-C14-C3	Yes	
Memory card 4 - DIMM 4	Un-P1-C14-C4	Yes	
<b>Device physical locations</b>			

Table 9. FRU location table (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Tape drive (SAS)	Un-P1-D1	No	
Tape drive (USB)	Un-P1-D2	No	
Disk drive 1	Un-P3-D1	Yes	See Disk drives.
Disk drive 2	Un-P3-D2	Yes	
Disk drive 3	Un-P3-D3	Yes	
Disk drive 4	Un-P3-D4	Yes	
Disk drive 5	Un-P3-D5	Yes	
Disk drive 6	Un-P3-D6	Yes	
Solid-state disk drive 1 on PCIe SAS RAID and SSD adapter	Un -P1-Cx-D1	No	
Solid-state disk drive 2 on PCIe SAS RAID and SSD adapter	Un -P1-Cx-D2	No	
Solid-state disk drive 3 on PCIe SAS RAID and SSD adapter	Un -P1-Cx-D3	No	
Solid-state disk drive 4 on PCIe SAS RAID and SSD adapter	Un -P1-Cx-D4	No	
DVD	Un-P3-D7	Yes	
SAS port	Un-P2-T1	No	
Embedded SAS controller	Un-P1-T9	No	
<b>Control panel</b>			
Control panel	Un -D1	No	See Control panel and signal cables for the 8231-E2B system.
Temperature sensor	Un -D1	No	
Control panel - USB port	Un -D1-T1	No	
<b>Server firmware</b>			
Server firmware	Um-Y1		

**Related reference:**

“8231-E2B system parts” on page 204

Indexed drawings show system part numbers of each part.

**8231-E1C, 8231-E1D, 8231-E2C, 8231-E2D, or 8268-E1D**

The information provided in this topic defines specific sections of a location code string. Use this information to understand the meaning of a location code.

**Using location codes**

Use the following table to link to a specific topic that you need additional information about when reading your location code.

Location code topics	Description
"Location code overview"	Contains background information about the use of location codes.
"Physical location codes"	Provides a definition for physical location code.
"Logical location codes" on page 37	Provides a definition of what a logical location code is.
"Location code format" on page 37	Provides descriptive information of the <i>Un</i> value in the location code string. For example, U789C.001.
"Location code labels" on page 38	Provides a table that identifies and defines the location code labels. The location code labels begin with an alphabetic character and follow the system serial number. For example, U789C.001.10ABCDE-P3-C31-T2-L23. The system serial number is 10ABCDE in the previous example. P3, C31, T2, and L23 all contain an alphabetic character that is identified in the Location code labels table.
"Worldwide unique identifier" on page 38	Provides a definition for the world unique identifier. This group of digits follows the resource code labels and always begins with the letter <i>W</i> .

## Location code overview

Servers (system units and expansion units) use physical location codes to provide mapping of replaceable units. Location codes are produced by the server's firmware, which positions them so that they can be used to identify specific parts in a system. The location code format is the same for all servers.

If you are working with a specific location code, the unit type and model immediately follow the first character (*Utttt.mmm*). Match the unit type and model to a link, as shown in the Unit type and locations table.

If the location code ends with *-Txx-Lxx*, the server's firmware could not identify the physical location. When a physical location cannot be identified, a logical location code is provided. Where logical location codes occur in enclosures, the locations topic for the enclosure lists the known conversions. For logical location codes with no conversion, contact your next level of support.

If the location code begins with *UTMPx*, the machine type, model, and serial number of the expansion I/O unit have not been set yet, and this is a temporary unit identifier. To identify the unit, examine the display panels on all of the expansion I/O units that are connected to the server until you find one with the same characters in the first 5 digits of the top line in the unit's display. Record the unit's real machine type and model from the unit label. Match the unit's machine type and model in the Unit type and locations table and follow the link to determine the service information.

**Note:** Locations for units that are not in the preceding list are either not supported or have a problem in the firmware. Contact your next level of support.

## Physical location codes

Physical location codes provide a mapping of logical functions and components (such as backplanes, removable modules, connectors, ports, cables, and devices) to their specific locations within the physical structure of the server.



## Logical location codes

If the physical location cannot be mapped to a physical location code, the server's firmware generates a logical location code. A logical location code is a sequence of location labels that identifies the path that the system uses to communicate with a given resource.

**Note:** A resource has as many logical location codes as it has logical connections to the system. For example, an external tape device connected to two I/O adapters has two logical location codes.

An example of a logical location code is:

U789C.001.10ABCDE-P3-C31-T2-L23

The first part of the location code (through the T2 label) represents the physical location code for the resource that communicates with the target resource. The remainder of the logical location code (L23) represents which resource is indicated.

## Location code format

The location code is an alphanumeric string of variable length, consisting of a series of location identifiers, separated by a dash. An example of a physical location for a fan is  $U_n-A1$ .

The first position, represented by  $U_n$  (where  $n$  is equal to any string contained between the U and the hyphen) in the preceding example, is displayed in one of the forms in the following table.

**Note:** In location codes, the U is a constant digit; however, the numbered positions that follow the U are variables and are dependent on your server. Each column defines the numbers that follow the U in the beginning of the location code.

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
$Utttt.mmm.ssssss-A1$	$Uffff.ccc.ssssss-A1$
The leftmost code is always U.	The leftmost code is always U.
$tttt$ represents the unit type of the enclosure (drawer or node).	$ffff$ represents the feature code of the enclosure (drawer or node).
$mmm$ represents the model of the enclosure.	$ccc$ represents the sequence number of the enclosure.
$ssssss$ represents the serial number for the enclosure.	$ssssss$ represents the serial number of the enclosure.
<b>Note:</b> The $mmm$ or $ccc$ number might not be displayed on all location codes for all servers. If the $mmm$ value is not displayed, the location code is displayed in one of the following forms:	
<ul style="list-style-type: none"><li>• <math>Utttt.ssssss-A1</math></li><li>• <math>Uffff.ssssss-A1</math></li></ul>	

The location code is hierarchical; that is, each location identifier in the string represents a physical part. The order (from left to right) in which each identifier is shown, helps you determine which parts contain other parts in the string.

The dash (-) separator character represents a relationship between two components in the unit. In the example of the fan, whose location code is  $U_n-A1$ , the dash shows that the fan (A1) is contained in the base unit (or  $U_n$ ). Modules, adapters, cables, and devices are all parts that are plugged into another part. Their location codes always show that they are plugged into another part as components of the server. Another example follows:  $U_n-P1-C9$  is a memory dual inline memory module (DIMM) (C9) that is plugged into a backplane (P1), which is inside the unit ( $U_n$ ).

Table 10. Unit type and locations

Unit type (Utttt.mmm)	Link to location information
U8231.E1C or U8231.E2C	8231-E1C or 8231-E2C locations

## Location code labels

The prefixes in location code labels represent a physical part of the server. The following table describes the prefixes in location code labels.

**Note:** These labels apply to system units only.

Table 11. Prefixes in a location code label for system units

Prefix	Description	Example
A	Air-moving device	Fan, blower
C	Card connector	IOP, IOA, DIMM, processor card
D	Device	Diskette, control panel
E	Electrical	Battery, power supply, ac charger
L	Logical path SAS target	Integrated drive electronics (IDE) address, Fibre Channel LUN
N	Horizontal placement for an empty rack location	
P	Planar	System backplane
T	Port, external cable	
U	Unit	
V	Virtual planar	
W	Worldwide unique ID	
X	EIA value for an empty rack location	
Y	Firmware FRU	

## Worldwide unique identifier

The location code label for the worldwide unique identifier consists of the prefix W followed by a maximum of 16 uppercase hexadecimal digits with no leading zeros. A location code might not consist of a worldwide unique identifier. When present, the worldwide unique identifier location label follows the location label of the resource that interfaces with the resource that has the worldwide unique identifier, usually a port.

### 8231-E1C, 8231-E1D, 8231-E2C, 8231-E2D, or 8268-E1D locations

Use this information to help you map a location code to a position on the unit.

The following diagrams show field replaceable unit (FRU) layouts in the system. Use these diagrams with the following tables.

## Rack views

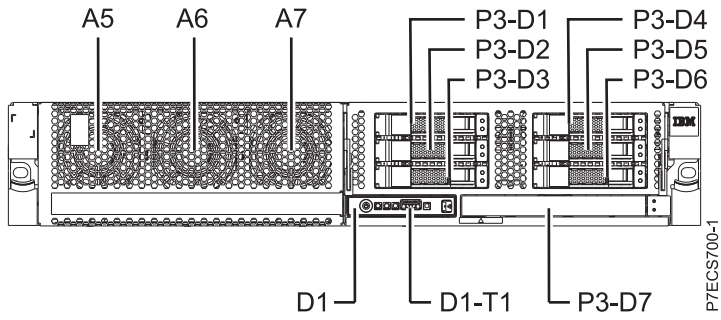


Figure 23. Front view of the base model with six small-form factor (SFF) bays

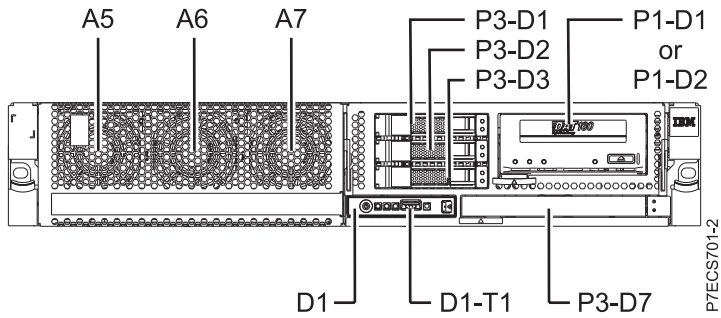


Figure 24. Front view of the model with three SFF bays (optional)

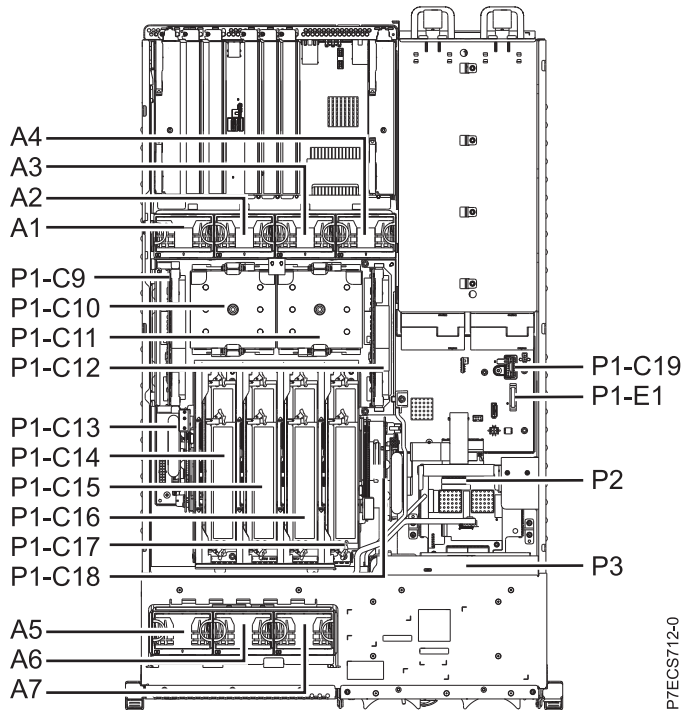


Figure 25. Top view

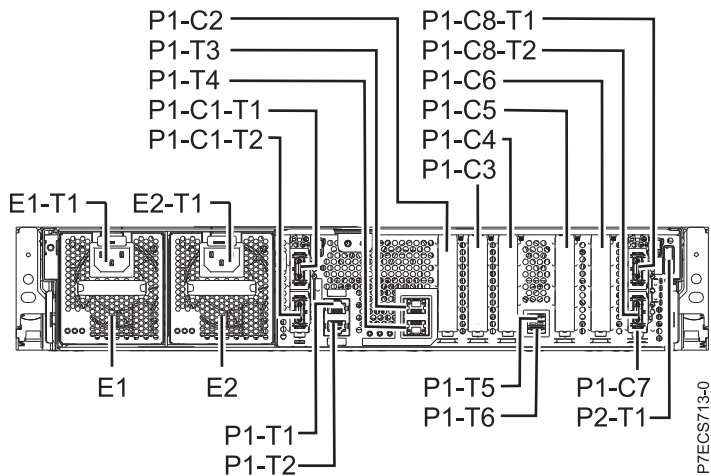


Figure 26. Rear view

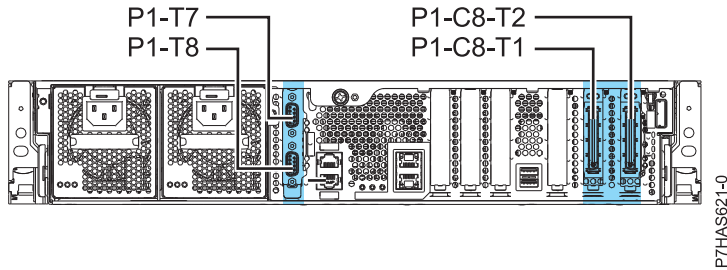


Figure 27. Rear view with feature code EJ0G (optional)

### Memory card locations

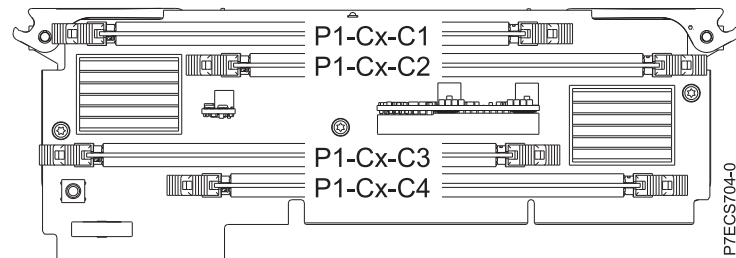


Figure 28. Memory card locations

### PCIe SAS RAID and SSD adapter locations

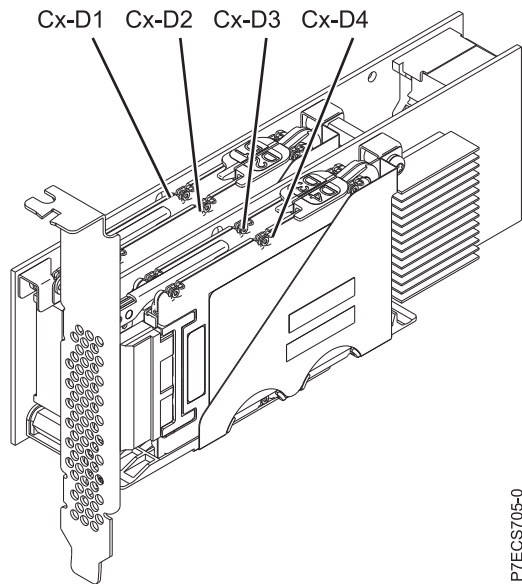


Figure 29. PCIe SAS RAID and SSD adapter locations

The following table provides location codes for parts in a server.

Table 12. FRU location table

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
System unit	Un		
<b>Fans</b>			
Fan 1	Un-A1	Yes	See Fans.
Fan 2	Un-A2	Yes	
Fan 3	Un-A3	Yes	
Fan 4	Un-A4	Yes	
Fan 5	Un-A5	Yes	
Fan 6	Un-A6	Yes	
Fan 7	Un-A7	Yes	
<b>Power supplies</b>			
Power supply 1	Un-E1	Yes	See Power supplndary.
Power supply 1 - Cord connector	Un-E1-T1	No	
Power supply 2	Un-E2	Yes	
Power supply 2 - Cord connector	Un-E2-T1	No	
<b>Backplanes</b>			
System backplane	Un-P1	Yes	See System backplane.
Time-of-day	Un-P1		
Time-of-day battery	Un-P1-E1		See Time-of-day battery.
Storage backplane interposer	Un-P2	Yes	

Table 12. FRU location table (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Disk drive backplane	Un-P3	Yes	See Disk drive backplane.
<b>Ports</b>			
System port 1	Un-P1-T1	No	
System port 2	Un-P1-T2	No	
HMC port 1	Un-P1-T3	No	
HMC port 2	Un-P1-T4	No	
USB port 1	Un-P1-T5	No	
USB port 2	Un-P1-T6	No	
SPCN port 1	Un-P1-T7	No	
SPCN port 2	Un-P1-T8	No	
<b>Processor and processor regulator</b>			
POWER7 processor module 1	Un-P1-C11	Yes	See System processor module.
POWER7 processor module 2	Un-P1-C10	Yes	
POWER7 processor module 1 VRM	Un-P1-C12	Yes	See Voltage regulator module.
POWER7 processor module 2 VRM	Un-P1-C9	Yes	
<b>Adapters</b>			
PCIe x8 G2 slot 1	Un-P1-C2	Yes	See PCI adapters.
PCIe x8 G2 slot 2	Un-P1-C3	Yes	
PCIe x8 G2 slot 3	Un-P1-C4	Yes	
PCIe x8 G2 slot 4	Un-P1-C5	Yes	
PCIe x8 G2 slot 5	Un-P1-C6	Yes	
PCIe x4 G2 slot 6	Un-P1-C7	Yes	
GX Dual-Port 12X Channel Attach adapter slot 1	Un-P1-C1	Yes	See GX++ channel adapters.
GX Dual-Port 12X Channel Attach adapter slot 1 card - port 1	Un-P1-C1-T1	Yes	
GX Dual-Port 12X Channel Attach adapter slot 1 card - port 2	Un-P1-C1-T2	Yes	
GX Dual-Port 12X Channel Attach adapter slot 2	Un-P1-C8	Yes	
GX Dual-Port 12X Channel Attach adapter slot 2 card - port 1	Un-P1-C8-T1	Yes	
GX Dual-Port 12X Channel Attach adapter slot 2 card - port 2	Un-P1-C8-T2	Yes	
System VPD card	Un-P1-C19		

Table 12. FRU location table (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Cache battery card	Un-P1-C13	Yes	See SAS RAID enablement and cache battery pack.
Battery on cache battery card	Un-P1-C13-E1	Yes	
RAID and cache storage controller	Un-P1-C18	Yes	
Battery on RAID and cache storage controller	Un-P1-C18-E1	Yes	
<b>Memory modules</b>			
Memory card 1	Un-P1-C17	Yes	See Memory modules.
Memory card 1 - DIMM 1	Un-P1-C17-C1	Yes	
Memory card 1 - DIMM 2	Un-P1-C17-C2	Yes	
Memory card 1 - DIMM 3	Un-P1-C17-C3	Yes	<b>Note:</b> The DIMM fault and identify LED is not visible when the system is in the service position.
Memory card 1 - DIMM 4	Un-P1-C17-C4	Yes	
Memory card 2	Un-P1-C16	Yes	
Memory card 2 - DIMM 1	Un-P1-C16-C1	Yes	
Memory card 2 - DIMM 2	Un-P1-C16-C2	Yes	
Memory card 2 - DIMM 3	Un-P1-C16-C3	Yes	<b>Note:</b> The DIMM fault and identify LED is not visible when the system is in the service position.
Memory card 2 - DIMM 4	Un-P1-C16-C4	Yes	
Memory card 3	Un-P1-C15	Yes	
Memory card 3 - DIMM 1	Un-P1-C15-C1	Yes	
Memory card 3 - DIMM 2	Un-P1-C15-C2	Yes	
Memory card 3 - DIMM 3	Un-P1-C15-C3	Yes	<b>Note:</b> The DIMM fault and identify LED is not visible when the system is in the service position.
Memory card 3 - DIMM 4	Un-P1-C15-C4	Yes	
Memory card 4	Un-P1-C14	Yes	
Memory card 4 - DIMM 1	Un-P1-C14-C1	Yes	
Memory card 4 - DIMM 2	Un-P1-C14-C2	Yes	
Memory card 4 - DIMM 3	Un-P1-C14-C3	Yes	<b>Note:</b> The DIMM fault and identify LED is not visible when the system is in the service position.
Memory card 4 - DIMM 4	Un-P1-C14-C4	Yes	
<b>Device physical locations</b>			
Tape drive (SAS)	Un-P1-D1	No	

Table 12. FRU location table (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Tape drive (USB)	Un-P1-D2	No	
Disk drive 1	Un-P3-D1	Yes	See Disk drives.
Disk drive 2	Un-P3-D2	Yes	
Disk drive 3	Un-P3-D3	Yes	
Disk drive 4	Un-P3-D4	Yes	
Disk drive 5	Un-P3-D5	Yes	
Disk drive 6	Un-P3-D6	Yes	
Solid-state disk drive (SSD) 1 on PCIe SAS RAID and SSD adapter	Un-P1-Cx-D1	No	
Solid-state disk drive 2 on PCIe SAS RAID and SSD adapter	Un-P1-Cx-D2	No	
Solid-state disk drive 3 on PCIe SAS RAID and SSD adapter	Un-P1-Cx-D3	No	
Solid-state disk drive 4 on PCIe SAS RAID and SSD adapter	Un-P1-Cx-D4	No	
DVD	Un-P3-D7	Yes	
SAS port	Un-P2-T1	No	
Embedded SAS controller	Un-P1-T9	No	
<b>Control panel</b>			
Control panel	Un-D1	No	See Control panel and signal cables for the 8231-E2B system.
Temperature sensor	Un-D1	No	
Control panel - USB port	Un-D1-T1	No	
<b>Server firmware</b>			
Server firmware	Um-Y1		

**Related reference:**

“8231-E1C, 8231-E1D, 8231-E2C, 8231-E2D, or 8268-E1D system parts” on page 209  
 Indexed drawings show system part numbers of each part.

**8233-E8B and 8236-E8C**

The information provided in this topic defines specific sections of a location code string. Use this information to understand the meaning of a location code.

**Using location codes**

Use the following table to link to a specific topic that you need additional information on when reading your location code.



Location code topics that might be of interest	Description
"Location code overview"	Contains background information on the use of location codes.
"Physical location codes"	Provides a definition for physical location code.
"Logical location codes" on page 46	Provides a definition of what a logical location code is.
"Location code format" on page 46	Provides descriptive information of the <i>Un</i> value in the location code string. For example U78A0.001.
"Location code labels" on page 47	Provides a table that identifies and defines the location code labels. The location code labels begin with an alphabetic character and follow the system serial number. For example, U78A0.001.10ABCDE-P3-C31-T2-L23. (The system serial number is the 10ABCDE in the previous example.) The P3, C31, T2, and L23 all contain an alphabetic character that is identified in the Location code labels table.
"Worldwide unique identifier" on page 47	Provides a definition for the world unique identifier. This group of digits follows the resource code labels and always begins with the letter <i>W</i> .

## Location code overview

Servers (system unit and expansion units) use physical location codes to provide mapping of replaceable units. Location codes are produced by the server's firmware, which structures them so that they can be used to identify specific parts in a system. The location code format is the same for all servers.

If you are working with a specific location code, the unit type and model immediately follow the first character (*Utttt.mmmm*). Match the unit type and model to a link, as shown in the Unit type and locations table.

If the location code ends with *-Txx-Lxx*, the server's firmware could not identify the physical location. When a physical location cannot be identified, a logical location code is provided. Where logical location codes occur in enclosures, the locations topic for the enclosure has the known conversions listed. For logical location codes with no conversion, contact your next level of support.

If the location code begins with *UTMPx*, the expansion I/O unit's machine type, model and serial number have not been set yet and this is a temporary unit identifier. To identify the unit, examine the display panels on all of the expansion I/O units connected to the server until you find one with the same characters in the first 5 digits of the top line in the unit's display. Record the unit's real machine type and model from the unit label. Match the unit's machine type and model in the Unit type and locations table and follow the link to determine the service information.

**Note:** Locations for units that are not in the preceding list are either not supported or there is a problem in the firmware. Contact your next level of support.

## Physical location codes

Physical location codes provide a mapping of logical functions and components (such as backplanes, removable modules, connectors, ports, cables, and devices) to their specific locations within the physical structure of the server.

## Logical location codes

If the physical location cannot be mapped to a physical location code, the server's firmware generates a logical location code. A logical location code is a sequence of location labels that identifies the path that the system uses to communicate with a given resource.

**Note:** A resource has as many logical location codes as it has logical connections to the system. For example, an external tape device connected to two I/O adapters will have two logical location codes.

An example of a logical location code is:

U7879.001.10ABCDE-P3-C31-T2-L23

The first part of the location code (through the T2 label) represents the physical location code for the resource that communicates with the target resource. The remainder of the logical location code (L23) represents exactly which resource is indicated.

## Location code format

The location code is an alphanumeric string of variable length, consisting of a series of location identifiers, separated by a dash. An example of a physical location for a fan is  $U_n-A1$ .

The first position, represented by  $U_n$  (where  $n$  is equal to any string contained between the U and the hyphen) in the preceding example, is displayed in one of the forms in the following table.

**Note:** In location codes the U is a constant digit; however, the numbered positions that follow the U are variables and are dependent on your server. Each column defines the numbers that follow the U in the beginning of the location code.

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
$Utttt.mmm.ssssss-A1$	$Uffff.ccc.ssssss-A1$
The leftmost code is always U.	The leftmost code is always U.
$tttt$ represents the unit type of the enclosure (drawer or node).	$ffff$ represents the feature code of the enclosure (drawer or node).
$mmm$ represents the model of the enclosure.	$ccc$ represents the sequence number of the enclosure .
$ssssss$ represents the serial number for the enclosure.	$ssssss$ represents the serial number of the enclosure.
<b>Note:</b> The $mmm$ or $ccc$ number might not be displayed on all location codes for all servers. If the $mmm$ value is not displayed, the location code is displayed in one of the following forms:	
<ul style="list-style-type: none"><li>• <math>Utttt.ssssss-A1</math></li><li>• <math>Uffff.ssssss-A1</math></li></ul>	

The location code is hierarchical; that is, each location identifier in the string represents a physical part. The order (from left to right), in which each identifier is shown, allows you to determine which parts contain other parts in the string.

The dash (-) separator character represents a relationship between two components in the unit. In the example of the fan, whose location code is  $U_n-A1$ , the dash shows that the fan (A1) is contained in the base unit (or  $U_n$ ). Modules, adapters, cables, and devices are all parts that are plugged into another part. Their location codes will always show that they are plugged into another part as components of the server. Another example follows;  $U_n-P1-C9$  is a memory DIMM, with memory DIMM (C9) plugged into a backplane (P1), which is inside the unit ( $U_n$ ).

**Note:** For devices, certain error conditions might cause an IBM i device to display the device location in an AIX format.

Table 13. Unit type and locations

Unit type (Utttt)	Link to location information
U8233.E8B	8233-E8B or 8236-E8C Locations

## Location code labels

The location code label represents a physical part of the server. The following table describes the prefixes of location code labels.

**Note:** These labels apply to system units only.

Table 14. Prefixes of location code labels for system units

Prefix	Description	Example
A	Air-moving device	Fan, blower
C	Card connector	IOP, IOA, DIMM, processor card
D	Device	Diskette, control panel
E	Electrical	Battery, power supply, ac charger
L	Logical path SAS target	Integrated drive electronics (IDE) address, Fibre Channel LUN
N	Horizontal placement for an empty rack location	
P	Planar	System backplane
T	Port, external cables	
U	Unit	
V	Virtual planar	
W	Worldwide unique ID	
X	EIA value for an empty rack location	
Y	Firmware FRU	

## Worldwide unique identifier

The location code label for the worldwide unique identifier consists of the prefix W followed by a maximum of 16 uppercase hexadecimal digits with no leading zeros. A location code might not consist of a worldwide unique identifier. When present, the worldwide unique identifier location label follows the location label of the resource that interfaces with the resource that has the worldwide unique identifier, usually a port.

## 8233-E8B and 8236-E8C locations

Use this information to help you map a location code to a position on the unit.

The following diagrams show field replaceable unit (FRU) layouts in the system. Use these diagrams with the following tables.

## Rack views

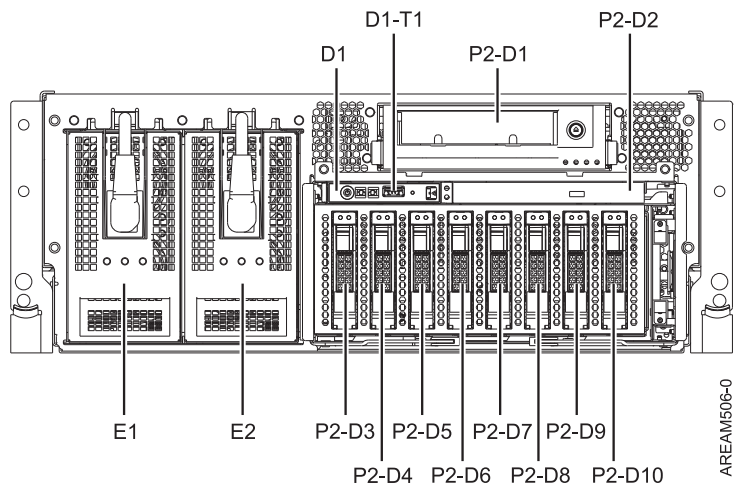


Figure 30. Rack front view

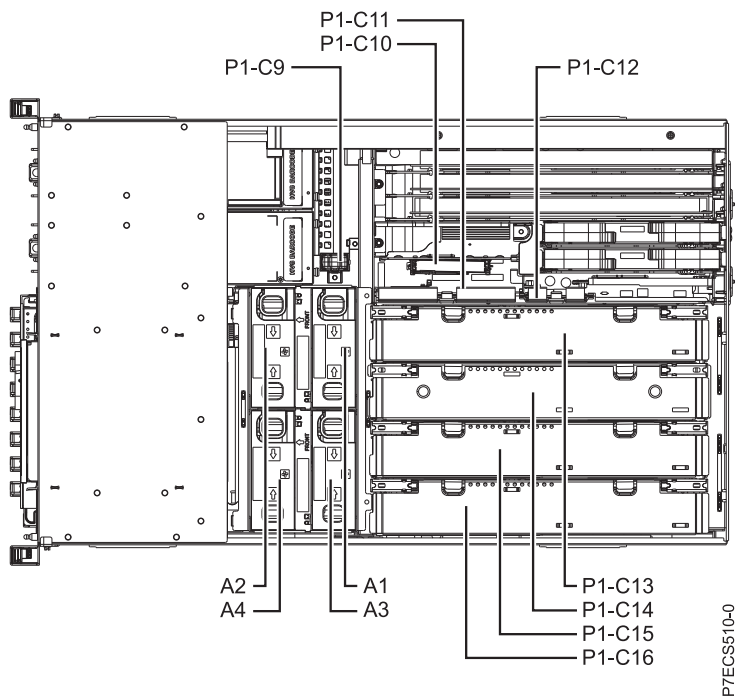


Figure 31. Rack top view

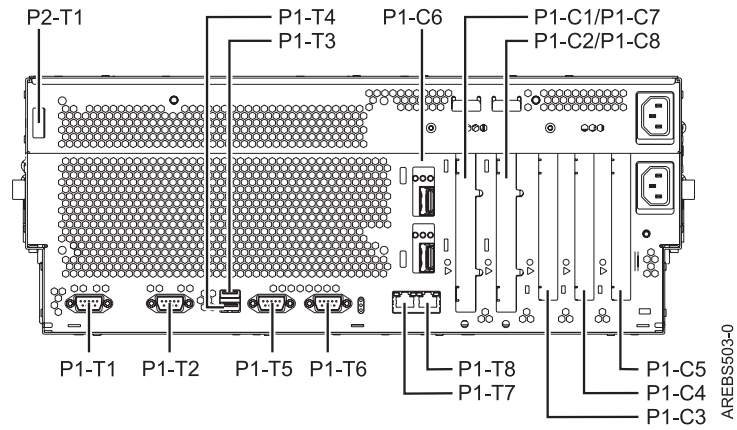


Figure 32. Rack rear view

### Processor book

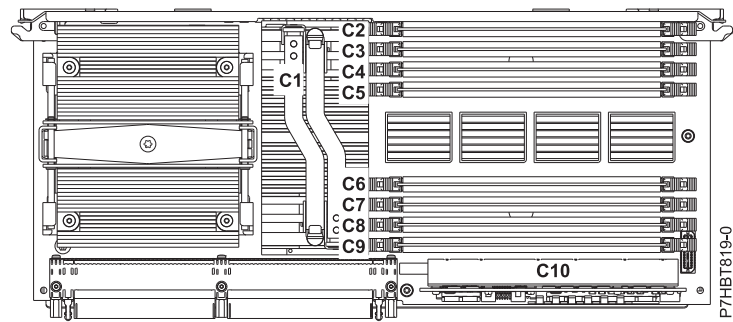


Figure 33. Processor book

### Location codes

The following table provides location codes for parts that comprise the server.

Table 15. FRU location table

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
System unit	U <sub>n</sub>		
Fans			

Table 15. FRU location table (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Fan 1	Un-A1	Yes	See Fans.
Fan 2	Un-A2	Yes	
Fan 3	Un-A3	Yes	
Fan 4	Un-A4	Yes	
<b>Power supplies</b>			
Power supply 1	Un-E1	Yes	See Power supply.
Power supply 2	Un-E2	Yes	
<b>Backplanes</b>			
Input/output backplane with embedded: <ul style="list-style-type: none"> <li>• Ethernet controller</li> <li>• USB controller (AIX or Linux only)</li> <li>• SAS controllers</li> <li>• Logic oscillator</li> <li>• Service processor</li> <li>• SPCN</li> <li>• Time-of-day</li> </ul>	Un-P1	Yes	See System backplane.
Battery	Un-P1-E1		
Disk drive and media backplane	Un-P2	Yes	See Disk drive backplane.
<b>System backplane ports</b>			
System serial port 1 (rear view - left connector)	Un-P1-T1		
System serial port 2 (rear view - right connector)	Un-P1-T2		
Embedded USB front port	Un-D1-T1		
Embedded USB rear port 1	Un-P1-T3		
Embedded USB rear port 2	Un-P1-T4		
SPCN port 1 (rear view - left connector)	Un-P1-T5		
SPCN port 2 (rear view - right connector)	Un-P1-T6		
HMC 1 (rear view - left connector)	Un-P1-T7		
HMC 2 (rear view - right connector)	Un-P1-T8		
Dual 10 GB Ethernet port 1 (top RJ45 connector)	Un-P1-C6-T1		
Dual 10 GB Ethernet port 2 (bottom RJ45 connector)	Un-P1-C6-T2		
Quad 1 GB Ethernet port 1 (top RJ45 connector)	Un-P1-C6-T1		
Quad 1 GB Ethernet port 2 (middle top RJ45 connector)	Un-P1-C6-T2		

Table 15. FRU location table (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Quad 1 GB Ethernet port 3 (middle bottom RJ45 connector)	Un-P1-C6-T3		
Quad 1 GB Ethernet port 4 (bottom RJ45 connector)	Un-P1-C6-T4		
External SAS port	Un-P2-T1		
<b>Processor and processor regulator</b>			
POWER7 Processor card 1	Un-P1-C13	Yes	See System processor module.
POWER7 Processor card 2	Un-P1-C14	Yes	
POWER7 Processor card 3	Un-P1-C15	Yes	
POWER7 Processor card 4	Un-P1-C16	Yes	
Processor VRM (Vdd, Vcs, and Vio)	Un-P1-C13-C1	Yes	See Voltage regulator module.
Processor VRM (Vdd, Vcs, and Vio)	Un-P1-C14-C1	Yes	
Processor VRM (Vdd, Vcs, and Vio)	Un-P1-C15-C1	Yes	
Processor VRM (Vdd, Vcs, and Vio)	Un-P1-C16-C1	Yes	
Memory VRM (Vcc, Vdim, and Vtt)	Un-P1-C13-C10	Yes	
Memory VRM (Vcc, Vdim, and Vtt)	Un-P1-C14-C10	Yes	
Memory VRM (Vcc, Vdim, and Vtt)	Un-P1-C15-C10	Yes	
Memory VRM (Vcc, Vdim, and Vtt)	Un-P1-C16-C10	Yes	
VPD card	Un-P1-C9	Yes	
<b>Adapters</b>			
PCIe x8 adapter in slot 1	Un-P1-C1	Yes	See PCI Adapters.
PCIe x8 adapter in slot 2	Un-P1-C2	Yes	
PCIe x8 adapter in slot 3	Un-P1-C3	Yes	
PCI-X 2.0 adapter in slot 4	Un-P1-C4	Yes	
PCI-X 2.0 adapter in slot 5	Un-P1-C5	Yes	
HEA Ethernet card	Un-P1-C6	Yes	See Host Ethernet adapter.

Table 15. FRU location table (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
GX adapters controller slot 1 (rear view - second slot from center)	Un-P1-C8	Yes	See GX adapters.
GX Dual-Port 12X Channel Attach adapter controller slot 2 (rear view - first slot from center)	Un-P1-C7	Yes	
GX adapters controller slot 1 port 1 (top connector)	Un-P1-C8-T1	No	
GX adapters controller slot 1 port 2 (bottom connector)	Un-P1-C8-T2	No	
GX Dual-Port 12X Channel Attach adapter controller slot 2 port 1 (top connector)	Un-P1-C7-T1	No	
GX Dual-Port 12X Channel Attach adapter controller slot 2 port 2 (bottom connector)	Un-P1-C7-T2	No	
RAID auxiliary card	Un-P1-C10	Yes	See SAS RAID enablement and cache battery pack.
RAID card battery	Un-P1-C10-E1	No	
RAID base card	Un-P1-C11	Yes	
Thermal management card	Un-P1-C12	Yes	
<b>Memory modules</b>			



Table 15. FRU location table (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Memory module 1 on processor 1	Un-P1-C13-C2	Yes	See Memory modules.
Memory module 2 on processor 1	Un-P1-C13-C3	Yes	
Memory module 3 on processor 1	Un-P1-C13-C4	Yes	
Memory module 4 on processor 1	Un-P1-C13-C5	Yes	
Memory module 5 on processor 1	Un-P1-C13-C6	Yes	
Memory module 6 on processor 1	Un-P1-C13-C7	Yes	
Memory module 7 on processor 1	Un-P1-C13-C8	Yes	
Memory module 8 on processor 1	Un-P1-C13-C9	Yes	
Memory module 1 on processor 2	Un-P1-C14-C2	Yes	
Memory module 2 on processor 2	Un-P1-C14-C3	Yes	
Memory module 3 on processor 2	Un-P1-C14-C4	Yes	
Memory module 4 on processor 2	Un-P1-C14-C5	Yes	
Memory module 5 on processor 2	Un-P1-C14-C6	Yes	
Memory module 6 on processor 2	Un-P1-C14-C7	Yes	
Memory module 7 on processor 2	Un-P1-C14-C8	Yes	
Memory module 8 on processor 2	Un-P1-C14-C9	Yes	
Memory module 1 on processor 3	Un-P1-C15-C2	Yes	
Memory module 2 on processor 3	Un-P1-C15-C3	Yes	
Memory module 3 on processor 3	Un-P1-C15-C4	Yes	
Memory module 4 on processor 3	Un-P1-C15-C5	Yes	
Memory module 5 on processor 3	Un-P1-C15-C6	Yes	
Memory module 6 on processor 3	Un-P1-C15-C7	Yes	
Memory module 7 on processor 3	Un-P1-C15-C8	Yes	
Memory module 8 on processor 3	Un-P1-C15-C9	Yes	
Memory module 1 on processor 4	Un-P1-C16-C2	Yes	
Memory module 2 on processor 4	Un-P1-C16-C3	Yes	
Memory module 3 on processor 4	Un-P1-C16-C4	Yes	
Memory module 4 on processor 4	Un-P1-C16-C5	Yes	
Memory module 5 on processor 4	Un-P1-C16-C6	Yes	
Memory module 6 on processor 4	Un-P1-C16-C7	Yes	
Memory module 7 on processor 4	Un-P1-C16-C8	Yes	
Memory module 8 on processor 4	Un-P1-C16-C9	Yes	
<b>Device physical locations</b>			
Half high SAS Tape Device	Un-P2-D1	No	
Slim DVD	Un-P2-D2	No	

Table 15. FRU location table (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
SFF Disk drive 1	Un-P2-D3	Yes	See Disk drives.
SFF Disk drive 2	Un-P2-D4	Yes	
SFF Disk drive 3	Un-P2-D5	Yes	
SFF Disk drive 4	Un-P2-D6	Yes	
SFF Disk drive 5	Un-P2-D7	Yes	
SFF Disk drive 6	Un-P2-D8	Yes	
SFF Disk drive 7	Un-P2-D9	Yes	
SFF Disk drive 8	Un-P2-D10	Yes	
<b>Control panel</b>			
Operator panel	Un -D1	No	See Control panel and signal cables.
Temperature sensor	Un -D1	No	
<b>Server firmware</b>			
Platform firmware	Um-Y1		
System	Um		

**Related reference:**

“8233-E8B and 8236-E8C system parts” on page 217  
 Indexed drawings show system part numbers.

**8248-L4T, 8408-E8D, or 9109-RMD**

The information provided in this topic defines specific sections of a location code string. Use this information to understand the meaning of a location code.

**Using location codes**

For additional information about reading your location code, use the following table to link to a specific topic.

Location code topics	Description
“Location code overview” on page 55	Contains background information on the use of location codes.
“Physical location codes” on page 55	Provides a definition for physical location code.
“Logical location codes” on page 55	Provides a definition for a logical location code.
“Location code format” on page 56	Provides descriptive information of the Un value in the location code string. For example, U5886.001.
“Location code labels” on page 56	Provides a table that identifies and defines the location code labels. The location code labels begin with an alphabetic character and follow the system serial number. For example, U7879.001.10ABCDE-P3-C31-T2-L23. (The system serial number is the 10ABCDE in the previous example.) P3, C31, T2, and L23 all contain an alphabetic character that is identified in the Location code labels table.

Location code topics	Description
"Worldwide unique identifier" on page 57	Provides a definition for the worldwide unique identifier. This group of digits follows the resource code labels and always begins with the letter W.

## Location code overview

Servers (system units and expansion units) use physical location codes to provide mapping of replaceable units. Location codes are produced by the server's firmware, which positions them so that they can be used to identify specific parts in a system. The location code format is the same for all servers.

If you are working with a specific location code, the feature immediately follows the first character (U5886). Match the unit type and model to a link, as shown in the Unit type and locations table..

If the location code ends with **-Txx-Lxx**, the server's firmware could not identify the physical location. When a physical location cannot be identified, a logical location code is provided. Where logical location codes occur in enclosures, the locations topic for the enclosure has the known conversions listed. For logical location codes with no conversion, contact your next level of support.

If the location code begins with **UTMPx**, the machine type, model, and serial number of the expansion I/O unit have not been set yet, and this is a temporary unit identifier. To identify the unit, examine the display panels on all of the expansion I/O units connected to the server until you find one with the same characters in the first 5 digits of the top line in the unit's display. Record the unit's real machine type and model from the unit label. Match the unit's machine type and model in the Unit type and locations table, and follow the link to determine the service information.

**Note:** If locations for units are not in the preceding format, either they are not supported or there is a problem in the firmware. Contact your next level of support.

## Physical location codes

Physical location codes provide a mapping of logical functions and components (such as backplanes, removable modules, connectors, ports, cables, and devices) to their specific locations within the physical structure of the server.

## Logical location codes

If the physical location cannot be mapped to a physical location code, the server's firmware generates a logical location code. A logical location code is a sequence of location labels that identifies the path that the system uses to communicate with a given resource.

**Note:** A resource has as many logical location codes as it has logical connections to the system. For example, an external tape device connected to two I/O adapters will have two logical location codes.

An example of a logical location code is:

U7879.001.10ABCDE-P3-C31-T2-L23

The first part of the location code (through the T2 label) represents the physical location code for the resource that communicates with the target resource. The remainder of the logical location code (L23) represents which resource is indicated.

## Location code format

The location code is an alphanumeric string of variable length, consisting of a series of location identifiers, separated by a dash. An example of a physical location for a fan is *Un-A1*.

The first position, represented by *Un* (where *n* is equal to any string contained between the U and the hyphen) in the preceding example, is displayed in one of the forms in the following table.

**Note:** In location codes, the U is a constant digit; however, the numbered positions following the U are variables and are dependent on your server. Each column defines the numbers that follow the U in the beginning of the location code.

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
<i>Utttt.mmm.ssssss-A1</i>	<i>Uffff.ccc.ssssss-A1</i>
The leftmost code is always U.	The leftmost code is always U.
<i>ttt</i> represents the unit type of the enclosure (drawer or node).	<i>fff</i> represents the feature code of the enclosure (drawer or node).
<i>mmm</i> represents the model of the enclosure.	<i>ccc</i> represents the sequence number of the enclosure.
<i>sssss</i> represents the serial number for the enclosure.	<i>sssss</i> represents the serial number of the enclosure.
<p><b>Note:</b> The <i>mmm</i> or <i>ccc</i> number might not be displayed on all location codes for all servers. If the <i>mmm</i> value is not displayed, the location code is displayed in one of the following forms:</p> <ul style="list-style-type: none"> <li>• <i>Utttt.ssssss-A1</i></li> <li>• <i>Uffff.ssssss-A1</i></li> </ul>	

The location code is hierarchical; that is, each location identifier in the string represents a physical part. The order (from left to right), in which each identifier is shown, helps you determine which parts contain other parts in the string.

The dash (-) separator character represents a relationship between two components in the unit. In the example of the fan, whose location code is *Un-A1*, the dash shows that the fan (A1) is contained in the base unit (or *Un*). Modules, adapters, cables, and devices are all parts that are plugged into another part. Their location codes always show that they are plugged into another part as components of the server. Another example follows: *Un-P1-C9* is memory DIMM (C9), which is plugged into a backplane (P1), which is inside the unit (*Un*).

**Note:** For devices, certain error conditions might cause an IBM i device to display the device location in an AIX format.

Table 16. Unit type and locations

Unit type (Utttt.mmm)	Link to location information
U78C5.001	8248-L4T, 8408-E8D, or 9109-RMD locations.

## Location code labels

The location code label represents a physical part of the server. The following table describes the prefixes of location code labels.

**Note:** These labels apply to system units only.

Table 17. Prefixes of location code labels for system units

Prefix	Description	Example
A	Air-moving device	Fan, blower
C	Card connector	IOP, IOA, DIMM, processor card
D	Device	Diskette, control panel
E	Electrical	Battery, power supply, ac charger
L	Logical path SAS target	Integrated drive electronics (IDE) address, Fibre Channel LUN
N	Horizontal placement for an empty rack location	
P	Planar	System backplane
T	Port	
U	Unit	
V	Virtual planar	
W	Worldwide unique ID	
X	EIA value for an empty rack location	
Y	Firmware FRU	

## Worldwide unique identifier

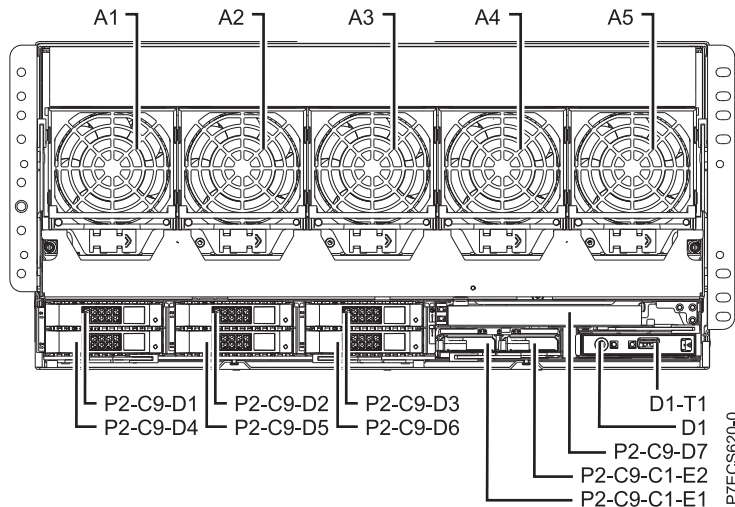
The location code label for the worldwide unique identifier consists of the prefix W followed by a maximum of 16 uppercase hexadecimal digits with no leading zeros. A location code might not consist of a worldwide unique identifier. When present, the worldwide unique identifier location label follows the location label of the resource that interfaces with the resource that has the worldwide unique identifier, usually a port.

## 8248-L4T, 8408-E8D, or 9109-RMD locations

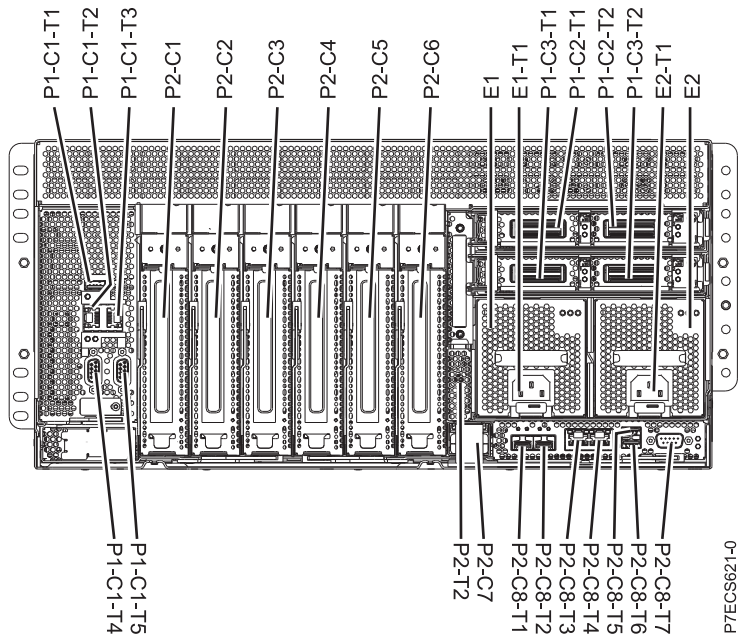
The following table contains location codes for the parts that make up the server.

The following diagrams show field replaceable unit (FRU) layouts in the system. Use these diagrams with the following tables.

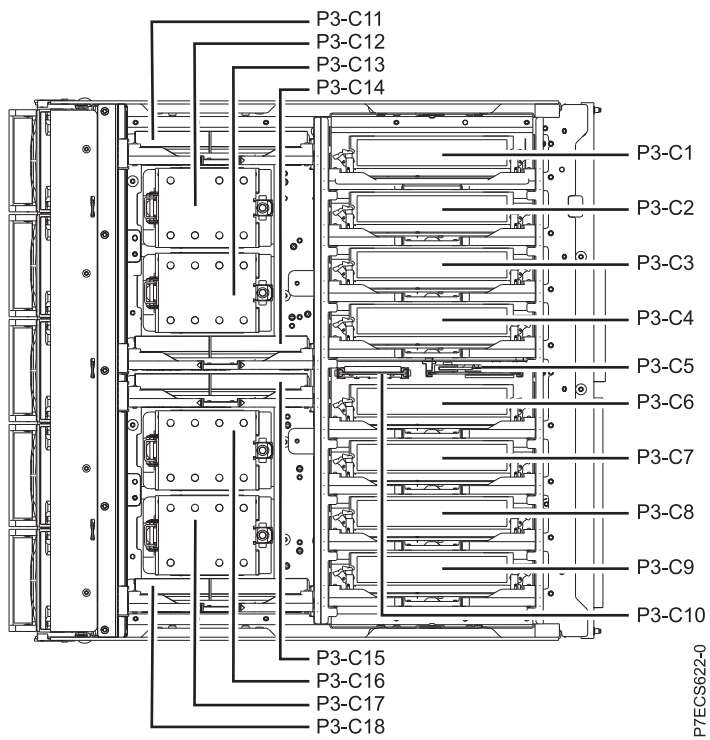
### Front



## Rear



## Top



## Memory card locations

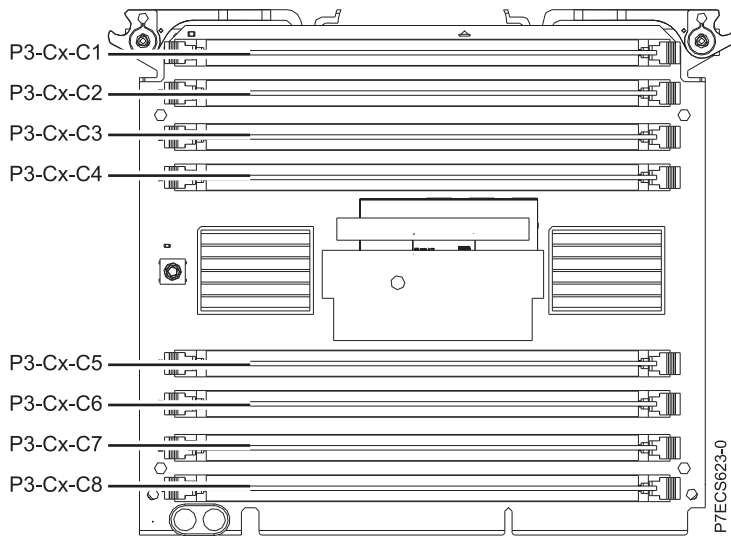


Table 18. FRU location table

Failing item name	Physical location code	Fault and identify LED	Failing item removal and replacement procedures
System unit	Un	Yes	
<b>Fans</b>			
Fan 1	Un-A1	Yes	See Fans.
Fan 2	Un-A2	Yes	
Fan 3	Un-A3	Yes	
Fan 4	Un-A4	Yes	
Fan 5	Un-A5	Yes	
<b>Power supplies</b>			
Power supply 1	Un-E1	Yes	See Power supply.
Power supply 1 - Line cord	Un-E1-T1		
Power supply 2	Un-E2	Yes	
Power supply 2 - Line cord	Un-E2-T1		
Battery pack (left)	Un-P2-C9-C1-E1	Yes	
Battery pack (right)	Un-P2-C9-C1-E2	Yes	
<b>Backplanes</b>			
Midplane	Un-P1	Yes	See Midplane.
I/O backplane	Un-P2	Yes	See I/O backplane.
System processor assembly	Un-P3	Yes	
Small form factor SAS disk drive backplane with embedded SAS adapters	Un-P2-C9	Yes	See Disk drive backplane.
<b>Ports</b>			
Integrated 10 Gb port	Un-P2-C8-T1		

Table 18. FRU location table (continued)

Failing item name	Physical location code	Fault and identify LED	Failing item removal and replacement procedures
Integrated 10 Gb port	Un-P2-C8-T2		
Integrated 10 Gb or 1 Gb Ethernet port	Un-P2-C8-T3		
Integrated 10 Gb or 1 Gb Ethernet port	Un-P2-C8-T4		
USB top port (integrated multifunction card)	Un-P2-C8-T5		
USB bottom port (integrated multifunction card)	Un-P2-C8-T6		
Integrated serial port (integrated multifunction card)	Un-P2-C8-T7		
Serial-attached SCSI (SAS) controller A	Un-P2-C9-R1		
SAS controller B	Un-P2-C9-R2		
External SAS cable connector	Un-P2-T2	Yes	
Integrated Serial Advanced Technology Attachment (SATA) controller	Un-P2-R1		
Integrated serial controller	Un-P2-T5	Yes	
GX++ 0 connector (1) (left)	Un-P1-C2-T1	Yes	
GX++ 1 connector (1) (right)	Un-P1-C2-T2	Yes	
GX++ 0 connector (2) (left)	Un-P1-C3-T1	Yes	
GX++ 1 connector (2) (right)	Un-P1-C3-T2	Yes	
RJ-45 management port 1	Un-P1-C2-T1	Yes	
RJ-45 management port 2	Un-P1-C2-T2	Yes	
<b>Processor and processor regulator</b>			
Processor voltage regulator for processor 1	Un-P3-C11	Yes	See Voltage regulator modules.
Processor voltage regulator for processor 2	Un-P3-C18	Yes	
Processor voltage regulator for processor 3	Un-P3-C14	Yes	
Processor voltage regulator for processor 4	Un-P3-C15	Yes	
Memory voltage regulator	Un-P3-C10	Yes	
Thermal power management device (TPMD) card	Un-P3-C5	Yes	See TPMD card.
Processor 1	Un-P3-C12	Yes	
Processor 2	Un-P3-C17	Yes	
Processor 3	Un-P3-C13	Yes	
Processor 4	Un-P3-C16	Yes	
Fan connector (leftmost)	Un-P3-T1		
Fan connector (second from left)	Un-P3-T2		
Fan connector (third from left)	Un-P3-T3		



Table 18. FRU location table (continued)

Failing item name	Physical location code	Fault and identify LED	Failing item removal and replacement procedures
Fan connector (second from right)	Un-P3-T4		
Fan connector (rightmost)	Un-P3-T5		
Vital product data (VPD) card	Un-P2-C7		See VPD card.
<b>Service processor</b>			
Service processor USB port	Un-P1-C1-T1		
Time-of-day (TOD)	Un-P1-C1		
Time-of-day battery	Un-P1-C1-E1		See Time-of-day battery.
HMC 1 connector	Un-P1-C1-T2	Identify only	
HMC 2 connector	Un-P1-C1-T3	Identify only	
SPCN 0 connector	Un-P1-C1-T4		
SPCN 1 connector	Un-P1-C1-T5		
Ambient temperature sensor	Un-D1		
<b>Adapters</b>			
PCIe adapter in slot 1	Un-P2-C1	Yes	See PCI adapters.
PCIe adapter in slot 2	Un-P2-C2	Yes	
PCIe adapter in slot 3	Un-P2-C3	Yes	
PCIe adapter in slot 4	Un-P2-C4	Yes	
PCIe adapter in slot 5	Un-P2-C5	Yes	
PCIe adapter in slot 6	Un-P2-C6	Yes	
1 Gb or 10 Gb integrated multifunction card	Un-P2-C8	Yes	See Integrated multifunction cards.
Service processor card	Un-P1-C1	Yes	See Service processor card.
Expansion card - GX++ (Slot 1)	Un-P1-C2	Yes	See GX adapters.
Expansion card - GX++ (Slot 2)	Un-P1-C3	Yes	
Disk drive controller	Un-P2-C9	Yes	
175 MB cache RAID and dual storage IOA enablement card	Un-P2-C9-C1	Yes	
<b>Memory modules</b>			

Table 18. FRU location table (continued)

Failing item name	Physical location code	Fault and identify LED	Failing item removal and replacement procedures
Memory card 1	Un-P3-C1	Yes	See Memory.
Memory card 1 - DIMM 1	Un-P3-C1-C1	Yes	
Memory card 1 - DIMM 2	Un-P3-C1-C2	Yes	
Memory card 1 - DIMM 3	Un-P3-C1-C3	Yes	
Memory card 1 - DIMM 4	Un-P3-C1-C4	Yes	
Memory card 1 - DIMM 5	Un-P3-C1-C5	Yes	
Memory card 1 - DIMM 6	Un-P3-C1-C6	Yes	
Memory card 1 - DIMM 7	Un-P3-C1-C7	Yes	
Memory card 1 - DIMM 8	Un-P3-C1-C8	Yes	See Memory.
Memory card 2	Un-P3-C2	Yes	
Memory card 2 - DIMM 1	Un-P3-C2-C1	Yes	
Memory card 2 - DIMM 2	Un-P3-C2-C2	Yes	
Memory card 2 - DIMM 3	Un-P3-C2-C3	Yes	
Memory card 2 - DIMM 4	Un-P3-C2-C4	Yes	
Memory card 2 - DIMM 5	Un-P3-C2-C5	Yes	
Memory card 2 - DIMM 6	Un-P3-C2-C6	Yes	
Memory card 2 - DIMM 7	Un-P3-C2-C7	Yes	See Memory.
Memory card 2 - DIMM 8	Un-P3-C2-C8	Yes	
Memory card 3	Un-P3-C3	Yes	
Memory card 3 - DIMM 1	Un-P3-C3-C1	Yes	
Memory card 3 - DIMM 2	Un-P3-C3-C2	Yes	
Memory card 3 - DIMM 3	Un-P3-C3-C3	Yes	
Memory card 3 - DIMM 4	Un-P3-C3-C4	Yes	
Memory card 3 - DIMM 5	Un-P3-C3-C5	Yes	
Memory card 3 - DIMM 6	Un-P3-C3-C6	Yes	See Memory.
Memory card 3 - DIMM 7	Un-P3-C3-C7	Yes	
Memory card 3 - DIMM 8	Un-P3-C3-C8	Yes	
Memory card 4	Un-P3-C4	Yes	
Memory card 4 - DIMM 1	Un-P3-C4-C1	Yes	
Memory card 4 - DIMM 2	Un-P3-C4-C2	Yes	
Memory card 4 - DIMM 3	Un-P3-C4-C3	Yes	
Memory card 4 - DIMM 4	Un-P3-C4-C4	Yes	
Memory card 4 - DIMM 5	Un-P3-C4-C5	Yes	
Memory card 4 - DIMM 6	Un-P3-C4-C6	Yes	See Memory.
Memory card 4 - DIMM 7	Un-P3-C4-C7	Yes	
Memory card 4 - DIMM 8	Un-P3-C4-C8	Yes	

Table 18. FRU location table (continued)

Failing item name	Physical location code	Fault and identify LED	Failing item removal and replacement procedures
Memory card 5	Un-P3-C6	Yes	See Memory.
Memory card 5 - DIMM 1	Un-P3-C6-C1	Yes	
Memory card 5 - DIMM 2	Un-P3-C6-C2	Yes	
Memory card 5 - DIMM 3	Un-P3-C6-C3	Yes	
Memory card 5 - DIMM 4	Un-P3-C6-C4	Yes	
Memory card 5 - DIMM 5	Un-P3-C6-C5	Yes	
Memory card 5 - DIMM 6	Un-P3-C6-C6	Yes	
Memory card 5 - DIMM 7	Un-P3-C6-C7	Yes	
Memory card 5 - DIMM 8	Un-P3-C6-C8	Yes	See Memory.
Memory card 6	Un-P3-C7	Yes	
Memory card 6 - DIMM 1	Un-P3-C7-C1	Yes	
Memory card 6 - DIMM 2	Un-P3-C7-C2	Yes	
Memory card 6 - DIMM 3	Un-P3-C7-C3	Yes	
Memory card 6 - DIMM 4	Un-P3-C7-C4	Yes	
Memory card 6 - DIMM 5	Un-P3-C7-C5	Yes	
Memory card 6 - DIMM 6	Un-P3-C7-C6	Yes	
Memory card 6 - DIMM 7	Un-P3-C7-C7	Yes	See Memory.
Memory card 6 - DIMM 8	Un-P3-C7-C8	Yes	
Memory card 7	Un-P3-C8	Yes	
Memory card 7 - DIMM 1	Un-P3-C8-C1	Yes	
Memory card 7 - DIMM 2	Un-P3-C8-C2	Yes	
Memory card 7 - DIMM 3	Un-P3-C8-C3	Yes	
Memory card 7 - DIMM 4	Un-P3-C8-C4	Yes	
Memory card 7 - DIMM 5	Un-P3-C8-C5	Yes	
Memory card 7 - DIMM 6	Un-P3-C8-C6	Yes	See Memory.
Memory card 7 - DIMM 7	Un-P3-C8-C7	Yes	
Memory card 7 - DIMM 8	Un-P3-C8-C8	Yes	
Memory card 8	Un-P3-C9	Yes	
Memory card 8 - DIMM 1	Un-P3-C9-C1	Yes	
Memory card 8 - DIMM 2	Un-P3-C9-C2	Yes	
Memory card 8 - DIMM 3	Un-P3-C9-C3	Yes	
Memory card 8 - DIMM 4	Un-P3-C9-C4	Yes	
Memory card 8 - DIMM 5	Un-P3-C9-C5	Yes	
Memory card 8 - DIMM 6	Un-P3-C9-C6	Yes	
Memory card 8 - DIMM 7	Un-P3-C9-C7	Yes	
Memory card 8 - DIMM 8	Un-P3-C9-C8	Yes	
<b>Device physical locations</b>			

Table 18. FRU location table (continued)

Failing item name	Physical location code	Fault and identify LED	Failing item removal and replacement procedures
Disk drive 1	Un-P2-C9-D1	Identify only	See Disk drives or solid-state drives.
Disk drive 2	Un-P2-C9-D2		
Disk drive 3	Un-P2-C9-D3		
Disk drive 4	Un-P2-C9-D4		
Disk drive 5	Un-P2-C9-D5		
Disk drive 6	Un-P2-C9-D6		
Integrated drive electronics (IDE) drive 1	Un-P2-C9-D7		
<b>Control panel</b>			
Control panel (bottom media bay)	Un-D1	Yes	See Control panel and signal cables.
Control panel USB port	Un-D1-T1		
<b>Server firmware</b>			
Server firmware	Un-Y1		

**Related reference:**

“8248-L4T, 8408-E8D, or 9109-RMD system parts” on page 227  
 Indexed drawings show system part numbers.

**9117-MMB and 9179-MHB**

The information provided in this topic defines specific sections of a location code string. Use this information to understand the meaning of a location code.

**Using location codes**

For additional information about reading your location code, use the following table to link to a specific topic.

Location code topics that might be of interest	Description
“Location code overview” on page 65	Contains background information on the use of location codes.
“Physical location codes” on page 65	Provides a definition for physical location code.
“Logical location codes” on page 65	Provides a definition for a logical location code.
“Location code format” on page 65	Provides descriptive information of the Un value in the location code string. For example U5886.001.
“Location code labels” on page 66	Provides a table that identifies and defines the location code labels. The location code labels begin with an alphabetic character and follow the system serial number. For example, U7879.001.10ABCDE-P3-C31-T2-L23. (The system serial number is the 10ABCDE in the previous example.) The P3, C31, T2, and L23 all contain an alphabetic character that is identified in the Location code labels table.
“Worldwide unique identifier” on page 67	Provides a definition for the worldwide unique identifier. This group of digits follows the resource code labels and always begins with the letter W.

## Location code overview

Servers (system unit and expansion units) use physical location codes to provide mapping of replaceable units. Location codes are produced by the server's firmware, which structures them so that they can be used to identify specific parts in a system. The location code format is the same for all servers.

If you are working with a specific location code, the feature immediately follows the first character (U5886). Refer to the Unit type and locations table.

If the location code ends with -Txx-Lxx, the server's firmware could not identify the physical location. When a physical location cannot be identified, a logical location code is provided. Where logical location codes occur in enclosures, the locations topic for the enclosure has the known conversions listed. For logical location codes with no conversion, contact your next level of support.

If the location code begins with **UTMPx**, the expansion I/O unit's machine type, model and serial number have not been set yet and this is a temporary unit identifier. To identify the unit, examine the display panels on all of the expansion I/O units connected to the server until you find one with the same characters in the first 5 digits of the top line in the unit's display. Record the unit's real machine type and model from the unit label. Match the unit's machine type and model in the Unit type and locations table, and follow the link to determine the service information.

**Note:** If locations for units are not in the preceding format, either they are not supported or there is a problem in the firmware. Contact your next level of support.

## Physical location codes

Physical location codes provide a mapping of logical functions and components (such as backplanes, removable modules, connectors, ports, cables, and devices) to their specific locations within the physical structure of the server.

## Logical location codes

If the physical location cannot be mapped to a physical location code, the server's firmware generates a logical location code. A logical location code is a sequence of location labels that identifies the path that the system uses to communicate with a given resource.

**Note:** A resource has as many logical location codes as it has logical connections to the system. For example, an external tape device connected to two I/O adapters will have two logical location codes.

An example of a logical location code is:

```
U7879.001.10ABCDE-P3-C31-T2-L23
```

The first part of the location code (through the T2 label) represents the physical location code for the resource that communicates with the target resource. The remainder of the logical location code (L23) represents exactly which resource is indicated.

## Location code format

The location code is an alphanumeric string of variable length, consisting of a series of location identifiers, separated by a dash. An example of a physical location for a fan is *Un-A1*.

The first position, represented by *Un* (where *n* is equal to any string contained between the U and the hyphen) in the preceding example, is displayed in one of the forms in the following table.

**Note:** In location codes, the U is a constant digit; however, the numbered positions following the U are variables and are dependent on your server. Each column defines the numbers that follow the U in the beginning of the location code.

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
Utttt.mmm.ssssss-A1	Uffff.ccc.ssssss-A1
The leftmost code is always U.	The leftmost code is always U.
tttt represents the unit type of the enclosure (drawer or node).	ffff represents the feature code of the enclosure (drawer or node).
mmm represents the model of the enclosure.	ccc represents the sequence number of the enclosure .
ssssss represents the serial number for the enclosure.	ssssss represents the serial number of the enclosure.
<p><b>Note:</b> The <i>mmm</i> or <i>ccc</i> number might not be displayed on all location codes for all servers. If the <i>mmm</i> value is not displayed, the location code is displayed in one of the following forms:</p> <ul style="list-style-type: none"> <li>• Utttt.ssssss-A1</li> <li>• Uffff.ssssss-A1</li> </ul>	

The location code is hierarchical; that is, each location identifier in the string represents a physical part. The order (from left to right), in which each identifier is shown, allows you to determine which parts contain other parts in the string.

The dash (-) separator character represents a relationship between two components in the unit. In the example of the fan, whose location code is *Un-A1*, the dash shows that the fan (A1) is contained in the base unit (or *Un*). Modules, adapters, cables, and devices are all parts that are plugged into another part. Their location codes always show that they are plugged into another part as components of the server. Another example follows: *Un-P1-C9* is a memory DIMM, with memory DIMM (C9) plugged into a backplane (P1), which is inside the unit (*Un*).

**Note:** For devices, certain error conditions might cause an IBM i device to display the device location in an AIX format.

Table 19. Unit type and locations

Unit type (Utttt.mmm)	Link to location information
U78C0.001	9117-MMB or 9179-MHB Locations

## Location code labels

The location code label represents a physical part of the server. The following table describes the prefixes of location code labels.

**Note:** These labels apply to system units only.

Table 20. Prefixes of location code labels for system units

Prefix	Description	Example
A	Air-moving device	Fan, blower
C	Card connector	IOP, IOA, DIMM, processor card
D	Device	Diskette, control panel
E	Electrical	Battery, power supply, ac charger
L	Logical path SAS target	Integrated drive electronics (IDE) address, Fibre Channel LUN
N	Horizontal placement for an empty rack location	

Table 20. Prefixes of location code labels for system units (continued)

Prefix	Description	Example
P	Planar	System backplane
T	Port	
U	Unit	
V	Virtual planar	
W	Worldwide unique ID	
X	EIA value for an empty rack location	
Y	Firmware FRU	

## Worldwide unique identifier

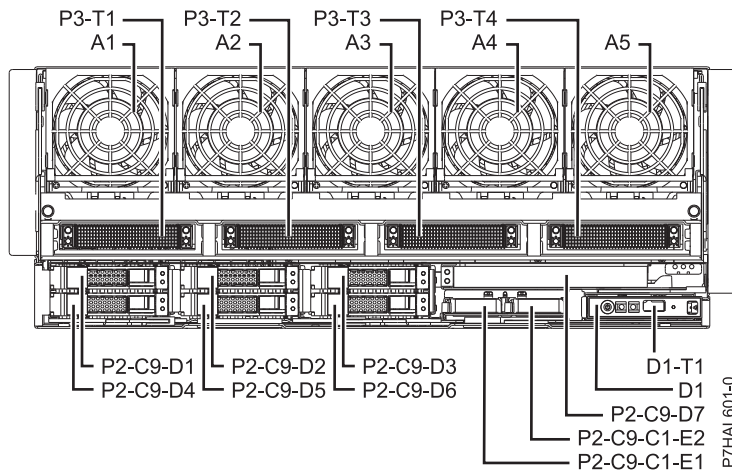
The location code label for the worldwide unique identifier consists of the prefix W followed by a maximum of 16 uppercase hexadecimal digits with no leading zeros. A location code might not consist of a worldwide unique identifier. When present, the worldwide unique identifier location label follows the location label of the resource that interfaces with the resource that has the worldwide unique identifier, usually a port.

## 9117-MMB and 9179-MHB locations

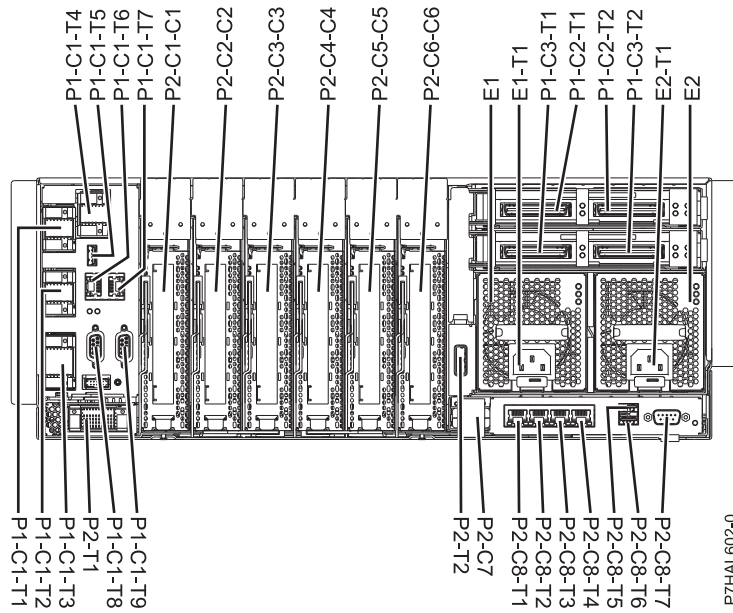
The following table contains location codes for the parts that make up the server.

The following diagrams show field replaceable unit (FRU) layouts in the system. Use these diagrams with the following tables.

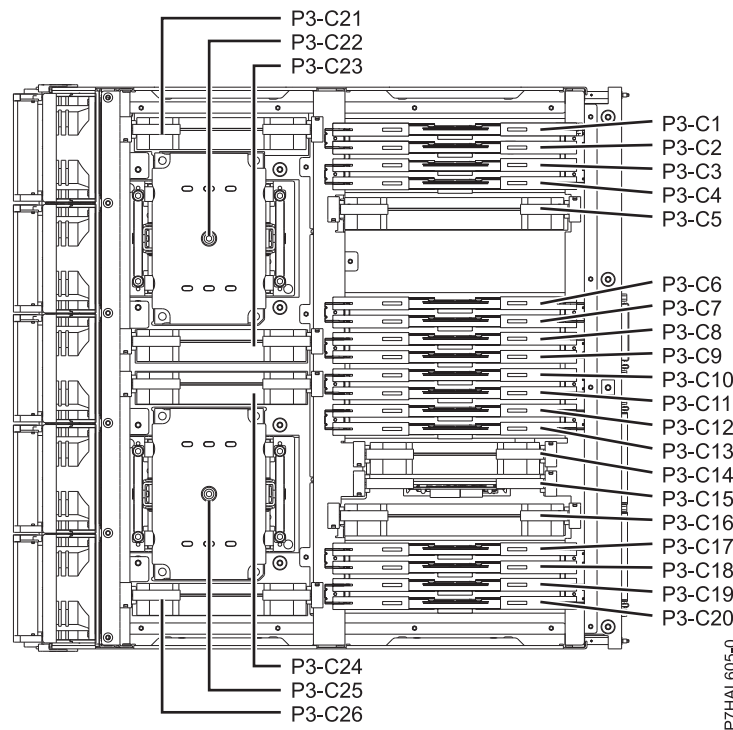
### Front



## Rear

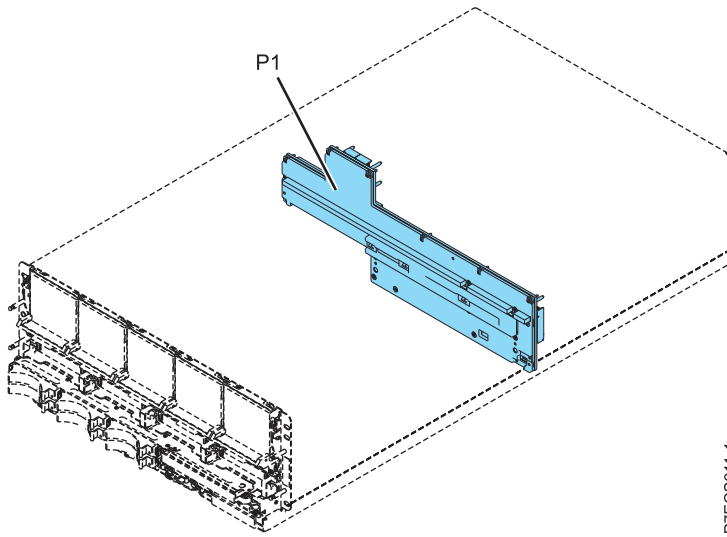


## Top



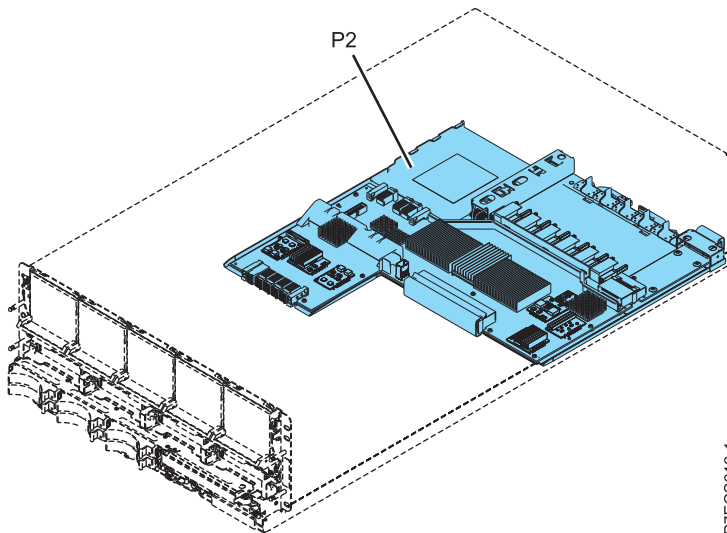


## Midplane



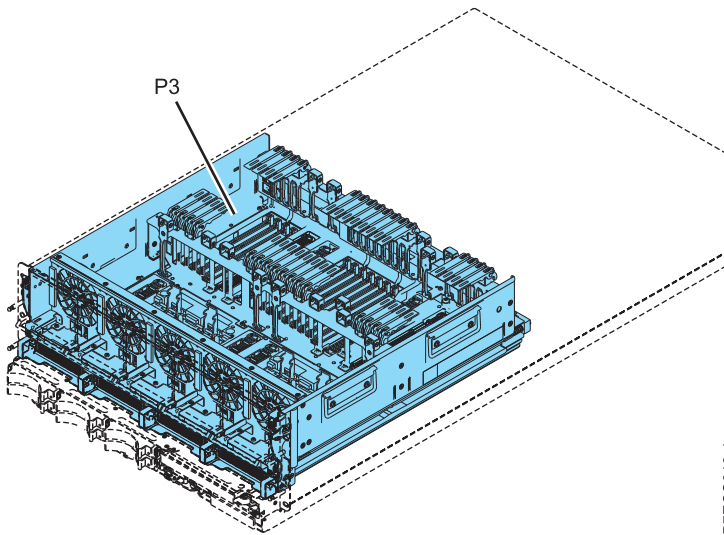
P7ECS611-1

## I/O card



P7ECS612-1

## System processor assembly



P7ECS813-1

Table 21. FRU location table

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
System unit	Un		
<b>Fans</b>			
Fan 1	Un-A1	Yes	See Fans.
Fan 2	Un-A2	Yes	
Fan 3	Un-A3	Yes	
Fan 4	Un-A4	Yes	
Fan 5	Un-A5	Yes	
<b>Power supplies</b>			
Power supply 1	Un-E1	Yes	See Power supply.
Power supply 1 - Line cord	Un-E1-T1		
Power supply 2	Un-E2	Yes	
Power supply 2- Line cord	Un-E2-T1		
Battery pack (left)	Un-P2-C9-C1-E1		
Battery pack (right)	Un-P2-C9-C1-E2		
<b>Backplanes</b>			
Mid-plane	Un-P1	Yes	
I/O card	Un-P2	Yes	
System processor assembly	Un-P3	Yes	
Small form factor SAS disk drive backplane with embedded SAS adapters	Un-P2-C9	Yes	
<b>Ports</b>			
Integrated 10 Gb or 1 Gb ethernet port	Un-P2-C8-T1	Yes	
Integrated 10 Gb or 1 Gb ethernet port	Un-P2-C8-T2	Yes	

Table 21. FRU location table (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Integrated 10 Gb or 1 Gb ethernet port	Un-P2-C8-T3	Yes	
Integrated 10 Gb or 1 Gb ethernet port	Un-P2-C8-T4	Yes	
USB top port (HEA Card)	Un -P2-C8-T5	Yes	
USB bottom port (HEA Card)	Un -P2-C8-T6	Yes	
Integrated serial port (HEA Card)	Un-P2-C8-T7	Yes	
External SAS cable connector	Un-P2-T2	Yes	
Integrated serial controller	Un-P2-T5	Yes	
Integrated Serial Advanced Technology Attachment (SATA) controller	Un-P2-T3	Yes	
Integrated SAS controller (A)	Un-P2-C9-T1	Yes	
Integrated SAS controller (B)	Un-P2-C9-T2	Yes	
FSP cable connector	Un-P2-T1	Yes	
IB 0 connector (1) (left)	Un-P1-C2-T1	Yes	
IB 1 connector (1) (right)	Un-P1-C2-T2	Yes	
IB 0 connector (2) (left)	Un-P1-C3-T1	Yes	
IB 1 connector (2) (right)	Un-P1-C3-T2	Yes	
<b>Processor and processor regulator</b>			
Processor card regulator 1 (40P)	Un-P3-C21	Yes	
Processor voltage regulator module (VRM)	Un-P3-C23	Yes	
Processor card regulator 3 (20P)	Un-P3-C24	Yes	
Processor VRM	Un-P3-C26	Yes	
Memory VRM	Un-P3-C5	Yes	
Processor VRM	Un-P3-C14	Yes	
Memory VRM	Un-P3-C16	Yes	
TPMD card	Un-P3-C15	Yes	
SCM - P7-0	Un -P3-C22		
SCM - P7-1	Un -P3-C25		
Fabric Bus A- P7 - 0 Bus cable connector	Un-P3-T1		
Fabric Bus B- P7- 0 Bus cable connector	Un-P3-T2		
Fabric Bus A- P7 -1 Bus cable connector	Un-P3-T3		
Fabric Bus B- P7- 1 Bus cable connector	Un-P3-T4		
Fan connector (leftmost)	Un-P3-T5		
Fan connector (second from left)	Un-P3-T6		
Fan connector (third from left)	Un-P3-T7		
Fan connector (second from right)	Un-P3-T8		
Fan connector (rightmost)	Un-P3-T9		
VPD card	Un-P2- C7		

Table 21. FRU location table (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
<b>Service processor</b>			
FSP cable A connector	Un-P1-C1-T1	Yes	
FSP cable Drawer 4 connector	Un-P1-C1-T1	Yes	
FSP cable Drawer 3 connector	Un-P1-C1-T2	Yes	
FSP cable Drawer 1, 2 connector	Un-P1-C1-T3	Yes	
FSP cable Drawer 5 connector	Un-P1-C1-T4	Yes	
FSP USB port	Un-P1-C1-T5	Yes	
Time-of-day (TOD)	Un-P1-C1		
Time-of-day Battery	Un-P1-C1-E1		
HMC 1 connector	Un-P1-C1-T6	Yes	
HMC 2 connector	Un-P1-C1-T7	Yes	
SPCN 0 connector	Un-P1-C1-T8		
SPCN 1 connector	Un-P1-C1-T9		
Ambient temperature sensor	Un-D1		
<b>Adapters</b>			
PCI-E adapter in slot 1	Un-P2-C1	Yes	
PCI-E adapter in slot 2	Un-P2-C2	Yes	
PCI-E adapter in slot 3	Un-P2-C3	Yes	
PCI-E adapter in slot 4	Un-P2-C4	Yes	
PCI-E adapter in slot 5	Un-P2-C5	Yes	
PCI-E adapter in slot 6	Un-P2-C6	Yes	
1 Gb or 10 Gb HEA daughter card	Un-P2-C8		
FSP card	Un-P1-C1	Yes	
Expansion card - GX++ (Slot 1)	Un-P1-C2	Yes	
Expansion card - GX++ (Slot 2)	Un-P1-C3	Yes	
Disk drive controller	Un-P2-C9	Yes	
175 MB cache RAID and dual storage IOA enablement card	Un-P2-C9-C1	Yes	
<b>Memory modules</b>			
Memory module 1	Un-P3-C1	Yes	
Memory module 2	Un-P3-C2	Yes	
Memory module 3	Un-P3-C3	Yes	
Memory module 4	Un-P3-C4	Yes	
Memory module 5	Un-P3-C6	Yes	
Memory module 6	Un-P3-C7	Yes	
Memory module 7	Un-P3-C8	Yes	
Memory module 8	Un-P3-C9	Yes	
Memory module 9	Un-P3-C10	Yes	

Table 21. FRU location table (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Memory module 10	Un-P3-C11	Yes	
Memory module 11	Un-P3-C12	Yes	
Memory module 12	Un-P3-C13	Yes	
Memory module 13	Un-P3-C17	Yes	
Memory module 14	Un-P3-C18	Yes	
Memory module 15	Un-P3-C19	Yes	
Memory module 16	Un-P3-C20	Yes	
<b>Device physical locations</b>			
Disk drive 1	Un-P2-C9-D1	Yes	
Disk drive 2	Un-P2-C9-D2	Yes	
Disk drive 3	Un-P2-C9-D3	Yes	
Disk drive 4	Un-P2-C9-D4	Yes	
Disk drive 5	Un-P2-C9-D5	Yes	
Disk drive 6	Un-P2-C9-D6	Yes	
Integrated drive electronics (IDE) drive 1	Un-P2-C9-D7	Yes	
<b>Control panel</b>			
Control panel (bottom media bay)	Un -D1		See Control panel and signal cables.
Control panel USB port	Un -D1-T1		
<b>Server firmware</b>			
Server firmware	Un-Y1		

**Related reference:**

“9117-MMB and 9179-MHB system parts” on page 237  
 Indexed drawings show system part numbers.

**8412-EAD, 9117-MMC, 9117-MMD, 9179-MHC, or 9179-MHD**

The information provided in this topic defines specific sections of a location code string. Use this information to understand the meaning of a location code.

**Using location codes**

For additional information about reading your location code, use the following table to link to a specific topic.

Location code topics that might be of interest	Description
“Location code overview” on page 74	Contains background information on the use of location codes.
“Physical location codes” on page 74	Provides a definition for physical location code.
“Logical location codes” on page 74	Provides a definition for a logical location code.
“Location code format” on page 75	Provides descriptive information of the Un value in the location code string. For example, U5886.001.

Location code topics that might be of interest	Description
"Location code labels" on page 75	Provides a table that identifies and defines the location code labels. The location code labels begin with an alphabetic character and follow the system serial number. For example, U7879.001.10ABCDE-P3-C31-T2-L23. (The system serial number is the 10ABCDE in the previous example.) P3, C31, T2, and L23 all contain an alphabetic character that is identified in the Location code labels table.
"Worldwide unique identifier" on page 76	Provides a definition for the worldwide unique identifier. This group of digits follows the resource code labels and always begins with the letter W.

## Location code overview

Servers (system units and expansion units) use physical location codes to provide mapping of replaceable units. Location codes are produced by the server's firmware, which structures them so that they can be used to identify specific parts in a system. The location code format is the same for all servers.

If you are working with a specific location code, the feature immediately follows the first character (U5886). Refer to the Unit type and locations table.

If the location code ends with **-Txx-Lxx**, the server's firmware could not identify the physical location. When a physical location cannot be identified, a logical location code is provided. Where logical location codes occur in enclosures, the locations topic for the enclosure has the known conversions listed. For logical location codes with no conversion, contact your next level of support.

If the location code begins with **UTMPx**, the expansion I/O unit's machine type, model and serial number have not been set yet and this is a temporary unit identifier. To identify the unit, examine the display panels on all of the expansion I/O units connected to the server until you find one with the same characters in the first 5 digits of the top line in the unit's display. Record the unit's real machine type and model from the unit label. Match the unit's machine type and model in the Unit type and locations table, and follow the link to determine the service information.

**Note:** If locations for units are not in the preceding format, either they are not supported or there is a problem in the firmware. Contact your next level of support.

## Physical location codes

Physical location codes provide a mapping of logical functions and components (such as backplanes, removable modules, connectors, ports, cables, and devices) to their specific locations within the physical structure of the server.

## Logical location codes

If the physical location cannot be mapped to a physical location code, the server's firmware generates a logical location code. A logical location code is a sequence of location labels that identifies the path that the system uses to communicate with a given resource.

**Note:** A resource has as many logical location codes as it has logical connections to the system. For example, an external tape device connected to two I/O adapters will have two logical location codes.

An example of a logical location code is:

U7879.001.10ABCDE-P3-C31-T2-L23

The first part of the location code (through the T2 label) represents the physical location code for the resource that communicates with the target resource. The remainder of the logical location code (L23) represents exactly which resource is indicated.

## Location code format

The location code is an alphanumeric string of variable length, consisting of a series of location identifiers, separated by a dash. An example of a physical location for a fan is  $Un-A1$ .

The first position, represented by  $Un$  (where  $n$  is equal to any string contained between the U and the hyphen) in the preceding example, is displayed in one of the forms in the following table.

**Note:** In location codes, the U is a constant digit; however, the numbered positions following the U are variables and are dependent on your server. Each column defines the numbers that follow the U in the beginning of the location code.

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
$Utttt.mmm.ssssss-A1$	$Uffff.ccc.ssssss-A1$
The leftmost code is always U.	The leftmost code is always U.
$tttt$ represents the unit type of the enclosure (drawer or node).	$ffff$ represents the feature code of the enclosure (drawer or node).
$mmm$ represents the model of the enclosure.	$ccc$ represents the sequence number of the enclosure.
$ssssss$ represents the serial number for the enclosure.	$ssssss$ represents the serial number of the enclosure.
<p><b>Note:</b> The <math>mmm</math> or <math>ccc</math> number might not be displayed on all location codes for all servers. If the <math>mmm</math> value is not displayed, the location code is displayed in one of the following forms:</p> <ul style="list-style-type: none"> <li><math>Utttt.ssssss-A1</math></li> <li><math>Uffff.ssssss-A1</math></li> </ul>	

The location code is hierarchical; that is, each location identifier in the string represents a physical part. The order (from left to right), in which each identifier is shown, allows you to determine which parts contain other parts in the string.

The dash (-) separator character represents a relationship between two components in the unit. In the example of the fan, whose location code is  $Un-A1$ , the dash shows that the fan (A1) is contained in the base unit (or  $Un$ ). Modules, adapters, cables, and devices are all parts that are plugged into another part. Their location codes always show that they are plugged into another part as components of the server. Another example follows:  $Un-P1-C9$  is memory DIMM (C9), which is plugged into a backplane (P1), which is inside the unit ( $Un$ ).

**Note:** For devices, certain error conditions might cause an IBM i device to display the device location in an AIX format.

Table 22. Unit type and locations

Unit type (Utttt.mmm)	Link to location information
U78C0.001, U497B.001, or U2C4E.001	8412-EAD, 9117-MMC, 9117-MMD, 9179-MHC, or 9179-MHD Locations

## Location code labels

The location code label represents a physical part of the server. The following table describes the prefixes of location code labels.

**Note:** These labels apply to system units only.

Table 23. Prefixes of location code labels for system units

Prefix	Description	Example
A	Air-moving device	Fan, blower
C	Card connector	IOP, IOA, DIMM, processor card
D	Device	Diskette, control panel
E	Electrical	Battery, power supply, ac charger
L	Logical path SAS target	Integrated drive electronics (IDE) address, Fibre Channel LUN
N	Horizontal placement for an empty rack location	
P	Planar	System backplane
T	Port	
U	Unit	
V	Virtual planar	
W	Worldwide unique ID	
X	EIA value for an empty rack location	
Y	Firmware FRU	

## Worldwide unique identifier

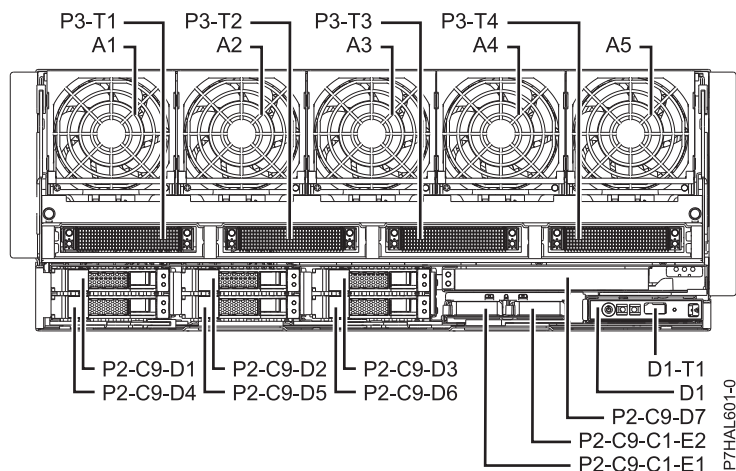
The location code label for the worldwide unique identifier consists of the prefix W followed by a maximum of 16 uppercase hexadecimal digits with no leading zeros. A location code might not consist of a worldwide unique identifier. When present, the worldwide unique identifier location label follows the location label of the resource that interfaces with the resource that has the worldwide unique identifier, usually a port.

## 8412-EAD, 9117-MMC, 9117-MMD, 9179-MHC, or 9179-MHD locations

The following table contains location codes for the parts that make up the server.

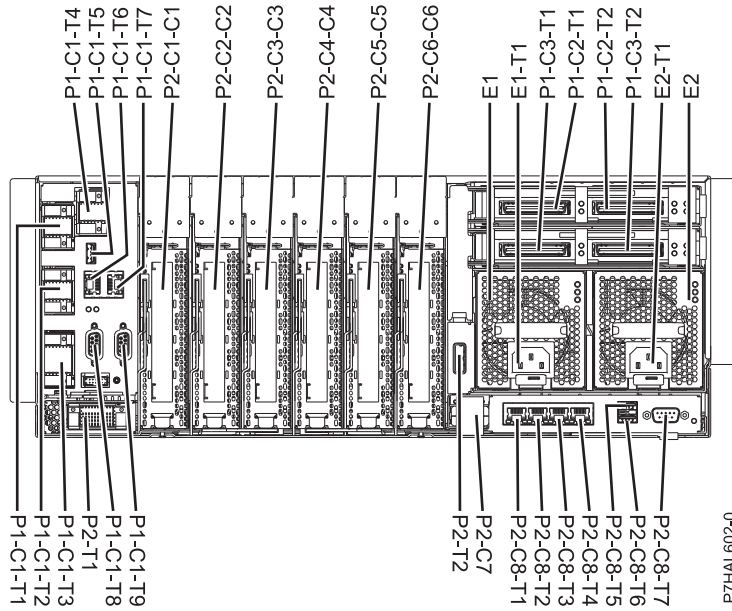
The following diagrams show field replaceable unit (FRU) layouts in the system. Use these diagrams with the following tables.

### Front

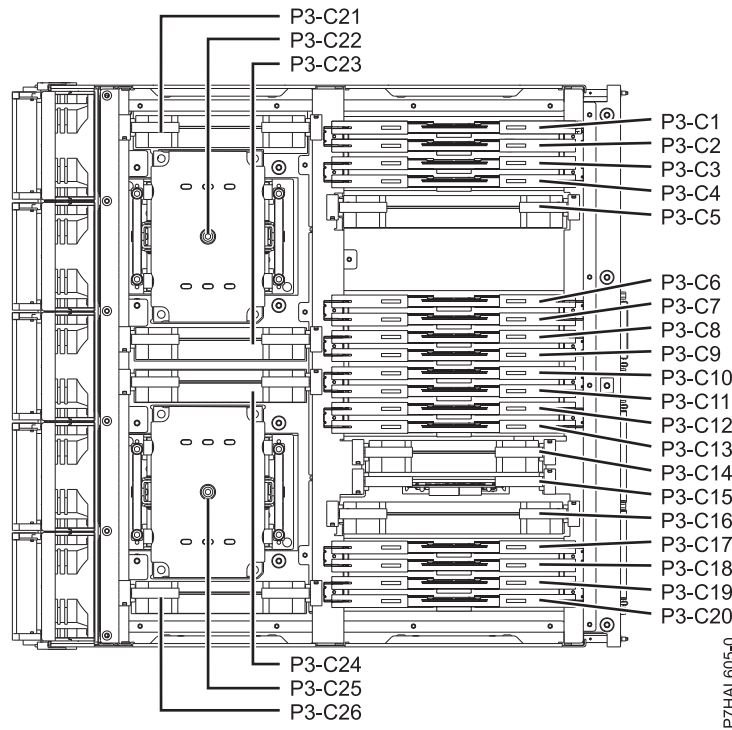




**Rear**



**Top (9117-MMC or 9179-MHC with two-processor system unit)**



**Top (8412-EAD, 9117-MMD, 9179-MHC with four-processor system unit, or 9179-MHD)**

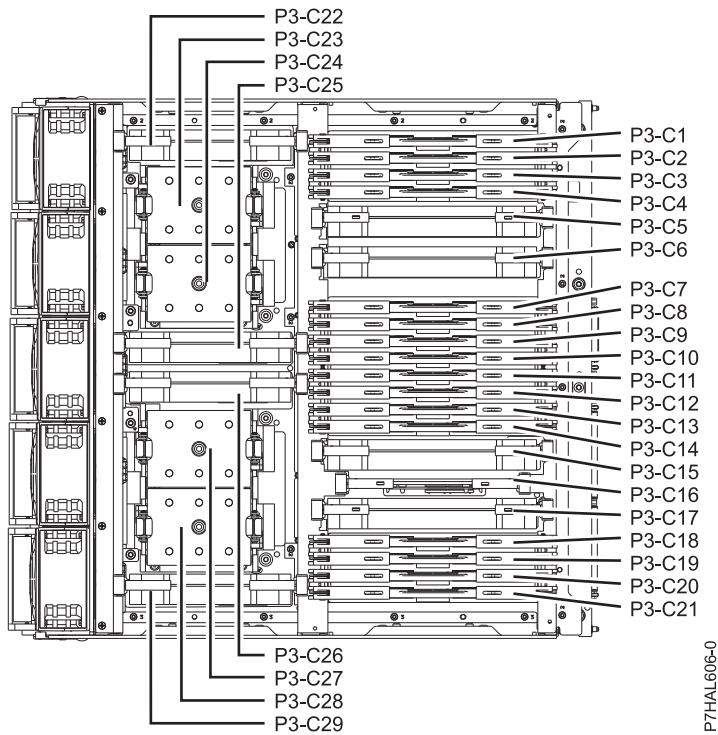


Table 24. FRU location table

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
System unit	Un		
<b>Fans</b>			
Fan 1	Un-A1	Yes	See Fans.
Fan 2	Un-A2	Yes	
Fan 3	Un-A3	Yes	
Fan 4	Un-A4	Yes	
Fan 5	Un-A5	Yes	
<b>Power supplies</b>			
Power supply 1	Un-E1	Yes	See Power supply.
Power supply 1 - Line cord	Un-E1-T1		
Power supply 2	Un-E2	Yes	
Power supply 2- Line cord	Un-E2-T1		
Battery pack (left)	Un-P2-C9-C1-E1		
Battery pack (right)	Un-P2-C9-C1-E2		
<b>Backplanes</b>			
Midplane	Un-P1	Yes	
I/O card	Un-P2	Yes	
System processor assembly	Un-P3	Yes	

Table 24. FRU location table (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Small form factor SAS disk drive backplane with embedded SAS adapters	Un-P2-C9	Yes	
<b>Ports</b>			
Integrated 10 Gb or 1 Gb Ethernet port	Un-P2-C8-T1	Yes	
Integrated 10 Gb or 1 Gb Ethernet port	Un-P2-C8-T2	Yes	
Integrated 10 Gb or 1 Gb Ethernet port	Un-P2-C8-T3	Yes	
Integrated 10 Gb or 1 Gb Ethernet port	Un-P2-C8-T4	Yes	
USB top port (integrated multifunction card)	Un-P2-C8-T5	Yes	
USB bottom port (integrated multifunction card)	Un-P2-C8-T6	Yes	
Integrated serial port (integrated multifunction card)	Un-P2-C8-T7	Yes	
External SAS cable connector	Un-P2-T2	Yes	
Integrated serial controller	Un-P2-T5	Yes	
Integrated SAS controller (A)	Un-P2-C9-T1	Yes	
Integrated SAS controller (B)	Un-P2-C9-T2	Yes	
FSP cable connector	Un-P2-T1	Yes	
GX++ 0 connector (1) (left)	Un-P1-C2-T1	Yes	
GX++ 1 connector (1) (right)	Un-P1-C2-T2	Yes	
GX++ 0 connector (2) (left)	Un-P1-C3-T1	Yes	
GX++ 1 connector (2) (right)	Un-P1-C3-T2	Yes	
<b>Processor and processor regulator (9117-MMC or 9179-MHC with two-processor system unit)</b>			
Voltage Regulator Module 1 (40P VRM)	Un-P3-C21	Yes	
Processor Voltage Regulator Module 2 (Proc VRM)	Un-P3-C23	Yes	
Voltage Regulator Module 3 (20P VRM)	Un-P3-C24	Yes	
Processor Voltage Regulator Module 4 (Proc VRM)	Un-P3-C26	Yes	
Memory Voltage Regulator Module 5 (Mem2 VRM)	Un-P3-C5	Yes	
Processor Voltage Regulator Module 6 (Proc VRM)	Un-P3-C14	Yes	
Memory Voltage Regulator Module 7 (Mem2 VRM)	Un-P3-C16	Yes	
TPMD card	Un-P3-C15	Yes	
SCM - P7-0	Un-P3-C22		
SCM - P7-1	Un-P3-C25		
<b>Processor and processor regulator (8412-EAD, 9117-MMD, 9179-MHC with four-processor system unit, or 9179-MHD)</b>			

Table 24. FRU location table (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Processor Voltage Regulator Module 1 (Proc2 VRM)	Un-P3-C22	Yes	
Processor Voltage Regulator Module 2 (Proc2 VRM)	Un-P3-C25	Yes	
Processor Voltage Regulator Module 3 (Proc2 VRM)	Un-P3-C26	Yes	
Processor Voltage Regulator Module 4 (Proc2 VRM)	Un-P3-C29	Yes	
Memory Voltage Regulator Module 5 (Mem2 VRM)	Un-P3-C5	Yes	
Voltage Regulator Module 6 (30P VRM)	Un-P3-C6	Yes	
Voltage Regulator Module 7 (30P VRM)	Un-P3-C15	Yes	
Memory Voltage Regulator Module 8 (Mem2 VRM)	Un-P3-C17	Yes	
TPMD card	Un-P3-C16	Yes	
SCM - P7-0	Un-P3-C23		
SCM - P7-2	Un-P3-C24		
SCM - P7-3	Un-P3-C27		
SCM - P7-1	Un-P3-C28		
Fabric Bus A- P7 - 0 Bus cable connector	Un-P3-T1		
Fabric Bus B- P7- 0 Bus cable connector	Un-P3-T2		
Fabric Bus A- P7 -1 Bus cable connector	Un-P3-T3		
Fabric Bus B- P7- 1 Bus cable connector	Un-P3-T4		
Fan connector (leftmost)	Un-P3-T5		
Fan connector (second from left)	Un-P3-T6		
Fan connector (third from left)	Un-P3-T7		
Fan connector (second from right)	Un-P3-T8		
Fan connector (rightmost)	Un-P3-T9		
VPD card	Un-P2- C7		
<b>Service processor</b>			
FSP cable A connector	Un-P1-C1-T1	Yes	
FSP cable drawer 4 connector	Un-P1-C1-T1	Yes	
FSP cable drawer 3 connector	Un-P1-C1-T2	Yes	
FSP cable drawer 1, 2 connector	Un-P1-C1-T3	Yes	
FSP cable drawer 5 connector	Un-P1-C1-T4	Yes	
FSP USB port	Un-P1-C1-T5	Yes	
Time-of-day (TOD)	Un-P1-C1		
Time-of-day battery	Un-P1-C1-E1		
HMC 1 connector	Un-P1-C1-T6	Yes	

Table 24. FRU location table (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
HMC 2 connector	Un-P1-C1-T7	Yes	
SPCN 0 connector	Un-P1-C1-T8		
SPCN 1 connector	Un-P1-C1-T9		
Ambient temperature sensor	Un-D1		
<b>Adapters</b>			
PCIe adapter in slot 1	Un-P2-C1	Yes	
PCIe adapter in slot 2	Un-P2-C2	Yes	
PCIe adapter in slot 3	Un-P2-C3	Yes	
PCIe adapter in slot 4	Un-P2-C4	Yes	
PCIe adapter in slot 5	Un-P2-C5	Yes	
PCIe adapter in slot 6	Un-P2-C6	Yes	
1 Gb or 10 Gb integrated multifunction card	Un-P2-C8		
FSP card	Un-P1-C1	Yes	
Expansion card - GX++ (Slot 1)	Un-P1-C2	Yes	
Expansion card - GX++ (Slot 2)	Un-P1-C3	Yes	
Disk drive controller	Un-P2-C9	Yes	
175 MB cache RAID and dual storage IOA enablement card	Un-P2-C9-C1	Yes	
<b>Memory modules (9117-MMC or 9179-MHC with two-processor system unit)</b>			
Memory module 1	Un-P3-C1	Yes	
Memory module 2	Un-P3-C2	Yes	
Memory module 3	Un-P3-C3	Yes	
Memory module 4	Un-P3-C4	Yes	
Memory module 5	Un-P3-C6	Yes	
Memory module 6	Un-P3-C7	Yes	
Memory module 7	Un-P3-C8	Yes	
Memory module 8	Un-P3-C9	Yes	
Memory module 9	Un-P3-C10	Yes	
Memory module 10	Un-P3-C11	Yes	
Memory module 11	Un-P3-C12	Yes	
Memory module 12	Un-P3-C13	Yes	
Memory module 13	Un-P3-C17	Yes	
Memory module 14	Un-P3-C18	Yes	
Memory module 15	Un-P3-C19	Yes	
<b>Memory modules (8412-EAD, 9117-MMD, 9179-MHC with four-processor system unit, or 9179-MHD)</b>			
Memory module 1	Un-P3-C1	Yes	
Memory module 2	Un-P3-C2	Yes	

Table 24. FRU location table (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Memory module 3	Un-P3-C3	Yes	
Memory module 4	Un-P3-C4	Yes	
Memory module 5	Un-P3-C7	Yes	
Memory module 6	Un-P3-C8	Yes	
Memory module 7	Un-P3-C9	Yes	
Memory module 8	Un-P3-C10	Yes	
Memory module 9	Un-P3-C11	Yes	
Memory module 10	Un-P3-C12	Yes	
Memory module 11	Un-P3-C13	Yes	
Memory module 12	Un-P3-C14	Yes	
Memory module 13	Un-P3-C18	Yes	
Memory module 14	Un-P3-C19	Yes	
Memory module 15	Un-P3-C20	Yes	
Memory module 16	Un-P3-C21	Yes	
<b>Device physical locations</b>			
Disk drive 1	Un-P2-C9-D1	Yes	
Disk drive 2	Un-P2-C9-D2	Yes	
Disk drive 3	Un-P2-C9-D3	Yes	
Disk drive 4	Un-P2-C9-D4	Yes	
Disk drive 5	Un-P2-C9-D5	Yes	
Disk drive 6	Un-P2-C9-D6	Yes	
Integrated drive electronics (IDE) drive 1	Un-P2-C9-D7	Yes	
<b>Control panel</b>			
Control panel (bottom media bay)	Un-D1		See Control panel and signal cables.
Control panel USB port	Un-D1-T1		
<b>Server firmware</b>			
Server firmware	Un-Y1		

**Related reference:**

“8412-EAD, 9117-MMC, 9117-MMD, 9179-MHC, or 9179-MHD system parts” on page 248  
 Indexed drawings show system part numbers.

**9119-FHB**

The information provided in this topic defines specific sections of a location code string. Use this information to understand the meaning of a location code.

**Using location codes**

For additional information about reading your location code, use the following table to link to a specific topic.

Location code topics	Description
"Location code overview"	Contains background information on the use of location codes.
"Physical location codes"	Provides a definition for physical location code.
"Logical location codes"	Provides a definition for a logical location code.
"Location code format" on page 84	Provides descriptive information of the <i>Un</i> value in the location code string. For example U5886.001.
"Location code labels" on page 85	Provides a table that identifies and defines the location code labels. The location code labels begin with an alphabetic character and follow the system serial number. For example, U789C.001.10ABCDE-P3-C31-T2-L23. The system serial number is 10ABCDE in the previous example. P3, C31, T2, and L23 all contain an alphabetic character that is identified in the Location code labels table.
"Worldwide unique identifier" on page 85	Provides a definition for the worldwide unique identifier. This group of digits follows the resource code labels and always begins with the letter <i>W</i> .

## Location code overview

Servers (system unit and expansion units) use physical location codes to provide mapping of replaceable units. Location codes are produced by the server's firmware, which structures them so that they can be used to identify specific parts in a system. The location code format is the same for all servers.

If you are working with a specific location code, the feature immediately follows the first character (U5886). Refer to the Unit type and locations table.

If the location code ends with **-Txx-Lxx**, the server's firmware could not identify the physical location. When a physical location cannot be identified, a logical location code is provided. Where logical location codes occur in enclosures, the locations topic for the enclosure has the known conversions listed. For logical location codes with no conversion, contact your next level of support.

If the location code begins with **UTMPx**, the expansion I/O unit's machine type, model, and serial number have not been set yet and this is a temporary unit identifier. To identify the unit, examine the display panels on all of the expansion I/O units that are connected to the server until you find one with the same characters in the first 5 digits of the top line in the unit's display. Record the unit's real machine type and model from the unit label. Match the unit's machine type and model in the Unit type and locations table and follow the link to determine the service information.

**Note:** If locations for units are not in the preceding format, either they are not supported or there is a problem in the firmware. Contact your next level of support.

## Physical location codes

Physical location codes provide a mapping of logical functions and components (such as backplanes, removable modules, connectors, ports, cables, and devices) to their specific locations within the physical structure of the server.

## Logical location codes

If the physical location cannot be mapped to a physical location code, the server's firmware generates a logical location code. A logical location code is a sequence of location labels that identifies the path that the system uses to communicate with a given resource.

**Note:** A resource has as many logical location codes as it has logical connections to the system. For example, an external tape device connected to two I/O adapters has two logical location codes.

An example of a logical location code is:

U7879.001.10ABCDE-P3-C31-T2-L23

The first part of the location code (through the T2 label) represents the physical location code for the resource that communicates with the target resource. The remainder of the logical location code (L23) represents exactly which resource is indicated.

## Location code format

The location code is an alphanumeric string of variable length, consisting of a series of location identifiers, separated by a dash. An example of a physical location for a fan is  $U_n-A1$ .

The first position, represented by  $U_n$  (where  $n$  is equal to any string contained between the U and the hyphen) in the preceding example, is displayed in one of the forms in the following table.

**Note:** In location codes, the U is a constant digit; however, the numbered positions following the U are variables and are dependent on your server. Each column defines the numbers that follow the U in the beginning of the location code.

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
$U_{tttt}.mmm.sssssss-A1$	$U_{ffff}.ccc.sssssss-A1$
The leftmost code is always U.	The leftmost code is always U.
$tttt$ represents the unit type of the enclosure (drawer or node).	$ffff$ represents the feature code of the enclosure (drawer or node).
$mmm$ represents the model of the enclosure.	$ccc$ represents the sequence number of the enclosure .
$sssssss$ represents the serial number for the enclosure.	$sssssss$ represents the serial number of the enclosure.
<p><b>Note:</b> The <math>mmm</math> or <math>ccc</math> number might not be displayed on all location codes for all servers. If the <math>mmm</math> value is not displayed, the location code is displayed in one of the following forms:</p> <ul style="list-style-type: none"> <li>• <math>U_{tttt}.sssssss-A1</math></li> <li>• <math>U_{ffff}.sssssss-A1</math></li> </ul>	

The location code is hierarchical; that is, each location identifier in the string represents a physical part. The order (from left to right), in which each identifier is shown, allows you to determine which parts contain other parts in the string.

The dash (-) separator character represents a relationship between two components in the unit. In the example of the fan, whose location code is  $U_n-A1$ , the dash shows that the fan (A1) is contained in the base unit (or  $U_n$ ). Modules, adapters, cables, and devices are all parts that are plugged into another part. Their location codes always show that they are plugged into another part as components of the server. Another example follows:  $U_n-P1-C9$  is a memory DIMM (C9) that is plugged into a backplane (P1), which is inside the unit ( $U_n$ ).

**Note:** For devices, certain error conditions might cause an IBM i device to display the device location in an AIX format.

Table 25. Unit type and locations

Unit type (Utttt.mmm)	Link to location information
U9119.FHB	9119-FHB Locations



## Location code labels

The location code label represents a physical part of the server. The following table describes the prefixes of location code labels.

**Note:** These labels apply to system units only.

Table 26. Prefixes of location code labels for system units

Prefix	Description	Example
A	Air-moving device	Fan, blower
C	Card connector	IOP, IOA, DIMM, processor card
D	Device	Diskette, control panel
E	Electrical	Battery, power supply, ac charger
L	Logical path SAS target	Integrated drive electronics (IDE) address, Fibre Channel LUN
N	Horizontal placement for an empty rack location	
P	Planar	System backplane
T	Port	
U	Unit	
V	Virtual planar	
W	Worldwide unique ID	
X	EIA value for an empty rack location	
Y	Firmware FRU	

## Worldwide unique identifier

The location code label for the worldwide unique identifier consists of the prefix W followed by a maximum of 16 uppercase hexadecimal digits with no leading zeros. A location code might not consist of a worldwide unique identifier. When present, the worldwide unique identifier location label follows the location label of the resource that interfaces with the resource that has the worldwide unique identifier, usually a port.

## 9119-FHB locations

Use this information to help you map a location code to a position on the unit.

**Note:** The known logical location codes for this unit are listed next to the corresponding physical location in the following information. If you are working with a logical location code for this unit and it is not listed in the following information, contact your next level of support.

The following diagrams show the field replaceable unit (FRU) layout in the system. Use these diagrams with the following tables.

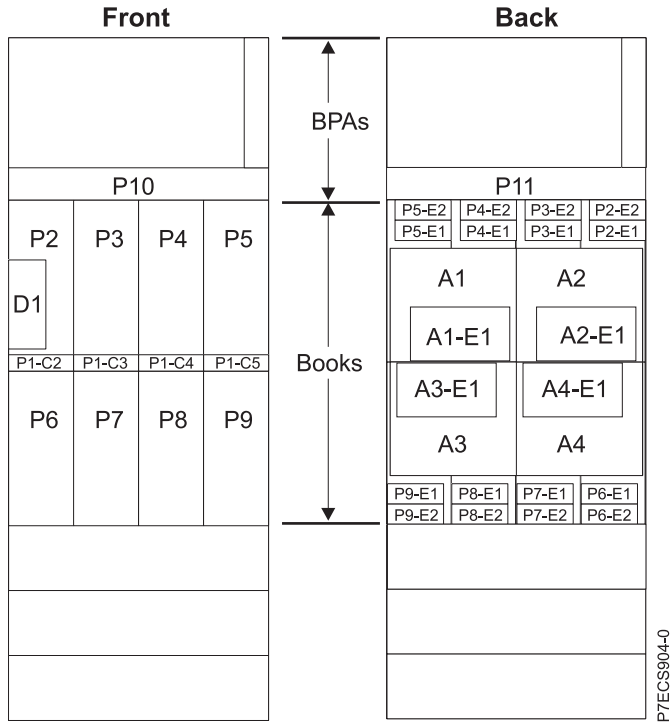


Figure 34. Front and rear views

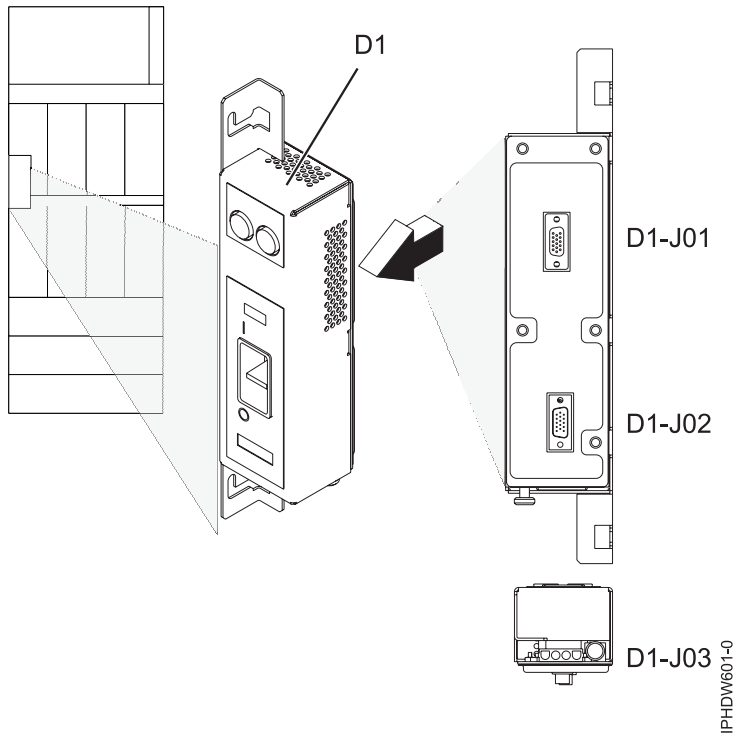


Figure 35. Emergency power off (EPO)

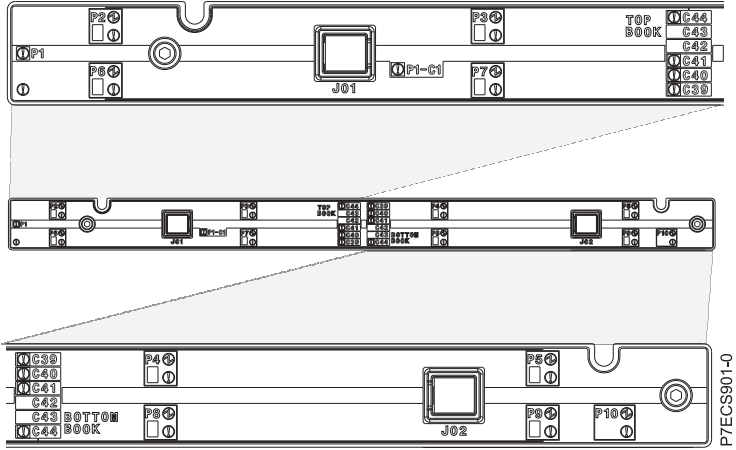


Figure 36. Light strip views

Px-J01	Px-E1	J01	ON/OFF	□	Ax
	Px-E2	J01	ON/OFF	□	
	Px-E3	J01	ON/OFF	□	
	Px-E4	J01	ON/OFF	□	
	Px-C1	J01 J02 J03 J04 J06 J07 J10 J11			
	Px-C2	J01 J02 J03 J04 J05 J06 J07 J08 J09 J10			
	Px-C3	J01 J02 J03 J04 J05 J06 J07 J08 J09 J10			
	Px-C4	J01 J02 J03 J04 J05 J06 J07 J08 J09 J10 J11 J12 J13 J14 J15 J16 J17 J18 J19 J20 J21 J22 J23 J24			

IPHDW603-1

Figure 37. Bulk power assembly (BPA). Front is Un-P1 and back is Un-P2.

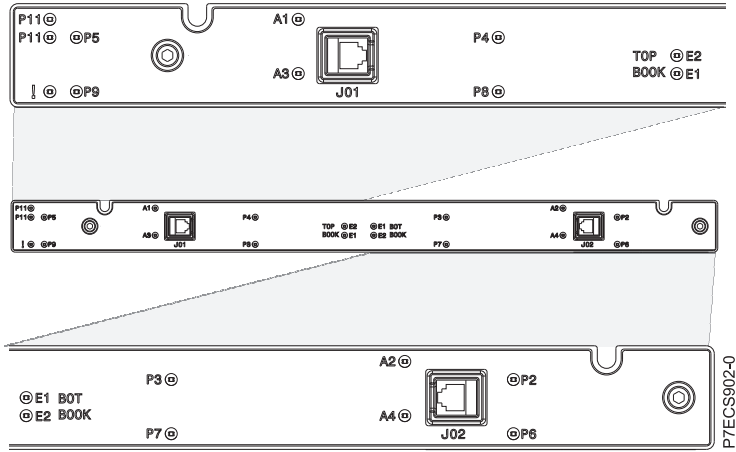


Figure 38. Light strip views

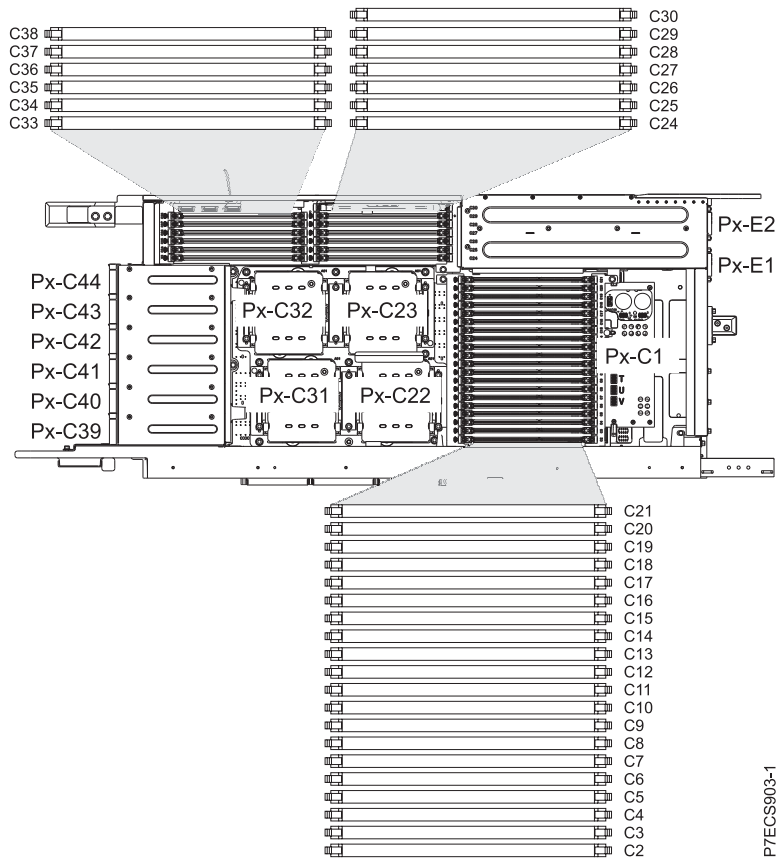


Figure 39. Node locations

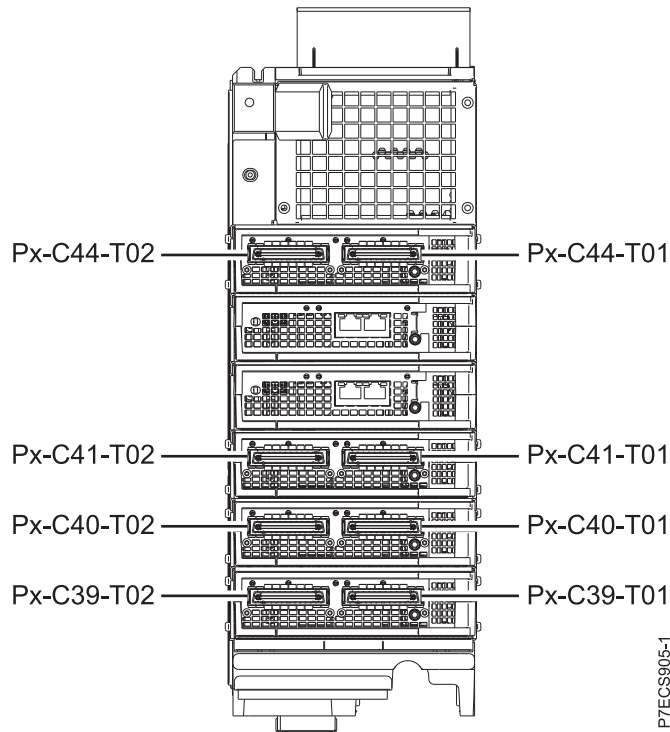


Figure 40. GX++ card locations (upper nodes)

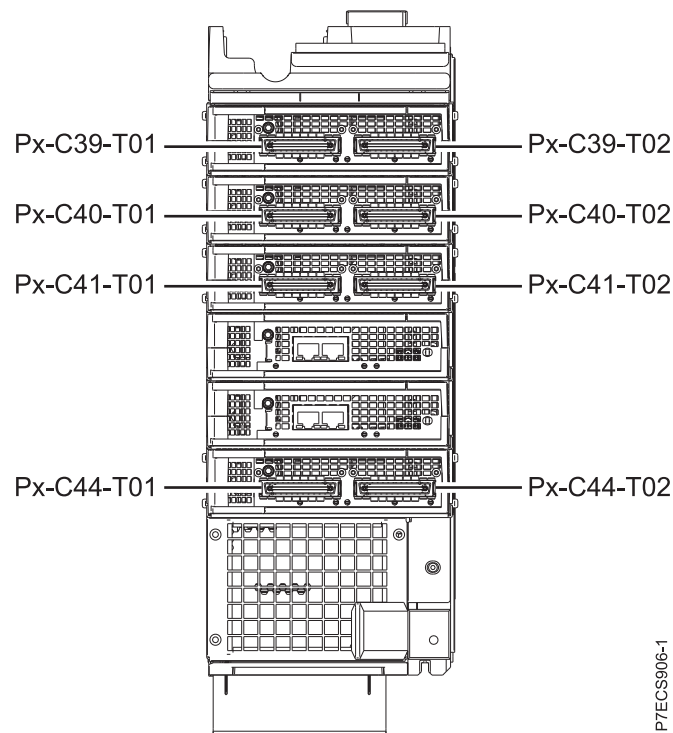


Figure 41. GX++ card locations (lower nodes)

The following table provides location codes for parts that make up the server.

**Note:** To remove and replace a failing item, see 9119-FHB removal and replacement procedures.

Table 27. Bulk power assembly (BPA) locations and failing components

Failing item name	Identify LED	Physical location code
System unit bulk power assembly (BPA)		Un
<b>Bulk power distribution (BPD)</b>		
Bulk power regulator (BPR) A, front of frame	No	Un-P1
Bulk power regulator (BPR) 4A, top	No	Un-P1-E1
Bulk power regulator (BPR) 3A	No	Un-P1-E2
Bulk power regulator (BPR) 2A	No	Un-P1-E3
Bulk power regulator (BPR) 1A	No	Un-P1-E4
Bulk power controller (BPC) A	No	Un-P1-C1
Bulk power distribution (BPD) 1A	No	Un-P1-C2
Bulk power distribution (BPD) 2A	No	Un-P1-C3
Bulk power hub (BPH) A	No	Un-P1-C4
Bulk power fan (BPF) A	No	Un-A1
Bulk power assembly (BPA) B. Rear of frame, B-side power boundary		Un-P2
Bulk power regulator (BPR) 4B, top	No	Un-P2-E1
Bulk power regulator (BPR) 3B	No	Un-P2-E2
Bulk power regulator (BPR) 2B	No	Un-P2-E3
Bulk power regulator (BPR) 1B	No	Un-P2-E4
Bulk power controller (BPC) B	No	Un-P2-C1
Bulk power distribution (BPD) 1B	No	Un-P2-C2
Bulk power distribution (BPD) 2B	No	Un-P2-C3
Bulk power hub (BPH) B	No	Un-P2-C4
Bulk power fan (BPF) B	No	Un-A2
UEPO panel		Un-D1
<b>Bulk power assembly (BPA)</b>		
BPR 4		Un-Px-E1
Connector J01		Un-Px-E1-J01
BPR 3		Un-Px-E2
Connector J01		Un-Px-E2-J01
BPR 2		Un-Px-E3
Connector J01, IBF		Un-Px-E3-J01
BPR 1		Un-Px-E4
Connector J01, IBF		Un-Px-E4-J01
Bulk power controller (BPC)		Un-Px-C1
Connector J01, BPC cross communication	No	Un-Px-C1-J01
Connector J02, Ethernet to BPH	No	Un-Px-C1-J02
Connector J03, Ethernet to BPH	No	Un-Px-C1-J03
Connector J04, UEPO panel	No	Un-Px-C1-J04
Connector J06, BPF	No	Un-Px-C1-J06
Connector J07, BPC cross power	No	Un-Px-C1-J07

Table 27. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Identify LED	Physical location code
Connector J10, MDA 1 and 3, Y cable powers 2 MDAs	No	Un-Px-C1-J10
Connector J11, MDA 2 and 4, Y cable powers 2 MDAs	No	Un-Px-C1-J11
<b>Bulk power distribution (BPD) connectors</b>		
BPD1	No	Un-Px-C2
Connector J01, I/O drawer 1, DCA 2	No	Un-Px-C2-J01
Connector J02, I/O drawer 1, DCA 1	No	Un-Px-C2-J02
Connector J03, I/O drawer 2, DCA 2	No	Un-Px-C2-J03
Connector J04, I/O drawer 2, DCA 1	No	Un-Px-C2-J04
Connector J05, I/O drawer 3, DCA 2	No	Un-Px-C2-J05
Connector J06, I/O drawer 3, DCA 1	No	Un-Px-C2-J06
Connector J07, node P5	No	Un-Px-C2-J07
Connector J08, node P9	No	Un-Px-C2-J08
Connector J09, node P2	No	Un-Px-C2-J09
Connector J10, node P6	No	Un-Px-C2-J10
BPD2	No	Un-Px-C3
Connector J01, I/O drawer 4, DCA 2	No	Un-Px-C3-J01
Connector J02, I/O drawer 4, DCA 1	No	Un-Px-C3-J02
Connector J03, I/O drawer 5, DCA 2	No	Un-Px-C3-J03
Connector J04, I/O drawer 5, DCA 1	No	Un-Px-C3-J04
Connector J05, I/O drawer 6, DCA 2	No	Un-Px-C3-J05
Connector J06, I/O drawer 6, DCA 1	No	Un-Px-C3-J06
Connector J07, node P4, or I/O drawer 7	No	Un-Px-C3-J07
Connector J08, node P3, or I/O drawer 8	No	Un-Px-C3-J08
Connector J09, node P8, or I/O drawer 9	No	Un-Px-C3-J09
Connector J10, node P7, or I/O drawer 10	No	Un-Px-C3-J10
Bulk power hub (BPH)	No	Un-Px-C4
Connector J01-J24	No	Un-Px-C4-Jmm
UEPO panel		Un-D1
Connector J01 to BPC-A		Un-D1-J01
Connector J02 to BPC-B		Un-D1-J02
<b>Central electronics complex (CEC)</b>		
CEC cage	No	Un
System backplane	Yes	Un-P1
System VPD card	Yes	Un-P1-C1
FSP card 0	Yes	Un-P1-C2
Clock card 0	Yes	Un-P1-C3
Clock card 1	Yes	Un-P1-C4
FSP card 1	Yes	Un-P1-C5

Table 27. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Identify LED	Physical location code
Processor book 0, plugs into midplane	Yes	Un-P2
Processor book 1	Yes	Un-P6
Processor book 2	Yes	Un-P3
Processor book 3	Yes	Un-P7
Processor book 4	Yes	Un-P4
Processor book 5	Yes	Un-P8
Processor book 6	Yes	Un-P5
Processor book 7	Yes	Un-P9
Air moving device AMD 1	Yes	Un-A1
Motor drive assembly (MDA) 1	Yes	Un-A1-E1
Air moving device AMD 2	Yes	Un-A2
MDA 2	Yes	Un-A2-E1
Air moving device AMD 3	Yes	Un-A3
MDA 3	Yes	Un-A3-E1
Air moving device AMD 4	Yes	Un-A4
MDA 4	Yes	Un-A4-E1
<b>Processor book, where <math>m</math> is 2 – 9</b>		
Processor book		Un-P $n$
DCA 1	Yes	Un-P $m$ -E2
DCA 2	Yes	Un-P $m$ -E1
<b>GX++ cards, where <math>m</math> is 2 – 9</b>		
Slot T	Yes	Un-P $m$ -C41
Slot S	Yes	Un-P $m$ -C44
Slot U	Yes	Un-P $m$ -C39
Slot V	Yes	Un-P $m$ -C40
<b>GX++ card connectors, where <math>m</math> is 2 – 9</b>		
Slot T	Yes	Un-P $m$ -C41-T01 and Un-P $m$ -C41-T02
Slot S	Yes	Un-P $m$ -C44-T01 and Un-P $m$ -C44-T02
Slot U	Yes	Un-P $m$ -C39-T01 and Un-P $m$ -C39-T02
Slot V	Yes	Un-P $m$ -C40-T01 and Un-P $m$ -C40-T02
Book FSP card 1	Yes	Un-P $m$ -C43
Book FSP card 0	Yes	Un-P $m$ -C42
LED service card	Yes	Un-P $m$ -C01
TPMD card	Yes	Un-P $m$ -C30
FSP card connector J01	Yes	Un-P $m$ -C $n$ -T01
FSP card connector J02	Yes	Un-P $m$ -C $n$ -T02
<b>Memory Where <math>m</math> varies from 2 – 9</b>		
DIMM V-M1-B	Yes	Un-P $m$ -C3
DIMM V-M1-C	Yes	Un-P $m$ -C4
DIMM V-M1-D	Yes	Un-P $m$ -C5



Table 27. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Identify LED	Physical location code
DIMM U-M1-A	Yes	Un-Pm-C6
DIMM U-M1-B	Yes	Un-Pm-C7
DIMM U-M1-C	Yes	Un-Pm-C8
DIMM U-M1-D	Yes	Un-Pm-C9
DIMM U-M0-A	Yes	Un-Pm-C10
DIMM U-M0-B	Yes	Un-Pm-C11
DIMM U-M0-C	Yes	Un-Pm-C12
DIMM U-M0-D	Yes	Un-Pm-C13
DIMM V-M0-D	Yes	Un-Pm-C14
DIMM V-M0-C	Yes	Un-Pm-C15
DIMM V-M0-B	Yes	Un-Pm-C16
DIMM V-M0-A	Yes	Un-Pm-C17
DIMM T-M0-D	Yes	Un-Pm-C18
DIMM T-M0-C	Yes	Un-Pm-C19
DIMM T-M0-B	Yes	Un-Pm-C20
DIMM T-M0-A	Yes	Un-Pm-C21
DIMM T-M1-A	Yes	Un-Pm-C24
DIMM T-M1-B	Yes	Un-Pm-C25
DIMM T-M1-C	Yes	Un-Pm-C26
DIMM T-M1-D	Yes	Un-Pm-C27
DIMM S-M0-A	Yes	Un-Pm-C28
DIMM S-M0-B	Yes	Un-Pm-C29
DIMM S-M1-A	Yes	Un-Pm-C33
DIMM S-M1-B	Yes	Un-Pm-C34
DIMM S-M1-C	Yes	Un-Pm-C35
DIMM S-M1-D	Yes	Un-Pm-C36
DIMM S-M0-C	Yes	Un-Pm-C37
DIMM S-M0-D	Yes	Un-Pm-C38
MCM-S	Yes	Un-Pm-C32
MCM-T	Yes	Un-Pm-C23
MCM-U	Yes	Un-Pm-C22
MCM-V	Yes	Un-Pm-C31
Front light strip	Yes	Un-P10
Back light strip	Yes	Un-P11
<b>Central electronics complex (CEC) cage connectors</b>		
System controller 0, 1 where $m$ is 2 or 5		
Connector J1, front light strip (J01 or J02)	No	Un-P1-Cm-T1
Connector J2, back light strip (J01 or J02)	No	Un-P1-Cm-T2
Connector J3, Ethernet connects to BHP A	Yes	Un-P1-Cm-T3
Connector J4, Ethernet connects to BHP B	Yes	Un-P1-Cm-T4

Table 27. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Identify LED	Physical location code
Connector J5, SPCN connector	No	Un-P1-Cm-T5
<b>Book connectors</b>		
Super UPIC power connector J01	No	Un-Pn-J01
Super UPIC power connector J02	No	Un-Pn-J02
Motor drive assembly (MDA) 1	Yes	Un-A2-E1
MDA 2	Yes	Un-A4-E1
MDA 3	Yes	Un-A3-E1
MDA 4	Yes	Un-A1-E1
<b>I/O drawer and IBF (Integrated battery feature) EIA 9 - 12</b>		
I/O cage		Un
DCA 1		Un-E1
DCA 2		Un-E2
I/O planar book		Un-P1
I/O planar book		Un-P2
IBF (EIA 9 - 12)		
IBF-F1		Un-E3
IBF-F2		Un-E4
IBF-R1		Un-E5
IBF-R2		Un-E6
<b>I/O drawer and IBF EIA 5 - 8</b>		
I/O cage		Un
DCA 1		Un-E1
DCA 2		Un-E2
I/O planar book		Un-P1
I/O planar book		Un-P2
<b>I/O drawer and IBF EIA 1 - 4</b>		
I/O cage		Un
DCA 1		Un-E1
DCA 2		Un-E2
I/O planar book		Un-P1
I/O planar book		Un-P2

**Related reference:**

“9119-FHB system parts” on page 263

Indexed drawings show system part numbers of each part.

**Related information:**

 Removing and replacing parts

**9125-F2C**

The information provided in this topic defines specific sections of a location code string. Use this information to understand the meaning of a location code.

## Using location codes

Use the following table to link to a specific topic that you need additional information about when reading your location code.

Location code topics	Description
"Location code overview"	Contains background information about the use of location codes.
"Physical location codes"	Provides a definition for physical location code.
"Logical location codes" on page 96	Provides a definition of what a logical location code is.
"Location code format" on page 96	Provides descriptive information of the <i>Un</i> value in the location code string. For example, U789C.001.
"Location code labels" on page 97	Provides a table that identifies and defines the location code labels. The location code labels begin with an alphabetic character and follow the system serial number. For example, U789C.001.10ABCDE-P3-C31-T2-L23. The system serial number is 10ABCDE in the previous example. P3, C31, T2, and L23 all contain an alphabetic character that is identified in the Location code labels table.
"Worldwide unique identifier" on page 97	Provides a definition for the world unique identifier. This group of digits follows the resource code labels and always begins with the letter <i>W</i> .

### Location code overview

Servers (system units and expansion units) use physical location codes to provide mapping of replaceable units. Location codes are produced by the server's firmware, which structures them so that they can be used to identify specific parts in a system. The location code format is the same for all servers.

If you are working with a specific location code, the unit type and model immediately follow the first character (*Utttt.mmm*). Match the unit type and model to a link, as shown in the Unit type and locations table.

If the location code ends with *-Txx-Lxx*, the server's firmware could not identify the physical location. When a physical location cannot be identified, a logical location code is provided. Where logical location codes occur in enclosures, the locations topic for the enclosure lists the known conversions. For logical location codes with no conversion, contact your next level of support.

If the location code begins with **UTMPx**, the expansion I/O unit's machine type, model, and serial number have not been set yet and this is a temporary unit identifier. To identify the unit, examine the display panels on all of the expansion I/O units that are connected to the server until you find one with the same characters in the first 5 digits of the top line in the unit's display. Record the unit's real machine type and model from the unit label. Match the unit's machine type and model in the Unit type and locations table and follow the link to determine the service information.

**Note:** Locations for units that are not in the preceding list are either not supported or have a problem in the firmware. Contact your next level of support.

### Physical location codes

Physical location codes provide a mapping of logical functions and components (such as backplanes, removable modules, connectors, ports, cables, and devices) to their specific locations within the physical structure of the server.

## Logical location codes

If the physical location cannot be mapped to a physical location code, the server's firmware generates a logical location code. A logical location code is a sequence of location labels that identifies the path that the system uses to communicate with a given resource.

**Note:** A resource has as many logical location codes as it has logical connections to the system. For example, an external tape device connected to two I/O adapters has two logical location codes.

An example of a logical location code is:

U78A9.001.312N003-P1-C15-T1-L3

The first part of the location code (through the T2 label) represents the physical location code for the resource that communicates with the target resource. The remainder of the logical location code (L23) represents exactly which resource is indicated.

## Location code format

The location code is an alphanumeric string of variable length, consisting of a series of location identifiers, separated by a dash. An example of a physical location for a fan is  $U_n-A1$ .

The first position, represented by  $U_n$  (where  $n$  is equal to any string contained between the U and the hyphen) in the preceding example, is displayed in one of the forms in the following table.

**Note:** In location codes, the U is a constant digit; however, the numbered positions that follow the U are variables and are dependent on your server. Each column defines the numbers that follow the U in the beginning of the location code.

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
$Utttt.mmm.ssssss-A1$	$Uffff.ccc.ssssss-A1$
The leftmost code is always U.	The leftmost code is always U.
$tttt$ represents the unit type of the enclosure (drawer or node).	$ffff$ represents the feature code of the enclosure (drawer or node).
$mmm$ represents the model of the enclosure.	$ccc$ represents the sequence number of the enclosure.
$ssssss$ represents the serial number for the enclosure.	$ssssss$ represents the serial number of the enclosure.
<b>Note:</b> The $mmm$ or $ccc$ number might not be displayed on all location codes for all servers. If the $mmm$ value is not displayed, the location code is displayed in one of the following forms:	
<ul style="list-style-type: none"><li>• <math>Utttt.ssssss-A1</math></li><li>• <math>Uffff.ssssss-A1</math></li></ul>	

The location code is hierarchical; that is, each location identifier in the string represents a physical part. The order (from left to right) in which each identifier is shown helps you determine which parts contain other parts in the string.

The dash (-) separator character represents a relationship between two components in the unit. In the example of the fan, whose location code is  $U_n-A1$ , the dash shows that the fan (A1) is contained in the base unit (or  $U_n$ ). Modules, adapters, cables, and devices are all parts that are plugged into another part. Their location codes always show that they are plugged into another part as components of the server. Another example follows:  $U_n-P1-C9$  is memory DIMM (C9), which is, plugged into a backplane (P1), which is inside the unit ( $U_n$ ).

Table 28. Unit type and locations

Unit type (Utttt.mmm)	Link to location information
U78A9.001	9125-F2C Locations

## Location code labels

The location code label represents a physical part of the server. The following table describes the prefixes of location code labels.

**Note:** These labels apply to system units only.

Table 29. Prefixes of location code labels for system units

Prefix	Description	Example
A	Air-moving device	Fan, blower
C	Card connector	IOP, IOA, DIMM, processor card
D	Device	Diskette, control panel
E	Electrical	Battery, power supply, ac charger
L	Logical path SAS target	Integrated drive electronics (IDE) address, Fibre Channel LUN
N	Horizontal placement for an empty rack location	
P	Planar	System backplane
T	Port, external cable	
U	Unit	
V	Virtual planar	
W	Worldwide unique ID	
X	EIA value for an empty rack location	
Y	Firmware FRU	

## Worldwide unique identifier

The location code label for the worldwide unique identifier consists of the prefix W followed by a maximum of 16 uppercase hexadecimal digits with no leading zeros. A location code might not consist of a worldwide unique identifier. When present, the worldwide unique identifier location label follows the location label of the resource that interfaces with the resource that has the worldwide unique identifier, usually a port.

## 9125-F2C locations

Use this information to help you map a location code to a position on the unit.

The following diagrams show field replaceable unit (FRU) layouts in the system. Use these diagrams with the following tables.

## Rack views

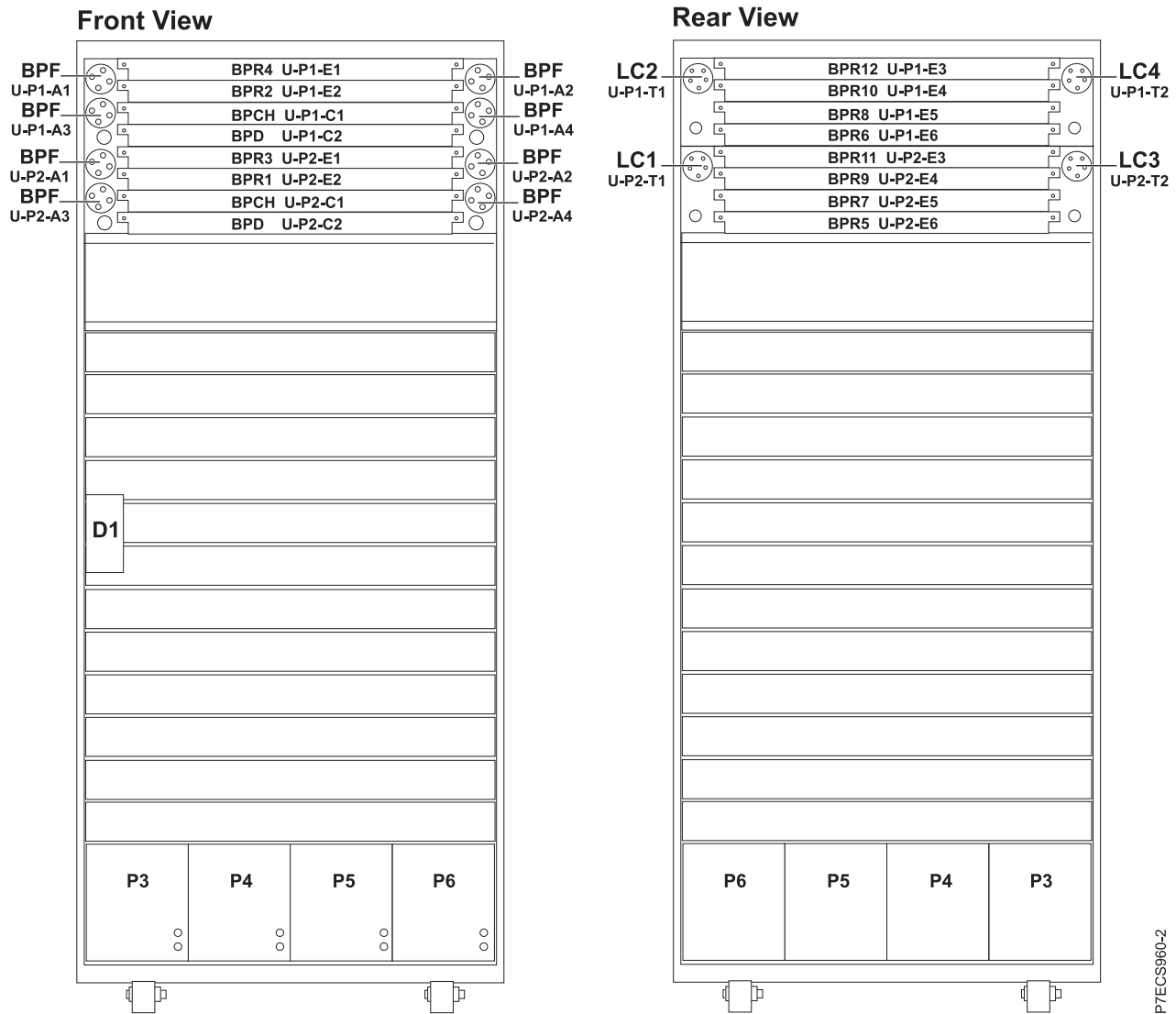


Figure 42. Front and rear view of frame

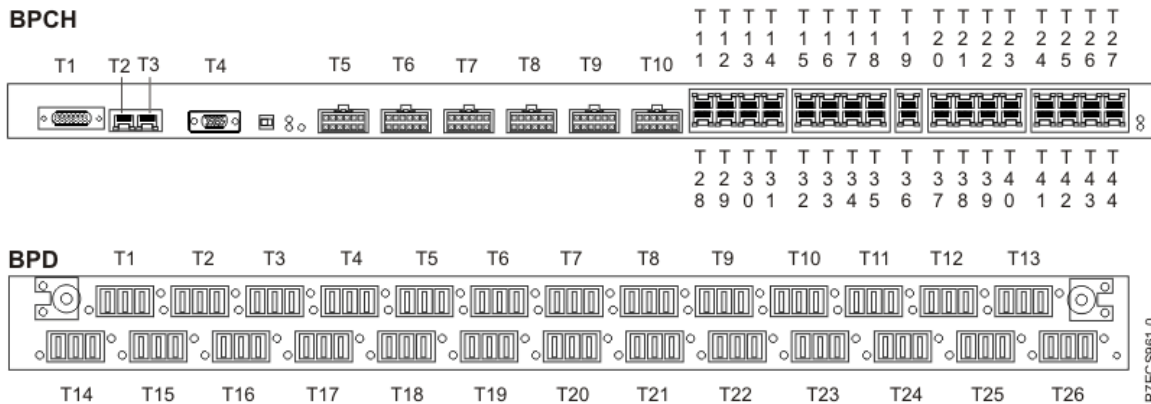
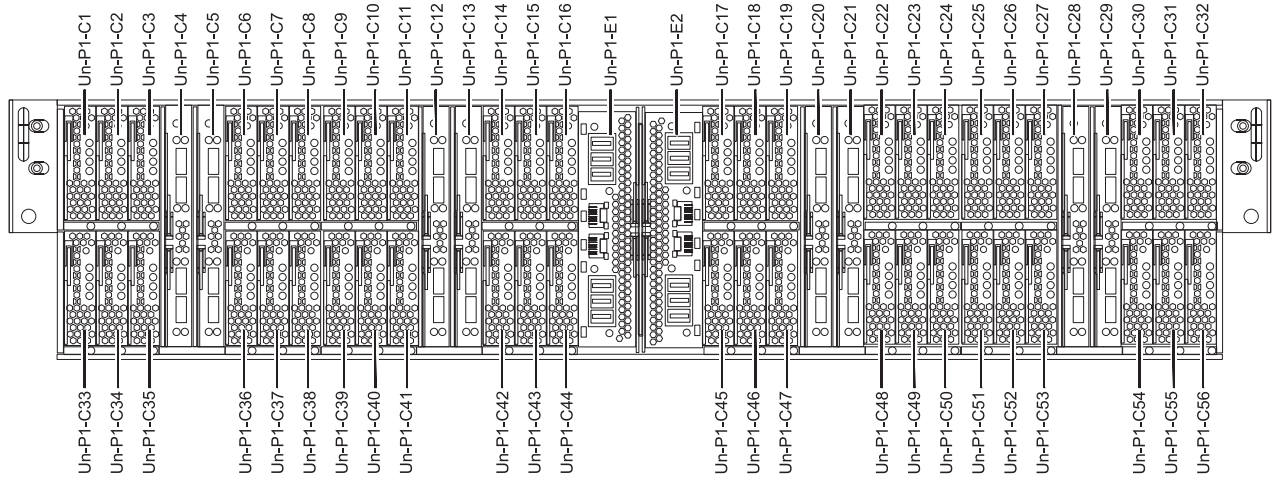


Figure 43. Bulk power control and communications hub (BPCH) and Bulk power distribution (BPD) locations

**Front view**



**Rear view**

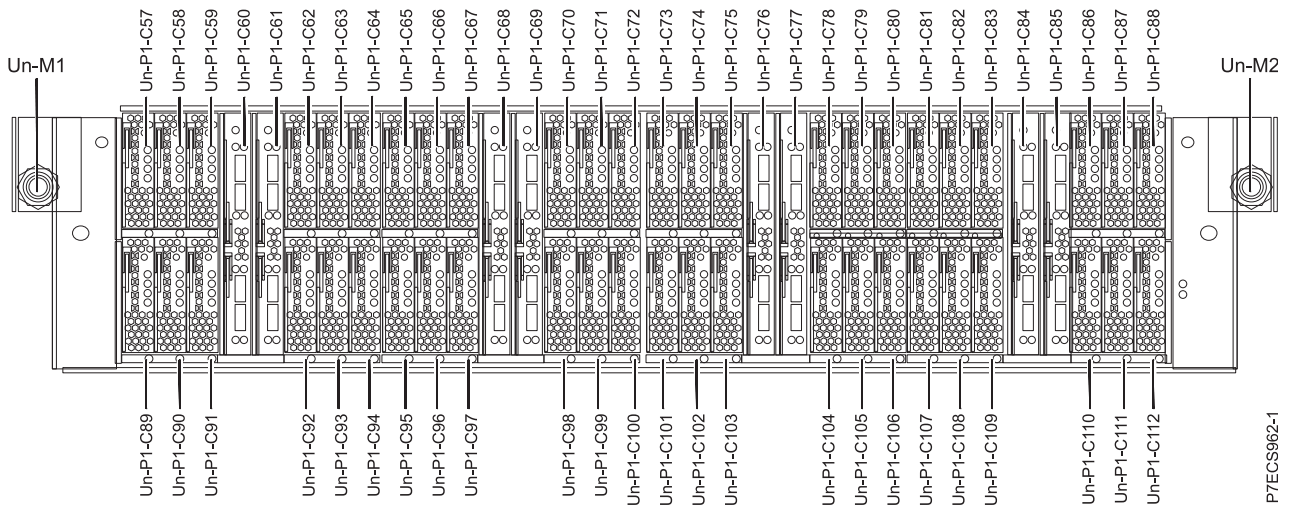


Figure 44. Memory card locations

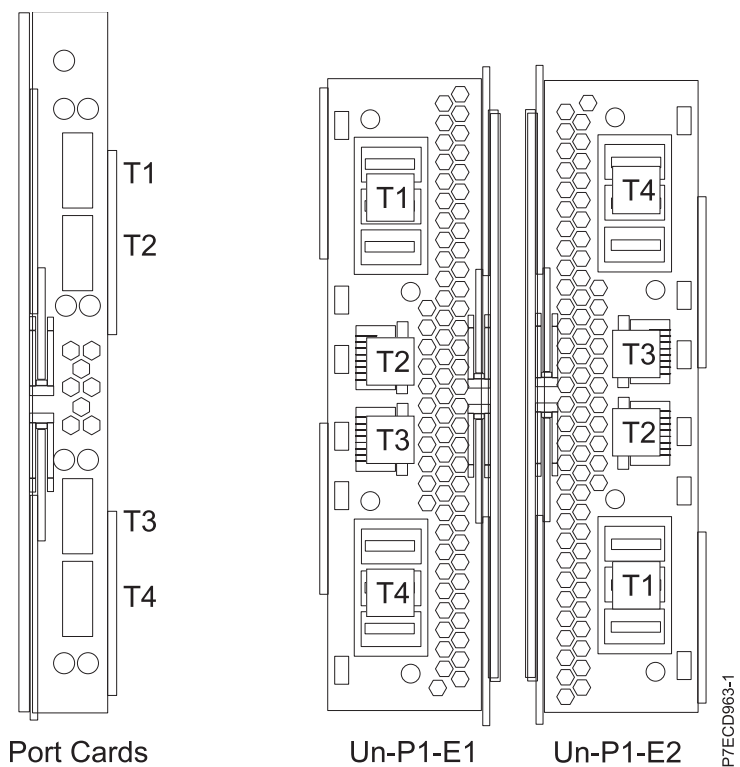


Figure 45. Bulk power assembly (BPA) connector locations

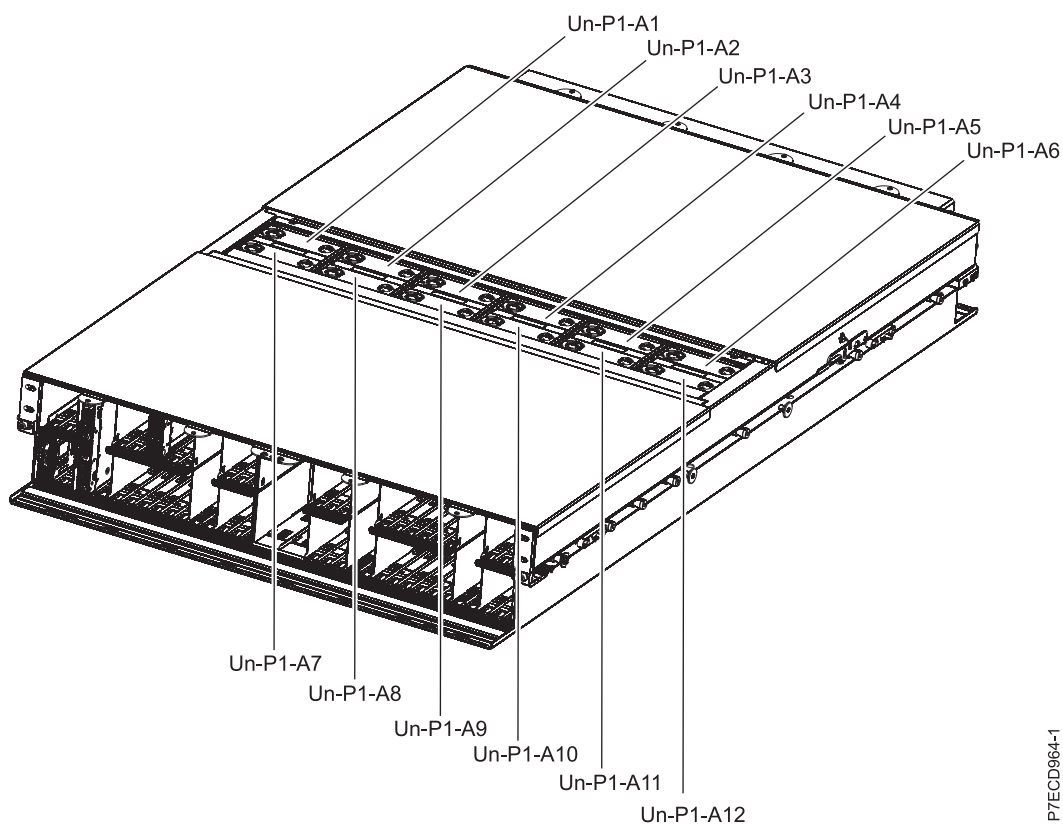


Figure 46. Bulk power fan (BPF) locations



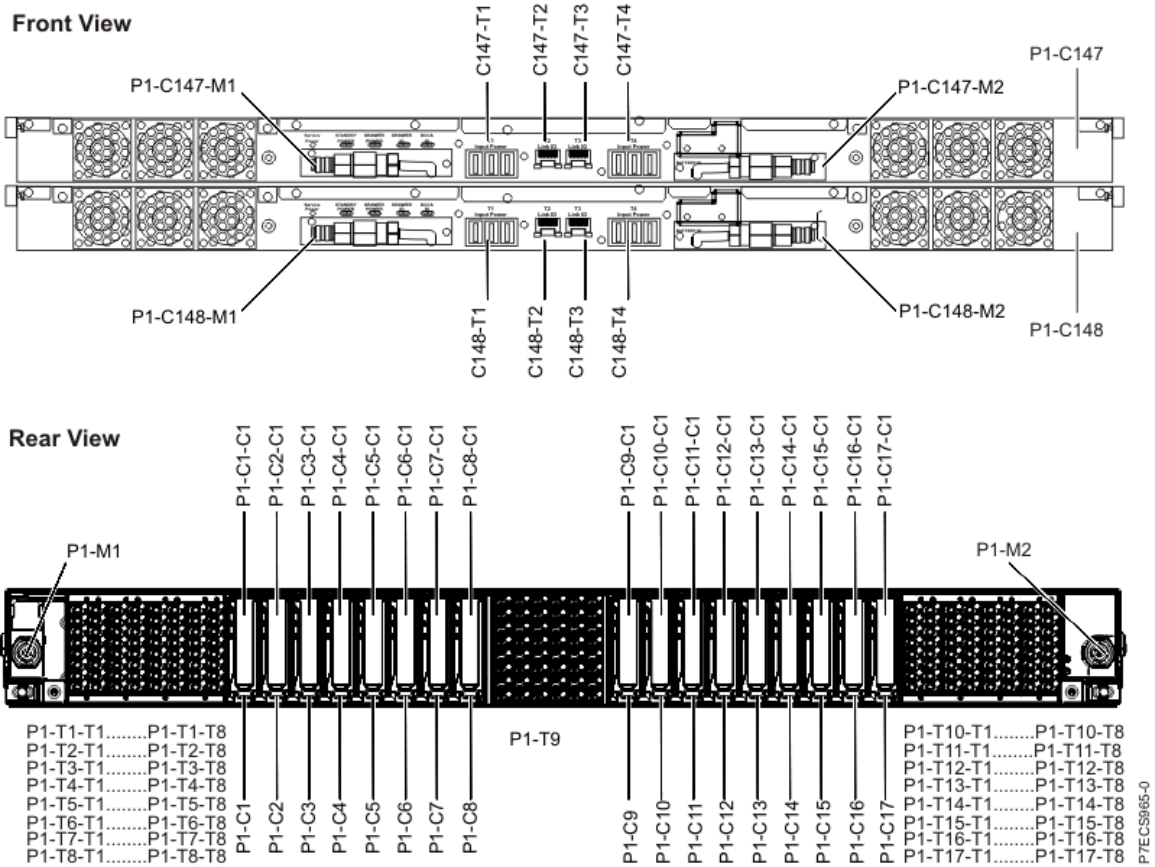


Figure 47. Distributed converter and control assembly (DCCA) and PCIe riser locations

Table 30. Bulk power assembly (BPA) locations and failing components

Failing item name	Physical location code
<b>Frame</b>	
UEPO panel	Un-D1
Connector T1 for BPA -A connection (upper BPA)	Un-D1-T1
Connector T2 for BPA-B connection (lower BPA)	Un-D1-T2
<b>BPA-A (lower BPA )</b>	
<b>BPA</b>	
Line cord (LC) 1	Un-P2-T1
LC 3	Un-P2-T2
Bulk power regulator (BPR) 3	Un-P2-E1
BPR 1	Un-P2-E2
BPR 11	Un-P2-E3
BPR 9	Un-P2-E4
BPR 7	Un-P2-E5
BPR 5	Un-P2-E6
Bulk power fan (BPF)	Un-P2-A1
BPF	Un-P2-A2

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
BPF	Un-P2-A3
BPF	Un-P2-A4
<b>Bulk power control and communications hub (BPCH)</b>	
BPCH	Un-P2-C1
<b>BPCH connectors</b>	
Connector T1	Un-P2-C1-T1
Connector T2	Un-P2-C1-T2
Connector T3	Un-P2-C1-T3
Connector T4	Un-P2-C1-T4
Connector T5	Un-P2-C1-T5
Connector T6	Un-P2-C1-T6
Connector T7	Un-P2-C1-T7
Connector T8	Un-P2-C1-T8
Connector T9	Un-P2-C1-T9
Connector T10	Un-P2-C1-T10
Connector T11	Un-P2-C1-T11
Connector T12	Un-P2-C1-T12
Connector T13	Un-P2-C1-T13
Connector T14	Un-P2-C1-T14
Connector T15	Un-P2-C1-T15
Connector T16	Un-P2-C1-T16
Connector T17	Un-P2-C1-T17
Connector T18	Un-P2-C1-T18
Connector T19	Un-P2-C1-T19
Connector T20	Un-P2-C1-T20
Connector T21	Un-P2-C1-T21
Connector T22	Un-P2-C1-T22
Connector T23	Un-P2-C1-T23
Connector T24	Un-P2-C1-T24
Connector T25	Un-P2-C1-T25
Connector T26	Un-P2-C1-T26
Connector T27	Un-P2-C1-T27
Connector T28	Un-P2-C1-T28
Connector T29	Un-P2-C1-T29
Connector T30	Un-P2-C1-T30
Connector T31	Un-P2-C1-T31
Connector T32	Un-P2-C1-T32
Connector T33	Un-P2-C1-T33
Connector T34	Un-P2-C1-T34
Connector T35	Un-P2-C1-T35

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
Connector T36	Un-P2-C1-T36
Connector T37	Un-P2-C1-T37
Connector T38	Un-P2-C1-T38
Connector T39	Un-P2-C1-T39
Connector T40	Un-P2-C1-T40
Connector T41	Un-P2-C1-T41
Connector T42	Un-P2-C1-T42
<b>Bulk power distribution (BPD)</b>	
BPD	Un-P2-C2
<b>BPD connectors</b>	
Connector T1	Un-P2-C2-T1
Connector T2	Un-P2-C2-T2
Connector T3	Un-P2-C2-T3
Connector T4	Un-P2-C2-T4
Connector T5	Un-P2-C2-T5
Connector T6	Un-P2-C2-T6
Connector T7	Un-P2-C2-T7
Connector T8	Un-P2-C2-T8
Connector T9	Un-P2-C2-T9
Connector T10	Un-P2-C2-T10
Connector T11	Un-P2-C2-T11
Connector T12	Un-P2-C2-T12
Connector T13	Un-P2-C2-T13
Connector T14	Un-P2-C2-T14
Connector T15	Un-P2-C2-T15
Connector T16	Un-P2-C2-T16
Connector T17	Un-P2-C2-T17
Connector T18	Un-P2-C2-T18
Connector T19	Un-P2-C2-T19
Connector T20	Un-P2-C2-T20
Connector T21	Un-P2-C2-T21
Connector T22	Un-P2-C2-T22
Connector T23	Un-P2-C2-T23
Connector T24	Un-P2-C2-T24
Connector T25	Un-P2-C2-T25
Connector T26	Un-P2-C2-T26
<b>BPA-B (Upper BPA)</b>	
<b>BPA</b>	Un-P1
Power cord 2	Un-P1-T1
Power cord 4	Un-P1-T2

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
BPR 4	Un-P1-E1
BPR 2	Un-P1-E2
BPR 12	Un-P1-E3
BPR 10	Un-P1-E4
BPR 8	Un-P1-E5
BPR 6	Un-P1-E6
Bulk power fan (BPF)	Un-P1-A1
BPF	Un-P1-A2
BPF	Un-P1-A3
BPF	Un-P1-A4
<b>BPCH</b>	
BPCH	Un-P1-C1
<b>BPCH connectors</b>	
Connector T1	Un-P1-C1-T1
Connector T2	Un-P1-C1-T2
Connector T3	Un-P1-C1-T3
Connector T4	Un-P1-C1-T4
Connector T5	Un-P1-C1-T5
Connector T6	Un-P1-C1-T6
Connector T7	Un-P1-C1-T7
Connector T8	Un-P1-C1-T8
Connector T9	Un-P1-C1-T9
Connector T10	Un-P1-C1-T10
Connector T11	Un-P1-C1-T11
Connector T12	Un-P1-C1-T12
Connector T13	Un-P1-C1-T13
Connector T14	Un-P1-C1-T14
Connector T15	Un-P1-C1-T15
Connector T16	Un-P1-C1-T16
Connector T17	Un-P1-C1-T17
Connector T18	Un-P1-C1-T18
Connector T19	Un-P1-C1-T19
Connector T20	Un-P1-C1-T20
Connector T21	Un-P1-C1-T21
Connector T22	Un-P1-C1-T22
Connector T23	Un-P1-C1-T23
Connector T24	Un-P1-C1-T24
Connector T25	Un-P1-C1-T25
Connector T26	Un-P1-C1-T26
Connector T27	Un-P1-C1-T27

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
Connector T28	Un-P1-C1-T28
Connector T29	Un-P1-C1-T29
Connector T30	Un-P1-C1-T30
Connector T31	Un-P1-C1-T31
Connector T32	Un-P1-C1-T32
Connector T33	Un-P1-C1-T33
Connector T34	Un-P1-C1-T34
Connector T35	Un-P1-C1-T35
Connector T36	Un-P1-C1-T36
Connector T37	Un-P1-C1-T37
Connector T38	Un-P1-C1-T38
Connector T39	Un-P1-C1-T39
Connector T40	Un-P1-C1-T40
Connector T41	Un-P1-C1-T41
Connector T42	Un-P1-C1-T42
<b>BPD</b>	
BPD	Un-P1-C2
<b>BPD connectors</b>	
Connector T1	Un-P1-C2-T1
Connector T2	Un-P1-C2-T2
Connector T3	Un-P1-C2-T3
Connector T4	Un-P1-C2-T4
Connector T5	Un-P1-C2-T5
Connector T6	Un-P1-C2-T6
Connector T7	Un-P1-C2-T7
Connector T8	Un-P1-C2-T8
Connector T9	Un-P1-C2-T9
Connector T10	Un-P1-C2-T10
Connector T11	Un-P1-C2-T11
Connector T12	Un-P1-C2-T12
Connector T13	Un-P1-C2-T13
Connector T14	Un-P1-C2-T14
Connector T15	Un-P1-C2-T15
Connector T16	Un-P1-C2-T16
Connector T17	Un-P1-C2-T17
Connector T18	Un-P1-C2-T18
Connector T19	Un-P1-C2-T19
Connector T20	Un-P1-C2-T20
Connector T21	Un-P1-C2-T21
Connector T22	Un-P1-C2-T22

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
Connector T23	Un-P1-C2-T23
Connector T24	Un-P1-C2-T24
Connector T25	Un-P1-C2-T25
Connector T26	Un-P1-C2-T26
<b>Water cooling</b>	
Manifold left	Un-M1
Manifold right	Un-M2
Rear door heat exchanger (RDHX)	Un-M3
<b>Water conditioning unit (WCU)</b>	
WCU 1	Un-P3
MDA-W	Un-P3-C1
Connector T1	Un-P3-C1-T1
Connector T2	Un-P3-C1-T2
WCU 2	Un-P4
MDA-W	Un-P4-C1
Connector T1	Un-P4-C1-T1
Connector T2	Un-P4-C1-T2
WCU 3	Un-P5
MDA-W	Un-P5-C1
Connector T1	Un-P5-C1-T1
Connector T2	Un-P5-C1-T2
WCU 4	Un-P6
MDA-W	Un-P6-C1
Connector T1	Un-P6-C1-T1
Connector T2	Un-P6-C1-T2
<b>Fill drain tool (FDT)</b>	
FDT - BPA 1	Un-P7
FDT control card	Un-P7-C1
FDT - BPA 2	Un-P8
FDT control card	Un-P8-C1
<b>Node</b>	
<b>Processor or hub FRU (field replaceable unit) (upper DCCA)</b>	Un-P1
DCCA 0	Un-P1-C147
Connector	Un-C147-T1
Connector	Un-C147-T4
HMC1 connector (FSP)	Un-C147-T2
HMC2 connector (FSP)	Un-C147-T3
Battery	Un-C147-E1
DCCA 1	Un-P1-C148
Connector	Un-C148-T1

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
Connector	Un-C148-T4
HMC1 connector (FSP)	Un-C148-T2
HMC2 connector (FSP)	Un-C148-T3
Battery	Un-C148-E1
<b>System VPD</b>	
System VPD card	Un-P1-C146
<b>Memory DIMM</b>	
Memory DIMM	Un-P1-C18
Memory DIMM	Un-P1-C19
Memory DIMM	Un-P1-C20
Memory DIMM	Un-P1-C21
Memory DIMM	Un-P1-C22
Memory DIMM	Un-P1-C23
Memory DIMM	Un-P1-C24
Memory DIMM	Un-P1-C25
Memory DIMM	Un-P1-C26
Memory DIMM	Un-P1-C27
Memory DIMM	Un-P1-C28
Memory DIMM	Un-P1-C29
Memory DIMM	Un-P1-C30
Memory DIMM	Un-P1-C31
Memory DIMM	Un-P1-C32
Memory DIMM	Un-P1-C33
Memory DIMM	Un-P1-C34
Memory DIMM	Un-P1-C35
Memory DIMM	Un-P1-C36
Memory DIMM	Un-P1-C37
Memory DIMM	Un-P1-C38
Memory DIMM	Un-P1-C39
Memory DIMM	Un-P1-C40
Memory DIMM	Un-P1-C41
Memory DIMM	Un-P1-C42
Memory DIMM	Un-P1-C43
Memory DIMM	Un-P1-C44
Memory DIMM	Un-P1-C45
Memory DIMM	Un-P1-C46
Memory DIMM	Un-P1-C47
Memory DIMM	Un-P1-C48
Memory DIMM	Un-P1-C49
Memory DIMM	Un-P1-C50

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
Memory DIMM	Un-P1-C51
Memory DIMM	Un-P1-C52
Memory DIMM	Un-P1-C53
Memory DIMM	Un-P1-C54
Memory DIMM	Un-P1-C55
Memory DIMM	Un-P1-C56
Memory DIMM	Un-P1-C57
Memory DIMM	Un-P1-C58
Memory DIMM	Un-P1-C59
Memory DIMM	Un-P1-C60
Memory DIMM	Un-P1-C61
Memory DIMM	Un-P1-C62
Memory DIMM	Un-P1-C63
Memory DIMM	Un-P1-C64
Memory DIMM	Un-P1-C65
Memory DIMM	Un-P1-C66
Memory DIMM	Un-P1-C67
Memory DIMM	Un-P1-C68
Memory DIMM	Un-P1-C69
Memory DIMM	Un-P1-C70
Memory DIMM	Un-P1-C71
Memory DIMM	Un-P1-C72
Memory DIMM	Un-P1-C73
Memory DIMM	Un-P1-C74
Memory DIMM	Un-P1-C75
Memory DIMM	Un-P1-C76
Memory DIMM	Un-P1-C77
Memory DIMM	Un-P1-C78
Memory DIMM	Un-P1-C79
Memory DIMM	Un-P1-C80
Memory DIMM	Un-P1-C81
Memory DIMM	Un-P1-C82
Memory DIMM	Un-P1-C83
Memory DIMM	Un-P1-C84
Memory DIMM	Un-P1-C85
Memory DIMM	Un-P1-C86
Memory DIMM	Un-P1-C87
Memory DIMM	Un-P1-C88
Memory DIMM	Un-P1-C89
Memory DIMM	Un-P1-C90



Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
Memory DIMM	Un-P1-C91
Memory DIMM	Un-P1-C92
Memory DIMM	Un-P1-C93
Memory DIMM	Un-P1-C94
Memory DIMM	Un-P1-C95
Memory DIMM	Un-P1-C96
Memory DIMM	Un-P1-C97
Memory DIMM	Un-P1-C98
Memory DIMM	Un-P1-C99
Memory DIMM	Un-P1-C100
Memory DIMM	Un-P1-C101
Memory DIMM	Un-P1-C102
Memory DIMM	Un-P1-C103
Memory DIMM	Un-P1-C104
Memory DIMM	Un-P1-C105
Memory DIMM	Un-P1-C106
Memory DIMM	Un-P1-C107
Memory DIMM	Un-P1-C108
Memory DIMM	Un-P1-C109
Memory DIMM	Un-P1-C110
Memory DIMM	Un-P1-C111
Memory DIMM	Un-P1-C112
Memory DIMM	Un-P1-C113
Memory DIMM	Un-P1-C114
Memory DIMM	Un-P1-C115
Memory DIMM	Un-P1-C116
Memory DIMM	Un-P1-C117
Memory DIMM	Un-P1-C118
Memory DIMM	Un-P1-C119
Memory DIMM	Un-P1-C120
Memory DIMM	Un-P1-C121
Memory DIMM	Un-P1-C122
Memory DIMM	Un-P1-C123
Memory DIMM	Un-P1-C124
Memory DIMM	Un-P1-C125
Memory DIMM	Un-P1-C126
Memory DIMM	Un-P1-C127
Memory DIMM	Un-P1-C128
Memory DIMM	Un-P1-C129
Memory DIMM	Un-P1-C130

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
Memory DIMM	Un-P1-C131
Memory DIMM	Un-P1-C132
Memory DIMM	Un-P1-C133
Memory DIMM	Un-P1-C134
Memory DIMM	Un-P1-C135
Memory DIMM	Un-P1-C136
Memory DIMM	Un-P1-C137
Memory DIMM	Un-P1-C138
Memory DIMM	Un-P1-C139
Memory DIMM	Un-P1-C140
Memory DIMM	Un-P1-C141
Memory DIMM	Un-P1-C142
Memory DIMM	Un-P1-C143
Memory DIMM	Un-P1-C144
Memory DIMM	Un-P1-C145
<b>HUB and Torrent</b>	
HUB 0	Un-P1-R1
HUB 1	Un-P1-R2
HUB 2	Un-P1-R3
HUB 3	Un-P1-R4
HUB 4	Un-P1-R5
HUB 5	Un-P1-R6
HUB 6	Un-P1-R7
HUB 7	Un-P1-R8
<b>HUB 0 optics</b>	
HUB 0 D-Link 14	Un-P1-R1-R1
HUB 0 D-Link 12	Un-P1-R1-R2
HUB 0 D-Link 10	Un-P1-R1-R3
HUB 0 D-Link 8	Un-P1-R1-R4
HUB 0 D-Link 6	Un-P1-R1-R5
HUB 0 D-Link 4	Un-P1-R1-R6
HUB 0 D-Link 2	Un-P1-R1-R7
HUB 0 D-Link 15	Un-P1-R1-R8
HUB 0 D-Link 13	Un-P1-R1-R9
HUB 0 D-Link 11	Un-P1-R1-R10
HUB 0 D-Link 9	Un-P1-R1-R11
HUB 0 D-Link 7	Un-P1-R1-R12
HUB 0 D-Link 5	Un-P1-R1-R13
HUB 0 D-Link 3	Un-P1-R1-R14
HUB 0 D-Link 1	Un-P1-R1-R15

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
HUB 0 L-Link 20	Un-P1-R1-R16
HUB 0 L-Link 21	Un-P1-R1-R17
HUB 0 L-Link 16	Un-P1-R1-R18
HUB 0 L-Link 17	Un-P1-R1-R19
HUB 0 L-Link 12	Un-P1-R1-R20
HUB 0 L-Link 13	Un-P1-R1-R21
HUB 0 L-Link 8	Un-P1-R1-R22
HUB 0 L-Link 9	Un-P1-R1-R23
HUB 0 L-Link 4	Un-P1-R1-R24
HUB 0 L-Link 5	Un-P1-R1-R25
HUB 0 L-Link 0	Un-P1-R1-R26
HUB 0 L-Link 1	Un-P1-R1-R27
HUB 0 D-Link 0	Un-P1-R1-R28
HUB 0 L-Link 22	Un-P1-R1-R29
HUB 0 L-Link 23	Un-P1-R1-R30
HUB 0 L-Link 18	Un-P1-R1-R31
HUB 0 L-Link 19	Un-P1-R1-R32
HUB 0 L-Link 14	Un-P1-R1-R33
HUB 0 L-Link 15	Un-P1-R1-R34
HUB 0 L-Link 10	Un-P1-R1-R35
HUB 0 L-Link 11	Un-P1-R1-R36
HUB 0 L-Link 6	Un-P1-R1-R37
HUB 0 L-Link 7	Un-P1-R1-R38
HUB 0 L-Link 2	Un-P1-R1-R39
HUB 0 L-Link 3	Un-P1-R1-R40
<b>HUB 1 optics</b>	
HUB 1 D-Link 14	Un-P1-R2-R1
HUB 1 D-Link 12	Un-P1-R2-R2
HUB 1 D-Link 10	Un-P1-R2-R3
HUB 1 D-Link 8	Un-P1-R2-R4
HUB 1 D-Link 6	Un-P1-R2-R5
HUB 1 D-Link 4	Un-P1-R2-R6
HUB 1 D-Link 2	Un-P1-R2-R7
HUB 1 D-Link 15	Un-P1-R2-R8
HUB 1 D-Link 13	Un-P1-R2-R9
HUB 1 D-Link 11	Un-P1-R2-R10
HUB 1 D-Link 9	Un-P1-R2-R11
HUB 1 D-Link 7	Un-P1-R2-R12
HUB 1 D-Link 5	Un-P1-R2-R13
HUB 1 D-Link 3	Un-P1-R2-R14

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
HUB 1 D-Link 1	Un-P1-R2-R15
HUB 1 L-Link 20	Un-P1-R2-R16
HUB 1 L-Link 21	Un-P1-R2-R17
HUB 1 L-Link 16	Un-P1-R2-R18
HUB 1 L-Link 17	Un-P1-R2-R19
HUB 1 L-Link 12	Un-P1-R2-R20
HUB 1 L-Link 13	Un-P1-R2-R21
HUB 1 L-Link 8	Un-P1-R2-R22
HUB 1 L-Link 9	Un-P1-R2-R23
HUB 1 L-Link 4	Un-P1-R2-R24
HUB 1 L-Link 5	Un-P1-R2-R25
HUB 1 L-Link 0	Un-P1-R2-R26
HUB 1 L-Link 1	Un-P1-R2-R27
HUB 0 D-Link 0	Un-P1-R1-R28
HUB 1 L-Link 22	Un-P1-R2-R29
HUB 1 L-Link 23	Un-P1-R2-R30
HUB 1 L-Link 18	Un-P1-R2-R31
HUB 1 L-Link 19	Un-P1-R2-R32
HUB 1 L-Link 14	Un-P1-R2-R33
HUB 1 L-Link 15	Un-P1-R2-R34
HUB 1 L-Link 10	Un-P1-R2-R35
HUB 1 L-Link 11	Un-P1-R2-R36
HUB 1 L-Link 6	Un-P1-R2-R37
HUB 1 L-Link 7	Un-P1-R2-R38
HUB 1 L-Link 2	Un-P1-R2-R39
HUB 1 L-Link 3	Un-P1-R2-R40
<b>HUB 2 optics</b>	
HUB 2 D-Link 14	Un-P1-R3-R1
HUB 2 D-Link 12	Un-P1-R3-R2
HUB 2 D-Link 10	Un-P1-R3-R3
HUB 2 D-Link 8	Un-P1-R3-R4
HUB 2 D-Link 6	Un-P1-R3-R5
HUB 2 D-Link 4	Un-P1-R3-R6
HUB 2 D-Link 2	Un-P1-R3-R7
HUB 2 D-Link 15	Un-P1-R3-R8
HUB 2 D-Link 13	Un-P1-R3-R9
HUB 2 D-Link 11	Un-P1-R3-R10
HUB 2 D-Link 9	Un-P1-R3-R11
HUB 2 D-Link 7	Un-P1-R3-R12
HUB 2 D-Link 5	Un-P1-R3-R13

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
HUB 2 D-Link 3	Un-P1-R3-R14
HUB 2 D-Link 1	Un-P1-R3-R15
HUB 2 L-Link 20	Un-P1-R3-R16
HUB 2 L-Link 21	Un-P1-R3-R17
HUB 2 L-Link 16	Un-P1-R3-R18
HUB 2 L-Link 17	Un-P1-R3-R19
HUB 2 L-Link 12	Un-P1-R3-R20
HUB 2 L-Link 13	Un-P1-R3-R21
HUB 2 L-Link 8	Un-P1-R3-R22
HUB 2 L-Link 9	Un-P1-R3-R23
HUB 2 L-Link 4	Un-P1-R3-R24
HUB 2 L-Link 5	Un-P1-R3-R25
HUB 2 L-Link 0	Un-P1-R3-R26
HUB 2 L-Link 1	Un-P1-R3-R27
HUB 0 D-Link 0	Un-P1-R1-R28
HUB 2 L-Link 22	Un-P1-R3-R29
HUB 2 L-Link 23	Un-P1-R3-R30
HUB 2 L-Link 18	Un-P1-R3-R31
HUB 2 L-Link 19	Un-P1-R3-R32
HUB 2 L-Link 14	Un-P1-R3-R33
HUB 2 L-Link 15	Un-P1-R3-R34
HUB 2 L-Link 10	Un-P1-R3-R35
HUB 2 L-Link 11	Un-P1-R3-R36
HUB 2 L-Link 6	Un-P1-R3-R37
HUB 2 L-Link 7	Un-P1-R3-R38
HUB 2 L-Link 2	Un-P1-R3-R39
HUB 2 L-Link 3	Un-P1-R3-R40
<b>HUB 3 optics</b>	
HUB 3 D-Link 14	Un-P1-R4-R1
HUB 3 D-Link 12	Un-P1-R4-R2
HUB 3 D-Link 10	Un-P1-R4-R3
HUB 3 D-Link 8	Un-P1-R4-R4
HUB 3 D-Link 6	Un-P1-R4-R5
HUB 3 D-Link 4	Un-P1-R4-R6
HUB 3 D-Link 2	Un-P1-R4-R7
HUB 3 D-Link 15	Un-P1-R4-R8
HUB 3 D-Link 13	Un-P1-R4-R9
HUB 3 D-Link 11	Un-P1-R4-R10
HUB 3 D-Link 9	Un-P1-R4-R11
HUB 3 D-Link 7	Un-P1-R4-R12

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
HUB 3 D-Link 5	Un-P1-R4-R13
HUB 3 D-Link 3	Un-P1-R4-R14
HUB 3 D-Link 1	Un-P1-R4-R15
HUB 3 L-Link 20	Un-P1-R4-R16
HUB 3 L-Link 21	Un-P1-R4-R17
HUB 3 L-Link 16	Un-P1-R4-R18
HUB 3 L-Link 17	Un-P1-R4-R19
HUB 3 L-Link 12	Un-P1-R4-R20
HUB 3 L-Link 13	Un-P1-R4-R21
HUB 3 L-Link 8	Un-P1-R4-R22
HUB 3 L-Link 9	Un-P1-R4-R23
HUB 3 L-Link 4	Un-P1-R4-R24
HUB 3 L-Link 5	Un-P1-R4-R25
HUB 3 L-Link 0	Un-P1-R4-R26
HUB 3 L-Link 1	Un-P1-R4-R27
HUB 0 D-Link 0	Un-P1-R1-R28
HUB 3 L-Link 22	Un-P1-R4-R29
HUB 3 L-Link 23	Un-P1-R4-R30
HUB 3 L-Link 18	Un-P1-R4-R31
HUB 3 L-Link 19	Un-P1-R4-R32
HUB 3 L-Link 14	Un-P1-R4-R33
HUB 3 L-Link 15	Un-P1-R4-R34
HUB 3 L-Link 10	Un-P1-R4-R35
HUB 3 L-Link 11	Un-P1-R4-R36
HUB 3 L-Link 6	Un-P1-R4-R37
HUB 3 L-Link 7	Un-P1-R4-R38
HUB 3 L-Link 2	Un-P1-R4-R39
HUB 3 L-Link 3	Un-P1-R4-R40
<b>HUB 4 optics</b>	
HUB 4 D-Link 14	Un-P1-R5-R1
HUB 4 D-Link 12	Un-P1-R5-R2
HUB 4 D-Link 10	Un-P1-R5-R3
HUB 4 D-Link 8	Un-P1-R5-R4
HUB 4 D-Link 6	Un-P1-R5-R5
HUB 4 D-Link 4	Un-P1-R5-R6
HUB 4 D-Link 2	Un-P1-R5-R7
HUB 4 D-Link 15	Un-P1-R5-R8
HUB 4 D-Link 13	Un-P1-R5-R9
HUB 4 D-Link 11	Un-P1-R5-R10
HUB 4 D-Link 9	Un-P1-R5-R11

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
HUB 4 D-Link 7	Un-P1-R5-R12
HUB 4 D-Link 5	Un-P1-R5-R13
HUB 4 D-Link 3	Un-P1-R5-R14
HUB 4 D-Link 1	Un-P1-R5-R15
HUB 4 L-Link 20	Un-P1-R5-R16
HUB 4 L-Link 21	Un-P1-R5-R17
HUB 4 L-Link 16	Un-P1-R5-R18
HUB 4 L-Link 17	Un-P1-R5-R19
HUB 4 L-Link 12	Un-P1-R5-R20
HUB 4 L-Link 13	Un-P1-R5-R21
HUB 4 L-Link 8	Un-P1-R5-R22
HUB 4 L-Link 9	Un-P1-R5-R23
HUB 4 L-Link 4	Un-P1-R5-R24
HUB 4 L-Link 5	Un-P1-R5-R25
HUB 4 L-Link 0	Un-P1-R5-R26
HUB 4 L-Link 1	Un-P1-R5-R27
HUB 0 D-Link 0	Un-P1-R1-R28
HUB 4 L-Link 22	Un-P1-R5-R29
HUB 4 L-Link 23	Un-P1-R5-R30
HUB 4 L-Link 18	Un-P1-R5-R31
HUB 4 L-Link 19	Un-P1-R5-R32
HUB 4 L-Link 14	Un-P1-R5-R33
HUB 4 L-Link 15	Un-P1-R5-R34
HUB 4 L-Link 10	Un-P1-R5-R35
HUB 4 L-Link 11	Un-P1-R5-R36
HUB 4 L-Link 6	Un-P1-R5-R37
HUB 4 L-Link 7	Un-P1-R5-R38
HUB 4 L-Link 2	Un-P1-R5-R39
HUB 4 L-Link 3	Un-P1-R5-R40
<b>HUB 5 optics</b>	
HUB 5 D-Link 14	Un-P1-R6-R1
HUB 5 D-Link 12	Un-P1-R6-R2
HUB 5 D-Link 10	Un-P1-R6-R3
HUB 5 D-Link 8	Un-P1-R6-R4
HUB 5 D-Link 6	Un-P1-R6-R5
HUB 5 D-Link 4	Un-P1-R6-R6
HUB 5 D-Link 2	Un-P1-R6-R7
HUB 5 D-Link 15	Un-P1-R6-R8
HUB 5 D-Link 13	Un-P1-R6-R9
HUB 5 D-Link 11	Un-P1-R6-R10

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
HUB 5 D-Link 9	Un-P1-R6-R11
HUB 5 D-Link 7	Un-P1-R6-R12
HUB 5 D-Link 5	Un-P1-R6-R13
HUB 5 D-Link 3	Un-P1-R6-R14
HUB 5 D-Link 1	Un-P1-R6-R15
HUB 5 L-Link 20	Un-P1-R6-R16
HUB 5 L-Link 21	Un-P1-R6-R17
HUB 5 L-Link 16	Un-P1-R6-R18
HUB 5 L-Link 17	Un-P1-R6-R19
HUB 5 L-Link 12	Un-P1-R6-R20
HUB 5 L-Link 13	Un-P1-R6-R21
HUB 5 L-Link 8	Un-P1-R6-R22
HUB 5 L-Link 9	Un-P1-R6-R23
HUB 5 L-Link 4	Un-P1-R6-R24
HUB 5 L-Link 5	Un-P1-R6-R25
HUB 5 L-Link 0	Un-P1-R6-R26
HUB 5 L-Link 1	Un-P1-R6-R27
HUB 0 D-Link 0	Un-P1-R1-R28
HUB 5 L-Link 22	Un-P1-R6-R29
HUB 5 L-Link 23	Un-P1-R6-R30
HUB 5 L-Link 18	Un-P1-R6-R31
HUB 5 L-Link 19	Un-P1-R6-R32
HUB 5 L-Link 14	Un-P1-R6-R33
HUB 5 L-Link 15	Un-P1-R6-R34
HUB 5 L-Link 10	Un-P1-R6-R35
HUB 5 L-Link 11	Un-P1-R6-R36
HUB 5 L-Link 6	Un-P1-R6-R37
HUB 5 L-Link 7	Un-P1-R6-R38
HUB 5 L-Link 2	Un-P1-R6-R39
HUB 5 L-Link 3	Un-P1-R6-R40
<b>HUB 6 optics</b>	
HUB 6 D-Link 14	Un-P1-R7-R1
HUB 6 D-Link 12	Un-P1-R7-R2
HUB 6 D-Link 10	Un-P1-R7-R3
HUB 6 D-Link 8	Un-P1-R7-R4
HUB 6 D-Link 6	Un-P1-R7-R5
HUB 6 D-Link 4	Un-P1-R7-R6
HUB 6 D-Link 2	Un-P1-R7-R7
HUB 6 D-Link 15	Un-P1-R7-R8
HUB 6 D-Link 13	Un-P1-R7-R9



Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
HUB 6 D-Link 11	Un-P1-R7-R10
HUB 6 D-Link 9	Un-P1-R7-R11
HUB 6 D-Link 7	Un-P1-R7-R12
HUB 6 D-Link 5	Un-P1-R7-R13
HUB 6 D-Link 3	Un-P1-R7-R14
HUB 6 D-Link 1	Un-P1-R7-R15
HUB 6 L-Link 20	Un-P1-R7-R16
HUB 6 L-Link 21	Un-P1-R7-R17
HUB 6 L-Link 16	Un-P1-R7-R18
HUB 6 L-Link 17	Un-P1-R7-R19
HUB 6 L-Link 12	Un-P1-R7-R20
HUB 6 L-Link 13	Un-P1-R7-R21
HUB 6 L-Link 8	Un-P1-R7-R22
HUB 6 L-Link 9	Un-P1-R7-R23
HUB 6 L-Link 4	Un-P1-R7-R24
HUB 6 L-Link 5	Un-P1-R7-R25
HUB 6 L-Link 0	Un-P1-R7-R26
HUB 6 L-Link 1	Un-P1-R7-R27
HUB 0 D-Link 0	Un-P1-R1-R28
HUB 6 L-Link 22	Un-P1-R7-R29
HUB 6 L-Link 23	Un-P1-R7-R30
HUB 6 L-Link 18	Un-P1-R7-R31
HUB 6 L-Link 19	Un-P1-R7-R32
HUB 6 L-Link 14	Un-P1-R7-R33
HUB 6 L-Link 15	Un-P1-R7-R34
HUB 6 L-Link 10	Un-P1-R7-R35
HUB 6 L-Link 11	Un-P1-R7-R36
HUB 6 L-Link 6	Un-P1-R7-R37
HUB 6 L-Link 7	Un-P1-R7-R38
HUB 6 L-Link 2	Un-P1-R7-R39
HUB 6 L-Link 3	Un-P1-R7-R40
<b>HUB 7 optics</b>	
HUB 7 D-Link 14	Un-P1-R8-R1
HUB 7 D-Link 12	Un-P1-R8-R2
HUB 7 D-Link 10	Un-P1-R8-R3
HUB 7 D-Link 8	Un-P1-R8-R4
HUB 7 D-Link 6	Un-P1-R8-R5
HUB 7 D-Link 4	Un-P1-R8-R6
HUB 7 D-Link 2	Un-P1-R8-R7
HUB 7 D-Link 15	Un-P1-R8-R8

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
HUB 7 D-Link 13	Un-P1-R8-R9
HUB 7 D-Link 11	Un-P1-R8-R10
HUB 7 D-Link 9	Un-P1-R8-R11
HUB 7 D-Link 7	Un-P1-R8-R12
HUB 7 D-Link 5	Un-P1-R8-R13
HUB 7 D-Link 3	Un-P1-R8-R14
HUB 7 D-Link 1	Un-P1-R8-R15
HUB 7 L-Link 20	Un-P1-R8-R16
HUB 7 L-Link 21	Un-P1-R8-R17
HUB 7 L-Link 16	Un-P1-R8-R18
HUB 7 L-Link 17	Un-P1-R8-R19
HUB 7 L-Link 12	Un-P1-R8-R20
HUB 7 L-Link 13	Un-P1-R8-R21
HUB 7 L-Link 8	Un-P1-R8-R22
HUB 7 L-Link 9	Un-P1-R8-R23
HUB 7 L-Link 4	Un-P1-R8-R24
HUB 7 L-Link 5	Un-P1-R8-R25
HUB 7 L-Link 0	Un-P1-R8-R26
HUB 7 L-Link 1	Un-P1-R8-R27
HUB 0 D-Link 0	Un-P1-R1-R28
HUB 7 L-Link 22	Un-P1-R8-R29
HUB 7 L-Link 23	Un-P1-R8-R30
HUB 7 L-Link 18	Un-P1-R8-R31
HUB 7 L-Link 19	Un-P1-R8-R32
HUB 7 L-Link 14	Un-P1-R8-R33
HUB 7 L-Link 15	Un-P1-R8-R34
HUB 7 L-Link 10	Un-P1-R8-R35
HUB 7 L-Link 11	Un-P1-R8-R36
HUB 7 L-Link 6	Un-P1-R8-R37
HUB 7 L-Link 7	Un-P1-R8-R38
HUB 7 L-Link 2	Un-P1-R8-R39
HUB 7 L-Link 3	Un-P1-R8-R40
<b>P7 chips</b>	
Quad chip module (QCM) 0 or P7-2	Un-P1-R9
QCM 0 or P7-1	Un-P1-R10
QCM 0 or P7-3	Un-P1-R11
QCM 0 or P7-0	Un-P1-R12
QCM 1 or P7-2	Un-P1-R13
QCM 1 or P7-1	Un-P1-R14
QCM 1 or P7-3	Un-P1-R15

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
QCM 1 or P7-0	Un-P1-R16
QCM 2 or P7-2	Un-P1-R17
QCM 2 or P7-1	Un-P1-R18
QCM 2 or P7-3	Un-P1-R19
QCM 2 or P7-0	Un-P1-R20
QCM 3 or P7-2	Un-P1-R21
QCM 3 or P7-1	Un-P1-R22
QCM 3 or P7-3	Un-P1-R23
QCM 3 or P7-0	Un-P1-R24
QCM 4 or P7-2	Un-P1-R25
QCM 4 or P7-1	Un-P1-R26
QCM 4 or P7-3	Un-P1-R27
QCM 4 or P7-0	Un-P1-R28
QCM 5 or P7-2	Un-P1-R29
QCM 5 or P7-1	Un-P1-R30
QCM 5 or P7-3	Un-P1-R31
QCM 5 or P7-0	Un-P1-R32
QCM 6 or P7-2	Un-P1-R33
QCM 6 or P7-1	Un-P1-R34
QCM 6 or P7-3	Un-P1-R35
QCM 6 or P7-0	Un-P1-R36
QCM 7 or P7-2	Un-P1-R37
QCM 7 or P7-1	Un-P1-R38
QCM 7 or P7-3	Un-P1-R39
QCM 7 or P7-0	Un-P1-R40
<b>PCI</b>	
PCIe riser1	Un-P1-C1
PCIe1	Un-P1-C1-C1
PCIe riser2	Un-P1-C2
PCIe2	Un-P1-C2-C1
PCIe riser3	Un-P1-C3
PCIe3	Un-P1-C3-C1
PCIe riser4	Un-P1-C4
PCIe4	Un-P1-C4-C1
PCIe riser5	Un-P1-C5
PCIe5	Un-P1-C5-C1
PCIe riser6	Un-P1-C6
PCIe6	Un-P1-C6-C1
PCIe riser7	Un-P1-C7
PCIe7	Un-P1-C7-C1

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
PCIe riser8	Un-P1-C8
PCIe8	Un-P1-C8-C1
PCIe riser9	Un-P1-C9
PCIe9	Un-P1-C9-C1
PCIe riser10	Un-P1-C10
PCIe10	Un-P1-C10-C1
PCIe riser11	Un-P1-C11
PCIe11	Un-P1-C11-C1
PCIe riser12	Un-P1-C12
PCIe12	Un-P1-C12-C1
PCIe riser13	Un-P1-C13
PCIe13	Un-P1-C13-C1
PCIe riser14	Un-P1-C14
PCIe14	Un-P1-C14-C1
PCIe riser15	Un-P1-C15
PCIe15	Un-P1-C15-C1
PCIe riser16	Un-P1-C16
PCIe16	Un-P1-C16-C1
PCIe riser17	Un-P1-C17
PCIe17	Un-P1-C17-C1
<b>L-Link</b>	
48 Cable L-Link Connector	Un-P1-T9
D-Link (Left group)	
Optical HUB 7	Un-P1-T1-T1
Optical HUB 7	Un-P1-T1-T2
Optical HUB 6	Un-P1-T1-T3
Optical HUB 6	Un-P1-T1-T4
Optical HUB 5	Un-P1-T1-T5
Optical HUB 5	Un-P1-T1-T6
Optical HUB 4	Un-P1-T1-T7
Optical HUB 4	Un-P1-T1-T8
Optical HUB 7	Un-P1-T2-T1
Optical HUB 7	Un-P1-T2-T2
Optical HUB 6	Un-P1-T2-T3
Optical HUB 6	Un-P1-T2-T4
Optical HUB 5	Un-P1-T2-T5
Optical HUB 5	Un-P1-T2-T6
Optical HUB 4	Un-P1-T2-T7
Optical HUB 4	Un-P1-T2-T8
Optical HUB 7	Un-P1-T3-T1

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
Optical HUB 7	Un-P1-T3-T2
Optical HUB 6	Un-P1-T3-T3
Optical HUB 6	Un-P1-T3-T4
Optical HUB 5	Un-P1-T3-T5
Optical HUB 5	Un-P1-T3-T6
Optical HUB 4	Un-P1-T3-T7
Optical HUB 4	Un-P1-T3-T8
Optical HUB 7	Un-P1-T4-T1
Optical HUB 7	Un-P1-T4-T2
Optical HUB 6	Un-P1-T4-T3
Optical HUB 6	Un-P1-T4-T4
Optical HUB 5	Un-P1-T4-T5
Optical HUB 5	Un-P1-T4-T6
Optical HUB 4	Un-P1-T4-T7
Optical HUB 4	Un-P1-T4-T8
Optical HUB 7	Un-P1-T5-T1
Optical HUB 7	Un-P1-T5-T2
Optical HUB 6	Un-P1-T5-T3
Optical HUB 6	Un-P1-T5-T4
Optical HUB 5	Un-P1-T5-T5
Optical HUB 5	Un-P1-T5-T6
Optical HUB 4	Un-P1-T5-T7
Optical HUB 4	Un-P1-T5-T8
Optical HUB 7	Un-P1-T6-T1
Optical HUB 7	Un-P1-T6-T2
Optical HUB 6	Un-P1-T6-T3
Optical HUB 6	Un-P1-T6-T4
Optical HUB 5	Un-P1-T6-T5
Optical HUB 5	Un-P1-T6-T6
Optical HUB 4	Un-P1-T6-T7
Optical HUB 4	Un-P1-T6-T8
Optical HUB 7	Un-P1-T7-T1
Optical HUB 7	Un-P1-T7-T2
Optical HUB 6	Un-P1-T7-T3
Optical HUB 6	Un-P1-T7-T4
Optical HUB 5	Un-P1-T7-T5
Optical HUB 5	Un-P1-T7-T6
Optical HUB 4	Un-P1-T7-T7
Optical HUB 4	Un-P1-T7-T8
Optical HUB 7	Un-P1-T8-T1

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
Optical HUB 7	Un-P1-T8-T2
Optical HUB 6	Un-P1-T8-T3
Optical HUB 6	Un-P1-T8-T4
Optical HUB 5	Un-P1-T8-T5
Optical HUB 5	Un-P1-T8-T6
Optical HUB 4	Un-P1-T8-T7
Optical HUB 4	Un-P1-T8-T8
<b>D-Link (Right group)</b>	
Optical HUB 3	Un-P1-T10-T1
Optical HUB 3	Un-P1-T10-T2
Optical HUB 2	Un-P1-T10-T3
Optical HUB 2	Un-P1-T10-T4
Optical HUB 1	Un-P1-T10-T5
Optical HUB 1	Un-P1-T10-T6
Optical HUB 0	Un-P1-T10-T7
Optical HUB 0	Un-P1-T10-T8
Optical HUB 3	Un-P1-T11-T1
Optical HUB 3	Un-P1-T11-T2
Optical HUB 2	Un-P1-T11-T3
Optical HUB 2	Un-P1-T11-T4
Optical HUB 1	Un-P1-T11-T5
Optical HUB 1	Un-P1-T11-T6
Optical HUB 0	Un-P1-T11-T7
Optical HUB 0	Un-P1-T11-T8
Optical HUB 3	Un-P1-T12-T1
Optical HUB 3	Un-P1-T12-T2
Optical HUB 2	Un-P1-T12-T3
Optical HUB 2	Un-P1-T12-T4
Optical HUB 1	Un-P1-T12-T5
Optical HUB 1	Un-P1-T12-T6
Optical HUB 0	Un-P1-T12-T7
Optical HUB 0	Un-P1-T12-T8
Optical HUB 3	Un-P1-T13-T1
Optical HUB 3	Un-P1-T13-T2
Optical HUB 2	Un-P1-T13-T3
Optical HUB 2	Un-P1-T13-T4
Optical HUB 1	Un-P1-T13-T5
Optical HUB 1	Un-P1-T13-T6
Optical HUB 0	Un-P1-T13-T7
Optical HUB 0	Un-P1-T13-T8

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
Optical HUB 3	Un-P1-T14-T1
Optical HUB 3	Un-P1-T14-T2
Optical HUB 2	Un-P1-T14-T3
Optical HUB 2	Un-P1-T14-T4
Optical HUB 1	Un-P1-T14-T5
Optical HUB 1	Un-P1-T14-T6
Optical HUB 0	Un-P1-T14-T7
Optical HUB 0	Un-P1-T14-T8
Optical HUB 3	Un-P1-T15-T1
Optical HUB 3	Un-P1-T15-T2
Optical HUB 2	Un-P1-T15-T3
Optical HUB 2	Un-P1-T15-T4
Optical HUB 1	Un-P1-T15-T5
Optical HUB 1	Un-P1-T15-T6
Optical HUB 0	Un-P1-T15-T7
Optical HUB 0	Un-P1-T15-T8
Optical HUB 3	Un-P1-T16-T1
Optical HUB 3	Un-P1-T16-T2
Optical HUB 2	Un-P1-T16-T3
Optical HUB 2	Un-P1-T16-T4
Optical HUB 1	Un-P1-T16-T5
Optical HUB 1	Un-P1-T16-T6
Optical HUB 0	Un-P1-T16-T7
Optical HUB 0	Un-P1-T16-T8
Optical HUB 3	Un-P1-T17-T1
Optical HUB 3	Un-P1-T17-T2
Optical HUB 2	Un-P1-T17-T3
Optical HUB 2	Un-P1-T17-T4
Optical HUB 1	Un-P1-T17-T5
Optical HUB 1	Un-P1-T17-T6
Optical HUB 0	Un-P1-T17-T7
Optical HUB 0	Un-P1-T17-T8
<b>L-Link (Center group)</b>	
HUB0 - HUB7	Un-P1-T9
<b>Disk drive enclosure</b>	
DCA	Un-E1
DCA UPIC Connector	Un-E1-T1
DCA UPIC Connector	Un-E1-T2
DCA	Un-E2
DCA UPIC Connector	Un-E2-T1

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
DCA UPIC Connector	Un-E2-T2
System backplane	Un-P1
Fan	Un-P1-A1
Fan	Un-P1-A2
Fan	Un-P1-A3
Fan	Un-P1-A4
Fan	Un-P1-A5
Fan	Un-P1-A6
Fan	Un-P1-A7
Fan	Un-P1-A8
Fan	Un-P1-A9
Fan	Un-P1-A10
Fan	Un-P1-A11
Fan	Un-P1-A12
Carrier	Un-P1-C1
Drive	Un-P1-C1-D1
Drive	Un-P1-C1-D2
Drive	Un-P1-C1-D3
Drive	Un-P1-C1-D4
Carrier	Un-P1-C2
Drive	Un-P1-C2-D1
Drive	Un-P1-C2-D2
Drive	Un-P1-C2-D3
Drive	Un-P1-C2-D4
Carrier	Un-P1-C3
Drive	Un-P1-C3-D1
Drive	Un-P1-C3-D2
Drive	Un-P1-C3-D3
Drive	Un-P1-C3-D4
Port card	Un-P1-C4
SAS port	Un-P1-C4-T1
SAS port	Un-P1-C4-T2
SAS port	Un-P1-C4-T3
SAS port	Un-P1-C4-T4
Port card	Un-P1-C5
SAS port	Un-P1-C5-T1
SAS port	Un-P1-C5-T2
SAS port	Un-P1-C5-T3
SAS port	Un-P1-C5-T4
Carrier	Un-P1-C6



Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
Drive	Un-P1-C6-D1
Drive	Un-P1-C6-D2
Drive	Un-P1-C6-D3
Drive	Un-P1-C6-D4
Carrier	Un-P1-C7
Drive	Un-P1-C7-D1
Drive	Un-P1-C7-D2
Drive	Un-P1-C7-D3
Drive	Un-P1-C7-D4
Carrier	Un-P1-C8
Drive	Un-P1-C8-D1
Drive	Un-P1-C8-D2
Drive	Un-P1-C8-D3
Drive	Un-P1-C8-D4
Carrier	Un-P1-C9
Drive	Un-P1-C9-D1
Drive	Un-P1-C9-D2
Drive	Un-P1-C9-D3
Drive	Un-P1-C9-D4
Carrier	Un-P1-C10
Drive	Un-P1-C10-D1
Drive	Un-P1-C10-D2
Drive	Un-P1-C10-D3
Drive	Un-P1-C10-D4
Carrier	Un-P1-C11
Drive	Un-P1-C11-D1
Drive	Un-P1-C11-D2
Drive	Un-P1-C11-D3
Drive	Un-P1-C11-D4
Port card	Un-P1-C12
SAS port	Un-P1-C12-T1
SAS port	Un-P1-C12-T2
SAS port	Un-P1-C12-T3
SAS port	Un-P1-C12-T4
Port card	Un-P1-C13
SAS port	Un-P1-C13-T1
SAS port	Un-P1-C13-T2
SAS port	Un-P1-C13-T3
SAS port	Un-P1-C13-T4
Carrier	Un-P1-C14

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
Drive	Un-P1-C14-D1
Drive	Un-P1-C14-D2
Drive	Un-P1-C14-D3
Drive	Un-P1-C14-D4
Carrier	Un-P1-C15
Drive	Un-P1-C15-D1
Drive	Un-P1-C15-D2
Drive	Un-P1-C15-D3
Drive	Un-P1-C15-D4
Carrier	Un-P1-C16
Drive	Un-P1-C16-D1
Drive	Un-P1-C16-D2
Drive	Un-P1-C16-D3
Drive	Un-P1-C16-D4
Carrier	Un-P1-C17
Drive	Un-P1-C17-D1
Drive	Un-P1-C17-D2
Drive	Un-P1-C17-D3
Drive	Un-P1-C17-D4
Carrier	Un-P1-C18
Drive	Un-P1-C18-D1
Drive	Un-P1-C18-D2
Drive	Un-P1-C18-D3
Drive	Un-P1-C18-D4
Carrier	Un-P1-C19
Drive	Un-P1-C19-D1
Drive	Un-P1-C19-D2
Drive	Un-P1-C19-D3
Drive	Un-P1-C19-D4
Port card	Un-P1-C20
SAS port	Un-P1-C20-T1
SAS port	Un-P1-C20-T2
SAS port	Un-P1-C20-T3
SAS port	Un-P1-C20-T4
Port card	Un-P1-C21
SAS port	Un-P1-C21-T1
SAS port	Un-P1-C21-T2
SAS port	Un-P1-C21-T3
SAS port	Un-P1-C21-T4
Carrier	Un-P1-C22

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
Drive	Un-P1-C22-D1
Drive	Un-P1-C22-D2
Drive	Un-P1-C22-D3
Drive	Un-P1-C22-D4
Carrier	Un-P1-C23
Drive	Un-P1-C23-D1
Drive	Un-P1-C23-D2
Drive	Un-P1-C23-D3
Drive	Un-P1-C23-D4
Carrier	Un-P1-C24
Drive	Un-P1-C24-D1
Drive	Un-P1-C24-D2
Drive	Un-P1-C24-D3
Drive	Un-P1-C24-D4
Carrier	Un-P1-C25
Drive	Un-P1-C25-D1
Drive	Un-P1-C25-D2
Drive	Un-P1-C25-D3
Drive	Un-P1-C25-D4
Carrier	Un-P1-C26
Drive	Un-P1-C26-D1
Drive	Un-P1-C26-D2
Drive	Un-P1-C26-D3
Drive	Un-P1-C26-D4
Carrier	Un-P1-C27
Drive	Un-P1-C27-D1
Drive	Un-P1-C27-D2
Drive	Un-P1-C27-D3
Drive	Un-P1-C27-D4
Port card	Un-P1-C28
SAS port	Un-P1-C28-T1
SAS port	Un-P1-C28-T2
SAS port	Un-P1-C28-T3
SAS port	Un-P1-C28-T4
Port card	Un-P1-C29
SAS port	Un-P1-C29-T1
SAS port	Un-P1-C29-T2
SAS port	Un-P1-C29-T3
SAS port	Un-P1-C29-T4
Carrier	Un-P1-C30

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
Drive	Un-P1-C30-D1
Drive	Un-P1-C30-D2
Drive	Un-P1-C30-D3
Drive	Un-P1-C30-D4
Carrier	Un-P1-C31
Drive	Un-P1-C31-D1
Drive	Un-P1-C31-D2
Drive	Un-P1-C31-D3
Drive	Un-P1-C31-D4
Carrier	Un-P1-C32
Drive	Un-P1-C32-D1
Drive	Un-P1-C32-D2
Drive	Un-P1-C32-D3
Drive	Un-P1-C32-D4
Carrier	Un-P1-C33
Drive	Un-P1-C33-D1
Drive	Un-P1-C33-D2
Drive	Un-P1-C33-D3
Drive	Un-P1-C33-D4
Carrier	Un-P1-C34
Drive	Un-P1-C34-D1
Drive	Un-P1-C34-D2
Drive	Un-P1-C34-D3
Drive	Un-P1-C34-D4
Carrier	Un-P1-C35
Drive	Un-P1-C35-D1
Drive	Un-P1-C35-D2
Drive	Un-P1-C35-D3
Drive	Un-P1-C35-D4
Carrier	Un-P1-C36
Drive	Un-P1-C36-D1
Drive	Un-P1-C36-D2
Drive	Un-P1-C36-D3
Drive	Un-P1-C36-D4
Carrier	Un-P1-C37
Drive	Un-P1-C37-D1
Drive	Un-P1-C37-D2
Drive	Un-P1-C37-D3
Drive	Un-P1-C37-D4
Carrier	Un-P1-C46

Table 30. Bulk power assembly (BPA) locations and failing components (continued)

Failing item name	Physical location code
Drive	Un-P1-C46-D1
Drive	Un-P1-C46-D2
Drive	Un-P1-C46-D3
Drive	Un-P1-C46-D4
Carrier	Un-P1-C47
Drive	Un-P1-C47-D1
Drive	Un-P1-C47-D2
Drive	Un-P1-C47-D3
Drive	Un-P1-C47-D4
Carrier	Un-P1-C48
Drive	Un-P1-C48-D1
Drive	Un-P1-C48-D2
Drive	Un-P1-C48-D3
Drive	Un-P1-C48-D4
Carrier	Un-P1-C49
Drive	Un-P1-C49-D1
Drive	Un-P1-C49-D2
Drive	Un-P1-C49-D3
Drive	Un-P1-C49-D4
Carrier	Un-P1-C50
Drive	Un-P1-C50-D1
Drive	Un-P1-C50-D2
Drive	Un-P1-C50-D3
Drive	Un-P1-C50-D4
Carrier	Un-P1-C51
Drive	Un-P1-C51-D1
Drive	Un-P1-C51-D2
Drive	Un-P1-C51-D3
Drive	Un-P1-C51-D4
Carrier	Un-P1-C52
Drive	Un-P1-C52-D1
Drive	Un-P1-C52-D2
Drive	Un-P1-C52-D3
Drive	Un-P1-C52-D4
Carrier	Un-P1-C53
Drive	Un-P1-C53-D1
Drive	Un-P1-C53-D2
Drive	Un-P1-C53-D3
Drive	Un-P1-C53-D4

### Related reference:

“9125-F2C system parts” on page 275  
Indexed drawings show system part numbers of each part.

### Related information:

 Removing and replacing parts

## 5786, 5787, 7031-D24, and 7031-T24

The information provided in this topic defines specific sections of a location code string. Use this information to understand the meaning of a location code.

### Using location codes

This topic also provides information about how to read and understand the specific sections of a location code string. A comprehensive list of location codes used by your I/O enclosure is also provided.

Use the following table to link to a specific topic for additional information when reading and understanding your location code.

Table 31. Location code topics

Location code topics	Description
“Location code overview”	Contains background information about using location codes.
“Physical location codes” on page 131	Provides definitions for physical location codes.
“Logical location codes” on page 131	Provides definitions for logical location codes.
“Location code format” on page 131	Provides format information of the <i>Un</i> value in the location code string. For example U7031.001.
“Location code labels” on page 132	Provides definitions for location code labels. The location code labels begin with an alphabetic character and follow the system serial number. For example, U7031.001.10ABCDE-P3-C31-T2-L23. (The system serial number is the 10ABCDE.) The P3, C31, T2, and L23 all contain an alphabetic character that is identified in the Location code labels table.
“Worldwide unique identifier” on page 133	Provides definitions for the worldwide unique identifiers. This group of digits follows the resource code labels and always begins with the letter <i>W</i> .

### Location code overview

Servers (system unit and enclosures) use physical location codes to provide mapping of replaceable units. Location codes are produced by the server's firmware, which structures them so that they can be used to identify specific parts in a system. The location code format is the same for all servers.

If you are working with a specific location code, the unit type and model immediately follow the first character (*Utttt.mmm*). Match the unit type and model to a link, as shown in the Unit type and locations table.

- If the location code ends with **-Txx-Lxx**, the server's firmware could not identify the physical location. When a physical location cannot be identified, a logical location code is provided. Where logical location codes occur in enclosures, the locations topic for the enclosure has the known conversions listed. For logical location codes with no conversion, contact your next level of support.

- If the location code begins with **UTMPx**, the expansion I/O unit's machine type, model number and serial number have not been set yet and this is a temporary unit identifier. To identify the unit, do the following:
  1. Examine the display panels on all of the I/O enclosures that are connected to the server until you find one with the same characters in the first 5 digits of the top line in the enclosure's display.
  2. Record the I/O enclosure's real machine type and model from the I/O enclosure label.
  3. Match the I/O enclosure's machine type and model in the unit type and locations table and then follow the link to determine the service information.

**Note:** If you have a location code that does not follow the location code format as described in "Location code format" it is either not supported or there is a problem in the firmware. Contact your next level of support.

## Physical location codes

Physical location codes provide a mapping of logical functions and components (such as backplanes, removable modules, connectors, ports, cables, and devices) to their specific locations within the physical structure of the server.

## Logical location codes

If the physical location cannot be mapped to a physical location code, the server's firmware generates a logical location code. A logical location code is a sequence of location labels that identifies the path that the system uses to communicate with a given resource.

A resource has as many logical location codes as it has logical connections to the system. For example, an external tape device connected to two I/O adapters will have two logical location codes.

An example of a logical location code is:

U7031.001.10ABCDE-P3-C31-T2-L23

The first part of the location code (through the T2 label) represents the physical location code for the resource that communicates with the target resource. The remainder of the logical location code (L23) represents exactly which resource is indicated.

## Location code format

The location code is an alphanumeric string of variable length, consisting of a series of location identifiers, separated by a dash. An example of a physical location for a fan is  $U_n-A1$ .

The first position, represented by  $U_n$  (where  $n$  is equal to any string contained between the U and the hyphen) in the preceding example, is displayed in one of the forms in the following table.

**Note:** In location codes, the U is a constant digit. However, the numbered positions following the U are variables and are dependent on your server. Each row in the following table defines the numbers that follow the U in the beginning of the location code.

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
$Utttt.mmm.ssssss-A1$	$Uffff.ccc.ssssss-A1$
The leftmost code is always U.	The leftmost code is always U.
$tttt$ represents the unit type of the enclosure (drawer or node).	$ffff$ represents the feature code of the enclosure (drawer or node).
$mmm$ represents the model of the enclosure.	$ccc$ represents the sequence number of the enclosure .

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
Utttt.mmm.ssssss-A1	Uffff.ccc.ssssss-A1
ssssss represents the serial number for the enclosure.	ssssss represents the serial number of the enclosure.
<p><b>Note:</b> The <i>mmm</i> or <i>ccc</i> number might not be displayed on all location codes for all servers. If the <i>mmm</i> value is not displayed, the location code is displayed in one of the following forms:</p> <ul style="list-style-type: none"> <li>• Utttt.ssssss-A1</li> <li>• Uffff.ssssss-A1</li> </ul>	

The location code is hierarchical; that is, each location identifier in the string represents a physical part. The order (from left to right), in which each identifier is shown, allows you to determine which parts contain other parts in the string.

The dash (-) separator character represents a relationship between two components in the unit. In the example of the fan, whose location code is *Un-A1*, the dash shows that the fan (A1) is contained in the base unit (or *Un*). Modules, adapters, cables, and devices are all parts that are plugged into another part. Their location codes will always show that they are plugged into another part as components of the server. Another example follows; *Un-P1-C9* is a memory DIMM, with memory DIMM (C9) plugged into a backplane (P1), which is inside the unit (*Un*).

To review a list of location codes for your I/O enclosure, refer to “5786, 5787, 7031-D24, and 7031-T24” on page 130.

**Note:** For devices, certain error conditions might cause an IBM i device to display the device location in an AIX format.

Table 32. Unit type and locations

Unit type (Utttt.mmm)	Link to location information
U5786.001	Locations
U5787.001	Locations
U7031.D24	Locations
U7031.T24	Locations

## Location code labels

The location code label represents a physical part of the server. The following table describes the prefixes of location code labels.

Table 33. Prefixes of location code labels for I/O enclosure and system units

Prefix	Description	Example
A	Air-moving device	Fan, blower
C	Card connector	input/output port (IOP), input/output adapter (IOA), dual inline memory module (DIMM), processor card
D	Device	Diskette, control panel
E	Electrical	Battery, power supply, ac charger
L	Logical path SCSI target	Integrated drive electronics (IDE) address, Fibre Channel logical unit number (LUN)
N	Horizontal placement for an empty rack location	
P	Planar	System backplane



Table 33. Prefixes of location code labels for I/O enclosure and system units (continued)

Prefix	Description	Example
T	Port	System unit or enclosure integrated connector
U	Unit	Usually consists of the machine type
V	Virtual planar	
W	Worldwide unique ID	This group of digits follows the resource code labels and always begins with the letter <i>W</i>
X	Electronic industries alliance (EIA) spacing value for an empty rack location	Standardized unit of measure used to identify the height of a rack drawer or the usable height space within a rack.
Y	Firmware field replaceable unit (FRU)	microprogram or instruction set stored in read only memory (ROM) of your system

## Worldwide unique identifier

The location code label for the worldwide unique identifier consists of the prefix *W* followed by a maximum of 16 uppercase hexadecimal digits with no leading zeros. A location code might not consist of a worldwide unique identifier. When present, the worldwide unique identifier location label follows the location label of the resource that interfaces with the resource that has the worldwide unique identifier, usually a port.

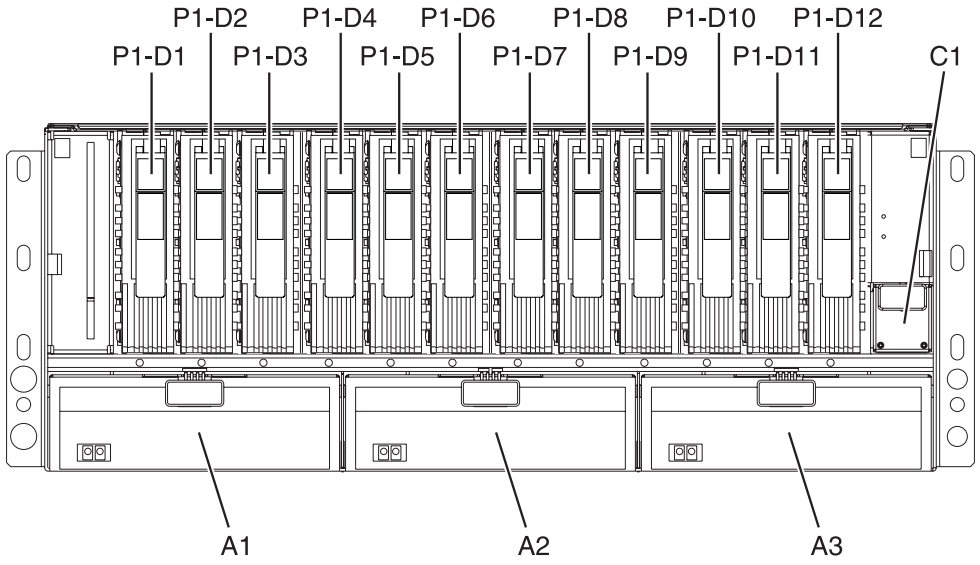
### 5786, 5787, 7031-D24, and 7031-T24 locations

Use the table and illustrations to help you identify the major field replaceable units (FRUs) installed in your I/O enclosure. The table also will cross reference to the symbolic FRU that might be associated with each FRU.

#### Note:

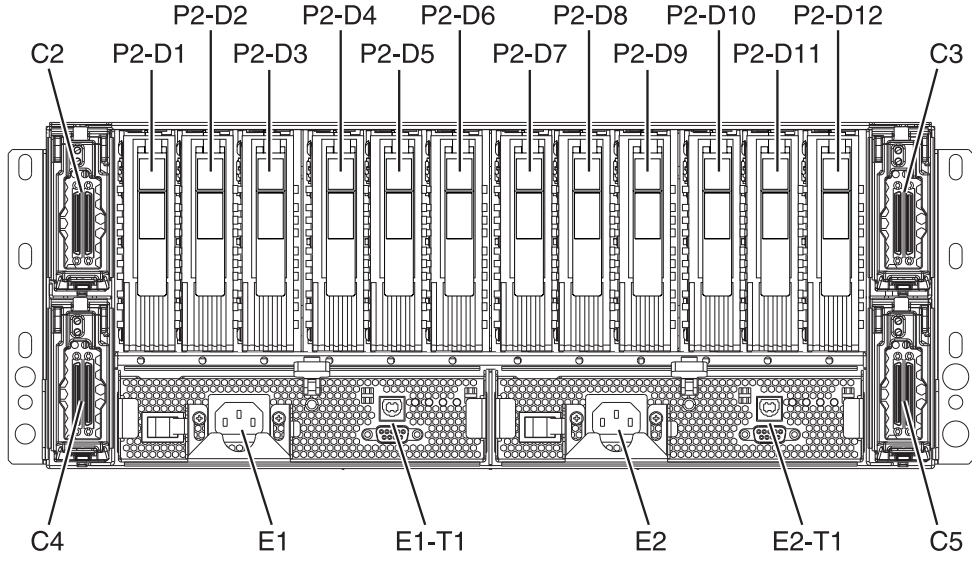
- The known logical location codes for this unit are listed next to the corresponding physical location in the following information. If you are working with a logical location code for this unit and it is not listed in the following information, contact your next level of support.
- If you need SCSI repeater card address information, refer to “5786, 5787, 7031-D24, and 7031-T24 addresses” on page 180.

The following illustrations show the FRU layout and its associated location code.



IPHAL970-0

Figure 48. I/O enclosure (drawer model, front) or (stand-alone model on its side, front)



IPHAL971-0

Figure 49. I/O enclosure (drawer model, back)

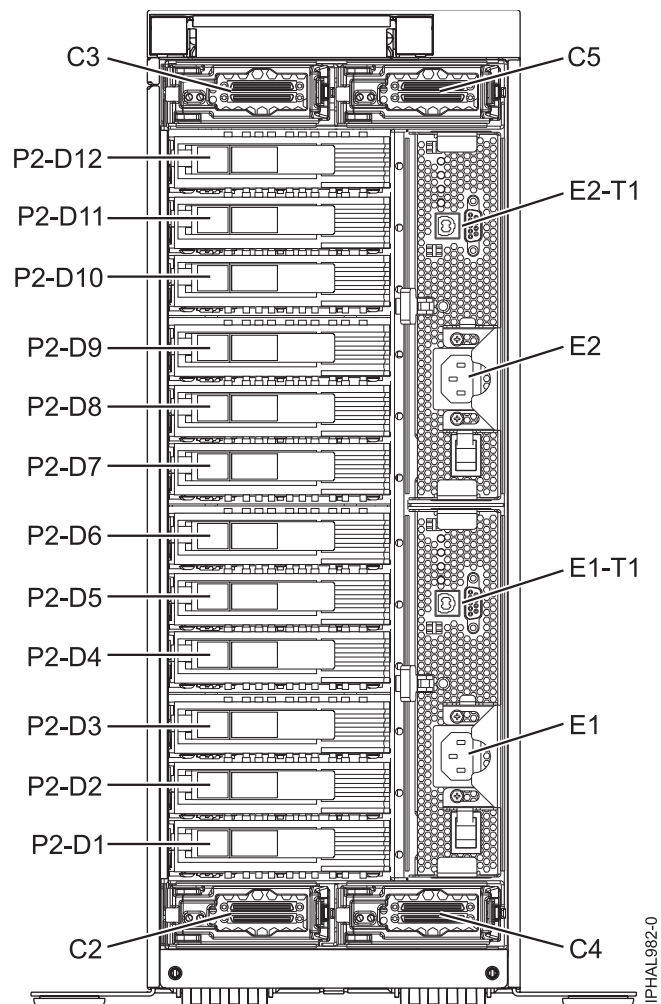


Figure 50. I/O enclosure (stand-alone model, back) 7031-T24

Table 34. FRU locations and failing components

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Disk drive backplane 1	U <sub>n</sub> -P1	No	
Disk drive backplane 2	U <sub>n</sub> -P2	No	
Power distribution backplane	U <sub>n</sub> -P3	No	
Fan 1 (left)	U <sub>n</sub> -A1	Yes	See Fans.
Fan 2	U <sub>n</sub> -A2	Yes	
Fan 3 (right)	U <sub>n</sub> -A3	Yes	
VPD card	U <sub>n</sub> -C1	No	

Table 34. FRU locations and failing components (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
SCSI repeater card 1 (upper left)	Un-C2	Yes	See SCSI repeater card.
SCSI repeater card 2 (upper right)	Un-C3	Yes	
SCSI repeater card 3 (lower left)	Un-C4	No	
SCSI repeater card 4 (lower right)	Un-C5	Yes	
Crossover card 1 (left)	Un-C6	No	
Crossover card 2 (right)	Un-C7	No	
Power supply 1 (left)	Un-E1	Yes	See Power supply.
Power supply 2 (right)	Un-E2	Yes	
Rack indicator connector	Un-E1-T1	No	
Rack indicator connector	Un-E2-T1	No	
<b>Device physical locations</b>			
Disk drive 1 (front)	Un-P1-D01 (logical location Un-Px-Ty-L5-L0 - single or Un-Px-Ty-L13-L0 - dual <sup>1</sup> )	Yes	See Disk drives.
Disk drive 2 (front)	Un-P1-D02 (logical location Un-Px-Ty-L4-L0 - single or Un-Px-Ty-L12-L0 - dual <sup>1</sup> )	Yes	
Disk drive 3 (front)	Un-P1-D03 (logical location Un-Px-Ty-L3-L0 - single or Un-Px-Ty-L11-L0 - dual <sup>1</sup> )	Yes	
Disk drive 4 (front)	Un-P1-D04 (logical location Un-Px-Ty-L2-L0 - single or Un-Px-Ty-L10-L0 - dual <sup>1</sup> )	Yes	
Disk drive 5 (front)	Un-P1-D05 (logical location Un-Px-Ty-L1-L0 - single or Un-Px-Ty-L9-L0 - dual <sup>1</sup> )	Yes	
Disk drive 6 (front)	Un-P1-D06 (logical location Un-Px-Ty-L0-L0 - single or Un-Px-Ty-L8-L0 - dual <sup>1</sup> )	Yes	
Disk drive 7 (front)	Un-P1-D07 (logical location Un-Px-Ty-L5-L0 <sup>1</sup> )	Yes	
Disk drive 8 (front)	Un-P1-D08 (logical location Un-Px-Ty-L4-L0 <sup>1</sup> )	Yes	
Disk drive 9 (front)	Un-P1-D09 (logical location Un-Px-Ty-L3-L0 <sup>1</sup> )	Yes	
Disk drive 10 (front)	Un-P1-D10 (logical location Un-Px-Ty-L2-L0 <sup>1</sup> )	Yes	
Disk drive 11 (front)	Un-P1-D11 (logical location Un-Px-Ty-L1-L0 <sup>1</sup> )	Yes	
Disk drive 12 (front)	Un-P1-D12 (logical location Un-Px-Ty-L0-L0 <sup>1</sup> )	Yes	

Table 34. FRU locations and failing components (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Disk drive 1 (back)	Un-P2-D01 (logical location Un-Px-Ty-L5-L0 - single or Un-Px-Ty-L13-L0 - dual <sup>1</sup> )	Yes	See Disk drives.
Disk drive 2 (back)	Un-P2-D02 (logical location Un-Px-Ty-L4-L0 - single or Un-Px-Ty-L12-L0 - dual <sup>1</sup> )	Yes	
Disk drive 3 (back)	Un-P2-D03 (logical location Un-Px-Ty-L3-L0 - single or Un-Px-Ty-L11-L0 - dual <sup>1</sup> )	Yes	
Disk drive 4 (back)	Un-P2-D04 (logical location Un-Px-Ty-L2-L0 - single or Un-Px-Ty-L10-L0 - dual <sup>1</sup> )	Yes	
Disk drive 5 (back)	Un-P2-D05 (logical location Un-Px-Ty-L1-L0 - single or Un-Px-Ty-L9-L0 - dual <sup>1</sup> )	Yes	
Disk drive 6 (back)	Un-P2-D06 (logical location Un-Px-Ty-L0-L0 - single or Un-Px-Ty-L8-L0 - dual <sup>1</sup> )	Yes	
Disk drive 7 (back)	Un-P2-D07 (logical location Un-Px-Ty-L5-L0 <sup>1</sup> )	Yes	
Disk drive 8 (back)	Un-P2-D08 (logical location Un-Px-Ty-L4-L0 <sup>1</sup> )	Yes	
Disk drive 9 (back)	Un-P2-D09 (logical location Un-Px-Ty-L3-L0 <sup>1</sup> )	Yes	
Disk drive 10 (back)	Un-P2-D10 (logical location Un-Px-Ty-L2-L0 <sup>1</sup> )	Yes	
Disk drive 11 (back)	Un-P2-D11 (logical location Un-Px-Ty-L1-L0 <sup>1</sup> )	Yes	
Disk drive 12 (back)	Un-P2-D12 (logical location Un-Px-Ty-L0-L0 <sup>1</sup> )	Yes	
<sup>1</sup> Where: <ul style="list-style-type: none"> <li>• Un-Px is the backplane of the unit where the SCSI PCI adapter is installed.</li> <li>• Ty is the connector on the SCSI PCI adapter.</li> <li>• single is a single SCSI interface card.</li> <li>• dual is a dual SCSI interface card.</li> </ul>			

**Related reference:**

“5786, 5787, 7031-D24, and 7031-T24 system parts” on page 286  
Indexed drawings show system part numbers.

**5796 and 7314-G30**

The information provided in this topic defines specific sections of a location code string. Use this information to understand the meaning of a location code.

## Using location codes

Use the following table to link to a specific topic that you need additional information on when reading your location code.

Table 35. Location code topics

Location code topics	Description
"Location code overview"	Contains background information on the use of location codes.
"Physical location codes" on page 139	Provides a definition for physical location code.
"Logical location codes" on page 139	Provides a definition of what a logical location code is.
"Location code format" on page 139	Provides descriptive information of the <i>Un</i> value in the location code string. For example, U7879.001.
"Location code labels" on page 140	Provides a table that identifies and defines the location code labels. The location code labels begin with an alphabetic character and follow the system serial number. For example, U7879.001.10ABCDE-P3-C31-T2-L23. (The system serial number is the 10ABCDE in the previous example.) The P3, C31, T2, and L23 all contain an alphabetic character that is identified in the Location code labels table.
"Worldwide unique identifier" on page 140	Provides a definition of a worldwide unique identifier. This group of digits follows the resource code labels and always begins with the letter <i>W</i> .

## Location code overview

Servers (system unit and expansion units) use physical location codes to provide mapping of replaceable units. Location codes are produced by the server's firmware, which structures them so that they can be used to identify specific parts in a system. The location code format is the same for all servers.

If you are working with a specific location code, the unit type and model immediately follow the first character (*Utttt.mmm*). Match the unit type and model to a link, as shown in the Unit type and locations table.

If the location code ends with *-Txx-Lxx*, the server's firmware could not identify the physical location. When a physical location cannot be identified, a logical location code is provided. Where logical location codes occur in enclosures, the locations topic for the enclosure has the known conversions listed. For logical location codes with no conversion, contact your next level of support.

If the location code begins with **UTMPx**, the expansion I/O unit's machine type, model and serial number have not been set yet and this is a temporary unit identifier. To identify the unit, examine the display panels on all of the expansion I/O units connected to the server until you find one with the same characters in the first 5 digits of the top line in the unit's display. If the expansion unit does not have a display, use the display of the attached system unit, or use the process of elimination by tracing the cables from the system unit to the expansion unit. Record the unit's machine type and model from the unit label. Match the unit's machine type and model in the Unit type and locations table and follow the link to determine the service information.

**Note:** Locations for units that are not in the preceding list are either not supported or there is a problem in the firmware. Contact your next level of support.

## Physical location codes

Physical location codes provide a mapping of logical functions and components (such as backplanes, removable modules, connectors, ports, cables, and devices) to their specific locations within the physical structure of the server.

## Logical location codes

If the physical location cannot be mapped to a physical location code, the server's firmware generates a logical location code. A logical location code is a sequence of location labels that identifies the path that the system uses to communicate with a given resource.

**Note:** A resource has as many logical location codes as it has logical connections to the system. For example, an external tape device connected to two I/O adapters will have two logical location codes.

An example of a logical location code is:

U7879.001.10ABCDE-P3-C31-T2-L23

The first part of the location code (through the T2 label) represents the physical location code of the resource that communicates with the target resource. The remainder of the logical location code (L23) represents exactly which resource is indicated.

## Location code format

The location code is an alphanumeric string of variable length, consisting of a series of location identifiers, separated by a dash. An example of a physical location for a fan is  $U_n-A1$ .

The first position, represented by  $U_n$  (where  $n$  is equal to any string contained between the U and the hyphen) in the preceding example, is displayed in one of the forms in the following table.

**Note:** In location codes, the U is a constant digit; however, the numbered positions following the U are variables and are dependent on your server. Each column defines the numbers that follow the U in the beginning of the location code.

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
$Utttt.mmm.ssssss-A1$	$Uffff.ccc.ssssss-A1$
The leftmost code is always U.	The leftmost code is always U.
$ttt$ represents the unit type of the enclosure (drawer or node).	$fff$ represents the feature code of the enclosure (drawer or node).
$mmm$ represents the model of the enclosure.	$ccc$ represents the sequence number of the enclosure .
$ssssss$ represents the serial number for the enclosure.	$ssssss$ represents the serial number of the enclosure.
<b>Note:</b> The $mmm$ or $ccc$ number might not be displayed on all location codes for all servers. If the $mmm$ value is not displayed, the location code is displayed in one of the following forms:	
<ul style="list-style-type: none"><li>• <math>Utttt.ssssss-A1</math></li><li>• <math>Uffff.ssssss-A1</math></li></ul>	

The location code is hierarchical; that is, each location identifier in the string represents a physical part. The order (from left to right), in which each identifier is shown, allows you to determine which parts contain other parts in the string.

The dash (-) separator character represents a relationship between two components in the unit. In the example of the fan, whose location code is  $U_n-A1$ , the dash shows that the fan (A1) is contained in the base unit (or  $U_n$ ). Modules, adapters, cables, and devices are all parts that are plugged into another part.

Their location codes will always show that they are plugged into another part as components of the server. Another example follows: *Un-P1-C9* is a dual in-line memory module (DIMM), with memory DIMM (C9) plugged into a backplane (P1), which is inside the unit (*Un*).

**Note:** For devices, certain error conditions might cause an IBM i device to display the device location in an AIX format.

*Table 36. Unit type and locations*

Unit type (Utttt.mmm)	Link to location information
U5796.001	"5796 and 7314-G30 locations"
U7314.G30	"5796 and 7314-G30 locations"

## Location code labels

The location code label represents a physical part of the server. The following table describes the prefixes of location code labels.

**Note:** These location code labels apply to system units only.

*Table 37. Prefixes of location code labels for system units*

Prefix	Description	Example
A	Air-moving device	Fan, blower
C	Card connector	IOP, IOA, DIMM, processor card
D	Device	Diskette, control panel
E	Electrical	Battery, power supply, ac charger
L	Logical path SCSI target	Integrated drive electronics (IDE) address, Fibre Channel LUN
N	Horizontal placement for an empty rack location	
P	Planar	System backplane
T	Port	
U	Unit	
V	Virtual planar	
W	Worldwide unique ID	
X	EIA value for an empty rack location	
Y	Firmware FRU	

## Worldwide unique identifier

The location code label for the worldwide unique identifier consists of the prefix W followed by a maximum of 16 uppercase hexadecimal digits with no leading zeros. A location code might not include a worldwide unique identifier. When present, the worldwide unique identifier location label follows the location label of the resource that interfaces with the resource that has the worldwide unique identifier, usually a port.

## 5796 and 7314-G30 locations

The known logical location codes for this unit are listed next to the corresponding physical location.

**Note:** Any known logical location codes for this unit are listed next to the corresponding physical location in the following information. If you are working with a logical location code for this unit and it is not listed in the following information, contact your next level of support.



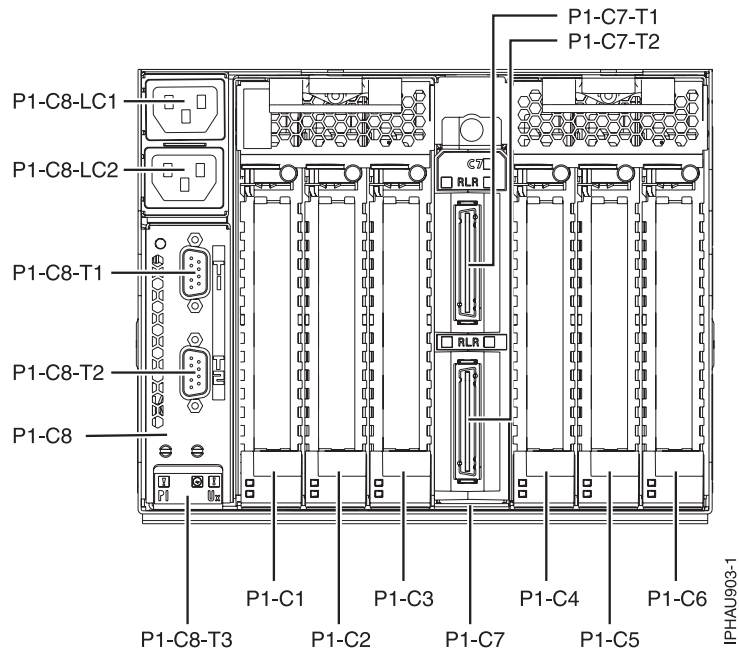


Figure 51. Rear view of unit.

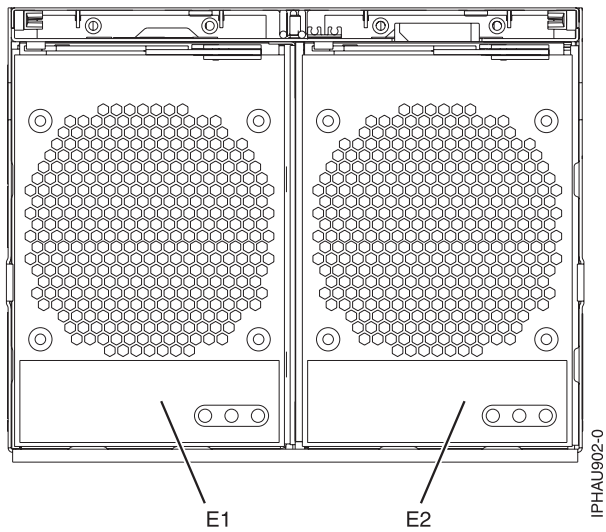


Figure 52. Front view of unit.

The following table provides location codes for parts that comprise the server.

Table 38. FRU locations and failing components

Failing item name	Symbolic failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
System unit		U <sub>n</sub>		
<b>Power supplies</b>				

Table 38. FRU locations and failing components (continued)

Failing item name	Symbolic failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Power supply 1, from front view it is left		Un-E1	Yes	See Power supply.
Power supply 2, from front view it is right		Un-E2	Yes	
<b>Backplane</b>				
I/O planar		Un-P1	Yes	
<b>Adapters</b>				
PCI adapter in slot 1		Un-P1-C1	Yes	See PCI adapter.
PCI adapter in slot 2		Un-P1-C2	Yes	
PCI adapter in slot 3		Un-P1-C3	Yes	
PCI adapter in slot 4		Un-P1-C4	Yes	
PCI adapter in slot 5		Un-P1-C5	Yes	
PCI adapter in slot 6		Un-P1-C6	Yes	
GX Dual-Port 12X Channel Attach adapter		Un-P1-C7	Yes	See GX Dual-Port 12X Channel Attach adapter.
GX Dual-Port 12X Channel Attach adapter top port		Un-P1-C7-T1	Yes	
GX Dual-Port 12X Channel Attach adapter bottom port		Un-P1-C7-T2	Yes	
SPCN		Un-P1-C8		See SPCN card.
SPCN top port		Un-P1-C8-T1		
SPCN bottom port		Un-P1-C8-T2		

**Related reference:**

“5796 and 7314-G30 system parts” on page 291  
 Indexed drawings show system part numbers.

**5802 and 5877**

The information provided in this topic defines specific sections of a location code string. Use this information to understand the meaning of a location code.

**Using location codes**

For additional information about reading your location code, use the following table to link to a specific topic.

Location code topics that might be of interest	Description
“Location code overview” on page 143	Contains background information on the use of location codes.
“Physical location codes” on page 143	Provides a definition for physical location code.
“Logical location codes” on page 143	Provides a definition for a logical location code.

Location code topics that might be of interest	Description
"Location code format" on page 144	Provides descriptive information of the <i>Un</i> value in the location code string. For example U5886.001.
"Location code labels" on page 145	Provides a table that identifies and defines the location code labels. The location code labels begin with an alphabetic character and follow the system serial number. For example, U7879.001.10ABCDE-P3-C31-T2-L23. (The system serial number is the 10ABCDE in the previous example.) The P3, C31, T2, and L23 all contain an alphabetic character that is identified in the Location code labels table.
"Worldwide unique identifier" on page 145	Provides a definition for the worldwide unique identifier. This group of digits follows the resource code labels and always begins with the letter <i>W</i> .

## Location code overview

Servers (system unit and expansion units) use physical location codes to provide mapping of replaceable units. Location codes are produced by the server's firmware, which structures them so that they can be used to identify specific parts in a system. The location code format is the same for all servers.

If you are working with a specific location code, the feature immediately follows the first character (U5886). Refer to the Unit type and locations table.

If the location code ends with **-Txx-Lxx**, the server's firmware could not identify the physical location. When a physical location cannot be identified, a logical location code is provided. Where logical location codes occur in enclosures, the locations topic for the enclosure has the known conversions listed. For logical location codes with no conversion, contact your next level of support.

If the location code begins with **UTMPx**, the expansion I/O unit's machine type, model and serial number have not been set yet and this is a temporary unit identifier. To identify the unit, examine the display panels on all of the expansion I/O units connected to the server until you find one with the same characters in the first 5 digits of the top line in the unit's display. Record the unit's real machine type and model from the unit label. Match the unit's machine type and model in the Unit type and locations table, and follow the link to determine the service information.

**Note:** If locations for units are not in the preceding format, either they are not supported or there is a problem in the firmware. Contact your next level of support.

## Physical location codes

Physical location codes provide a mapping of logical functions and components (such as backplanes, removable modules, connectors, ports, cables, and devices) to their specific locations within the physical structure of the server.

## Logical location codes

If the physical location cannot be mapped to a physical location code, the server's firmware generates a logical location code. A logical location code is a sequence of location labels that identifies the path that the system uses to communicate with a given resource.

**Note:** A resource has as many logical location codes as it has logical connections to the system. For example, an external tape device connected to two I/O adapters will have two logical location codes.

An example of a logical location code is:

The first part of the location code (through the T2 label) represents the physical location code for the resource that communicates with the target resource. The remainder of the logical location code (L23) represents exactly which resource is indicated.

## Location code format

The location code is an alphanumeric string of variable length, consisting of a series of location identifiers, separated by a dash. An example of a physical location for a fan is  $Un-A1$ .

The first position, represented by  $Un$  (where  $n$  is equal to any string contained between the U and the hyphen) in the preceding example, is displayed in one of the forms in the following table.

**Note:** In location codes, the U is a constant digit; however, the numbered positions following the U are variables and are dependent on your server. Each column defines the numbers that follow the U in the beginning of the location code.

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
$Utttt.mmm.ssssss-A1$	$Uffff.ccc.ssssss-A1$
The leftmost code is always U.	The leftmost code is always U.
$ttt$ represents the unit type of the enclosure (drawer or node).	$fff$ represents the feature code of the enclosure (drawer or node).
$mmm$ represents the model of the enclosure.	$ccc$ represents the sequence number of the enclosure .
$ssssss$ represents the serial number for the enclosure.	$ssssss$ represents the serial number of the enclosure.
<p><b>Note:</b> The <math>mmm</math> or <math>ccc</math> number might not be displayed on all location codes for all servers. If the <math>mmm</math> value is not displayed, the location code is displayed in one of the following forms:</p> <ul style="list-style-type: none"> <li>• <math>Utttt.ssssss-A1</math></li> <li>• <math>Uffff.ssssss-A1</math></li> </ul>	

The location code is hierarchical; that is, each location identifier in the string represents a physical part. The order (from left to right), in which each identifier is shown, allows you to determine which parts contain other parts in the string.

The dash (-) separator character represents a relationship between two components in the unit. In the example of the fan, whose location code is  $Un-A1$ , the dash shows that the fan (A1) is contained in the base unit (or  $Un$ ). Modules, adapters, cables, and devices are all parts that are plugged into another part. Their location codes will always show that they are plugged into another part as components of the server. Another example follows;  $Un-P1-C9$  is a memory DIMM, with memory DIMM (C9) plugged into a backplane (P1), which is inside the unit ( $Un$ ).

**Note:** For devices, certain error conditions might cause an IBM i device to display the device location in an AIX format.

Table 39. Unit type and locations

Unit type (Utttt.mmm)	Link to location information
U5802.001	Locations
U5877.001	Locations

## Location code labels

The location code label represents a physical part of the server. The following table describes the prefixes of location code labels.

**Note:** These labels apply to system units only.

*Table 40. Prefixes of location code labels for system units*

Prefix	Description	Example
A	Air-moving device	Fan, blower
C	Card connector	IOP, IOA, DIMM, processor card
D	Device	Diskette, control panel
E	Electrical	Battery, power supply, ac charger
L	Logical path SAS target	Integrated drive electronics (IDE) address, Fibre Channel LUN
N	Horizontal placement for an empty rack location	
P	Planar	System backplane
T	Port	
U	Unit	
V	Virtual planar	
W	Worldwide unique ID	
X	EIA value for an empty rack location	
Y	Firmware FRU	

## Worldwide unique identifier

The location code label for the worldwide unique identifier consists of the prefix W followed by a maximum of 16 uppercase hexadecimal digits with no leading zeros. A location code might not consist of a worldwide unique identifier. When present, the worldwide unique identifier location label follows the location label of the resource that interfaces with the resource that has the worldwide unique identifier, usually a port.

## 5802 and 5877 locations

Use this information to help you map a location code to a position on the unit.

**Note:** The known logical location codes for this unit are listed next to the corresponding physical location in the following information. If you are working with a logical location code for this unit and it is not listed in the following information, contact your next level of support.

The following diagrams show the field replaceable unit (FRU) layout in the system. Use these diagrams with the following tables.

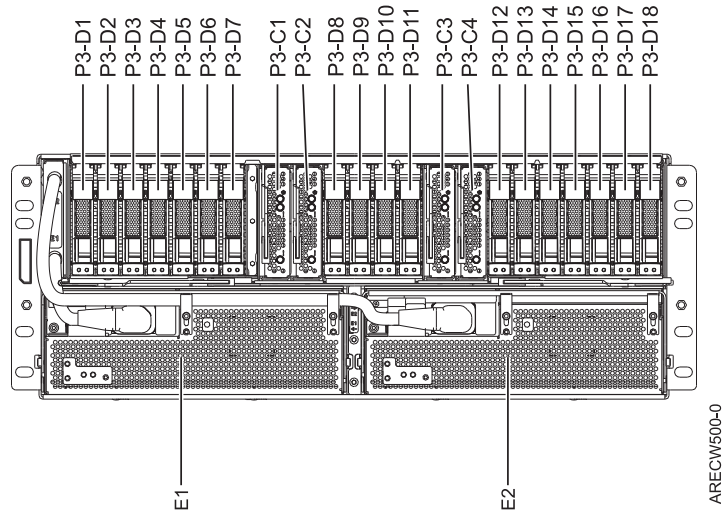


Figure 53. 5802 front view

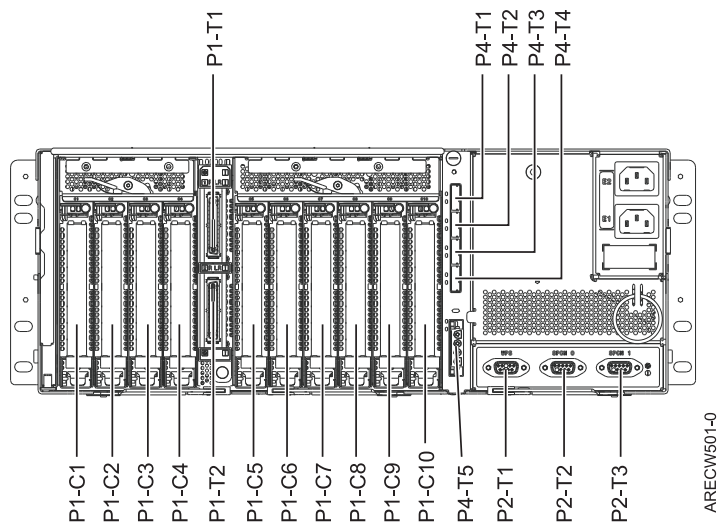


Figure 54. 5802 rear view

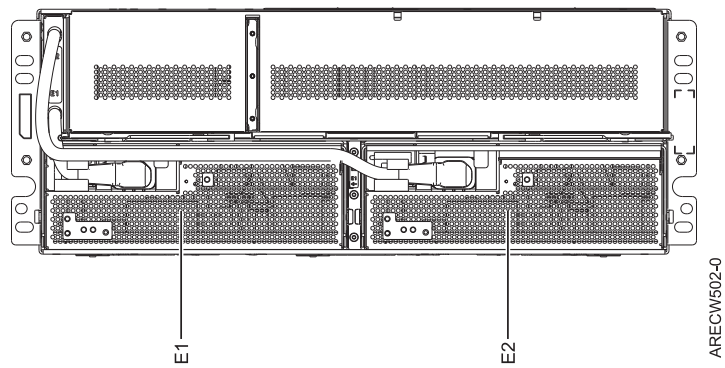


Figure 55. 5877 front view

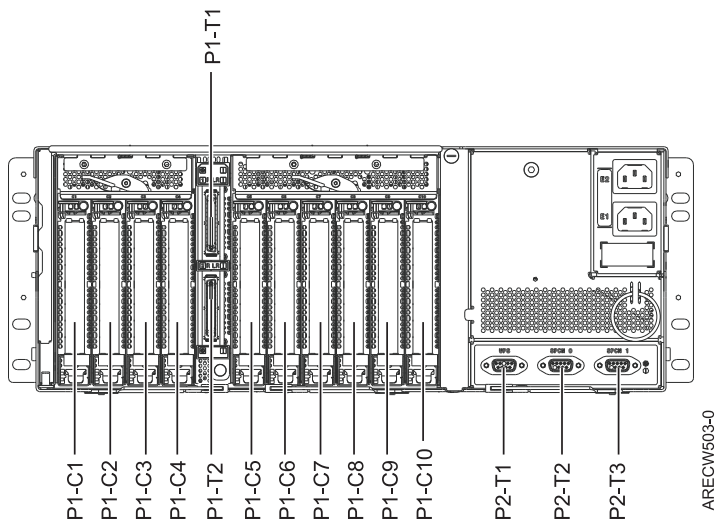


Figure 56. 5877 rear view

The following table provides location codes for parts that make up the server.

Table 41. Bulk power assembly (BPA) locations, and failing components

Failing item name	Symbolic FRU name	CCIN	Failing item removal and replacement procedures
OCA	Ux-E1	2C43	
OCA UPIC connector	Ux-E1-T1		
OCA UPIC connector	Ux-E1-T2		
OCA	Ux-E2	2C43	
OCA UPIC connector	Ux-E2-T1		
OCA UPIC connector	Ux-E2-T2		
<b>Fans</b>			
Fan	Ux-E1-A1		See Fan.
Fan	Ux-E1-A2		
Fan	Ux-E2-A1		
Fan	Ux-E2-A2		
<b>Backplane</b>			
System backplane	Ux-P1	50A2	
IOA	Ux-P1-C1		
IOA	Ux-P1-C2		
IOA	Ux-P1-C3		
IOA	Ux-P1-C4		
IOA	Ux-P1-C5		
IOA	Ux-P1-C6		
IOA	Ux-P1-C7		
IOA	Ux-P1-C8		
IOA	Ux-P1-C9		

Table 41. Bulk power assembly (BPA) locations, and failing components (continued)

Failing item name	Symbolic FRU name	CCIN	Failing item removal and replacement procedures
IOA	Ux-P1-C10		
IB riser port	Ux-P1-T1		
IB riser port	Ux-P1-T2		
<b>EMC card</b>			
Enclosure management controller (EMC) card	Ux-P2	50A6	See EMC card.
UPS	Ux-P2-T1		
SPCN 9 pin D-shell	Ux-P2-T2		
SPCN 9 pin D-shell	Ux-P2-T3		
<b>Disk drives</b>			
Disk drive backplane	Ux-P3	50A9	See Disk drive backplane.
Port card 1	Ux-P3-C1	50A4	
Port card 2	Ux-P3-C2	50A4	
Port card 3	Ux-P3-C3	50A4	
Port card 4	Ux-P3-C4	50A4	
Disk drive	Ux-P3-D1		See Disk drive.
Disk drive	Ux-P3-D2		
Disk drive	Ux-P3-D3		
Disk drive	Ux-P3-D4		
Disk drive	Ux-P3-D5		
Disk drive	Ux-P3-D6		
Disk drive	Ux-P3-D7		
Disk drive	Ux-P3-D8		
Disk drive	Ux-P3-D9		
Disk drive	Ux-P3-D10		
Disk drive	Ux-P3-D11		
Disk drive	Ux-P3-D12		
Disk drive	Ux-P3-D13		
Disk drive	Ux-P3-D14		
Disk drive	Ux-P3-D15		
Disk drive	Ux-P3-D16		
Disk drive	Ux-P3-D17		
Disk drive	Ux-P3-D18		
<b>SAS conduit</b>			
SAS conduit	Ux-P4	50A5	See SAS conduit card.
SAS connector	Ux-P4-T1		
SAS connector	Ux-P4-T2		
SAS connector	Ux-P4-T3		
SAS connector	Ux-P4-T4		



Table 41. Bulk power assembly (BPA) locations, and failing components (continued)

Failing item name	Symbolic FRU name	CCIN	Failing item removal and replacement procedures
Media bay connector	Ux-P4-T5		
<b>Midplane</b>			
Midplane	Ux-P5	50AA	

**Related reference:**

“5802 and 5877 system parts” on page 294  
 Indexed drawings show system part numbers.

## 5803 and 5873

The information provided in this topic defines specific sections of a location code string. Use this information to understand the meaning of a location code.

### Using location codes

For additional information about reading your location code, use the following table to link to a specific topic.

Location code topics that might be of interest	Description
“Location code overview”	Contains background information on the use of location codes.
“Physical location codes” on page 150	Provides a definition for physical location code.
“Logical location codes” on page 150	Provides a definition for a logical location code.
“Location code format” on page 150	Provides descriptive information of the <i>Un</i> value in the location code string. For example U5886.001.
“Location code labels” on page 151	Provides a table that identifies and defines the location code labels. The location code labels begin with an alphabetic character and follow the system serial number. For example, U7879.001.10ABCDE-P3-C31-T2-L23. (The system serial number is the 10ABCDE in the previous example.) The P3, C31, T2, and L23 all contain an alphabetic character that is identified in the Location code labels table.
“Worldwide unique identifier” on page 152	Provides a definition for the worldwide unique identifier. This group of digits follows the resource code labels and always begins with the letter <i>W</i> .

### Location code overview

Servers (system unit and expansion units) use physical location codes to provide mapping of replaceable units. Location codes are produced by the server's firmware, which structures them so that they can be used to identify specific parts in a system. The location code format is the same for all servers.

If you are working with a specific location code, the feature immediately follows the first character (U5886). Refer to the Unit type and locations table.

If the location code ends with **-Txx-Lxx**, the server's firmware could not identify the physical location. When a physical location cannot be identified, a logical location code is provided. Where logical location codes occur in enclosures, the locations topic for the enclosure has the known conversions listed. For logical location codes with no conversion, contact your next level of support.

If the location code begins with **UTMPx**, the expansion I/O unit's machine type, model and serial number have not been set yet and this is a temporary unit identifier. To identify the unit, examine the display panels on all of the expansion I/O units connected to the server until you find one with the same characters in the first 5 digits of the top line in the unit's display. Record the unit's real machine type and model from the unit label. Match the unit's machine type and model in the Unit type and locations table, and follow the link to determine the service information.

**Note:** If locations for units are not in the preceding format, either they are not supported or there is a problem in the firmware. Contact your next level of support.

## Physical location codes

Physical location codes provide a mapping of logical functions and components (such as backplanes, removable modules, connectors, ports, cables, and devices) to their specific locations within the physical structure of the server.

## Logical location codes

If the physical location cannot be mapped to a physical location code, the server's firmware generates a logical location code. A logical location code is a sequence of location labels that identifies the path that the system uses to communicate with a given resource.

**Note:** A resource has as many logical location codes as it has logical connections to the system. For example, an external tape device connected to two I/O adapters will have two logical location codes.

An example of a logical location code is:

U7879.001.10ABCDE-P3-C31-T2-L23

The first part of the location code (through the T2 label) represents the physical location code for the resource that communicates with the target resource. The remainder of the logical location code (L23) represents exactly which resource is indicated.

## Location code format

The location code is an alphanumeric string of variable length, consisting of a series of location identifiers, separated by a dash. An example of a physical location for a fan is *Un-A1*.

The first position, represented by *Un* (where *n* is equal to any string contained between the U and the hyphen) in the preceding example, is displayed in one of the forms in the following table.

**Note:** In location codes, the U is a constant digit; however, the numbered positions following the U are variables and are dependent on your server. Each column defines the numbers that follow the U in the beginning of the location code.

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
<i>Utttt.mmm.ssssss-A1</i>	<i>Uffff.ccc.ssssss-A1</i>
The leftmost code is always U.	The leftmost code is always U.
<i>ttt</i> represents the unit type of the enclosure (drawer or node).	<i>fff</i> represents the feature code of the enclosure (drawer or node).
<i>mmm</i> represents the model of the enclosure.	<i>ccc</i> represents the sequence number of the enclosure .
<i>ssssss</i> represents the serial number for the enclosure.	<i>ssssss</i> represents the serial number of the enclosure.

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
Utttt.mmm.ssssss-A1	Uffff.ccc.ssssss-A1
<p><b>Note:</b> The <i>mmm</i> or <i>ccc</i> number might not be displayed on all location codes for all servers. If the <i>mmm</i> value is not displayed, the location code is displayed in one of the following forms:</p> <ul style="list-style-type: none"> <li>• Utttt.ssssss-A1</li> <li>• Uffff.ssssss-A1</li> </ul>	

The location code is hierarchical; that is, each location identifier in the string represents a physical part. The order (from left to right), in which each identifier is shown, allows you to determine which parts contain other parts in the string.

The dash (-) separator character represents a relationship between two components in the unit. In the example of the fan, whose location code is *Un-A1*, the dash shows that the fan (*A1*) is contained in the base unit (or *Un*). Modules, adapters, cables, and devices are all parts that are plugged into another part. Their location codes will always show that they are plugged into another part as components of the server. Another example follows; *Un-P1-C9* is a memory DIMM, with memory DIMM (*C9*) plugged into a backplane (*P1*), which is inside the unit (*Un*).

**Note:** For devices, certain error conditions might cause an IBM i device to display the device location in an AIX format.

Table 42. Unit type and locations

Unit type (Utttt.mmm)	Link to location information
U5803.001	Locations
U5873.001	Locations

## Location code labels

The location code label represents a physical part of the server. The following table describes the prefixes of location code labels.

**Note:** These labels apply to system units only.

Table 43. Prefixes of location code labels for system units

Prefix	Description	Example
A	Air-moving device	Fan, blower
C	Card connector	IOP, IOA, DIMM, processor card
D	Device	Diskette, control panel
E	Electrical	Battery, power supply, ac charger
L	Logical path SAS target	Integrated drive electronics (IDE) address, Fibre Channel LUN
N	Horizontal placement for an empty rack location	
P	Planar	System backplane
T	Port	
U	Unit	
V	Virtual planar	
W	Worldwide unique ID	
X	EIA value for an empty rack location	

Table 43. Prefixes of location code labels for system units (continued)

Prefix	Description	Example
Y	Firmware FRU	

## Worldwide unique identifier

The location code label for the worldwide unique identifier consists of the prefix W followed by a maximum of 16 uppercase hexadecimal digits with no leading zeros. A location code might not consist of a worldwide unique identifier. When present, the worldwide unique identifier location label follows the location label of the resource that interfaces with the resource that has the worldwide unique identifier, usually a port.

## 5803 and 5873 locations

Use this information to help you map a location code to a position on the unit.

**Note:** The known logical location codes for this unit are listed next to the corresponding physical location in the following information. If you are working with a logical location code for this unit and it is not listed in the following information, contact your next level of support.

The following diagrams show the field replaceable unit (FRU) layout in the system. Use these diagrams with the following tables.

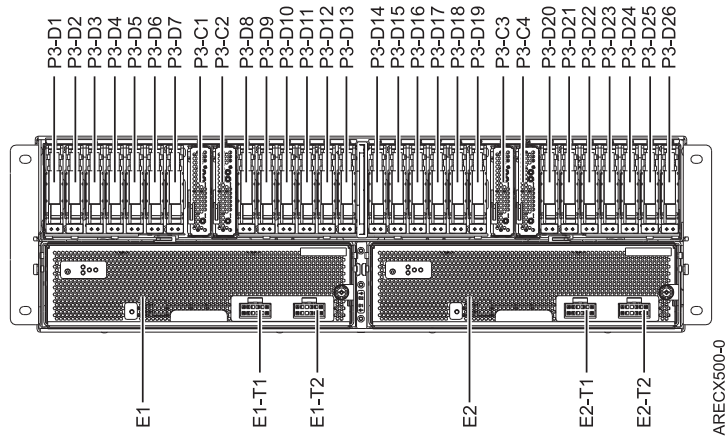


Figure 57. Front view

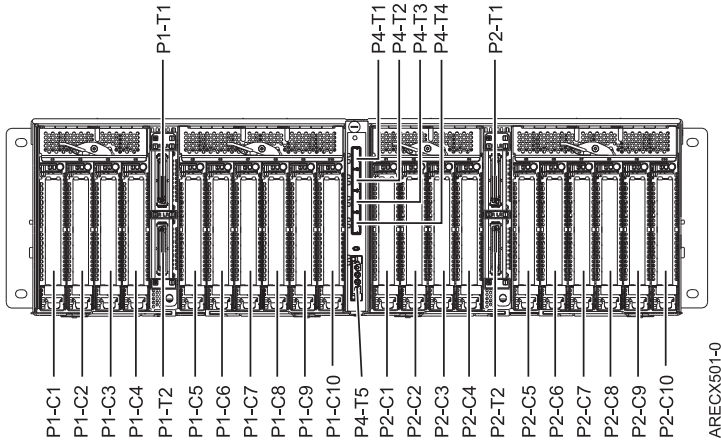


Figure 58. Rear view

The following table provides location codes for parts that make up the server.

Table 44. Bulk power assembly (BPA) locations, and failing components

Failing item name	Symbolic FRU name	CCIN
DCA	Un-E1	2C44
DCA UPIC connector	Un-E1-T1	
DCA UPIC connector	Un-E1-T2	
DCA	Un-E2	2C44
DCA UPIC connector	Un-E2-T1	
DCA UPIC connector	Un-E2-T2	
<b>Fans</b>		
Fan	Un-E1-A1	
Fan	Un-E1-A2	
Fan	Un-E1-A3	
Fan	Un-E2-A1	
Fan	Un-E2-A2	
Fan	Un-E2-A3	
<b>Backplane</b>		
• Un-P1-C1		
• Un-P2-C1		
Planar	Un-Px	50A2
IOA slot	Un-Px-C1	
IOA slot	Un-Px-C2	
IOA slot	Un-Px-C3	
IOA slot	Un-Px-C4	
IOA slot	Un-Px-C5	
IOA slot	Un-Px-C6	
IOA slot	Un-Px-C7	
IOA slot	Un-Px-C8	
IOA slot	Un-Px-C9	

Table 44. Bulk power assembly (BPA) locations, and failing components (continued)

Failing item name	Symbolic FRU name	CCIN
IOA slot	Un-Px-C10	
IB Riser Port	Un-Px-T1	
IB Riser Port	Un-Px-T2	
<b>DASD</b>		
DASD backplane	Un-P3	50A7
PORT card 1	Un-P3-C1	50A4
PORT card 2	Un-P3-C2	50A4
PORT card 3	Un-P3-C3	50A4
PORT card 4	Un-P3-C4	50A4
DASD drive bay	Un-P3-D1	
DASD drive bay	Un-P3-D2	
DASD drive bay	Un-P3-D3	
DASD drive bay	Un-P3-D4	
DASD drive bay	Un-P3-D5	
DASD drive bay	Un-P3-D6	
DASD drive bay	Un-P3-D7	
DASD drive bay	Un-P3-D8	
DASD drive bay	Un-P3-D9	
DASD drive bay	Un-P3-D10	
DASD drive bay	Un-P3-D11	
DASD drive bay	Un-P3-D12	
DASD drive bay	Un-P3-D13	
DASD drive bay	Un-P3-D14	
DASD drive bay	Un-P3-D15	
DASD drive bay	Un-P3-D16	
DASD drive bay	Un-P3-D17	
DASD drive bay	Un-P3-D18	
DASD drive bay	Un-P3-D19	
DASD drive bay	Un-P3-D20	
DASD drive bay	Un-P3-D21	
DASD drive bay	Un-P3-D22	
DASD drive bay	Un-P3-D23	
DASD drive bay	Un-P3-D24	
DASD drive bay	Un-P3-D25	
DASD drive bay	Un-P3-D26	
<b>SAS conduit</b>		
SAS conduit	Un-P4	50A5
SAS connector	Un-P4-T1	
SAS connector	Un-P4-T2	
SAS connector	Un-P4-T3	

Table 44. Bulk power assembly (BPA) locations, and failing components (continued)

Failing item name	Symbolic FRU name	CCIN
SAS connector	U $n$ -P4-T4	
Media bay connector	U $n$ -P4-T5	
Media bay connector	U $n$ -P4-T6	
<b>Midplane</b>		
Midplane	U $n$ -P5	50A8

## 5886

The information provided in this topic defines specific sections of a location code string. Use this information to understand the meaning of a location code.

### Using location codes

For additional information about reading your location code, use the following table to link to a specific topic.

Location code topics that might be of interest	Description
"Location code overview"	Contains background information on the use of location codes.
"Physical location codes" on page 156	Provides a definition for physical location code.
"Logical location codes" on page 156	Provides a definition for a logical location code.
"Location code format" on page 156	Provides descriptive information of the U $n$ value in the location code string. For example U5886.001.
"Location code labels" on page 157	Provides a table that identifies and defines the location code labels. The location code labels begin with an alphabetic character and follow the system serial number. For example, U7879.001.10ABCDE-P3-C31-T2-L23. (The system serial number is the 10ABCDE in the previous example.) The P3, C31, T2, and L23 all contain an alphabetic character that is identified in the Location code labels table.
"Worldwide unique identifier" on page 158	Provides a definition for the worldwide unique identifier. This group of digits follows the resource code labels and always begins with the letter W.

### Location code overview

Servers (system unit and expansion units) use physical location codes to provide mapping of replaceable units. Location codes are produced by the server's firmware, which structures them so that they can be used to identify specific parts in a system. The location code format is the same for all servers.

If you are working with a specific location code, the feature immediately follows the first character (U5886). Refer to the Unit type and locations table.

If the location code ends with **-Txx-Lxx**, the server's firmware could not identify the physical location. When a physical location cannot be identified, a logical location code is provided. Where logical location codes occur in enclosures, the locations topic for the enclosure has the known conversions listed. For logical location codes with no conversion, contact your next level of support.

If the location code begins with **UTMPx**, the expansion I/O unit's machine type, model and serial number have not been set yet and this is a temporary unit identifier. To identify the unit, examine the display panels on all of the expansion I/O units connected to the server until you find one with the same characters in the first 5 digits of the top line in the unit's display. Record the unit's real machine type and model from the unit label. Match the unit's machine type and model in the Unit type and locations table, and follow the link to determine the service information.

**Note:** If locations for units are not in the preceding format, either they are not supported or there is a problem in the firmware. Contact your next level of support.

## Physical location codes

Physical location codes provide a mapping of logical functions and components (such as backplanes, removable modules, connectors, ports, cables, and devices) to their specific locations within the physical structure of the server.

## Logical location codes

If the physical location cannot be mapped to a physical location code, the server's firmware generates a logical location code. A logical location code is a sequence of location labels that identifies the path that the system uses to communicate with a given resource.

**Note:** A resource has as many logical location codes as it has logical connections to the system. For example, an external tape device connected to two I/O adapters will have two logical location codes.

An example of a logical location code is:

U7879.001.10ABCDE-P3-C31-T2-L23

The first part of the location code (through the T2 label) represents the physical location code for the resource that communicates with the target resource. The remainder of the logical location code (L23) represents exactly which resource is indicated.

## Location code format

The location code is an alphanumeric string of variable length, consisting of a series of location identifiers, separated by a dash. An example of a physical location for a fan is *Un-A1*.

The first position, represented by *Un* (where *n* is equal to any string contained between the U and the hyphen) in the preceding example, is displayed in one of the forms in the following table.

**Note:** In location codes, the U is a constant digit; however, the numbered positions following the U are variables and are dependent on your server. Each column defines the numbers that follow the U in the beginning of the location code.

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
<i>Utttt.mmm.ssssss-A1</i>	<i>Uffff.ccc.ssssss-A1</i>
The leftmost code is always U.	The leftmost code is always U.
<i>ttt</i> represents the unit type of the enclosure (drawer or node).	<i>fff</i> represents the feature code of the enclosure (drawer or node).
<i>mmm</i> represents the model of the enclosure.	<i>ccc</i> represents the sequence number of the enclosure .
<i>ssssss</i> represents the serial number for the enclosure.	<i>ssssss</i> represents the serial number of the enclosure.



Machine type and model number in a location code	Feature codes and sequence numbers in a location code
Utttt.mmm.ssssss-A1	Uffff.ccc.ssssss-A1
<p><b>Note:</b> The <i>mmm</i> or <i>ccc</i> number might not be displayed on all location codes for all servers. If the <i>mmm</i> value is not displayed, the location code is displayed in one of the following forms:</p> <ul style="list-style-type: none"> <li>• Utttt.ssssss-A1</li> <li>• Uffff.ssssss-A1</li> </ul>	

The location code is hierarchical; that is, each location identifier in the string represents a physical part. The order (from left to right), in which each identifier is shown, allows you to determine which parts contain other parts in the string.

The dash (-) separator character represents a relationship between two components in the unit. In the example of the fan, whose location code is *Un-A1*, the dash shows that the fan (A1) is contained in the base unit (or *Un*). Modules, adapters, cables, and devices are all parts that are plugged into another part. Their location codes always show that they are plugged into another part as components of the server. Another example follows; *Un-P1-C9* is a memory DIMM, with memory DIMM (C9) plugged into a backplane (P1), which is inside the unit (*Un*).

**Note:** For devices, certain error conditions might cause an IBM i device to display the device location in an AIX format.

Table 45. Unit type and locations

Unit type (Utttt)	Link to location information
U5886.001	Locations

## Location code labels

The location code label represents a physical part of the server. The following table describes the prefixes of location code labels.

**Note:** These labels apply to system units only.

Table 46. Prefixes of location code labels for system units

Prefix	Description	Example
A	Air-moving device	Fan, blower
C	Card connector	IOP, IOA, DIMM, processor card
D	Device	Diskette, control panel
E	Electrical	Battery, power supply, ac charger
L	Logical path SAS target	Integrated drive electronics (IDE) address, Fibre Channel LUN
N	Horizontal placement for an empty rack location	
P	Planar	System backplane
T	Port	
U	Unit	
V	Virtual planar	
W	Worldwide unique ID	
X	EIA value for an empty rack location	
Y	Firmware FRU	

## Worldwide unique identifier

The location code label for the worldwide unique identifier consists of the prefix W followed by a maximum of 16 uppercase hexadecimal digits with no leading zeros. A location code might not consist of a worldwide unique identifier. When present, the worldwide unique identifier location label follows the location label of the resource that interfaces with the resource that has the worldwide unique identifier, usually a port.

## 5886 locations

Use this information to help you map a location code to a position on the unit.

**Note:** The known logical location codes for this unit are listed next to the corresponding physical location in the following information. If you are working with a logical location code for this unit and it is not listed in the following information, contact your next level of support.

The following diagrams show the field replaceable unit (FRU) layout in the system. Use these diagrams with the following tables.

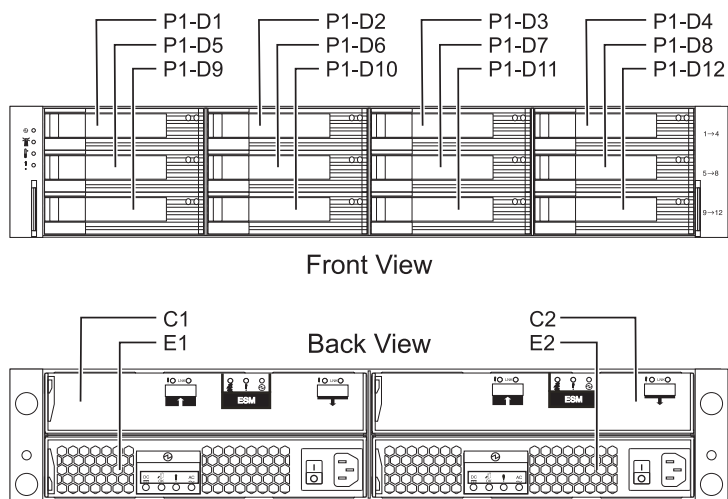


Figure 59. Front and rear views

The following table provides location codes for parts that make up the server.

Table 47. FRU locations and failing components

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
System unit	Un		
ESM			

Table 47. FRU locations and failing components (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
ESM A	Un-C1	Yes	See Enclosure services manager.
ESM B	Un-C2	Yes	
<b>Power supplies</b>			
Power supply	Un-E1	Yes	See Power supply.
Power supply	Un-E2	Yes	
<b>Midplane</b>			
Midplane	Un-P1	Yes	See Midplane.
<b>Device physical locations</b>			
Disk drive 1	Un-P1-D1	Yes	See Disk unit.
Disk drive 2	Un-P1-D2	Yes	
Disk drive 3	Un-P1-D3	Yes	
Disk drive 4	Un-P1-D4	Yes	
Disk drive 5	Un-P1-D5	Yes	
Disk drive 6	Un-P1-D6	Yes	
Disk drive 7	Un-P1-D7	Yes	
Disk drive 8	Un-P1-D8	Yes	
Disk drive 9	Un-P1-D9	Yes	
Disk drive 10	Un-P1-D10	Yes	
Disk drive 11	Un-P1-D11	Yes	
Disk drive 12	Un-P1-D12	Yes	

**Related reference:**

5886 system parts  
 Indexed drawings show system part numbers.

## 5887

The information provided in this topic defines specific sections of a location code string. Use this information to understand the meaning of a location code.

### Using location codes

For additional information about reading your location code, use the following table to link to a specific topic.

Location code topics that might be of interest	Description
"Location code overview" on page 160	Contains background information on the use of location codes.
"Physical location codes" on page 160	Provides a definition for physical location code.
"Logical location codes" on page 160	Provides a definition for a logical location code.
"Location code format" on page 161	Provides descriptive information of the Un value in the location code string. For example, U5887.001.

Location code topics that might be of interest	Description
"Location code labels" on page 161	Provides a table that identifies and defines the location code labels. The location code labels begin with an alphabetic character and follow the system serial number. For example, U7879.001.10ABCDE-P3-C31-T2-L23. (The system serial number is the 10ABCDE in the previous example.) The P3, C31, T2, and L23 all contain an alphabetic character that is identified in the Location code labels table.
"Worldwide unique identifier" on page 162	Provides a definition for the worldwide unique identifier. This group of digits follows the resource code labels and always begins with the letter W.

## Location code overview

Servers (system unit and expansion units) use physical location codes to provide mapping of replaceable units. Location codes are produced by the server's firmware, which structures them so that they can be used to identify specific parts in a system. The location code format is the same for all servers.

If you are working with a specific location code, the feature immediately follows the first character (U5886). See the Unit type and locations table.

If the location code ends with **-Txx-Lxx**, the server's firmware could not identify the physical location. When a physical location cannot be identified, a logical location code is provided. Where logical location codes occur in enclosures, the locations topic for the enclosure has the known conversions listed. For logical location codes with no conversion, contact your next level of support.

If the location code begins with **UTMPx**, the expansion I/O unit's machine type, model, and serial number have not been set yet and this is a temporary unit identifier. To identify the unit, examine the display panels on all of the expansion I/O units connected to the server until you find one with the same characters in the first 5 digits of the top line in the unit's display. Record the unit's real machine type and model from the unit label. Match the unit's machine type and model in the Unit type and locations table, and follow the link to determine the service information.

**Note:** If locations for units are not in the preceding format, either they are not supported or there is a problem in the firmware. Contact your next level of support.

## Physical location codes

Physical location codes provide a mapping of logical functions and components (such as backplanes, removable modules, connectors, ports, cables, and devices) to their specific locations within the physical structure of the server.

## Logical location codes

If the physical location cannot be mapped to a physical location code, the server's firmware generates a logical location code. A logical location code is a sequence of location labels that identifies the path that the system uses to communicate with a given resource.

**Note:** A resource has as many logical location codes as it has logical connections to the system. For example, an external tape device connected to two I/O adapters will have two logical location codes.

An example of a logical location code is:

U7879.001.10ABCDE-P3-C31-T2-L23

The first part of the location code (through the T2 label) represents the physical location code for the resource that communicates with the target resource. The remainder of the logical location code (L23) represents exactly which resource is indicated.

## Location code format

The location code is an alphanumeric string of variable length, consisting of a series of location identifiers, separated by a dash. An example of a physical location for a fan is *Un-A1*.

The first position, represented by *Un* (where *n* is equal to any string contained between the U and the hyphen) in the preceding example, is displayed in one of the forms in the following table.

**Note:** In location codes, the U is a constant digit; however, the numbered positions following the U are variables and are dependent on your server. Each column defines the numbers that follow the U in the beginning of the location code.

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
<i>Utttt.mmm.ssssss-A1</i>	<i>Uffff.ccc.ssssss-A1</i>
The leftmost code is always U.	The leftmost code is always U.
<i>tttt</i> represents the unit type of the enclosure (drawer or node).	<i>ffff</i> represents the feature code of the enclosure (drawer or node).
<i>mmm</i> represents the model of the enclosure.	<i>ccc</i> represents the sequence number of the enclosure.
<i>ssssss</i> represents the serial number for the enclosure.	<i>ssssss</i> represents the serial number of the enclosure.
<p><b>Note:</b> The <i>mmm</i> or <i>ccc</i> number might not be displayed on all location codes for all servers. If the <i>mmm</i> value is not displayed, the location code is displayed in one of the following forms:</p> <ul style="list-style-type: none"> <li>• <i>Utttt.ssssss-A1</i></li> <li>• <i>Uffff.ssssss-A1</i></li> </ul>	

The location code is hierarchical; that is, each location identifier in the string represents a physical part. The order (from left to right), in which each identifier is shown, allows you to determine which parts contain other parts in the string.

The dash (-) separator character represents a relationship between two components in the unit. In the example of the fan, whose location code is *Un-A1*, the dash shows that the fan (A1) is contained in the base unit (or *Un*). Modules, adapters, cables, and devices are all parts that are plugged into another part. Their location codes always show that they are plugged into another part as components of the server. Another example follows: *Un-P1-C9* is a memory DIMM, with memory DIMM (C9) plugged into a backplane (P1), which is inside the unit (*Un*).

**Note:** For devices, certain error conditions might cause an IBM i device to display the device location in an AIX format.

Table 48. Unit type and locations

Unit type (Utttt)	Link to location information
U5887.001	Locations

## Location code labels

The location code label represents a physical part of the server. The following table describes the prefixes of location code labels.

**Note:** These labels apply to system units only.

Table 49. Prefixes of location code labels for system units

Prefix	Description	Example
A	Air-moving device	Fan, blower
C	Card connector	IOP, IOA, DIMM, processor card
D	Device	Diskette, control panel
E	Electrical	Battery, power supply, ac charger
L	Logical path SAS target	Integrated drive electronics (IDE) address, Fibre Channel LUN
N	Horizontal placement for an empty rack location	
P	Planar	System backplane
T	Port	
U	Unit	
V	Virtual planar	
W	Worldwide unique ID	
X	EIA value for an empty rack location	
Y	Firmware FRU	

## Worldwide unique identifier

The location code label for the worldwide unique identifier consists of the prefix W followed by a maximum of 16 uppercase hexadecimal digits with no leading zeros. A location code might not consist of a worldwide unique identifier. When present, the worldwide unique identifier location label follows the location label of the resource that interfaces with the resource that has the worldwide unique identifier, usually a port.

## 5887 locations

Use this information to help you map a location code to a position on the unit.

**Note:** The known logical location codes for this unit are listed next to the corresponding physical location in the following information. If you are working with a logical location code for this unit and it is not listed in the following information, contact your next level of support.

The following diagrams show the field replaceable unit (FRU) layout in the system. Use these diagrams with the following tables.

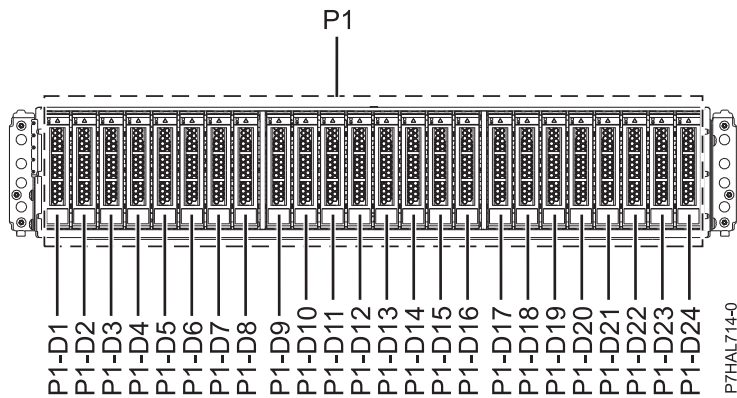


Figure 60. Front view

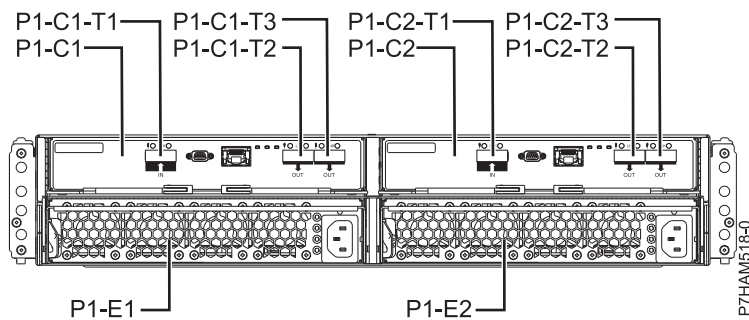


Figure 61. Rear view

The following table provides location codes for parts that make up the server.

Table 50. FRU locations and failing components

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
System unit	Un		
<b>ESM</b>			
Event Services Manager (ESM) A	Un-P1-C1	Yes	See Removing and installing an enclosure services manager.
ESM B	Un-P1-C2	Yes	
ESM A connector	Un-P1-C1-T1		
ESM A connector	Un-P1-C1-T2		
ESM A connector	Un-P1-C1-T3		
ESM B connector	Un-P1-C2-T1		
ESM B connector	Un-P1-C2-T2		
ESM B connector	Un-P1-C2-T3		
<b>Power supplies</b>			
Power supply	Un-P1-E1	Yes	See Removing and installing a power supply.
Power supply	Un-P1-E2	Yes	
<b>Midplane</b>			

Table 50. FRU locations and failing components (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Midplane	Un-P1	Yes	See Removing and installing a midplane.
<b>Device physical locations</b>			
Disk drive 1	Un-P1-D1	Yes	See Removing and installing a disk drive.
Disk drive 2	Un-P1-D2	Yes	
Disk drive 3	Un-P1-D3	Yes	
Disk drive 4	Un-P1-D4	Yes	
Disk drive 5	Un-P1-D5	Yes	
Disk drive 6	Un-P1-D6	Yes	
Disk drive 7	Un-P1-D7	Yes	
Disk drive 8	Un-P1-D8	Yes	
Disk drive 9	Un-P1-D9	Yes	
Disk drive 10	Un-P1-D10	Yes	
Disk drive 11	Un-P1-D11	Yes	
Disk drive 12	Un-P1-D12	Yes	
Disk drive 13	Un-P1-D13	Yes	
Disk drive 14	Un-P1-D14	Yes	
Disk drive 15	Un-P1-D15	Yes	
Disk drive 16	Un-P1-D16	Yes	
Disk drive 17	Un-P1-D17	Yes	
Disk drive 18	Un-P1-D18	Yes	
Disk drive 19	Un-P1-D19	Yes	
Disk drive 20	Un-P1-D20	Yes	
Disk drive 21	Un-P1-D21	Yes	
Disk drive 22	Un-P1-D22	Yes	
Disk drive 23	Un-P1-D23	Yes	
Disk drive 24	Un-P1-D24	Yes	

**Related reference:**

5887 system parts

Indexed drawings show system part numbers.

**5888 or EDR1 PCIe storage enclosure**

The information provided in this topic defines specific sections of a location code string. Use this information to understand the meaning of a location code.

**Using location codes**

Use the following table to link to a specific topic that you need additional information about when reading your location code.



Location code topics	Description
"Location code overview"	Contains background information on the use of location codes.
"Physical location codes"	Provides a definition for physical location code.
"Logical location codes" on page 166	Provides a definition of what a logical location code is.
"Location code format" on page 166	Provides descriptive information of the <i>Un</i> value in the location code string. For example, U789C.001.
"Location code labels" on page 167	Provides a table that identifies and defines the location code labels. The location code labels begin with an alphabetic character and follow the system serial number. For example, U789C.001.10ABCDE-P3-C31-T2-L23. The system serial number is 10ABCDE in the previous example. P3, C31, T2, and L23 all contain an alphabetic character that is identified in the Location code labels table.
"Worldwide unique identifier" on page 167	Provides a definition for the world unique identifier. This group of digits follows the resource code labels and always begins with the letter <i>W</i> .

## Location code overview

Servers (system unit and expansion units) use physical location codes to provide mapping of replaceable units. Location codes are produced by the server's firmware, which structures them so that they can be used to identify specific parts in a system. The location code format is the same for all servers.

If you are working with a specific location code, the unit type and model immediately follow the first character (*Utttt.mmm*). Match the unit type and model to a link, as shown in the Unit type and locations table.

If the location code ends with **-Txx-Lxx**, the server's firmware could not identify the physical location. When a physical location cannot be identified, a logical location code is provided. Where logical location codes occur in enclosures, the locations topic for the enclosure lists the known conversions. For logical location codes with no conversion, contact your next level of support.

If the location code begins with **UTMPx**, the expansion I/O unit's machine type, model, and serial number have not been set yet and this is a temporary unit identifier. To identify the unit, examine the display panels on all of the expansion I/O units that are connected to the server until you find one with the same characters in the first 5 digits of the top line in the unit's display. Record the unit's real machine type and model from the unit label. Match the unit's machine type and model in the Unit type and locations table and follow the link to determine the service information.

**Note:** Locations for units that are not in the preceding list are either not supported or have a problem in the firmware. Contact your next level of support.

## Physical location codes

Physical location codes provide a mapping of logical functions and components (such as backplanes, removable modules, connectors, ports, cables, and devices) to their specific locations within the physical structure of the server.

## Logical location codes

If the physical location cannot be mapped to a physical location code, the server's firmware generates a logical location code. A logical location code is a sequence of location labels that identifies the path that the system uses to communicate with a given resource.

**Note:** A resource has as many logical location codes as it has logical connections to the system. For example, an external tape device connected to two I/O adapters has two logical location codes.

An example of a logical location code is:

U789C.001.10ABCDE-P3-C31-T2-L23

The first part of the location code (through the T2 label) represents the physical location code for the resource that communicates with the target resource. The remainder of the logical location code (L23) represents exactly which resource is indicated.

## Location code format

The location code is an alphanumeric string of variable length, consisting of a series of location identifiers, separated by a dash. An example of a physical location for a fan is  $U_n-A1$ .

The first position, represented by  $U_n$  (where  $n$  is equal to any string contained between the U and the hyphen) in the preceding example, is displayed in one of the forms in the following table.

**Note:** In location codes, the U is a constant digit; however, the numbered positions that follow the U are variables and are dependent on your server. Each column defines the numbers that follow the U in the beginning of the location code.

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
$Utttt.mmm.ssssss-A1$	$Uffff.ccc.ssssss-A1$
The leftmost code is always U.	The leftmost code is always U.
$tttt$ represents the unit type of the enclosure (drawer or node).	$ffff$ represents the feature code of the enclosure (drawer or node).
$mmm$ represents the model of the enclosure.	$ccc$ represents the sequence number of the enclosure.
$ssssss$ represents the serial number for the enclosure.	$ssssss$ represents the serial number of the enclosure.
<b>Note:</b> The $mmm$ or $ccc$ number might not be displayed on all location codes for all servers. If the $mmm$ value is not displayed, the location code is displayed in one of the following forms:	
<ul style="list-style-type: none"><li>• <math>Utttt.ssssss-A1</math></li><li>• <math>Uffff.ssssss-A1</math></li></ul>	

The location code is hierarchical; that is, each location identifier in the string represents a physical part. The order (from left to right) in which each identifier is shown helps you determine which parts contain other parts in the string.

The dash (-) separator character represents a relationship between two components in the unit. In the example of the fan, whose location code is  $U_n-A1$ , the dash shows that the fan (A1) is contained in the base unit (or  $U_n$ ). Modules, adapters, cables, and devices are all parts that are plugged into another part. Their location codes always show that they are plugged into another part as components of the server. Another example follows:  $U_n-P1-C9$  is a memory DIMM (C9) that is plugged into a backplane (P1), which is inside the unit ( $U_n$ ).

## Location code labels

The location code label represents a physical part of the server. The following table describes the prefixes of location code labels.

**Note:** These labels apply to system units only.

*Table 51. Prefixes of location code labels for system units*

Prefix	Description	Example
A	Air-moving device	Fan, blower
C	Card connector	IOP, IOA, DIMM, processor card
D	Device	Diskette, control panel
E	Electrical	Battery, power supply, ac charger
L	Logical path SAS target	Integrated drive electronics (IDE) address, Fibre Channel LUN
N	Horizontal placement for an empty rack location	
P	Planar	System backplane
T	Port, external cable	
U	Unit	
V	Virtual planar	
W	Worldwide unique ID	
X	EIA value for an empty rack location	
Y	Firmware FRU	

## Worldwide unique identifier

The location code label for the worldwide unique identifier consists of the prefix *W* followed by a maximum of 16 uppercase hexadecimal digits with no leading zeros. A location code might not consist of a worldwide unique identifier. When present, the worldwide unique identifier location label follows the location label of the resource that interfaces with the resource that has the worldwide unique identifier, usually a port.

## 5888 or EDR1 PCIe storage enclosure locations

Use this information to help you map a location code to a position on the unit.

The following diagrams show field replaceable unit (FRU) layouts in the system. Use these diagrams with the following tables.

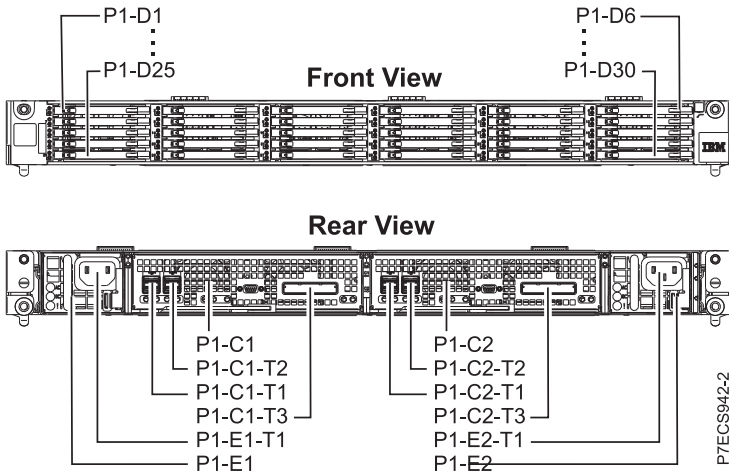


Figure 62. Front and rear view

The following table provides location codes for parts of a server.

Table 52. FRU locations and failing components

Failing item name	Physical location code	Fault and identify LED	Failing item removal and replacement procedures
System unit	Un	Yes	
<b>Midplane</b>			
Midplane	Un-P1	Fault only (5888 PCIe storage enclosure)  Yes (EDR1 PCIe storage enclosure)	For 5888 PCIe storage enclosure, see Removing and installing a midplane.  For EDR1 PCIe storage enclosure, see Removing and installing a midplane.
<b>Enclosure RAID module assembly</b>			
Enclosure RAID module assembly (left)	Un-P1-C1		For 5888 PCIe storage enclosure, see Removing and installing an enclosure RAID module assembly.
Enclosure RAID module assembly (right)	Un-P1-C2	Fault only (5888 PCIe storage enclosure)  Yes (EDR1 PCIe storage enclosure)	For EDR1 PCIe storage enclosure, see Removing and installing an enclosure RAID module assembly.
<b>Fan assembly</b>			
Fan assembly (on left enclosure RAID module assembly)	Un-P1-C1-A1	Fault only (5888 PCIe storage enclosure)  Yes (EDR1 PCIe storage enclosure)	For 5888 PCIe storage enclosure, see Removing and installing a fan assembly.
Fan assembly (on right enclosure RAID module assembly)	Un-P1-C2-A1	Fault only (5888 PCIe storage enclosure)  Yes (EDR1 PCIe storage enclosure)	For EDR1 PCIe storage enclosure, see Removing and installing a fan assembly.
<b>Power supplies</b>			

Table 52. FRU locations and failing components (continued)

Failing item name	Physical location code	Fault and identify LED	Failing item removal and replacement procedures
Power supply (left)	Un-P1-E1	Fault only (5888 PCIe storage enclosure)  Yes (EDR1 PCIe storage enclosure)	For 5888 PCIe storage enclosure, see Removing and installing a power supply.
Power supply (right)	Un-P1-E2	Fault only (5888 PCIe storage enclosure)  Yes (EDR1 PCIe storage enclosure)	For EDR1 PCIe storage enclosure, see Removing and installing a power supply.
<b>Ports</b>			
SAS connector	Un-P1-C1-T1		
SAS connector	Un-P1-C1-T2		
SAS connector	Un-P1-C2-T1		
SAS connector	Un-P1-C2-T2		
PCIe x8 connector	Un-P1-C1-T3		For 5888 PCIe storage enclosure, see Connecting your PCIe storage enclosures..
PCIe x8 connector	Un-P1-C2-T3		For EDR1 PCIe storage enclosure, see Removing and installing a PCIe cable.
<b>Device physical locations</b>			

Table 52. FRU locations and failing components (continued)

Failing item name	Physical location code	Fault and identify LED	Failing item removal and replacement procedures
Solid-state drive (SSD) 1	Un-P1-D1	Yes	For 5888 PCIe storage enclosure, see Removing and installing a solid-state drive.  For EDR1 PCIe storage enclosure, see Removing and installing a solid-state drive.
SSD 2	Un-P1-D2	Yes	
SSD 3	Un-P1-D3	Yes	
SSD 4	Un-P1-D4	Yes	
SSD 5	Un-P1-D5	Yes	
SSD 6	Un-P1-D6	Yes	
SSD 7	Un-P1-D7	Yes	
SSD 8	Un-P1-D8	Yes	
SSD 9	Un-P1-D9	Yes	
SSD 10	Un-P1-D10	Yes	
SSD 11	Un-P1-D11	Yes	
SSD 12	Un-P1-D12	Yes	
SSD 13	Un-P1-D13	Yes	
SSD 14	Un-P1-D14	Yes	
SSD 15	Un-P1-D15	Yes	
SSD 16	Un-P1-D16	Yes	
SSD 17	Un-P1-D17	Yes	
SSD 18	Un-P1-D18	Yes	
SSD 19	Un-P1-D19	Yes	
SSD 20	Un-P1-D20	Yes	
SSD 21	Un-P1-D21	Yes	
SSD 22	Un-P1-D22	Yes	
SSD 23	Un-P1-D23	Yes	
SSD 24	Un-P1-D24	Yes	
SSD 25	Un-P1-D25	Yes	
SSD 26	Un-P1-D26	Yes	
SSD 27	Un-P1-D27	Yes	
SSD 28	Un-P1-D28	Yes	
SSD 29	Un-P1-D29	Yes	
SSD 30	Un-P1-D30	Yes	

**Related reference:**

“5888 or EDR1 PCIe storage enclosure system parts” on page 310  
Indexed drawings show system part numbers.

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**Addresses**

Use this information to locate system addresses.

Use the address to find the location, and then go to “Part locations and location codes” on page 3 to find the physical location.

## 8202-E4B or 8205-E6B addresses

You can cross-reference a disk drive physical location code to the address.

Use the address to find the location for the system, and then go to “8202-E4B or 8205-E6B” on page 3 to find additional location information.

Table 53. IOA and device address information running IBM i

Position	Possible failing item	Direct Select Address (DSA) (BBBBcbb)	Unit address
Un -P1	Embedded SAS controller	02000000	Not applicable
Un -P1-C13	RAID card		Not applicable
Un -P1-C14	Split disk drive card		Not applicable
Un -P1-C4	PCIe adapter	02040000	Not applicable
Un -P1-C5	PCIe adapter	02050000	Not applicable
Un -P1-C6	PCIe adapter	02060000	Not applicable
Un -P1-C7	PCIe adapter	02070000	Not applicable
Un -P1-C1-C1	PCIe adapter	020B0000	Not applicable
Un -P1-C1-C2	PCIe adapter	02080000	Not applicable
Un -P1-C1-C3	PCIe adapter	020A0000	Not applicable
Un -P1-C1-C4	PCIe adapter	02090000	Not applicable
Un -P1-C19	RAID card or split disk drive card	02020000	Not applicable
Un -P1-D1	Tape drive - SAS	02000000	070000FF
Un - P2-D9	DVD	02000000	060000FF
Un -P2-D1	Disk drive 1	02000000 or 02020000	000400FF
Un -P2-D2	Disk drive 2	02000000 or 02020000	000500FF
Un -P2-D3	Disk drive 3	02000000 or 02020000	000600FF
Un -P2-D4	Disk drive 4	02000000 or 02020000	000700FF
Un -P2-D5	Disk drive 5	02000000 or 02020000	000800FF
Un -P2-D6	Disk drive 6	02000000 or 02020000	000900FF
Un -P2-D7	Disk drive 7	02000000 or 02020000	000A00FF
Un -P2-D8	Disk drive 8	02000000 or 02020000	000B00FF
Un -P1-Cx-D1 or Un -P1-C1-Cx-D1	Disk drive 1 on PCIe SAS RAID and SSD adapter	020x0000	000000FF
Un -P1-Cx-D2 or Un -P1-C1-Cx-D2	Disk drive 2 on PCIe SAS RAID and SSD adapter	020x0000	010000FF
Un -P1-Cx-D3 or Un -P1-C1-Cx-D3	Disk drive 3 on PCIe SAS RAID and SSD adapter	020x0000	040000FF
Un -P1-Cx-D4 or Un -P1-C1-Cx-D4	Disk drive 4 on PCIe SAS RAID and SSD adapter	020x0000	050000FF

## 8202-E4C, 8202-E4D, 8205-E6C, or 8205-E6D addresses

You can cross-reference a disk drive physical location code to the address.

Use the address to find the location for the system, and then go to “8202-E4C, 8202-E4D, 8205-E6C, or 8205-E6D” on page 15 to find additional location information.

Table 54. IOA and device address information running IBM i

Position	Possible failing item	DSA (BBBBcbb)	Unit address
Un -P1	Embedded SAS controller	000A0000	Not applicable
Un -P1-C19	RAID card	000C0000	Not applicable
Un -P1-C14	Split disk drive card		Not applicable
Un -P1-C2	PCIe adapter	02010000	
Un -P1-C3	PCIe adapter	02020000	
Un -P1-C4	PCIe adapter	02030000	Not applicable
Un -P1-C5	PCIe adapter	02040000	Not applicable
Un -P1-C6	PCIe adapter	02050000	Not applicable
Un -P1-C7	PCIe adapter	02060000	Not applicable
Un -P1-C1-C1	PCIe adapter	020A0000	Not applicable
Un -P1-C1-C2	PCIe adapter	02090000	Not applicable
Un -P1-C1-C3	PCIe adapter	02070000	Not applicable
Un -P1-C1-C4	PCIe adapter	02080000	Not applicable
Un -P1-C19	RAID card or split disk drive card	02020000	Not applicable
Un -P1-D1	Tape drive - SAS	02000000	070000FF
Un - P2-D9	DVD	02000000	060000FF
Un -P2-D1	Disk drive 1	000A0000 or 000C0000	000400FF
Un -P2-D2	Disk drive 2	000A0000 or 000C0000	000500FF
Un -P2-D3	Disk drive 3	000A0000 or 000C0000	000600FF
Un -P2-D4	Disk drive 4	000A0000 or 000C0000	000700FF
Un -P2-D5	Disk drive 5	000A0000 or 000C0000	000800FF
Un -P2-D6	Disk drive 6	000A0000 or 000C0000	000900FF
Un -P2-D7	Disk drive 7	000A0000 or 000C0000	000A00FF
Un -P2-D8	Disk drive 8	000A0000 or 000C0000	000B00FF
Un -P1-Cx-D1 or Un -P1-C1-Cx-D1	Disk drive 1 on PCIe SAS RAID and SSD adapter	020x0000	000000FF
Un -P1-Cx-D2 or Un -P1-C1-Cx-D2	Disk drive 2 on PCIe SAS RAID and SSD adapter	020x0000	010000FF
Un -P1-Cx-D3 or Un -P1-C1-Cx-D3	Disk drive 3 on PCIe SAS RAID and SSD adapter	020x0000	040000FF
Un -P1-Cx-D4 or Un -P1-C1-Cx-D4	Disk drive 4 on PCIe SAS RAID and SSD adapter	020x0000	050000FF



## 8231-E2B addresses

You can cross-reference a disk drive physical location code to the address.

Use the address to find the location for the system, and then go to “8231-E2B” on page 26 to find additional location information.

Table 55. IOA and device address information

Position	Possible failing item	DSA (BBBBcbb)	Unit address
Un -P1	Embedded SAS controller	02000000	Not applicable
Un -P1-C12	RAID card		
Un -P1-C13	Split disk drive card		
Un -P1	Integrated USB controller	02010000	Not applicable
Un -P1-C3	PCIe adapter	02030000	Not applicable
Un -P1-C4	PCIe adapter	02040000	Not applicable
Un -P1-C5	PCIe adapter	02050000	Not applicable
Un -P1-C6	PCIe adapter	02060000	Not applicable
Un - P1-C18	RAID card or split disk drive card	02020000	Not applicable
Un -P1-D1	Tape drive - SAS	02000000	070000FF
Un -P1-D2	Tape drive - USB	02010000	060000FF
Un -P3-D1	Disk drive 1	02000000 or 02020000	000400FF
Un -P3-D2	Disk drive 2	02000000 or 02020000	000500FF
Un -P3-D3	Disk drive 3	02000000 or 02020000	000600FF
Un -P3-D4	Disk drive 4	02000000 or 02020000	000700FF
Un -P3-D5	Disk drive 5	02000000 or 02020000	000800FF
Un -P2-D6	Disk drive 6	02000000 or 02020000	000900FF
Un -P3-D7	DVD	02000000	060000FF
Un -P1-Cx-D1	Disk drive 1 on PCIe SAS RAID and SSD adapter	020x0000	000000FF
Un -P1-Cx-D2	Disk drive 2 on PCIe SAS RAID and SSD adapter	020x0000	010000FF
Un -P1-Cx-D3	Disk drive 3 on PCIe SAS RAID and SSD adapter	020x0000	040000FF
Un -P1-Cx-D4	Disk drive 4 on PCIe SAS RAID and SSD adapter	020x0000	050000FF

## 8231-E1C, 8231-E1D, 8231-E2C, 8231-E2D, or 8268-E1D addresses

You can cross-reference the physical location code of a disk drive to the unit address.

Use the address to find the location for the system, and then go to “8231-E1C, 8231-E1D, 8231-E2C, 8231-E2D, or 8268-E1D” on page 35 to find additional location information.

Table 56. IOA and device address information

Position	Possible failing item	Direct select address (DSA) (BBBBcbb)	Unit address
Un-P1	Embedded SAS controller	02000000	Not applicable
Un-P1-C12	RAID card		
Un-P1-C13	Split disk drive card		
Un-P1	Integrated USB controller	02010000	Not applicable
Un-P1-C3	PCIe adapter	02030000	Not applicable
Un-P1-C4	PCIe adapter	02040000	Not applicable
Un-P1-C5	PCIe adapter	02050000	Not applicable
Un-P1-C6	PCIe adapter	02060000	Not applicable
Un-P1-C18	RAID card or split disk drive card	02020000	Not applicable
Un-P1-D1	Tape drive - SAS	02000000	
Un-P1-D2	Tape drive - USB	02010000	
Un-P3-D1	Disk drive 1	02000000 or 02020000	000400FF
Un-P3-D2	Disk drive 2	02000000 or 02020000	000500FF
Un-P3-D3	Disk drive 3	02000000 or 02020000	000600FF
Un-P3-D4	Disk drive 4	02000000 or 02020000	000700FF
Un -P3-D5	Disk drive 5	02000000 or 02020000	000800FF
Un-P2-D6	Disk drive 6	02000000 or 02020000	000900FF
Un-P3-D7	DVD	02000000	060000FF
Un-P1-Cx-D1	Disk drive 1 on PCIe SAS RAID and SSD adapter	020x0000	000000FF
Un-P1-Cx-D2	Disk drive 2 on PCIe SAS RAID and SSD adapter	020x0000	010000FF
Un-P1-Cx-D3	Disk drive 3 on PCIe SAS RAID and SSD adapter	020x0000	040000FF
Un-P1-Cx-D4	Disk drive 4 on PCIe SAS RAID and SSD adapter	020x0000	050000FF

## 8233-E8B and 8236-E8C addresses

You can cross-reference a disk drive physical location code to the address.

Use the address to find the location for the system, and then go to “8233-E8B and 8236-E8C” on page 44 to find additional location information.

Table 57. IOA, and device address information, running IBM i

Position	Possible failing item	DSA (BBBBcbb)	Unit address
Un -P1	Embedded SAS controller	02001000	7FFFFFFF
Un -P1-C1	PCI-E adapter	02040000	Not applicable

Table 57. IOA, and device address information, running IBM i (continued)

Position	Possible failing item	DSA (BBBBCbbb)	Unit address
Un -P1-C2	PCI-E adapter	02050000	Not applicable
Un -P1-C3	PCI-E adapter	02070000	Not applicable
Un -P1-C4	PCI-X adapter	02021000	Not applicable
Un -P1-C5	PCI-X adapter	02031000	Not applicable
Un -P1-C10	PCI auxiliary cache card	02060000	7FFFFFFF
Un -P1-C11	RAID card	02001000	7FFFFFFF
Un -P2-D1	Removable media	02001000	020000FF
Un -P2-D2	Removable media	02001000	030000FF
Un -P2-D3	Disk drive 1	02001000	040200FF
Un -P2-D4	Disk drive 2	02001000	040400FF
Un -P2-D5	Disk drive 3	02001000	040600FF
Un -P2-D6	Disk drive 4	02001000	040700FF
Un -P2-D7	Disk drive 5	02001000	040800FF
Un -P2-D8	Disk drive 6	02001000	040900FF
Un -P2-D9	Disk drive 7	02001000	040B00FF
Un -P2-D10	Disk drive 8	02001000	040D00FF

## 8408-E8D or 9109-RMD addresses

You can cross-reference the physical location code of a device to the unit address.

Use the address to find the location for the system, and then go to 8408-E8D or 9109-RMD to find additional location information.

Table 58. IOA and device address information for running IBM i

Position	Possible failing item	Direct select address (DSA) (BBBBCbbb)	Unit address
Un-P2-C9-R1	Embedded serial-attached SCSI (SAS) controller A	02080000	
Un-P2-C9-R2	Embedded SAS controller B	02090000	
Un-P2-R1	Integrated Serial Advanced Technology Attachment (SATA) controller	02000000	
Un-P2-C1	PCI adapter	02050000	
Un-P2-C2	PCI adapter	02040000	
Un-P2-C3	PCI adapter	02030000	
Un-P2-C4	PCI adapter	02020000	
Un-P2-C5	PCI adapter	020D0000	
Un-P2-C6	PCI adapter	020C0000	
Un-P2-C9-D1	Disk drive 1	02080000 or 02090000	000200FF
Un-P2-C9-D2	Disk drive 2	02080000 or 02090000	000100FF

Table 58. IOA and device address information for running IBM i (continued)

Position	Possible failing item	Direct select address (DSA) (BBBBCbbb)	Unit address
Un-P2-C9-D3	Disk drive 3	02080000 or 02090000	000000FF
Un-P2-C9-D4	Disk drive 4	02080000 or 02090000	000500FF
Un-P2-C9-D5	Disk drive 5	02080000 or 02090000	000400FF
Un-P2-C9-D6	Disk drive 6	02080000 or 02090000	000300FF
Un-P2-C9-D7	Integrated drive electronics (IDE) drive 1	02000000	000000FF

## 9117-MMB and 9179-MHB addresses

You can cross-reference a disk drive physical location code to the address.

Use the address to find the location for the system, and then go to “9117-MMB and 9179-MHB” on page 64 to find additional location information.

Table 59. IOA, and device address information for running IBM i

Position	Possible failing item	DSA (BBBBCbbb)	Unit address
Un -P2-C9-T1	Embedded SAS controller	0200-20-00 (primary) 0220-20-00 (secondary 1) 0240-20-00 (secondary 2) 0260-20-00 (secondary 3)	Not applicable
Un-P2-C1	PCI adapter	0204-00-00 (primary) 0224-00-00 (secondary 1) 0244-00-00 (secondary 2) 0264-00-00 (secondary 3)	Not applicable
Un -P2-C2	PCI adapter	0205-00-00 (primary) 0225-00-00 (secondary 1) 0245-00-00 (secondary 2) 0265-00-00 (secondary 3)	Not applicable
Un -P2-C3	PCI adapter	0206-00-00 (primary) 0226-00-00 (secondary 1) 0246-00-00 (secondary 2) 0266-00-00 (secondary 3)	Not applicable
Un -P2-C4	PCI adapter	0201-10-00 (primary) 0221-10-00 (secondary 1) 0241-10-00 (secondary 2) 0261-10-00 (secondary 3)	Not applicable

Table 59. IOA, and device address information for running IBM i (continued)

Position	Possible failing item	DSA (BBBBcbb)	Unit address
Un -P2-C5	PCI adapter	0202-10-00 (primary) 0222-10-00 (secondary 1) 0242-10-00 (secondary 2) 0262-10-00 (secondary 3)	Not applicable
Un -P2-C6	PCI adapter	0207-00-00 (primary) 0227-00-00 (secondary 1) 0247-00-00 (secondary 2) 0267-00-00 (secondary 3)	Not applicable
Un-P2-C9-D1	Disk drive 1	0200-20-00 (primary) 0220-20-00 (secondary 1) 0240-20-00 (secondary 2) 0260-20-00 (secondary 3)	000200FF
Un-P2-C9-D2	Disk drive 2	0200-20-00 (primary) 0220-20-00 (secondary 1) 0240-20-00 (secondary 2) 0260-20-00 (secondary 3)	000100FF
Un-P2-C9-D3	Disk drive 3	0200-20-00 (primary) 0220-20-00 (secondary 1) 0240-20-00 (secondary 2) 0260-20-00 (secondary 3)	000000FF
Un-P2-C9-D4	Disk drive 4	0200-20-00 (primary) 0220-20-00 (secondary 1) 0240-20-00 (secondary 2) 0260-20-00 (secondary 3)	000500FF
Un-P2-C9-D5	Disk drive 5	0200-20-00 (primary) 0220-20-00 (secondary 1) 0240-20-00 (secondary 2) 0260-20-00 (secondary 3)	000400FF
Un-P2-C9-D6	Disk drive 6	0200-20-00 (primary) 0220-20-00 (secondary 1) 0240-20-00 (secondary 2) 0260-20-00 (secondary 3)	000300FF

Table 59. IOA, and device address information for running IBM i (continued)

Position	Possible failing item	DSA (BBBBcbb)	Unit address
Un-P2-C9-D7	IDE drive 1	0200-20-00 (primary) 0220-20-00 (secondary 1) 0240-20-00 (secondary 2) 0260-20-00 (secondary 3)	000000FF

## 8412-EAD, 9117-MMC, 9117-MMD, 9179-MHC, or 9179-MHD addresses

You can cross-reference a disk drive physical location code to the address.

Use the address to find the location for the system, and then go to “8412-EAD, 9117-MMC, 9117-MMD, 9179-MHC, or 9179-MHD” on page 73 to find additional location information.

Table 60. IOA and device address information for running IBM i

Position	Possible failing item	DSA (BBBBcbb)	Unit address
Un-P2-C9-T1	Embedded SAS controller	0200-20-00 (primary) 0220-20-00 (secondary 1) 0240-20-00 (secondary 2) 0260-20-00 (secondary 3)	Not applicable
Un-P2-C1	PCI adapter	0204-00-00 (primary) 0224-00-00 (secondary 1) 0244-00-00 (secondary 2) 0264-00-00 (secondary 3)	Not applicable
Un-P2-C2	PCI adapter	0205-00-00 (primary) 0225-00-00 (secondary 1) 0245-00-00 (secondary 2) 0265-00-00 (secondary 3)	Not applicable
Un-P2-C3	PCI adapter	0206-00-00 (primary) 0226-00-00 (secondary 1) 0246-00-00 (secondary 2) 0266-00-00 (secondary 3)	Not applicable
Un-P2-C4	PCI adapter	0201-10-00 (primary) 0221-10-00 (secondary 1) 0241-10-00 (secondary 2) 0261-10-00 (secondary 3)	Not applicable

Table 60. IOA and device address information for running IBM i (continued)

Position	Possible failing item	DSA (BBBBcbb)	Unit address
Un-P2-C5	PCI adapter	0202-10-00 (primary) 0222-10-00 (secondary 1) 0242-10-00 (secondary 2) 0262-10-00 (secondary 3)	Not applicable
Un-P2-C6	PCI adapter	0207-00-00 (primary) 0227-00-00 (secondary 1) 0247-00-00 (secondary 2) 0267-00-00 (secondary 3)	Not applicable
Un-P2-C9-D1	Disk drive 1	0200-20-00 (primary) 0220-20-00 (secondary 1) 0240-20-00 (secondary 2) 0260-20-00 (secondary 3)	000200FF
Un-P2-C9-D2	Disk drive 2	0200-20-00 (primary) 0220-20-00 (secondary 1) 0240-20-00 (secondary 2) 0260-20-00 (secondary 3)	000100FF
Un-P2-C9-D3	Disk drive 3	0200-20-00 (primary) 0220-20-00 (secondary 1) 0240-20-00 (secondary 2) 0260-20-00 (secondary 3)	000000FF
Un-P2-C9-D4	Disk drive 4	0200-20-00 (primary) 0220-20-00 (secondary 1) 0240-20-00 (secondary 2) 0260-20-00 (secondary 3)	000500FF
Un-P2-C9-D5	Disk drive 5	0200-20-00 (primary) 0220-20-00 (secondary 1) 0240-20-00 (secondary 2) 0260-20-00 (secondary 3)	000400FF
Un-P2-C9-D6	Disk drive 6	0200-20-00 (primary) 0220-20-00 (secondary 1) 0240-20-00 (secondary 2) 0260-20-00 (secondary 3)	000300FF

Table 60. IOA and device address information for running IBM i (continued)

Position	Possible failing item	DSA (BBBBcbb)	Unit address
Un-P2-C9-D7	Serial Advanced Technology Attachment (SATA) drive 1	0200-20-00 (primary) 0220-20-00 (secondary 1) 0240-20-00 (secondary 2) 0260-20-00 (secondary 3)	000000FF

## 5786, 5787, 7031-D24, and 7031-T24 addresses

Use the table to cross reference a disk drive physical location code to that of the SCSI cable address.

Use the address to find the location for the system, and then go to “5786, 5787, 7031-D24, and 7031-T24” on page 130 to find additional location information.

**Note:** The *x* in the following table represents the I/O adapter number of the attached I/O card and the *y* represents the SCSI bus number.

Table 61. Device cable address information

Physical location code	Unit address (SCSI cable from I/O adapter to SCSI interface card)	Unit address (SCSI cable from SCSI interface card to SCSI interface card)
Un-P1-D1	xy0200FF	xy0A00FF
Un-P1-D2	xy0300FF	xy0B00FF
Un-P1-D3	xy0400FF	xy0C00FF
Un-P1-D4	xy0500FF	xy0D00FF
Un-P1-D5	xy0600FF	xy0E00FF
Un-P1-D6	xy0700FF	xy0F00FF
Un-P1-D7	xy0200FF	xy0A00FF
Un-P1-D8	xy0300FF	xy0B00FF
Un-P1-D9	xy0400FF	xy0C00FF
Un-P1-D10	xy0500FF	xy0D00FF
Un-P1-D11	xy0600FF	xy0E00FF
Un-P1-D12	xy0700FF	xy0F00FF
Un-P2-D1	xy0200FF	xy0A00FF
Un-P2-D2	xy0300FF	xy0B00FF
Un-P2-D3	xy0400FF	xy0C00FF
Un-P2-D4	xy0500FF	xy0D00FF
Un-P2-D5	xy0600FF	xy0E00FF
Un-P2-D6	xy0700FF	xy0F00FF
Un-P2-D7	xy0200FF	xy0A00FF
Un-P2-D8	xy0300FF	xy0B00FF
Un-P2-D9	xy0400FF	xy0C00FF
Un-P2-D10	xy0500FF	xy0D00FF
Un-P2-D11	xy0600FF	xy0E00FF
Un-P2-D12	xy0700FF	xy0F00FF



## 5796 and 7314-G30 addresses

You can cross-reference a disk drive physical location code to the address.

Use the address to find the location for the system, and then go to “5796 and 7314-G30” on page 137 to find additional location information.

Table 62. IOP, IOA, and device address information

Position	Possible failing item	DSA (BBBBcbb)	Unit address
Un-P1-C1	PCI adapter	aaaa-00-00	N/A
Un-P1-C2	PCI adapter	bbbb-00-00	N/A
Un-P1-C3	PCI adapter	cccc-00-00	N/A
Un-P1-C4	PCI adapter	dddd-00-00	N/A
Un-P1-C5	PCI adapter	eeee-00-00	N/A
Un-P1-C6	PCI adapter	ffff-00-00	N/A

## 5802 and 5877 addresses

You can cross-reference a disk drive physical location code to the address.

Use the address to find the location for the system, then go to “5802 and 5877” on page 142 to find additional location information.

Table 63. IOA, and device address information, running IBM i

Position	Possible failing item	DSA (BBBBcbb)	Unit address
Ux-P1-C1	PCIe adapter	aaaa-00-00	Not applicable
Ux-P1-C2	PCIe adapter	bbbb-00-00	Not applicable
Ux-P1-C3	PCIe adapter	cccc-00-00	Not applicable
Ux-P1-C4	PCIe adapter	dddd-00-00	Not applicable
Ux-P1-C5	PCIe adapter	eeee-00-00	Not applicable
Ux-P1-C6	PCIe adapter	ffff-00-00	Not applicable
Ux-P1-C7	PCIe adapter	gggg-00-00	Not applicable
Ux-P1-C8	PCIe adapter	hhhh-00-00	Not applicable
Ux-P1-C9	PCIe adapter	iiii-00-00	Not applicable
Ux-P1-C10	PCIe adapter	jjjj-00-00	Not applicable
Ux-P3-D1	DASD drive 1 (5802 only)	The disk unit has the same DSA as the storage IOA controlling it.	000600FF or 040600FF
Ux-P3-D2	DASD drive 2 (5802 only)	The disk unit has the same DSA as the storage IOA controlling it.	000700FF or 040700FF
Ux-P3-D3	DASD drive 3 (5802 only)	The disk unit has the same DSA as the storage IOA controlling it.	000800FF or 040800FF
Ux-P3-D4	DASD drive 4 (5802 only)	The disk unit has the same DSA as the storage IOA controlling it.	000900FF or 040900FF
Ux-P3-D5	DASD drive 5 (5802 only)	The disk unit has the same DSA as the storage IOA controlling it.	000A00FF or 040A00FF
Ux-P3-D6	DASD drive 6 (5802 only)	The disk unit has the same DSA as the storage IOA controlling it.	000B00FF or 040B00FF
Ux-P3-D7	DASD drive 7 (5802 only)	The disk unit has the same DSA as the storage IOA controlling it.	000C00FF or 040C00FF

Table 63. IOA, and device address information, running IBM i (continued)

Position	Possible failing item	DSA (BBBBcbb)	Unit address
Ux-P3-D8	DASD drive 8 (5802 only)	The disk unit has the same DSA as the storage IOA controlling it.	000D00FF or 040D00FF
Ux-P3-D9	DASD drive 9 (5802 only)	The disk unit has the same DSA as the storage IOA controlling it.	000E00FF or 040E00FF
Ux-P3-D10	DASD drive 10 (5802 only)	The disk unit has the same DSA as the storage IOA controlling it.	000600FF or 040600FF
Ux-P3-D11	DASD drive 11 (5802 only)	The disk unit has the same DSA as the storage IOA controlling it.	000700FF or 040700FF
Ux-P3-D12	DASD drive 12 (5802 only)	The disk unit has the same DSA as the storage IOA controlling it.	000800FF or 040800FF
Ux-P3-D13	DASD drive 13 (5802 only)	The disk unit has the same DSA as the storage IOA controlling it.	000900FF or 040900FF
Ux-P3-D14	DASD drive 14 (5802 only)	The disk unit has the same DSA as the storage IOA controlling it.	000A00FF or 040A00FF
Ux-P3-D15	DASD drive 15 (5802 only)	The disk unit has the same DSA as the storage IOA controlling it.	000B00FF or 040B00FF
Ux-P3-D16	DASD drive 16 (5802 only)	The disk unit has the same DSA as the storage IOA controlling it.	000C00FF or 040C00FF
Ux-P3-D17	DASD drive 17 (5802 only)	The disk unit has the same DSA as the storage IOA controlling it.	000D00FF or 040D00FF
Ux-P3-D18	DASD drive 18 (5802 only)	The disk unit has the same DSA as the storage IOA controlling it.	000E00FF or 040E00FF

## 5803 and 5873 addresses

You can cross-reference a disk drive physical location code to the address.

Use the address to find the location for the system, and then go to “5803 and 5873” on page 149 to find additional location information.

Table 64. IOA, and device address information, running IBM i

Position	Possible failing item	DSA (BBBBcbb)	Unit address
Un-Px-C1	PCIe adapter	aaaa-00-00	Not applicable
Un-Px-C2	PCIe adapter	bbbb-00-00	Not applicable
Un-Px-C3	PCIe adapter	cccc-00-00	Not applicable
Un-Px-C4	PCIe adapter	dddd-00-00	Not applicable
Un-Px-C5	PCIe adapter	eeee-00-00	Not applicable
Un-Px-C6	PCIe adapter	ffff-00-00	Not applicable
Un-Px-C7	PCIe adapter	gggg-00-00	Not applicable
Un-Px-C8	PCIe adapter	hhhh-00-00	Not applicable
Un-Px-C9	PCIe adapter	iiii-00-00	Not applicable
Un-Px-C10	PCIe adapter	jjjj-00-00	Not applicable
Un-P3-D1	DASD drive 1 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000600FF or 040600FF
Un-P3-D2	DASD drive 2 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000700FF or 040700FF

Table 64. IOA, and device address information, running IBM i (continued)

Position	Possible failing item	DSA (BBBBcbb)	Unit address
Un-P3-D3	DASD drive 3 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000800FF or 040800FF
Un-P3-D4	DASD drive 4 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000900FF or 040900FF
Un-P3-D5	DASD drive 5 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000A00FF or 040A00FF
Un-P3-D6	DASD drive 6 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000B00FF or 040B00FF
Un-P3-D7	DASD drive 7 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000C00FF or 040C00FF
Un-P3-D8	DASD drive 8 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000D00FF or 040D00FF
Un-P3-D9	DASD drive 9 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000E00FF or 040E00FF
Un-P3-D10	DASD drive 10 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000F00FF or 040F00FF
Un-P3-D11	DASD drive 11 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	001000FF or 041000FF
Un-P3-D12	DASD drive 12 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	001100FF or 041100FF
Un-P3-D13	DASD drive 13 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	001200FF or 041200FF
Un-P3-D14	DASD drive 14 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000600FF or 040600FF
Un-P3-D15	DASD drive 15 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000700FF or 040700FF
Un-P3-D16	DASD drive 16 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000800FF or 040800FF
Un-P3-D17	DASD drive 17 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000900FF or 040900FF
Un-P3-D18	DASD drive 18 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000A00FF or 040A00FF
Un-P3-D19	DASD drive 19 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000B00FF or 040B00FF
Un-P3-D20	DASD drive 20 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000C00FF or 040C00FF
Un-P3-D21	DASD drive 21(5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000D00FF or 040D00FF
Un-P3-D22	DASD drive 22 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000E00FF or 040E00FF
Un-P3-D23	DASD drive 23 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	000F00FF or 040F00FF
Un-P3-D24	DASD drive 24 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	001000FF or 041000FF
Un-P3-D25	DASD drive 25 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	001100FF or 041100FF

Table 64. IOA, and device address information, running IBM i (continued)

Position	Possible failing item	DSA (BBBBcbb)	Unit address
Un-P3-D26	DASD drive 26 (5803 only)	The disk unit has the same DSA as the storage IOA controlling it.	001200FF or 041200FF

## 5886 addresses

You can cross-reference a disk drive physical location code to the address.

Use the address to find the location for the system, and then go to “5886” on page 155 to find additional location information.

**Note:** The *x* in the following table depends upon which I/O adapter port is used and can have values of 0, 4, or 8.

Table 65. Device address information

Physical location code	Unit address
Un-P1-D1	0x0000FF
Un-P1-D2	0x0100FF
Un-P1-D3	0x0200FF
Un-P1-D4	0x0300FF
Un-P1-D5	0x0400FF
Un-P1-D6	0x0500FF
Un-P1-D7	0x0600FF
Un-P1-D8	0x0700FF
Un-P1-D9	0x0800FF
Un-P1-D10	0x0900FF
Un-P1-D11	0x0A00FF
Un-P1-D12	0x0B00FF

## 5887 addresses

You can cross-reference a disk drive physical location code to the address.

Use the address to find the location for the system, and then go to “5887” on page 159 to find additional location information.

**Note:** The *x* in the following table depends on which I/O adapter port is used and can have values of 0, 4, or 8.

Table 66. Device address information

Physical location code	Unit address
Un-P1-D1	0x0000FF or 00xx00FF
Un-P1-D2	0x0100FF or 00xx01FF
Un-P1-D3	0x0200FF or 00xx02FF
Un-P1-D4	0x0300FF or 00xx03FF
Un-P1-D5	0x0400FF or 00xx04FF
Un-P1-D6	0x0500FF or 00xx05FF

Table 66. Device address information (continued)

Physical location code	Unit address
Un-P1-D7	0x0600FF or 00xx06FF
Un-P1-D8	0x0700FF or 00xx07FF
Un-P1-D9	0x0800FF or 00xx08FF
Un-P1-D10	0x0900FF or 00xx09FF
Un-P1-D11	0x0A00FF or 00xx0AFF
Un-P1-D12	0x0B00FF or 00xx0BFF
Un-P1-D13	0x0C00FF or 00xx0CFF
Un-P1-D14	0x0D00FF or 00xx0DFF
Un-P1-D15	0x0E00FF or 00xx0EFF
Un-P1-D16	0x0F00FF or 00xx0FFF
Un-P1-D17	0x1000FF or 00xx10FF
Un-P1-D18	0x1100FF or 00xx11FF
Un-P1-D19	0x1200FF or 00xx12FF
Un-P1-D20	0x1300FF or 00xx13FF
Un-P1-D21	0x1400FF or 00xx14FF
Un-P1-D22	0x1500FF or 00xx15FF
Un-P1-D23	0x1600FF or 00xx16FF
Un-P1-D24	0x1700FF or 00xx17FF

## 5888 or EDR1 PCIe storage enclosure addresses

You can cross-reference the physical location code of a disk drive to the unit address.

Use the address to find the location for the system, and then go to “5888 or EDR1 PCIe storage enclosure” on page 164 to find additional location information.

**Note:** The *x* in the following table depends on which I/O adapter port is used and can have values of 0, 4, or 8.

Table 67. Device address information

Physical location code	Unit address
Un-P1-D1	0x0000FF
Un-P1-D2	0x0100FF
Un-P1-D3	0x0200FF
Un-P1-D4	0x0300FF
Un-P1-D5	0x0400FF
Un-P1-D6	0x0500FF
Un-P1-D7	0x0600FF
Un-P1-D8	0x0700FF
Un-P1-D9	0x0800FF
Un-P1-D10	0x0900FF
Un-P1-D11	0x0A00FF
Un-P1-D12	0x0B00FF

Table 67. Device address information (continued)

Physical location code	Unit address
Un-P1-D13	0x0C00FF
Un-P1-D14	0x0D00FF
Un-P1-D15	0x0E00FF
Un-P1-D16	0x0F00FF
Un-P1-D17	0x1000FF
Un-P1-D18	0x1100FF
Un-P1-D19	0x1200FF
Un-P1-D20	0x1300FF
Un-P1-D21	0x1400FF
Un-P1-D22	0x1500FF
Un-P1-D23	0x1600FF
Un-P1-D24	0x1700FF
Un-P1-D25	0x1800FF
Un-P1-D26	0x1900FF
Un-P1-D27	0x1A00FF
Un-P1-D28	0x1B00FF
Un-P1-D29	0x1C00FF
Un-P1-D30	0x1D00FF

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## System parts

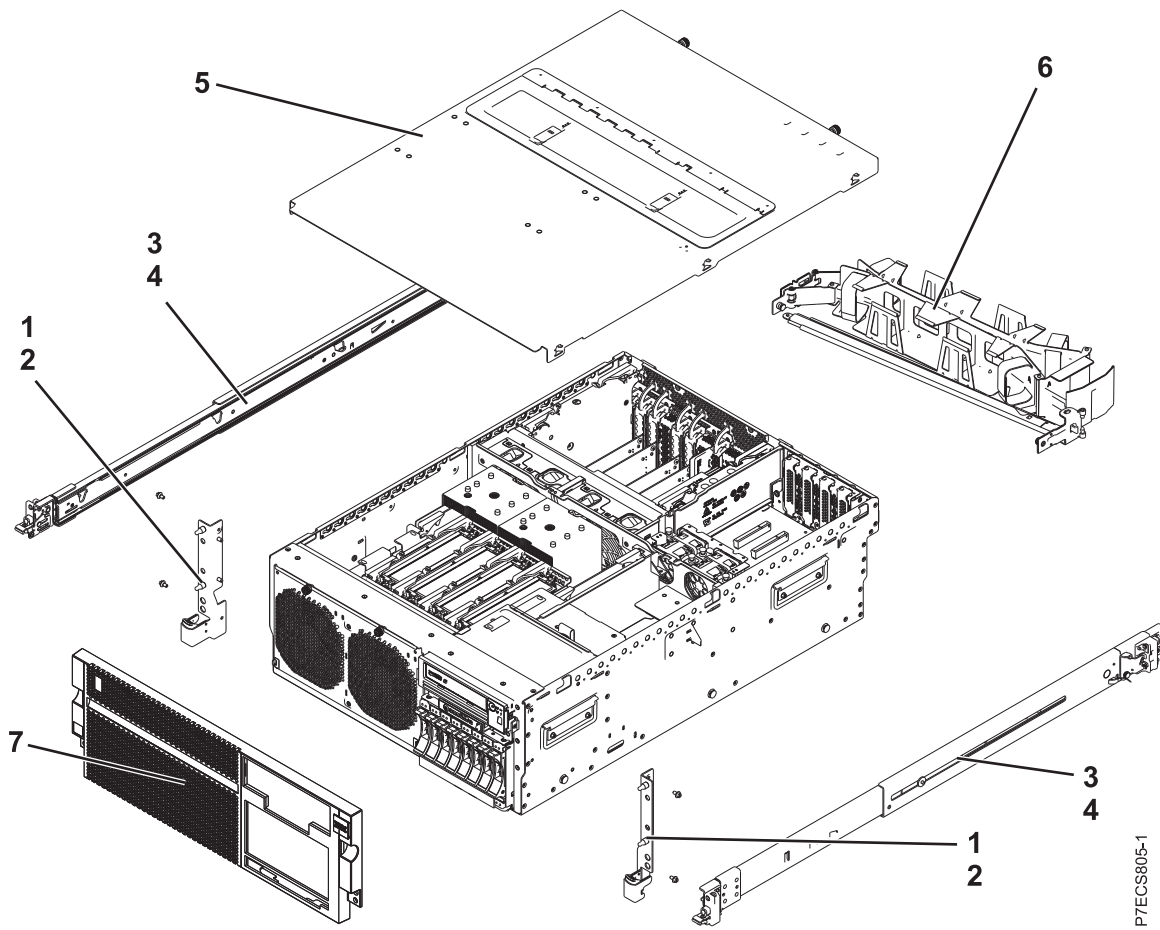
Use this information to locate and identify common hardware parts.

This section contains only the part numbers that are likely to be needed during hardware servicing, and is not a complete part number listing. Indexed assembly diagrams help you map the part to its position on the unit. Use “Part locations and location codes” on page 3 to help you identify location codes.

### 8202-E4B or 8205-E6B system parts

Indexed drawings show system part numbers for each part.

## Rack final assembly



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Table 68. Cover assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1		46K5096	1	EIA bracket (left)
1		46K5097	1	EIA bracket (right)
2		09P3744	2	Attaching screw for EIA bracket
3		59Y4919	2	Slide rail assembly
4		49Y5312	2	Attaching screw for slide rail assembly
5		74Y7445	1	Top access cover assembly
6		59Y4822	1	Cable management arm assembly
7		46K4640	1	Front bezel (8202-E4B)
		74Y5140	1	Front bezel (8205-E6B)
		74Y5142	1	Front bezel (OEM)

## Stand-alone final assembly

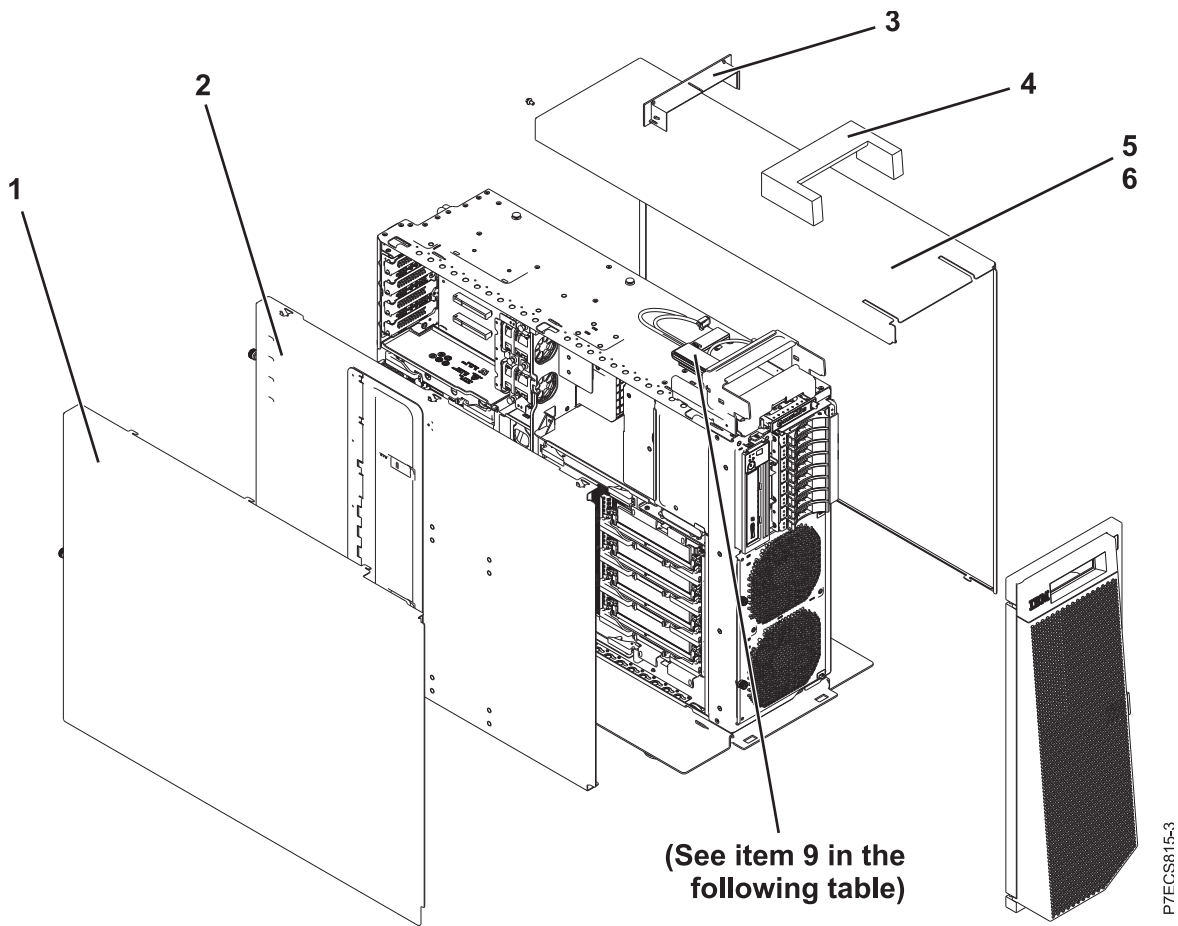
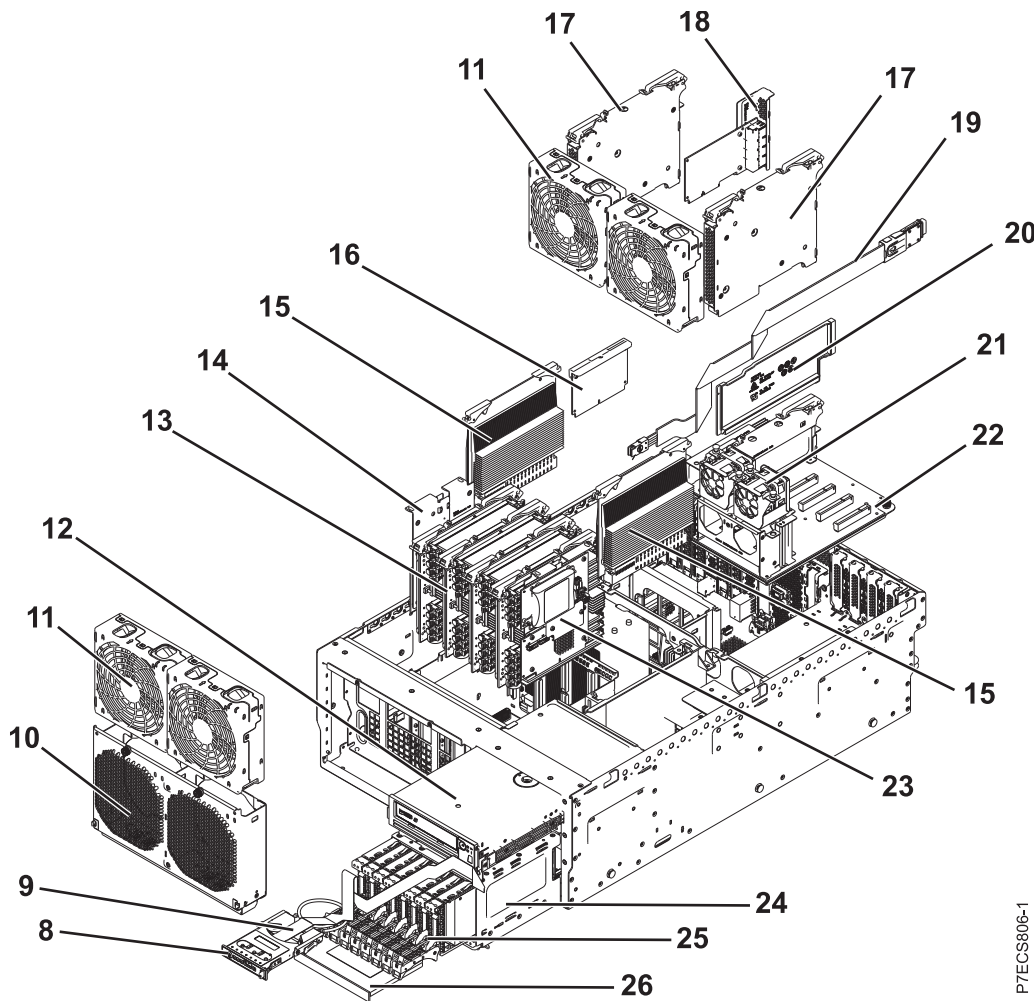


Table 69. Stand-alone assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1		46K4642	1	Side cover (left)
		74Y5228	1	Left side cover (OEM)
2			1	Service access cover
3		74Y4942	1	Top handle cap
4		74Y4941	1	Top handle assembly
5		46K4641	1	Side cover (right)
6			1	Attaching screw for side cover (right)



## System assembly detail



P7ECS806-1

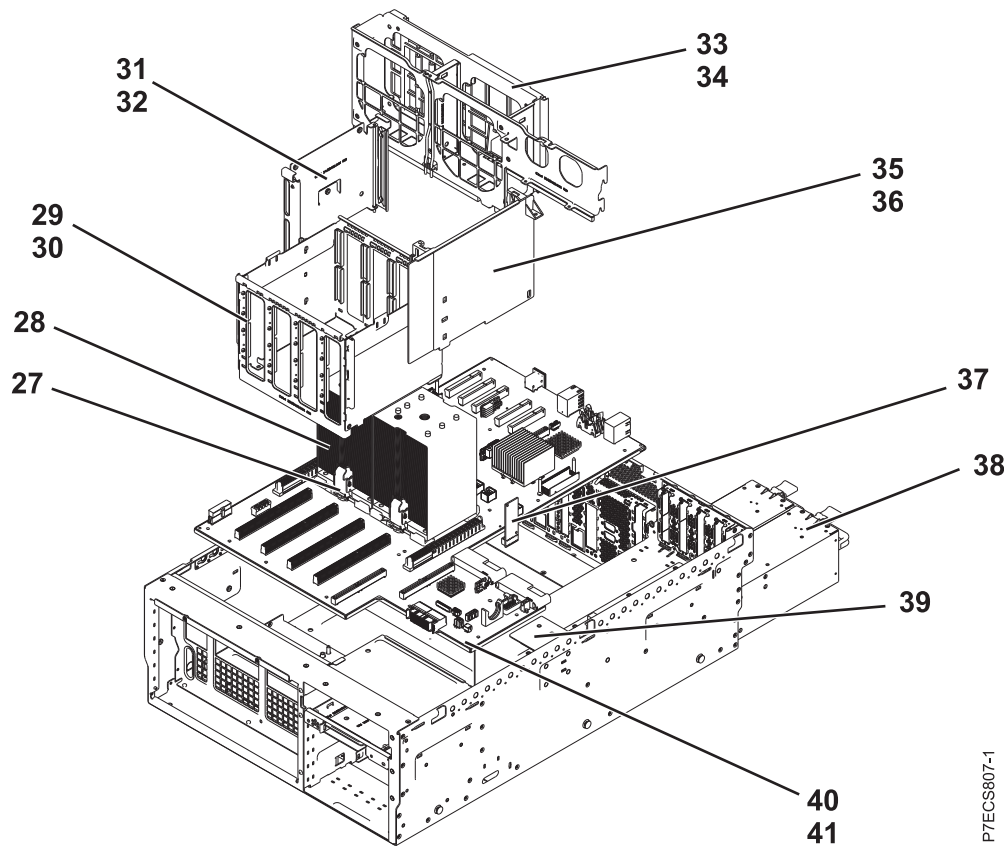
Table 70. System assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
8	2BCD	74Y5481	1	Control panel assembly
9		46K4646	1	Control panel cable (rack)
9		46K4645	1	Control panel cable (stand-alone)
10		74Y6301	1	Fan cage assembly
11		74Y5220	1	120 mm fan assembly
12			1	Tape drive. See Managing tape drives.
13		46K7514	1-4	Memory riser
14	2BCF	74Y6020	1	Cache battery card
15	51CB	74Y5451	2	Processor VRM
16	2BE1	46K7723	1	RAID enablement card
17	2BDA	46K7529	2	GX book assembly
18	266D	46K8121	1	Host Ethernet Adapter Quad 1 Gb copper card
18	266E	74Y2000	1	Host Ethernet Adapter Dual 10 Gb fiber card

Table 70. System assembly part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
18	266F	74Y2003	1	Host Ethernet Adapter Dual 10 Gb copper card
18	5288	74Y2094	1	PCIe2 2-port 10 GbE copper card
18	5287	74Y2095	1	PCIe2 2-port 10 GbE fiber card
19		46K5029	1	External SAS cable assembly
20		46K5415	1	Air divider
20		46K5417	1	Air divider on PCIe riser
21	6B1C	74Y8565	1	40 mm Fan assembly on PCIe riser
22	2BDD	74Y3019	1	PCIe expansion assembly
22	2BE6	74Y2288	1	PCIe expansion assembly (Gen2)
23	2BD9	44V8353	1	RAID and cache storage controller
23	2BE0	44V8368	1	RAID storage controller (split disk drive function)
24		46K7496	1	Disk unit cage assembly
24	2BD6	46K7552	1	Disk drive backplane (supports eight disk drives, one SATA DVD drive, and one SAS or USB tape drive)
24	2BD5	46K7496	1	Disk drive backplane (supports six disk drives, one SATA DVD drive, and one SAS or USB tape drive)
25			1 - 6 or 1 - 8	See Disk drive and solid-state drive system parts.
26			1	DVD drive. See Managing DVD drives.

## System assembly detail, continued



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Table 71. System assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
27	537B	74Y6151	1	8 core 3.0 GHz processor module (8202-E4B)
27	537C	74Y6150	1	6 core 3.0 GHz processor module (8202-E4B)
27	537D	74Y6149	1	4 core 3.0 GHz processor module (8202-E4B)
27	539E	74Y6155	1-2	4 core 3.72 GHz processor module (8205-E6B)
27	535E	74Y6152	1-2	4 core 3.3 GHz processor module (8205-E6B)
27	539D	74Y6153	1-2	6 core 3.72 GHz processor module (8205-E6B)
27	539F	74Y6154	1-2	8 core 3.55 GHz processor module (8205-E6B)
28		44V8326	1	Heat sink
29			1	Memory card cage assembly
30			1	Attaching screw for memory card cage assembly
31			1	Processor VRM bracket
32			1	Attaching screw for processor VRM bracket
33			1	Fan lattice
34			1	Attaching screw for fan bracket
35			1	Processor VRM bracket
36			1	Attaching screw for processor VRM bracket
37	52C3	74Y1706	1	System VPD card

Table 71. System assembly part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
38		74Y5985	2	Power supply assembly
39		74Y6714	1	Interlock switch with cable
40	2BFB	46K7505	1	System backplane (8205-E6B)
40	2BFC	46K7877	1	System backplane (8202-E4B)
41			1	Attaching screw for system backplane

## Memory card assembly

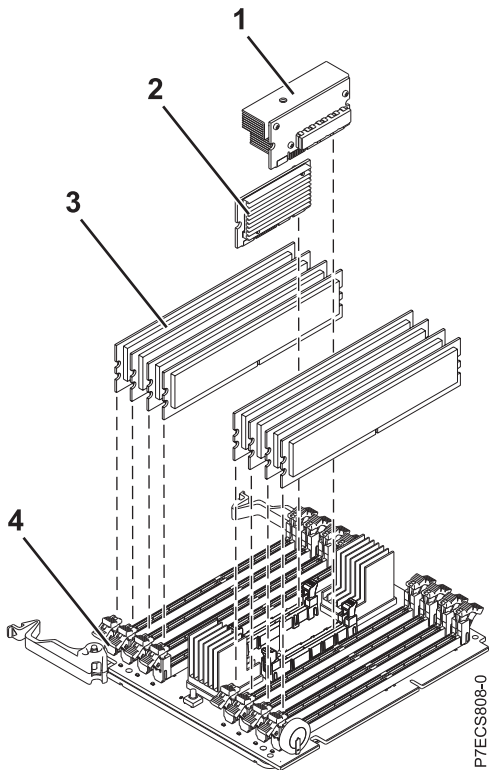


Table 72. Memory card assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1	51CC	74Y5453	1	80A memory VRM (C6)
2	51CD	74Y5455	1	20A memory VRM (C5)
3		77P8784	1-32	4 GB, 1066 MHz DDR3 DIMM
3		77P8919	1-32	8 GB, 1066 MHz DDR3 DIMM
4		46K7514	1-4	Memory riser

Table 73. Cables

Feature code	Description	Part number
1828	1.5-meter InfiniBand cable	45D2235
1841	3-meter InfiniBand cable	45D2236

Table 73. Cables (continued)

Feature code	Description	Part number
3124	3.7-meter cable	88G4771
3125	8-meter cable	88G4772
3652	1-meter SAS EE cable	44V4147
3653	3-meter SAS EE cable	44V4148
3654	6-meter SAS EE cable	44V4149
3661	3-meter SAS X cable	44V4154
3662	6-meter SAS X cable	44V4155
3663	15-meter SAS X cable	44V4156
3679	1-meter SAS AI cable	44V4041
3684	3-meter SAS AE cable	44V4163
3685	6-meter SAS AE cable	44V4164
3686	1.5-meter SAS YI cable	44V4161
3687	3-meter SAS Y0 cable	44V4162
3691	1.5-meter SAS Y0 cable	44V4157
3692	3-meter SAS Y0 cable	44V4158
3693	6-meter SAS Y0 cable	44V4159
3694	15-meter SAS Y0 cable	44V4160
3656	10.5 inch SAS cable	46K5450
6001	2-meter SPCN cable	22R5217
6006	3-meter SPCN cable	22R5239
6007	15-meter SPCN cable	22R5221
6008	6-meter SPCN cable	22R5219
6029	30-meter SPCN cable	22R5222
3656	SAS cable for tape drive	46K5450
	USB internal cable for tape drive	46K7435
	Internal power cable for tape drive	46K7434

Table 74. Miscellaneous parts

CCIN	Description	Part number
	External cables and cords	See Site and hardware planning.
	Removable media	See Managing devices.
	PCI adapters	See Managing PCI adapters.
58B2	1.8-inch 177 GB small form factor solid-state drive on PCIe SAS RAID and SSD adapter	43W7749
	Cache battery pack for cache battery card and RAID and cache storage controller	74Y6773
	Cable configuration	See Enclosures and expansion units.
	Time-of-day battery	44V4359
	Front cover for the tower	74Y4861

## 8202-E4C, 8202-E4D, 8205-E6C, or 8205-E6D system parts

Indexed drawings show system part numbers for each part.

### Rack final assembly

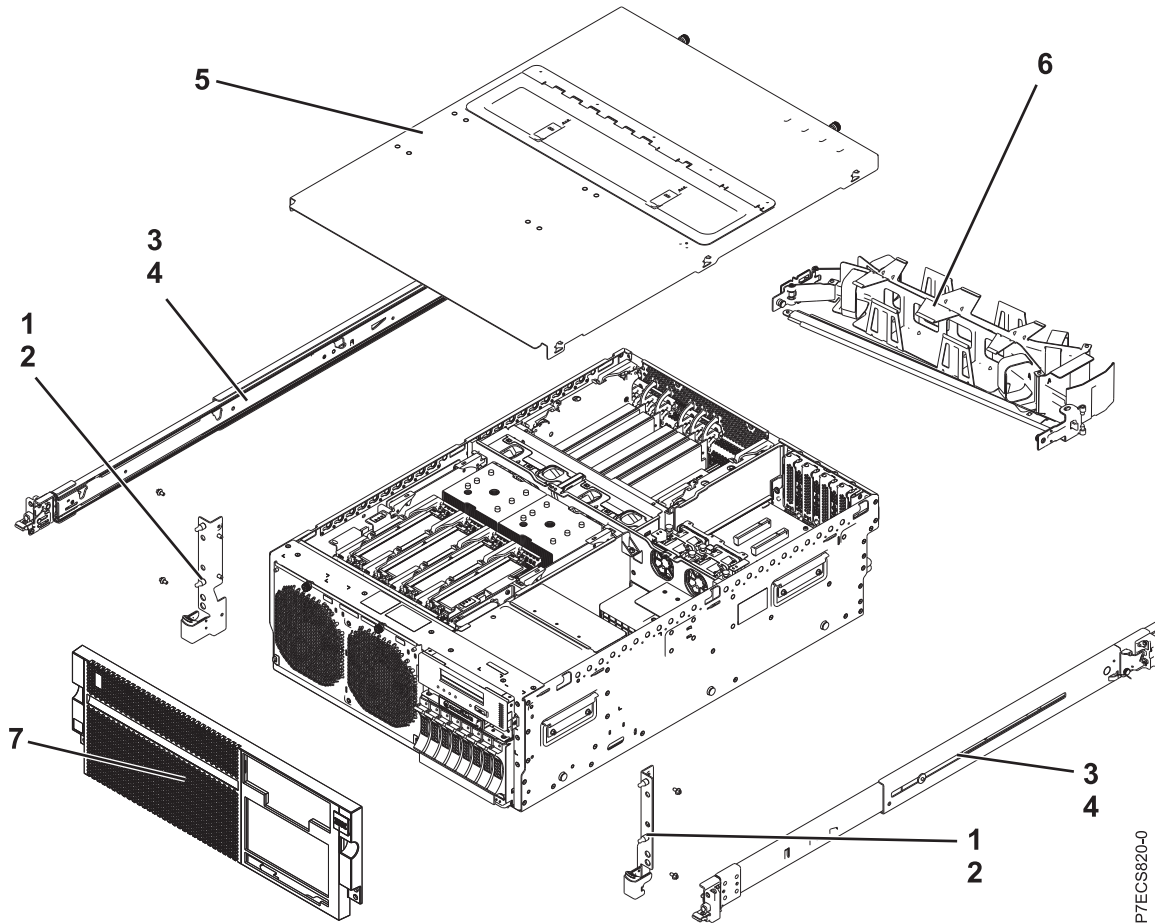


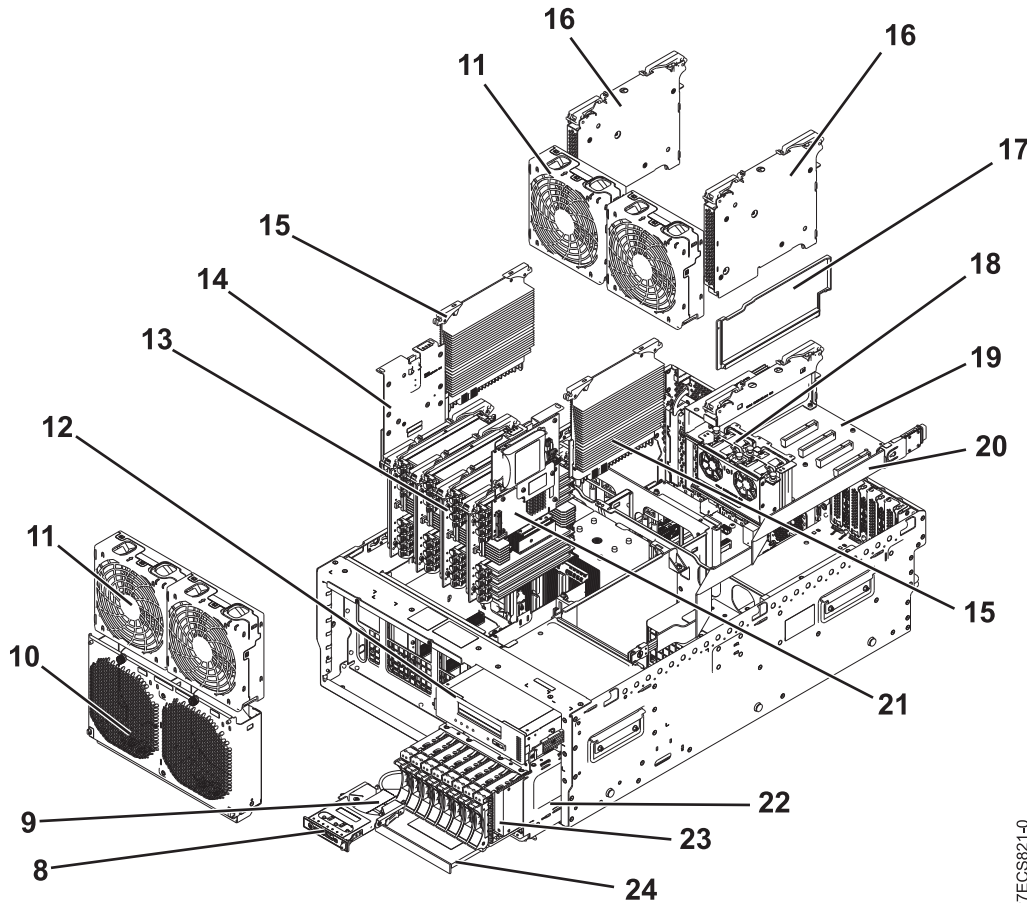
Table 75. Cover assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1		46K5096	1	EIA bracket (left)
1		46K5097	1	EIA bracket (right)
2		39J0199	2	Attaching screw for EIA bracket
3		00E5669	2	Slide rail assembly
4		49Y5312	2	Attaching screw for slide rail assembly
5		74Y9017	1	Top access cover assembly (IBM)
5		74Y9018	1	Top access cover assembly (OEM)
6		68Y7211	1	Cable management arm assembly
7		46K4640	1	Front bezel (8202-E4C or 8202-E4D) (rack)
7		46K4639	1	Front bezel (8202-E4C or 8202-E4D) (stand-alone)
7		74Y5138	1	Front bezel (8205-E6C or 8205-E6D) (rack)
7		74Y5142	1	Front bezel (OEM) (rack)

Table 75. Cover assembly part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
7		74Y4858	1	Front bezel (OEM) (stand-alone)

## System assembly detail



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Table 76. System assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
8	2BCD	74Y3964	1	Control panel assembly
9		46K4646	1	Control panel cable (rack)
9		46K4645	1	Control panel cable (stand-alone)
10		74Y6301	1	Fan cage assembly
11	6B1D	74Y5220	1	120 mm fan assembly
12			1	Tape drive. See Managing tape drives.
13	2C1C	00E0638	1 - 4	Memory riser
14	2BCF	74Y3343	1	Cache battery card <b>Note:</b> The cache battery card includes the cache battery pack.
14		74Y9340	1	Cache battery pack for cache battery card

Table 76. System assembly part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
15	2B50	00E7160	2	Processor VRM (8205-E6C and 8205-E6D)
15	51CE	00E7162	2	Processor VRM (low wattage) (8202-E4C and 8202-E4D)
16	2C1E	00E2822	2	GX adapter
16	2BDA	00E0646	2	GX adapter
17		46K5415	1	Air divider
17		46K5417	1	Air divider on PCIe riser
18	6B1C	74Y8565	1	40 mm fan assembly on PCIe riser
19	2BE6	74Y2288	1	PCIe expansion assembly (generation 2)
20		46K5029	1	External SAS cable assembly
21	2B4C	00E0665	1	RAID and cache storage controller <b>Note:</b> The RAID and cache storage controller includes the cache battery pack.
21		74Y9340	1	Cache battery pack for RAID and cache storage controller
21	2B4F	00E0660	1	RAID storage controller (split disk drive function)
22	2BD6	00E1078	1	Disk drive backplane assembly (supports eight disk drives, one SATA DVD drive, one SAS or USB tape drive, and external SAS port)
22	2BD5	00E2520	1	Disk drive backplane assembly (supports six disk drives, one SATA DVD drive, and one SAS or USB tape drive)
23			1 - 6 or 1 - 8	See Disk drive and solid-state drive system parts.
24			1	DVD drive. See Managing DVD drives.



## System assembly detail, continued

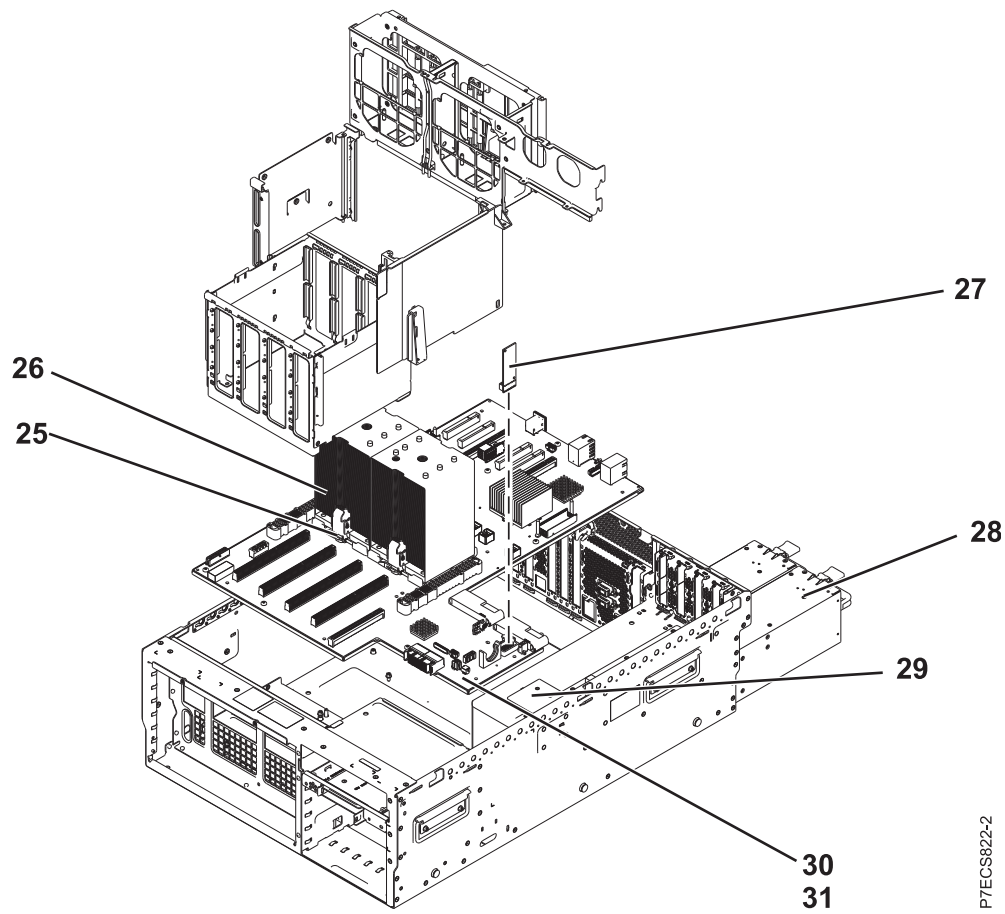


Table 77. System assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
25	543E	74Y8586	1	8 core 3.0 GHz processor module (8202-E4C)
25	543F	74Y8583	1	6 core 3.0 GHz processor module (8202-E4C)
25	544A	74Y8580	1	4 core 3.0 GHz processor module (8202-E4C)
25	543C	74Y8598	1 - 2	8 core 3.55 GHz processor module (8205-E6C)
25	543A	74Y8595	1 - 2	6 core 3.72 GHz processor module (8205-E6C)
25	543B	74Y8589	1 - 2	4 core 3.72 GHz processor module (8205-E6C)
25	543D	74Y8592	1 - 2	4 core 3.3 GHz processor module (8205-E6C)
25	54AF	00E7469	1 - 2	8 core 3.61 GHz processor module (8202-E4D or 8205-E6D)
25	54AD	00E7468	1 - 2	8 core 4.23 GHz processor module (8205-E6D)
25	54AC	00E7470	1 - 2	6 core 4.28 GHz processor module (8205-E6D)
25	54AB	00E7472	1 - 2	4 core 4.31 GHz processor module (8205-E6D)
25	54B0	00E7471	1	6 core 3.61 processor module (8202-E4D)
25	54B1	00E7473	1	4 core 3.61 GHz processor module (8202-E4D)
26		74Y7420	1	Heat sink

Table 77. System assembly part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
27	52DB	00E0942	1	System VPD card (8202-E4C or 8205-E6C)
27	521E	00E1672	1	System VPD card (8202-E4D or 8205-E6D)
28	2B46	00E7187	2	Power supply assembly (8202-E4C or 8205-E6C)
28	2BED	00E7237	2	Power supply assembly (8202-E4D or 8205-E6D)
29		74Y6714	1	Interlock switch with cable
30	2B4A	00E1768	1	System backplane (8205-E6C)
30	2B4B	00E1765	1	System backplane (8202-E4C)
30	2B2C	00E1751	1	System backplane (8205-E6D)
30	2B2D	00E1750	1	System backplane (8202-E4D)
31			1	Attaching screw for system backplane

## Memory card assembly

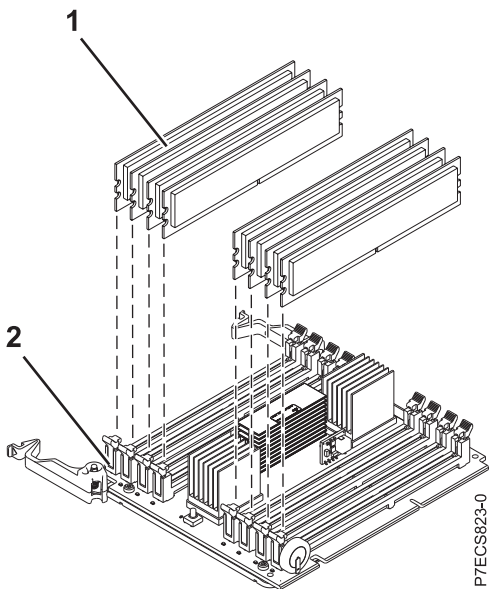


Table 78. Memory card assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1	31F8	78P1011	1 - 32	2 GB, 1066 MHz DDR3 DIMM (8202-E4C or 8205-E6C)
1	31F3	78P0554	1 - 32	4 GB, 1066 MHz DDR3 DIMM
1	31F4	78P0555	1 - 32	8 GB, 1066 MHz DDR3 DIMM (8202-E4C or 8205-E6C)
1	31F5	78P0639	1 - 32	16 GB, 1066 MHz DDR3 DIMM (8202-E4C or 8205-E6C)
1	31FA	78P1914	1 - 32	8 GB, 1066 MHz DDR3 DIMM (8202-E4D or 8205-E6D)

Table 78. Memory card assembly part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
1	31FB	78P1915	1 - 32	16 GB, 1066 MHz DDR3 DIMM (8202-E4D or 8205-E6D)
1	31F7	78P1539	1 - 32	32 GB, 1066 MHz DDR3 DIMM (8202-E4D or 8205-E6D)
2	2C1C	00E0638	1 - 4	Memory riser

Table 79. Cables

Feature code	Description	Part number
1828	1.5-meter InfiniBand cable	45D2235
1841	3-meter InfiniBand cable	45D2236
3124	3.7-meter cable	88G4771
3125	8-meter cable	88G4772
3656	10.5 inch SAS cable	46K5450
3652	1-meter SAS EE cable	44V4147
3653	3-meter SAS EE cable	44V4148
3654	6-meter SAS EE cable	44V4149
3661	3-meter SAS X cable	44V4154
3662	6-meter SAS X cable	44V4155
3663	15-meter SAS X cable	44V4156
3679	1-meter SAS AI cable	44V4041
3684	3-meter SAS AE cable	44V4163
3685	6-meter SAS AE cable	44V4164
3686	1.5-meter SAS YI cable	44V4161
3687	3-meter SAS Y0 cable	44V4162
3691	1.5-meter SAS Y0 cable	44V4157
3692	3-meter SAS Y0 cable	44V4158
3693	6-meter SAS Y0 cable	44V4159
3694	15-meter SAS Y0 cable	44V4160
6001	2-meter SPCN cable	22R5217
6006	3-meter SPCN cable	22R5239
6007	15-meter SPCN cable	22R5221
6008	6-meter SPCN cable	22R5219
6029	30-meter SPCN cable	22R5222
	USB internal cable for tape drive	46K7435
	Internal power cable for tape drive	46K7434

Table 80. Miscellaneous parts

CCIN	Description	Part number
	External cables and cords	See Planning for cables.
	Removable media	See Managing devices.

Table 80. Miscellaneous parts (continued)

CCIN	Description	Part number
	PCI adapters	See Managing PCI adapters.
58B2	1.8-inch 177 GB small form factor solid-state drive on PCIe SAS RAID and SSD adapter	43W7749
	Cache battery pack for cache battery card (CCIN 2BCF) and RAID and cache storage controller (CCIN 2B4C)	74Y9340
	Cable configuration	See Enclosures and expansion units.
	Time-of-day battery	74Y9628
	Keyboard parts	See Keyboard parts.

## Disk drive and solid-state drive system parts

Disk drive and solid-state drive system parts information.

Table 81. System unit disk drive and solid-state drive system parts

CCIN	Part number	Description
58B0	44V6821**	69 GB small form factor solid-state SAS drive
58B3	00E6051* 74Y5294**	177 GB small form factor solid-state SAS drive
58B8	74Y9524*	387 GB small form factor solid-state SAS drive
59E6	00E8670*	387 GB small form factor solid-state SAS drive
5B0E	00LY322*	387 GB (528 block size) small form factor solid-state SAS drive
59C0	00E8702*	775 GB small form factor solid-state SAS drive
59EA	00E8671*	775 GB small form factor solid-state SAS drive
5B0F	00LY323*	775 GB (528 block size) small form factor solid-state SAS drive
198B	00E6165* 44V4429**	69 GB 15K small form factor SAS disk drive (IBM i)
6600	42R8391**	73 GB 10K small form factor SAS disk drive (AIX and Linux)
198B	00E6168* 44V4426**	73 GB 15K small form factor SAS disk drive (AIX and Linux)
198C	00E6166* 44V6844**	139 GB 15K small form factor SAS disk drive (IBM i)
169C	42R8392**	146 GB 10K small form factor SAS disk drive (AIX and Linux)
198C	00E6169* 44V6845**	146 GB 15K small form factor SAS disk drive (AIX and Linux)
198D	00E6164* 74Y4896**	283 GB 10K small form factor SAS disk drive (IBM i)
19A1	74Y6495*	283 GB 15K small form factor SAS disk drive (IBM i)
59E0	00E9906*	283 GB 15K small form factor SAS disk drive (IBM i)
59E1	00E9966*	283 GB 15K small form factor SAS disk drive (IBM i)

Table 81. System unit disk drive and solid-state drive system parts (continued)

CCIN	Part number	Description
198D	00E6167*	300 GB 10K small form factor SAS disk drive (AIX and Linux)
	44V6833**	
19A1	74Y6496*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
59E0	00E9912*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
59E1	00E9972*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19A3	74Y4897*	571 GB 10K small form factor SAS disk drive (IBM i)
59CE	00E8648*	571 GB 15K small form factor SAS disk drive (IBM i)
59E4	00E9908*	571 GB 15K small form factor SAS disk drive (IBM i)
59E5	00E9968*	571 GB 15K small form factor SAS disk drive (IBM i)
19A3	74Y4900*	600 GB 10K small form factor SAS disk drive (AIX and Linux)
59CE	00E8653*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59E4	00E9914*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59E5	00E9974*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
19A4	74Y9271*	857 GB 10K small form factor SAS disk drive (IBM i)
19A4	74Y9272*	900 GB 10K small form factor SAS disk drive (AIX and Linux)
59C8	00E8606*	1.14 TB 10K small form factor SAS disk drive (IBM i)
59C8	00E8614*	1.2 TB 10K small form factor SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 82. 5886 disk drive and solid-state drive system parts

CCIN	Part number	Description
58B0	44V6819**	3.5-inch 69 GB solid-state SAS drive
433B	42R6690*	3.5-inch 69 GB 15K SAS disk drive (IBM i)
433B	10N7230*	3.5-inch 73.4 GB 15K SAS disk drive (AIX and Linux)
433C	42R6691*	3.5-inch 139 GB 15K SAS disk drive (IBM i)
433C	10N7232*	3.5-inch 146.8 GB 15K SAS disk drive (AIX and Linux)
433D	42R6692*	3.5-inch 283 GB 15K SAS disk drive (IBM i)
433D	10N7234*	3.5-inch 300 GB 15K SAS disk drive (AIX and Linux)
198E	44V4434*	3.5-inch 428 GB 15K SAS disk drive (IBM i)
198E	44V4432*	3.5-inch 450 GB 15K SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 83. 5887 disk drive and solid-state drive system parts

CCIN	Part number	Description
58B4	00E6053*	177 GB small form factor solid-state SAS drive
	74Y5296**	

Table 83. 5887 disk drive and solid-state drive system parts (continued)

CCIN	Part number	Description
58B9	74Y9526*	387 GB solid-state SAS drive
5B10	00LY336*	387 GB (4K block size) small form factor solid-state SAS drive
59C2	00E8709*	775 GB small form factor solid-state SAS drive
5B11	00LY337*	775 GB (4K block size) small form factor solid-state SAS drive
5B12	00LY338*	1551 GB (4K block size) small form factor solid-state SAS drive
5B16	00LY327*	387 GB (528 block size) small form factor solid-state SAS drive
5B17	00LY328*	775 GB (528 block size) small form factor solid-state SAS drive
19B0	00E6171* 46K4804**	139 GB 15K small form factor SAS disk drive (IBM i)
19B0	00E6173* 46K4806**	146 GB 15K small form factor SAS disk drive (AIX and Linux)
19B1	74Y6497*	283 GB 15K small form factor SAS disk drive (IBM i)
19B1	74Y6498*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19B7	00E6170* 74Y4898**	283 GB 10K small form factor SAS disk drive (IBM i)
59C9	00E8681*	283 GB 15K small form factor SAS disk drive (IBM i)
19B7	00E6172* 46K4812**	300 GB 10K small form factor SAS disk drive (AIX and Linux)
59C9	00E8687*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19B3	74Y4899*	571 GB 10K small form factor SAS disk drive (IBM i)
59CF	00E8660*	571 GB 15K small form factor SAS disk drive (IBM i)
59CC	00E8683*	571 GB 15K small form factor SAS disk drive (IBM i)
19B3	74Y4901*	600 GB 10K small form factor SAS disk drive (AIX and Linux)
59CF	00E8665*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59CC	00E8689*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
19B4	74Y9285*	857 GB 10K small form factor SAS disk drive (IBM i)
19B4	74Y9286*	900 GB 10K small form factor SAS disk drive (AIX and Linux)
59CD	00E8623*	1.14 TB 10K small form factor SAS disk drive (IBM i)
59CD	00E8631*	1.2 TB 10K small form factor SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 84. 5888 and EDR1 disk drive and solid-state drive system parts

CCIN	Part number	Description
58BB	00V5433*	1.8 inch 387 GB solid-state SAS drive
59BE	00E8692*	1.8 inch 387 GB solid-state SAS drive

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

## Keyboard parts

Keyboard parts information.

Table 85. Keyboard parts

Description	Part number
Keyboard, Arabic	10N9442
Keyboard, Belgium, and UK	10N9427
Keyboard, Brazilian Portuguese	10N9421
Keyboard, Bulgaria	10N9430
Keyboard, China	10N9424
Keyboard, Czechoslovakian	10N9439
Keyboard, Danish	10N9429
Keyboard, Dutch	10N9433
Keyboard, French	10N9415
Keyboard, French Canadian	10N9425
Keyboard, German/Austrian	10N9417
Keyboard, Greek	10N9435
Keyboard, Hebrew	10N9436
Keyboard, Hungarian	10N9422
Keyboard, Italian	10N9416
Keyboard, Japanese	10N9420
Keyboard, Korea	10N9423
Keyboard, Latin American (Spanish)	10N9441
Keyboard, Norwegian	10N9432
Keyboard, Portuguese	10N9434
Keyboard, Polish	10N9437
Keyboard, Russian	10N9444
Keyboard, Slovak	10N9438
Keyboard, Slovenia	10N9445
Keyboard, Spanish	10N9419
Keyboard, Sweden, and Finland	10N9428
Keyboard, Swiss, French, and German	10N9431
Keyboard, Thailand	10N9443
Keyboard, Turkish	10N9440
Keyboard, UK English	10N9418
Keyboard, US English	10N9414
Keyboard, US or Europe	10N9446

## 8231-E2B system parts

Indexed drawings show system part numbers of each part.

### Rack final assembly

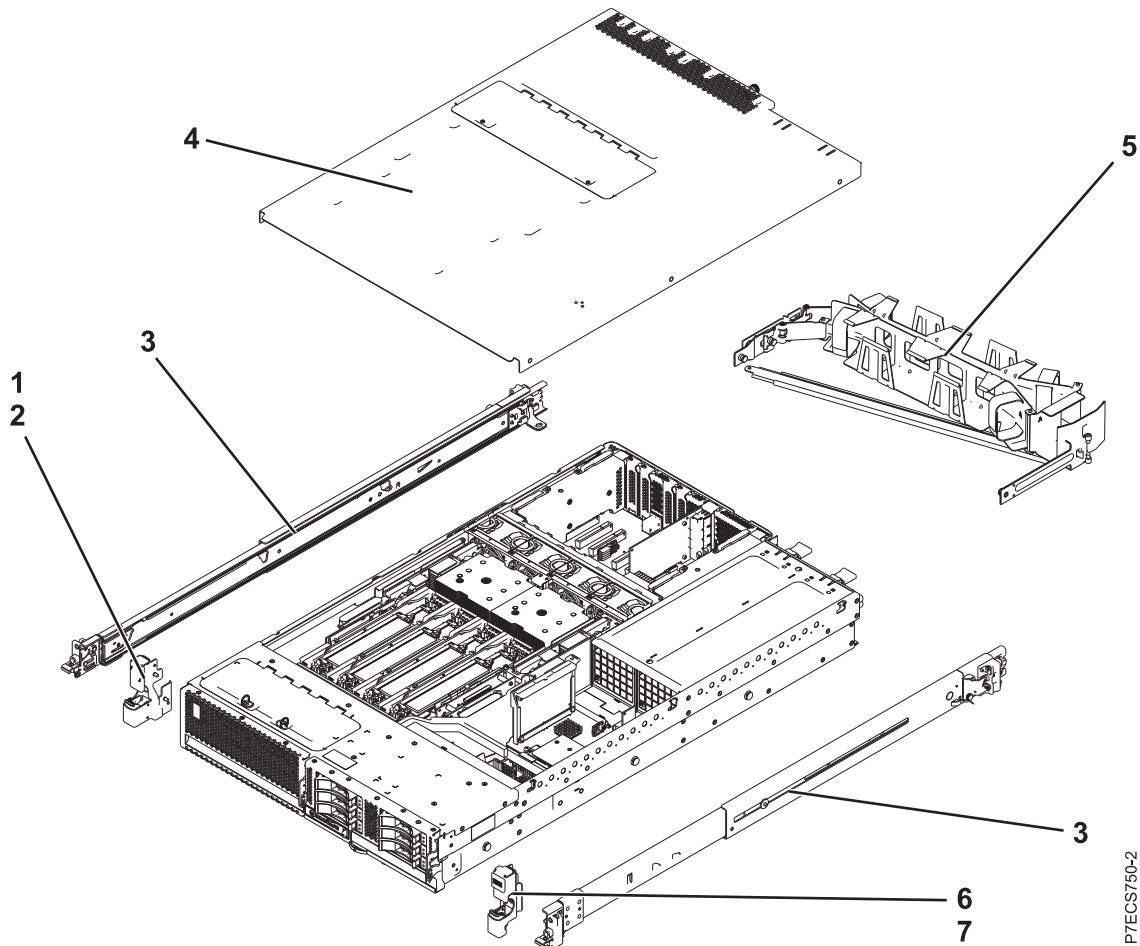
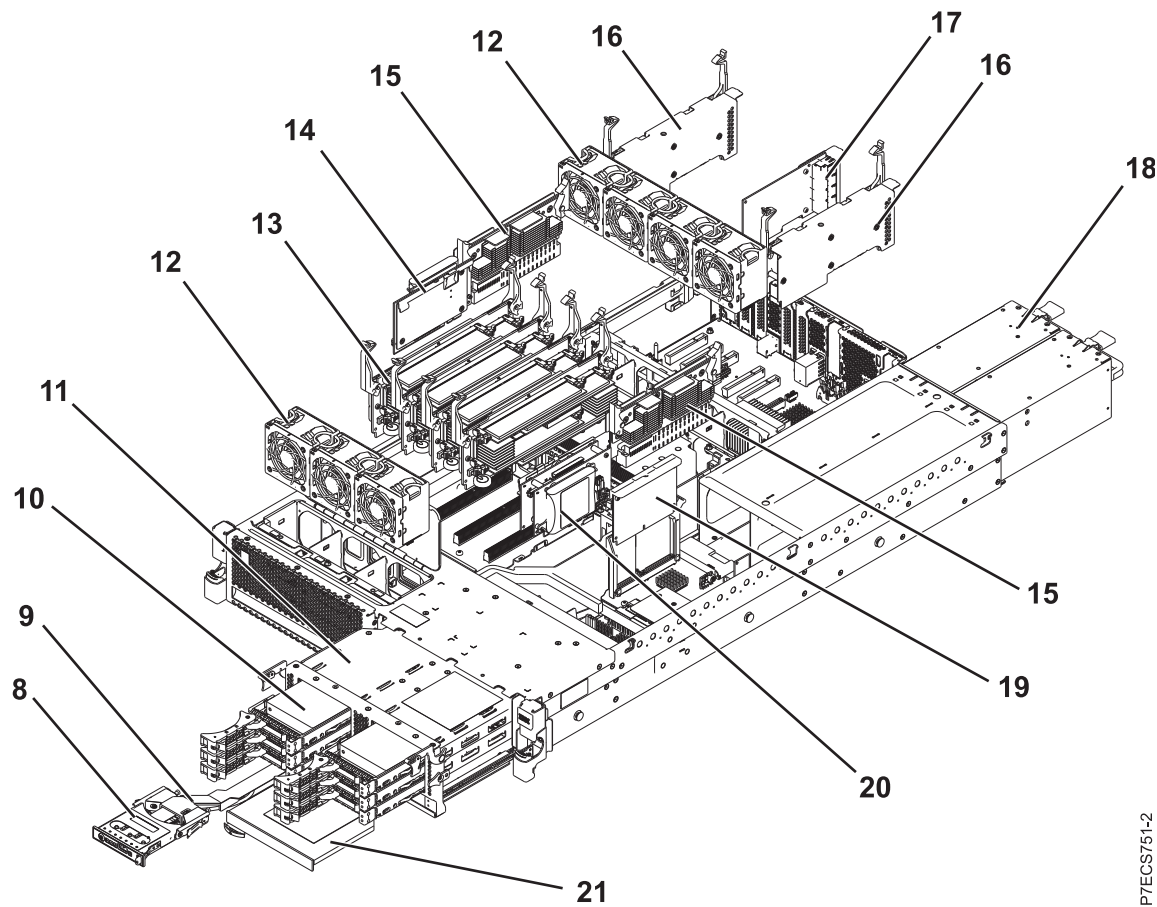


Table 86. Rack assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1		74Y5193	1	EIA bracket (left)
2		39J0199	2	Attaching screw for EIA bracket (left)
3		59Y4919	2	Slide rail assembly
4		74Y7446	1	Top access cover assembly
5		59Y4822	1	Cable management arm assembly
6		74Y5194	1	EIA bracket (right)
7		39J0199	2	Attaching screw for EIA bracket (right)



## Rack assembly detail



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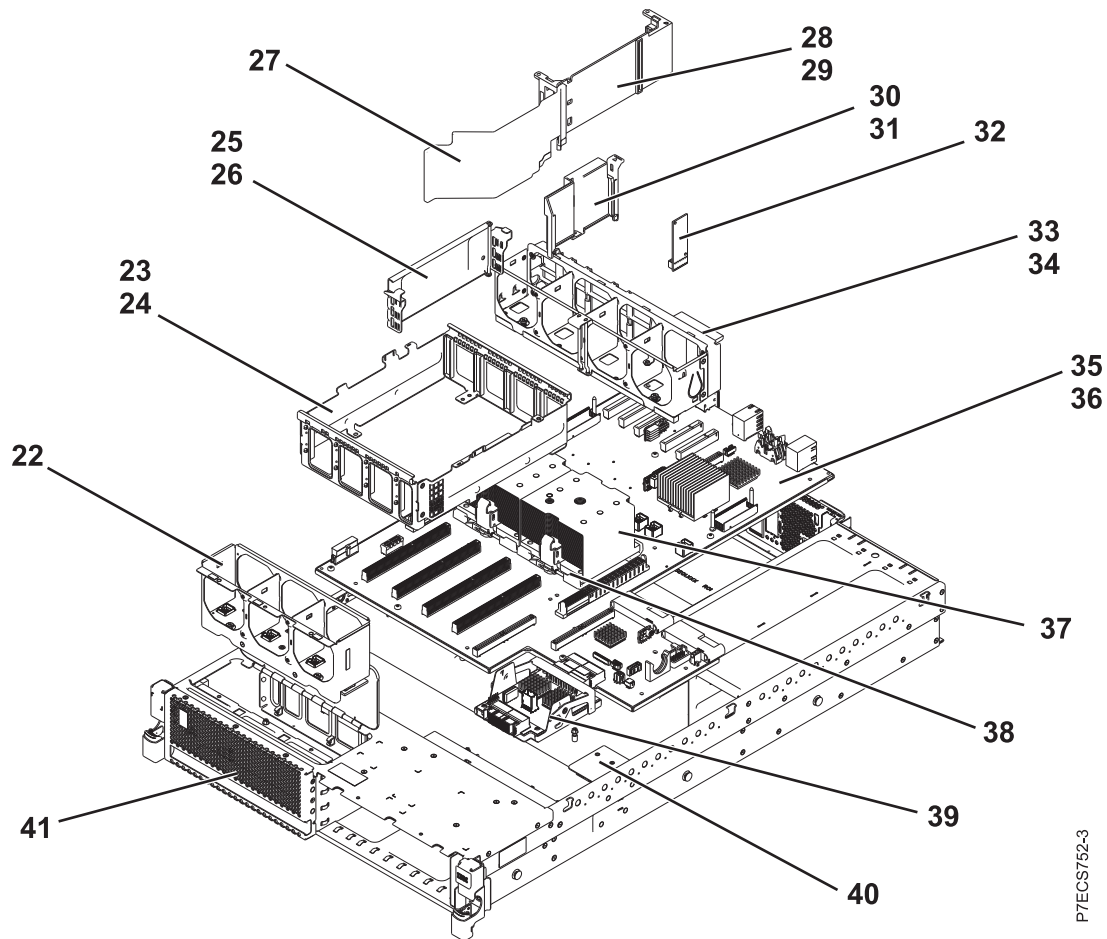
Table 87. Rack assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
8	2BCD	74Y5481	1	Control panel assembly
9		46K6257	1	Control panel cable
10	58B0	44V6821	1-6 or 1-3	69 GB small form factor solid-state SAS drive
10	58B3	74Y5294	1-6 or 1-3	177 GB small form factor solid-state SAS drive
10	198B	44V4429	1-6 or 1-3	70 GB 15K small form factor SAS disk drive
10		44V4426	1-6 or 1-3	73 GB 15K small form factor SAS disk drive
10	198C	44V6844	1-6 or 1-3	140 GB 15K small form factor SAS disk drive
10		44V6845	1-6 or 1-3	146 GB 15K small form factor SAS disk drive
10	198D	74Y4896	1-6 or 1-3	283 GB 10K small form factor SAS disk drive
10		44V6833	1-6 or 1-3	300 GB 10K small form factor SAS disk drive
10	58B8	74Y9524	1-6 or 1-3	387 GB small form factor solid-state SAS drive
10	58B9	74Y9526	1-6 or 1-3	387 GB small form factor solid-state SAS drive
10	19A3	74Y4897	1-6 or 1-3	571 GB 10K small form factor SAS disk drive (IBM i)
10		74Y4900	1-6 or 1-3	600 GB 10K small form factor SAS disk drive

Table 87. Rack assembly part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
10	19A4	74Y9271	1-6 or 1-3	857 GB 10K small form factor SAS disk drive (IBM i)
10		74Y9272	1-6 or 1-3	900 GB 10K small form factor SAS disk drive
11	2BE7	74Y2024	1	Disk drive backplane (supports three disk drives and one tape or DVD drive)
11	2BD7	74Y2023	1	Disk drive and media backplane (supports six disk drives and one DVD drive)
12		74Y5222	1	60 mm fan assembly
13	2BE3	74Y1959	1	Memory card assembly
13		78P1011	1-32	2 GB, 1066 MHz DDR3 DIMM
13		77P8784	1-32	4 GB, 1066 MHz DDR3 DIMM
13		77P8632	1-32	8 GB, 1066 MHz DDR3 DIMM
14	2BCF	44V8361	1	Cache battery card
15	2BE8	74Y5457	2	Processor VRM
16	2BDB	74Y1958	1	GX book assembly
17	266D	46K8121	1	Host Ethernet Adapter Quad 1 Gb copper card
17	266E	74Y2000	1	Host Ethernet Adapter Dual 10 Gb fiber card
17	266F	74Y2003	1	Host Ethernet Adapter Dual 10 Gb copper card
18	2BCB	74Y5985	1	Power supply assembly
19	2BE1	46K7723	1	RAID enablement card
20	2BD9	74Y2071	1	RAID and cache storage controller
21			1	DVD drive. See Managing DVD drives.

## Rack assembly detail, continued



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Table 88. Rack assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
22		74Y6275	1	Fan cage assembly (front)
23			1	Memory card cage assembly
24			6	Attaching screw for memory card cage assembly
25			1	VRM bracket (left)
26			2	Attaching screw for VRM bracket (left)
27			1	Divider
28			1	VRM guide (right)
29			2	Attaching screw, VRM guide (right)
30			1	RAID card guide
31			2	Attaching screw for RAID card guide
32	52C9	74Y2642	1	System VPD card
33			1	Fan cage assembly (rear)
34			1	Attaching screw for fan cage assembly (rear)
35	2BFC	46K7877	1	System backplane (contains 1 processor module)

Table 88. Rack assembly part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
35	2BFB	46K7505	1	System backplane (contains 2 processor modules)
36			5	Attaching screw for system backplane
37		46K5409	1	Heat sink
38	537D	74Y6149	1-2	4 core 3.0 GHz processor module
38	539E	74Y6155	1-2	4 core 3.72 GHz processor module
38	539E	74Y6153	1-2	6 core 3.72 GHz processor module
38	539F	74Y6154	1-2	8 core 3.55 GHz processor module
39	2D1F	74Y2021	1	Interposer card assembly (with RAID feature)
39	2D1E	74Y2022	1	Interposer card assembly
40		74Y7205	1	Interlock switch
41		74Y5197	1	Front Bezel (IBM Power® 710 Express)
		74Y5198	1	Front Bezel (IBM Power 730 Express)
		74Y5199	1	Front Bezel (OEM)

Table 89. Cables

Feature code	Description	Part number
3124	3.7-meter cable	88G4771
3125	8-meter cable	88G4772
3652	1-meter SAS EE cable	44V4147
3653	3-meter SAS EE cable	44V4148
3654	6-meter SAS EE cable	44V4149
3661	3-meter SAS X cable	44V4154
3662	6-meter SAS X cable	44V4155
3663	15-meter SAS X cable	44V4156
3684	3-meter SAS AE cable	44V4163
3685	6-meter SAS AE cable	44V4164
3686	1.5-meter SAS YI cable	44V4161
3687	3-meter SAS Y0 cable	44V4162
3691	1.5-meter SAS Y0 cable	44V4157
3692	3-meter SAS Y0 cable	44V4158
3693	6-meter SAS Y0 cable	44V4159
3694	15-meter SAS Y0 cable	44V4160
	USB internal cable for tape drive	46K7435
	Internal power cable for tape drive	46K7434
	SAS power and logic cable for tape drive	74Y6761

Table 90. Miscellaneous parts

CCIN	Description	Part number
	External cables and cords	See Site and hardware planning.

Table 90. Miscellaneous parts (continued)

CCIN	Description	Part number
	Removable media	See Managing devices.
	PCI adapters	See Managing PCI adapters.
58B2	1.8-inch 177 GB small form factor solid-state drive on PCIe SAS RAID and SSD adapter	43W7749
	Cache battery pack for cache battery card and RAID and cache storage controller	74Y6773
	Cable configuration	See Enclosures and expansion units.
	Time-of-day battery	44V4359

## 8231-E1C, 8231-E1D, 8231-E2C, 8231-E2D, or 8268-E1D system parts

Indexed drawings show system part numbers of each part.

### Rack final assembly

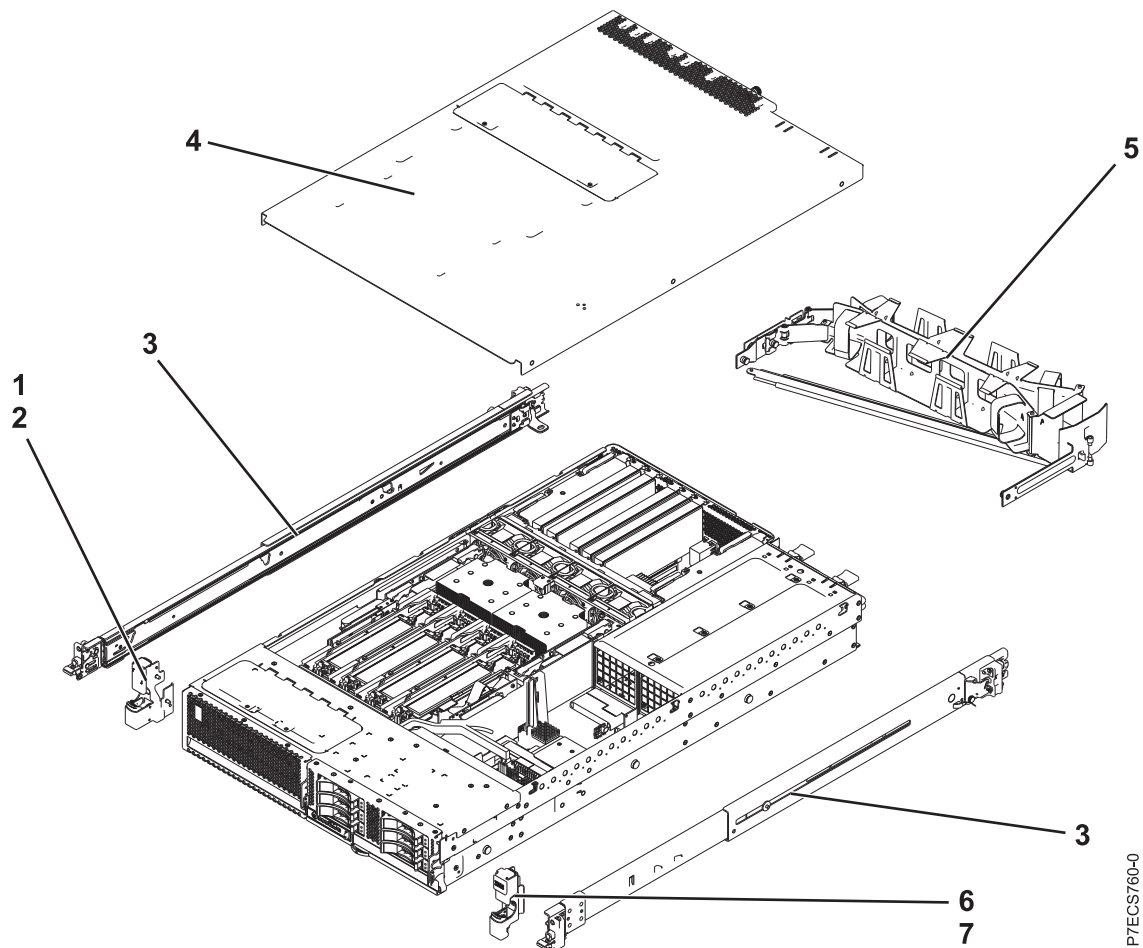
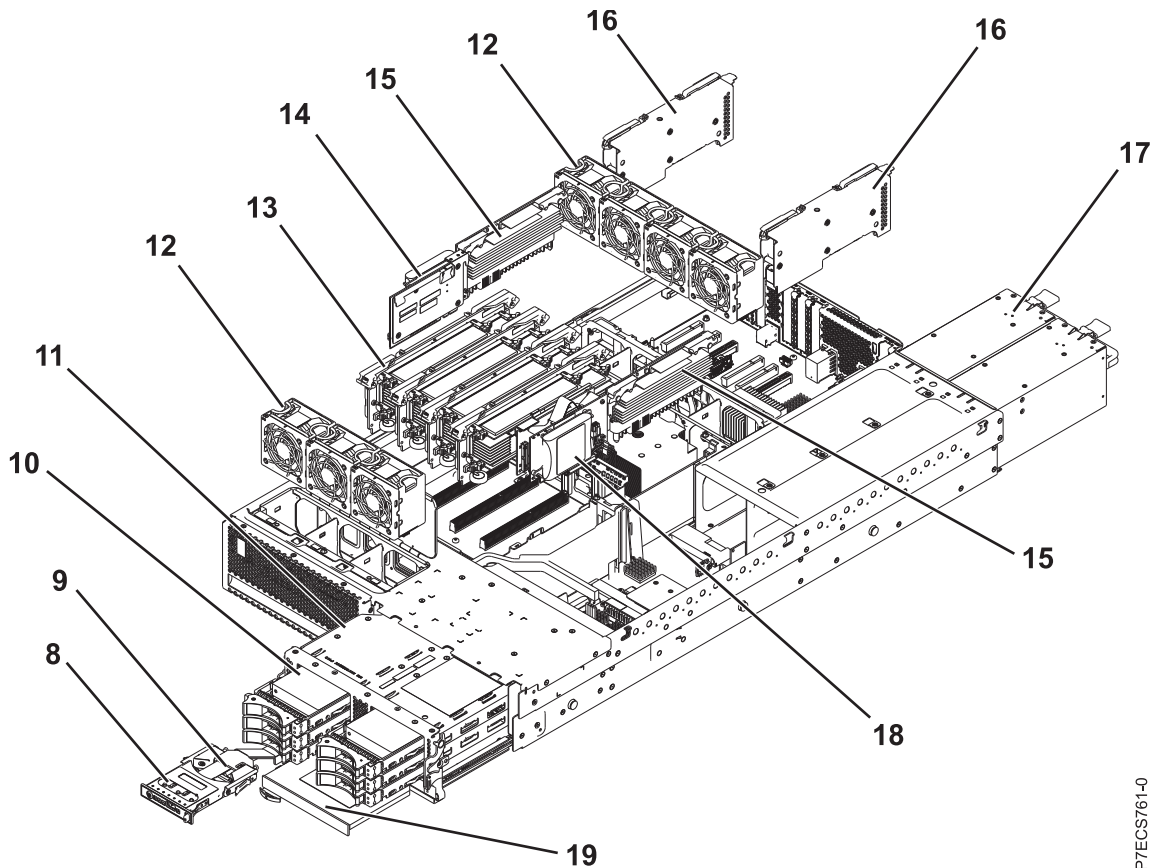


Table 91. Rack assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1		74Y5193	1	EIA bracket (left)
2		90P1959	2	Attaching screw for EIA bracket (left)
3		00E5669	1	Rail kit (includes two slides)
4		74Y9068	1	Top access cover assembly
5		74Y9063	1	Cable management arm assembly
6		74Y5194	1	EIA bracket (right)
7		90P1959	2	Attaching screw for EIA bracket (right)

### Rack assembly detail



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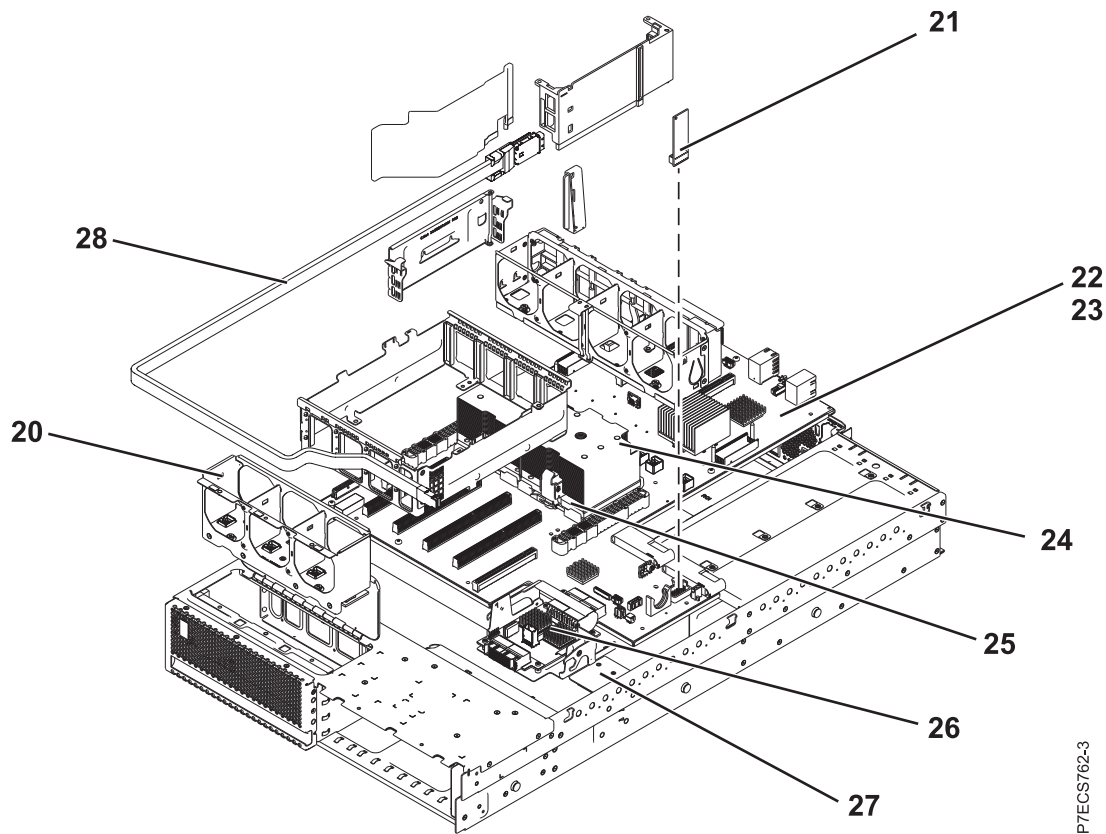
Table 92. Rack assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
8	2BCD	74Y3964	1	Control panel assembly
9		46K6257	1	Control panel cable
10			1 - 6 or 1 - 3	See Disk drive and solid-state drive system parts.
11	2BE7	74Y3355	1	Disk drive backplane (supports three disk drives and one tape or DVD drive)

Table 92. Rack assembly part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
11	2BD7	74Y3352	1	Disk drive and media backplane (supports six disk drives and one DVD drive)
12	6B1E	74Y5222	7	60 mm fan assembly
13	2BE3	00E0635	1 - 4	Memory card assembly
13	31F8	78P1011	1 - 32	2 GB, 1066 MHz DDR3 DIMM (8231-E1C or 8231-E2C)
13	31F3	78P0554	1 - 32	4 GB, 1066 MHz DDR3 DIMM
13	31F4	78P0555	1 - 32	8 GB, 1066 MHz DDR3 DIMM (8231-E1C or 8231-E2C)
13	31F5	78P0639	1 - 32	16 GB, 1066 MHz DDR3 DIMM (8231-E1C or 8231-E2C)
13	31FA	78P1914	1 - 32	8 GB, 1066 MHz DDR3 DIMM (8231-E1D, 8231-E2D, or 8268-E1D)
13	31FB	78P1915	1 - 32	16 GB, 1066 MHz DDR3 DIMM (8231-E1D, 8231-E2D, or 8268-E1D)
13	31F7	78P1539	1 - 32	32 GB, 1066 MHz DDR3 DIMM (8231-E1D, 8231-E2D, or 8268-E1D)
14	2BCF	74Y3345	1	Cache battery card
15	2B4E	00E7158	2	Processor VRM
16	2B4D	74Y4116	1	Double-wide GX adapter
16	2C1F	74Y3388	1 - 2	PCIe x8 GX adapter
16A		74Y3755	1	SPCN cable assembly
17	2B46	00E7187	1 - 2	Power supply assembly (8231-E1C or 8231-E2C)
17	2BED	00E7237	1 - 2	Power supply assembly (8231-E1D, 8231-E2D, or 8268-E1D)
18	2B4C	00E0663	1	RAID enablement card
19			1	DVD drive. See Managing DVD drives

## Rack assembly detail, continued



P7ECS762-3

Table 93. Rack assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
20		74Y3353	1	Fan cage assembly (front)
21	52DC	00E0940	1	System VPD card (8231-E1C or 8231-E2C)
21	521F	00E1674	1	System VPD card (8231-E1D, 8231-E2D, or 8268-E1D)
22	2B4B	00E1765	1	System backplane (contains one processor module) (8231-E1C)
22	2B4A	00E1768	1	System backplane (contains two processor modules) (8231-E2C)
22	2B2D	00E1750	1	System backplane (8231-E1D or 8268-E1D)
22	2B2C	00E1751	1	System backplane (8231-E2D)
23			5	Attaching screw for system backplane
24		74Y7421	1 - 2	Heat sink
25	544A	74Y8607	1 - 2	4 core 3.0 GHz processor module
25	543B	74Y8616	1 - 2	4 core 3.72 GHz processor module
25	543A	74Y8610	1 - 2	6 core 3.72 GHz processor module
25	543C	74Y8613	1 - 2	8 core 3.55 GHz processor module
25	54AD	00E7468	1 - 2	8- core 4.22 GHz processor module (only 8231-E1D, 8231-E2D, or 8268-E1D)



Table 93. Rack assembly part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
25	54AF	00E7469	1 - 2	8- core 3.61 GHz processor module (only 8231-E2D)
25	54AC	00E7470	1 - 2	6 core 4.28 GHz processor module (only 8231-E1D, 8231-E2D, or 8268-E1D)
25	54AB	00E7472	1 - 2	4 core 4.31 GHz processor module (only 8231-E2D)
26	2D1F	00E1088	1	Interposer card assembly (with RAID feature)
26	2D1E	00E0980	1	Interposer card assembly
27		74Y7205	1	Interlock switch
28		46K5849	1	Internal SAS port cable

Table 94. Cables

Feature code	Description	Part number
3124	3.7-meter cable	88G4771
3125	8-meter cable	88G4772
3652	1-meter SAS EE cable	44V4147
3653	3-meter SAS EE cable	44V4148
3654	6-meter SAS EE cable	44V4149
3661	3-meter SAS X cable	44V4154
3662	6-meter SAS X cable	44V4155
3663	15-meter SAS X cable	44V4156
3684	3-meter SAS AE cable	44V4163
3685	6-meter SAS AE cable	44V4164
3686	1.5-meter SAS YI cable	44V4161
3687	3-meter SAS Y0 cable	44V4162
3691	1.5-meter SAS Y0 cable	44V4157
3692	3-meter SAS Y0 cable	44V4158
3693	6-meter SAS Y0 cable	44V4159
3694	15-meter SAS Y0 cable	44V4160
	USB internal cable for tape drive	46K7435
	Internal power cable for tape drive	46K7434
	SAS power and logic cable for tape drive	74Y6761

Table 95. Miscellaneous parts

CCIN	Description	Part number
	External cables and cords	See Planning for cables
	Removable media	See Managing devices
	PCI adapters	See Managing PCI adapters
58B2	1.8-inch 177 GB small form factor solid-state drive on PCIe SAS RAID and SSD adapter	74Y8234

Table 95. Miscellaneous parts (continued)

CCIN	Description	Part number
	Cache battery pack for cache battery card and RAID and cache storage controller	74Y9340
	Cable configuration	See Enclosures and expansion units
	Time-of-day battery	74Y9628
	Keyboard parts	See Keyboard parts.

## Disk drive and solid-state drive system parts

Disk drive and solid-state drive system parts information.

Table 96. System unit disk drive and solid-state drive system parts

CCIN	Part number	Description
58B0	44V6821**	69 GB small form factor solid-state SAS drive
58B3	00E6051* 74Y5294**	177 GB small form factor solid-state SAS drive
58B8	74Y9524*	387 GB small form factor solid-state SAS drive
59E6	00E8670*	387 GB small form factor solid-state SAS drive
5B0E	00LY322*	387 GB (528 block size) small form factor solid-state SAS drive
59C0	00E8702*	775 GB small form factor solid-state SAS drive
59EA	00E8671*	775 GB small form factor solid-state SAS drive
5B0F	00LY323*	775 GB (528 block size) small form factor solid-state SAS drive
198B	00E6165* 44V4429**	69 GB 15K small form factor SAS disk drive (IBM i)
6600	42R8391**	73 GB 10K small form factor SAS disk drive (AIX and Linux)
198B	00E6168* 44V4426**	73 GB 15K small form factor SAS disk drive (AIX and Linux)
198C	00E6166* 44V6844**	139 GB 15K small form factor SAS disk drive (IBM i)
169C	42R8392**	146 GB 10K small form factor SAS disk drive (AIX and Linux)
198C	00E6169* 44V6845**	146 GB 15K small form factor SAS disk drive (AIX and Linux)
198D	00E6164* 74Y4896**	283 GB 10K small form factor SAS disk drive (IBM i)
19A1	74Y6495*	283 GB 15K small form factor SAS disk drive (IBM i)
59E0	00E9906*	283 GB 15K small form factor SAS disk drive (IBM i)
59E1	00E9966*	283 GB 15K small form factor SAS disk drive (IBM i)
198D	00E6167* 44V6833**	300 GB 10K small form factor SAS disk drive (AIX and Linux)
19A1	74Y6496*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
59E0	00E9912*	300 GB 15K small form factor SAS disk drive (AIX and Linux)

Table 96. System unit disk drive and solid-state drive system parts (continued)

CCIN	Part number	Description
59E1	00E9972*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19A3	74Y4897*	571 GB 10K small form factor SAS disk drive (IBM i)
59CE	00E8648*	571 GB 15K small form factor SAS disk drive (IBM i)
59E4	00E9908*	571 GB 15K small form factor SAS disk drive (IBM i)
59E5	00E9968*	571 GB 15K small form factor SAS disk drive (IBM i)
19A3	74Y4900*	600 GB 10K small form factor SAS disk drive (AIX and Linux)
59CE	00E8653*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59E4	00E9914*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59E5	00E9974*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
19A4	74Y9271*	857 GB 10K small form factor SAS disk drive (IBM i)
19A4	74Y9272*	900 GB 10K small form factor SAS disk drive (AIX and Linux)
59C8	00E8606*	1.14 TB 10K small form factor SAS disk drive (IBM i)
59C8	00E8614*	1.2 TB 10K small form factor SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 97. 5886 disk drive and solid-state drive system parts

CCIN	Part number	Description
58B0	44V6819**	3.5-inch 69 GB solid-state SAS drive
433B	42R6690*	3.5-inch 69 GB 15K SAS disk drive (IBM i)
433B	10N7230*	3.5-inch 73.4 GB 15K SAS disk drive (AIX and Linux)
433C	42R6691*	3.5-inch 139 GB 15K SAS disk drive (IBM i)
433C	10N7232*	3.5-inch 146.8 GB 15K SAS disk drive (AIX and Linux)
433D	42R6692*	3.5-inch 283 GB 15K SAS disk drive (IBM i)
433D	10N7234*	3.5-inch 300 GB 15K SAS disk drive (AIX and Linux)
198E	44V4434*	3.5-inch 428 GB 15K SAS disk drive (IBM i)
198E	44V4432*	3.5-inch 450 GB 15K SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 98. 5887 disk drive and solid-state drive system parts

CCIN	Part number	Description
58B4	00E6053*	177 GB small form factor solid-state SAS drive
	74Y5296**	
58B9	74Y9526*	387 GB solid-state SAS drive
5B10	00LY336*	387 GB (4K block size) small form factor solid-state SAS drive
59C2	00E8709*	775 GB small form factor solid-state SAS drive
5B11	00LY337*	775 GB (4K block size) small form factor solid-state SAS drive

Table 98. 5887 disk drive and solid-state drive system parts (continued)

CCIN	Part number	Description
5B12	00LY338*	1551 GB (4K block size) small form factor solid-state SAS drive
5B16	00LY327*	387 GB (528 block size) small form factor solid-state SAS drive
5B17	00LY328*	775 GB (528 block size) small form factor solid-state SAS drive
19B0	00E6171* 46K4804**	139 GB 15K small form factor SAS disk drive (IBM i)
19B0	00E6173* 46K4806**	146 GB 15K small form factor SAS disk drive (AIX and Linux)
19B1	74Y6497*	283 GB 15K small form factor SAS disk drive (IBM i)
19B1	74Y6498*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19B7	00E6170* 74Y4898**	283 GB 10K small form factor SAS disk drive (IBM i)
59C9	00E8681*	283 GB 15K small form factor SAS disk drive (IBM i)
19B7	00E6172* 46K4812**	300 GB 10K small form factor SAS disk drive (AIX and Linux)
59C9	00E8687*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19B3	74Y4899*	571 GB 10K small form factor SAS disk drive (IBM i)
59CF	00E8660*	571 GB 15K small form factor SAS disk drive (IBM i)
59CC	00E8683*	571 GB 15K small form factor SAS disk drive (IBM i)
19B3	74Y4901*	600 GB 10K small form factor SAS disk drive (AIX and Linux)
59CF	00E8665*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59CC	00E8689*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
19B4	74Y9285*	857 GB 10K small form factor SAS disk drive (IBM i)
19B4	74Y9286*	900 GB 10K small form factor SAS disk drive (AIX and Linux)
59CD	00E8623*	1.14 TB 10K small form factor SAS disk drive (IBM i)
59CD	00E8631*	1.2 TB 10K small form factor SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 99. 5888 and EDR1 disk drive and solid-state drive system parts

CCIN	Part number	Description
58BB	00V5433*	1.8 inch 387 GB solid-state SAS drive
59BE	00E8692*	1.8 inch 387 GB solid-state SAS drive

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

## Keyboard parts

Keyboard parts information.

Table 100. Keyboard parts

Description	Part number
Keyboard, Arabic	10N9442
Keyboard, Belgium, and UK	10N9427
Keyboard, Brazilian Portuguese	10N9421
Keyboard, Bulgaria	10N9430
Keyboard, China	10N9424
Keyboard, Czechoslovakian	10N9439
Keyboard, Danish	10N9429
Keyboard, Dutch	10N9433
Keyboard, French	10N9415
Keyboard, French Canadian	10N9425
Keyboard, German/Austrian	10N9417
Keyboard, Greek	10N9435
Keyboard, Hebrew	10N9436
Keyboard, Hungarian	10N9422
Keyboard, Italian	10N9416
Keyboard, Japanese	10N9420
Keyboard, Korea	10N9423
Keyboard, Latin American (Spanish)	10N9441
Keyboard, Norwegian	10N9432
Keyboard, Portuguese	10N9434
Keyboard, Polish	10N9437
Keyboard, Russian	10N9444
Keyboard, Slovak	10N9438
Keyboard, Slovenia	10N9445
Keyboard, Spanish	10N9419
Keyboard, Sweden, and Finland	10N9428
Keyboard, Swiss, French, and German	10N9431
Keyboard, Thailand	10N9443
Keyboard, Turkish	10N9440
Keyboard, UK English	10N9418
Keyboard, US English	10N9414
Keyboard, US or Europe	10N9446

## 8233-E8B and 8236-E8C system parts

Indexed drawings show system part numbers.

## Rack final assembly

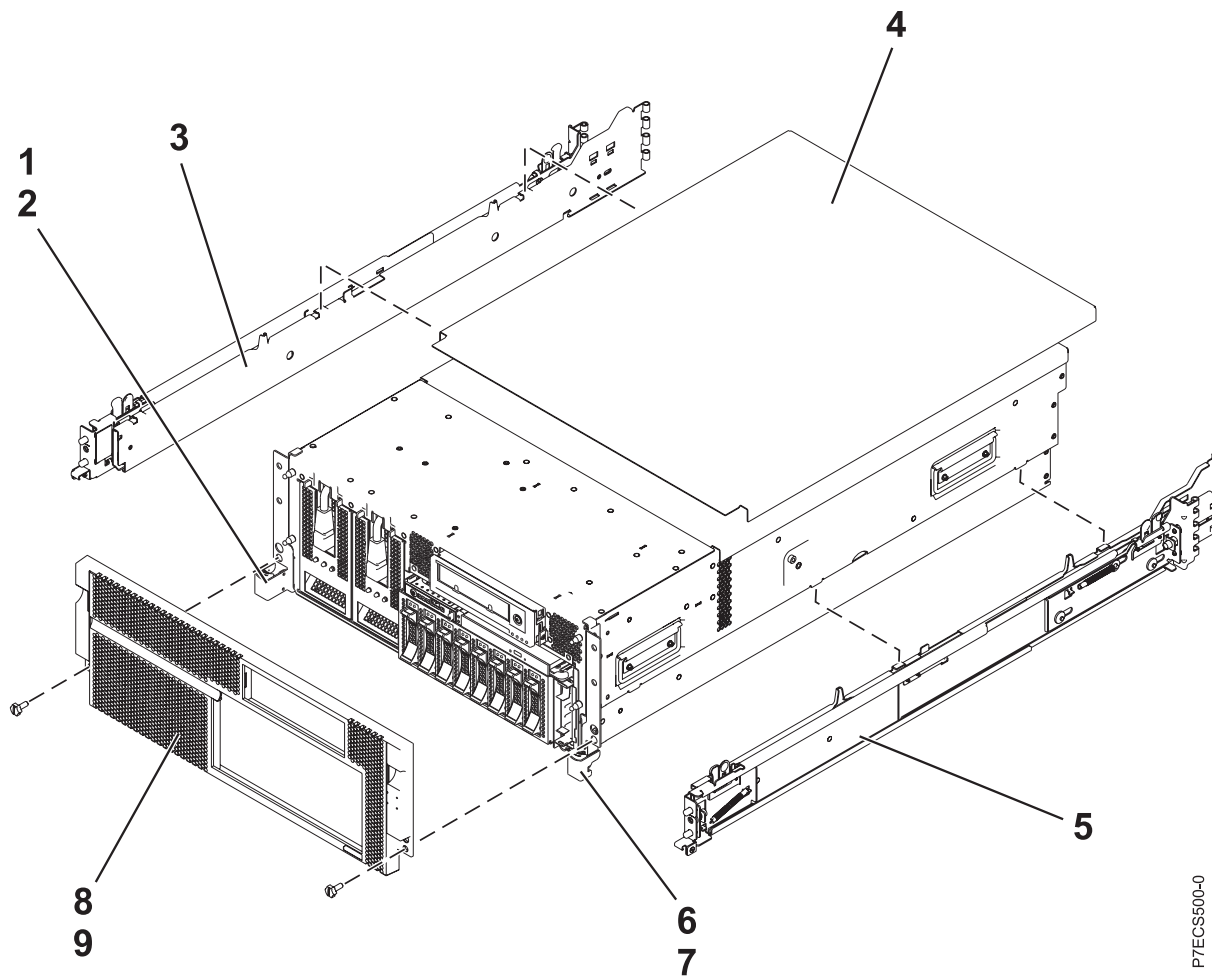
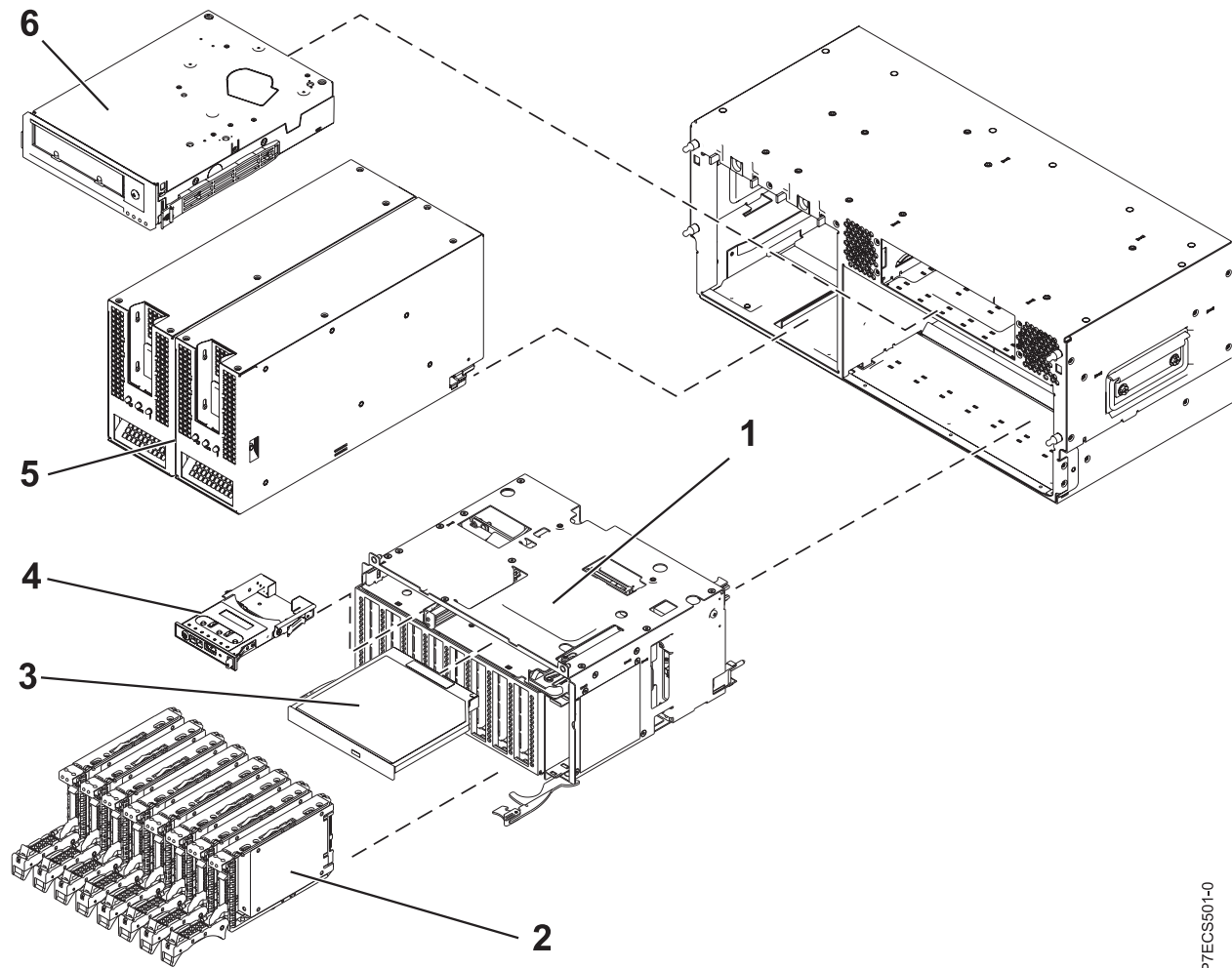


Table 101. Rack final assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1		44V4790	1	Left rack mounting bracket
2		09P3744	2	Screw
3		44V3349	1	Left rail
4		46K5086	1	Rack top cover
5		44V3352	1	Right rail
6		44V4793	1	Right rack mounting bracket
7		09P3744	2	Screw
8		46K5453	1	Front bezel (8233-E8B)
8		46K6256	1	Front bezel (8236-E8C)
9		12J5289	2	Screw

## Rack assembly detail



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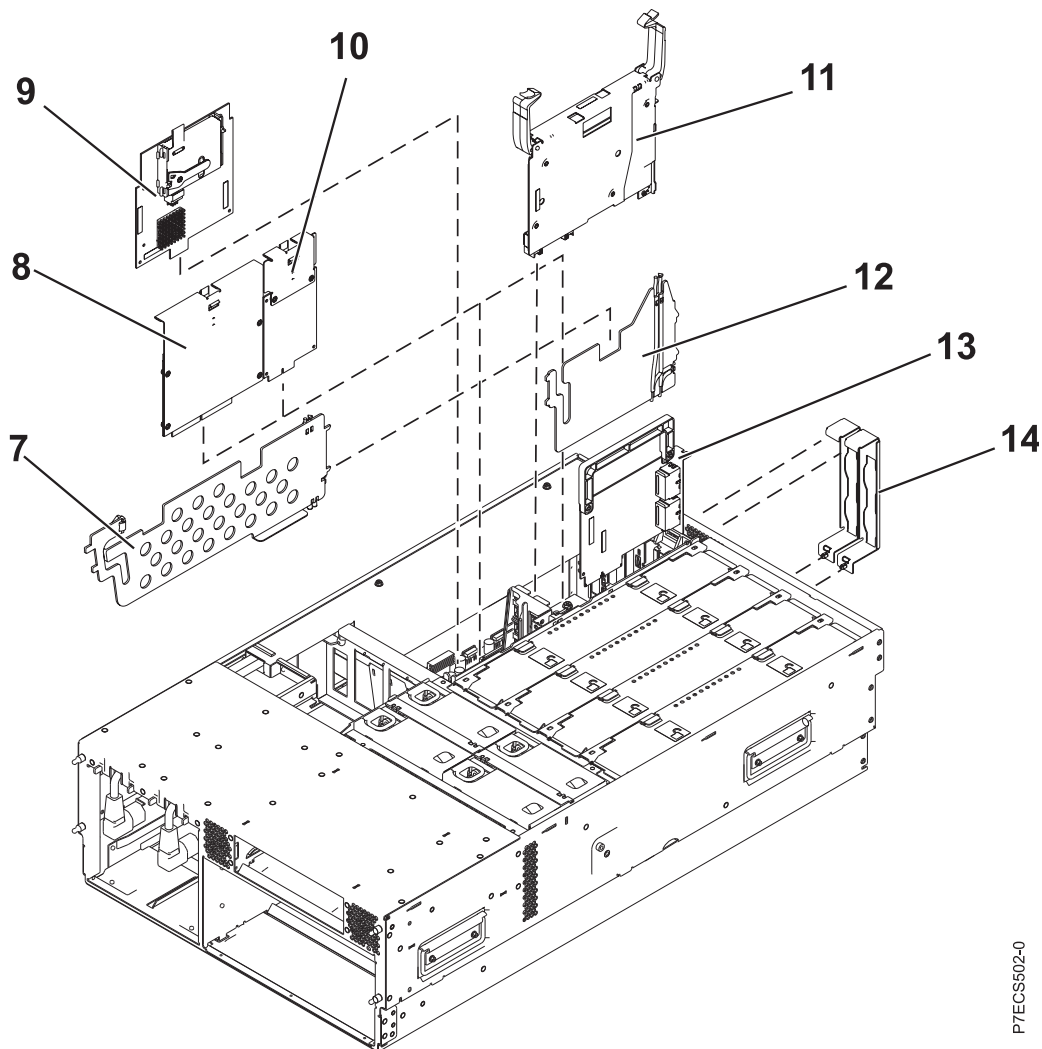
Table 102. Rack assembly detail part numbers

Index number	CCIN	Part number	Units per assembly	Description
1	2A16	74Y2244	1	Media backplane
2	58B8	74Y9524	1-8	387 GB small form factor solid-state SAS (Gen1) drive
2	58B9	74Y9526	1-8	387 GB small form factor solid-state SAS (Gen2) drive
2	58B0	44V6821	1-8	69 GB small form factor solid-state SAS drive
2	58B3	74Y5294	1-8	177 GB small form factor solid-state SAS drive
2	198B	44V4429	1-8	70 GB 15 K small form factor SAS disk drive
2		42R8391	1-8	73 GB 10 K small form factor SAS disk drive
2		44V4426	1-8	73 GB 15 K small form factor SAS disk drive
2	198C	44V6844	1-8	140 GB 15 K small form factor SAS disk drive
2		42R8392	1-8	146 GB 10 K small form factor SAS disk drive
2		44V6845	1-8	146 GB 15 K small form factor SAS disk drive
2	198D	74Y4896	1-8	283 GB 10 K small form factor SAS disk drive

Table 102. Rack assembly detail part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
2		44V6833	1-8	300 GB 10 K small form factor SAS disk drive
2	19A3	74Y4897	1-8	571 GB 10K small form factor SAS disk drive (IBM i)
2		74Y4900	1-8	600 GB 10K small form factor SAS disk drive
2	19A4	74Y9271	1-8	857 GB 10K small form factor SAS disk drive (IBM i)
2		74Y9272	1-8	900 GB 10K small form factor SAS disk drive
3		44V4220	1	DVD. See Managing devices.
4	296C	74Y5481	1	Control panel
5		46K5673	2	AC power supply
6		45E1127	1	Tape drive. See Managing devices.

**Rack assembly detail, continued**



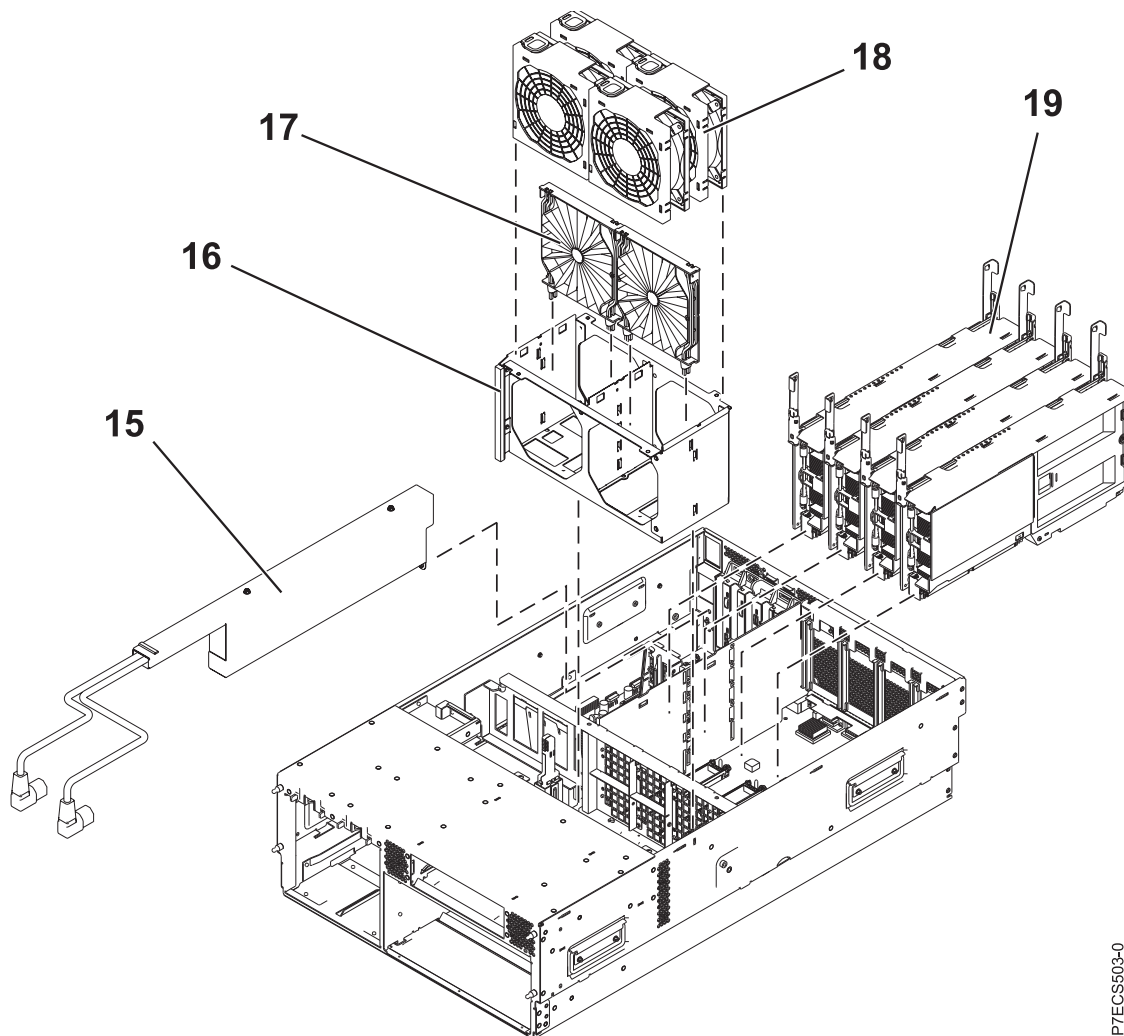
P7ECS502-0



Table 103. Rack assembly detail, continued part numbers

Index number	CCIN	Part number	Units per assembly	Description
7		44V3776	1	PCI divider
8		44V3298	1	RAID base card
9		46K6109	1	RAID cache card
9		74Y5667	1	RAID cache card battery
10		46Y3513	1	TPMD card
11	1817	46K6564	1	GX IB 12x adapter
11		45D3912	1	GX IB 12x adapter
11	52B4	45D5063	1	GX++ IB 12x adapter
12		44V3949	1	GX card divider
13	1818	46K7967	1	Dual 1 GB Ethernet card
13	1819	46K7971	1	Quad 1 GB Ethernet card
13	1830	46K6818	1	Dual 10 GB Ethernet card
14		42R5805	2	GX support bracket
14		42R5807	2	GX Dual-Port 12X Channel Attach adapter support bracket
14		42R5809	2	GX support bracket

## Rack assembly detail, continued



P7ECS503-0

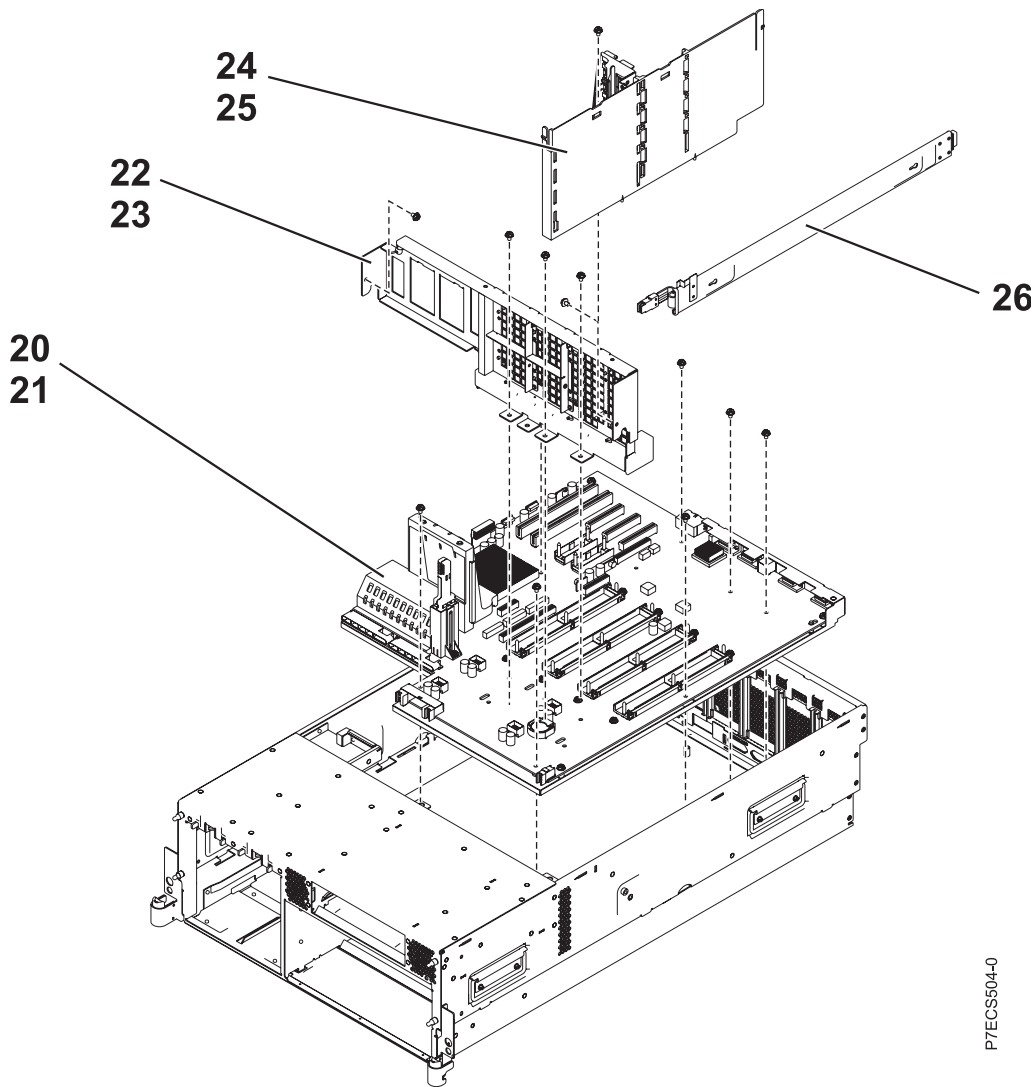
Table 104. Rack assembly detail part numbers

Index number	CCIN	Part number	Units per assembly	Description
15		44V3458	1	AC line cord box
16		NONUM	1	Fan cage
17		44V3455	1	Fan lattice
18		44V3454	4	Fan
19	530D	74Y1833	4	8 core 3.55 GHz processor card assembly (8233-E8B)
19	530E	74Y1845	4	6 core 3.3 GHz processor card assembly (8233-E8B)
19	535A	74Y1840	4	8 core 3.3 GHz processor card assembly (8233-E8B and 8236-E8C)
19	535B	74Y1855	4	8 core 3.0 GHz processor card assembly (8233-E8B)

Table 104. Rack assembly detail part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
19	538B	74Y2453	4	8 core 3.3 GHz processor card assembly (8233-E8B and 8236-E8C) <b>Note:</b> See the IBM Prerequisite Web site at <a href="http://www-912.ibm.com/e_dir/eServerPrereq.nsf">http://www-912.ibm.com/e_dir/eServerPrereq.nsf</a>  for minimum system firmware requirements.
19	538C	74Y2457	4	8 core 3.0 GHz processor card assembly (8233-E8B) <b>Note:</b> See the IBM Prerequisite Web site at <a href="http://www-912.ibm.com/e_dir/eServerPrereq.nsf">http://www-912.ibm.com/e_dir/eServerPrereq.nsf</a>  for minimum system firmware requirements.
19	538D	74Y2451	4	8 core 3.55 GHz processor card assembly (8233-E8B) <b>Note:</b> See the IBM Prerequisite Web site at <a href="http://www-912.ibm.com/e_dir/eServerPrereq.nsf">http://www-912.ibm.com/e_dir/eServerPrereq.nsf</a>  for minimum system firmware requirements.
19	542C	74Y3523	4	6 core 3.72 GHz processor card assembly (8233-E8B) <b>Note:</b> See the IBM Prerequisite Web site at <a href="http://www-912.ibm.com/e_dir/eServerPrereq.nsf">http://www-912.ibm.com/e_dir/eServerPrereq.nsf</a>  for minimum system firmware requirements.
19	542D	74Y3530	4	4 core 3.72 GHz processor card assembly (8233-E8B) <b>Note:</b> See the IBM Prerequisite Web site at <a href="http://www-912.ibm.com/e_dir/eServerPrereq.nsf">http://www-912.ibm.com/e_dir/eServerPrereq.nsf</a>  for minimum system firmware requirements.
19	542E	74Y3535	4	8 core 3.61 GHz processor card assembly (8233-E8B) <b>Note:</b> See the IBM Prerequisite Web site at <a href="http://www-912.ibm.com/e_dir/eServerPrereq.nsf">http://www-912.ibm.com/e_dir/eServerPrereq.nsf</a>  for minimum system firmware requirements.
19	542F	74Y3540	4	8 core 3.22 GHz processor card assembly (8233-E8B) <b>Note:</b> See the IBM Prerequisite Web site at <a href="http://www-912.ibm.com/e_dir/eServerPrereq.nsf">http://www-912.ibm.com/e_dir/eServerPrereq.nsf</a>  for minimum system firmware requirements.

## Rack assembly detail, continued

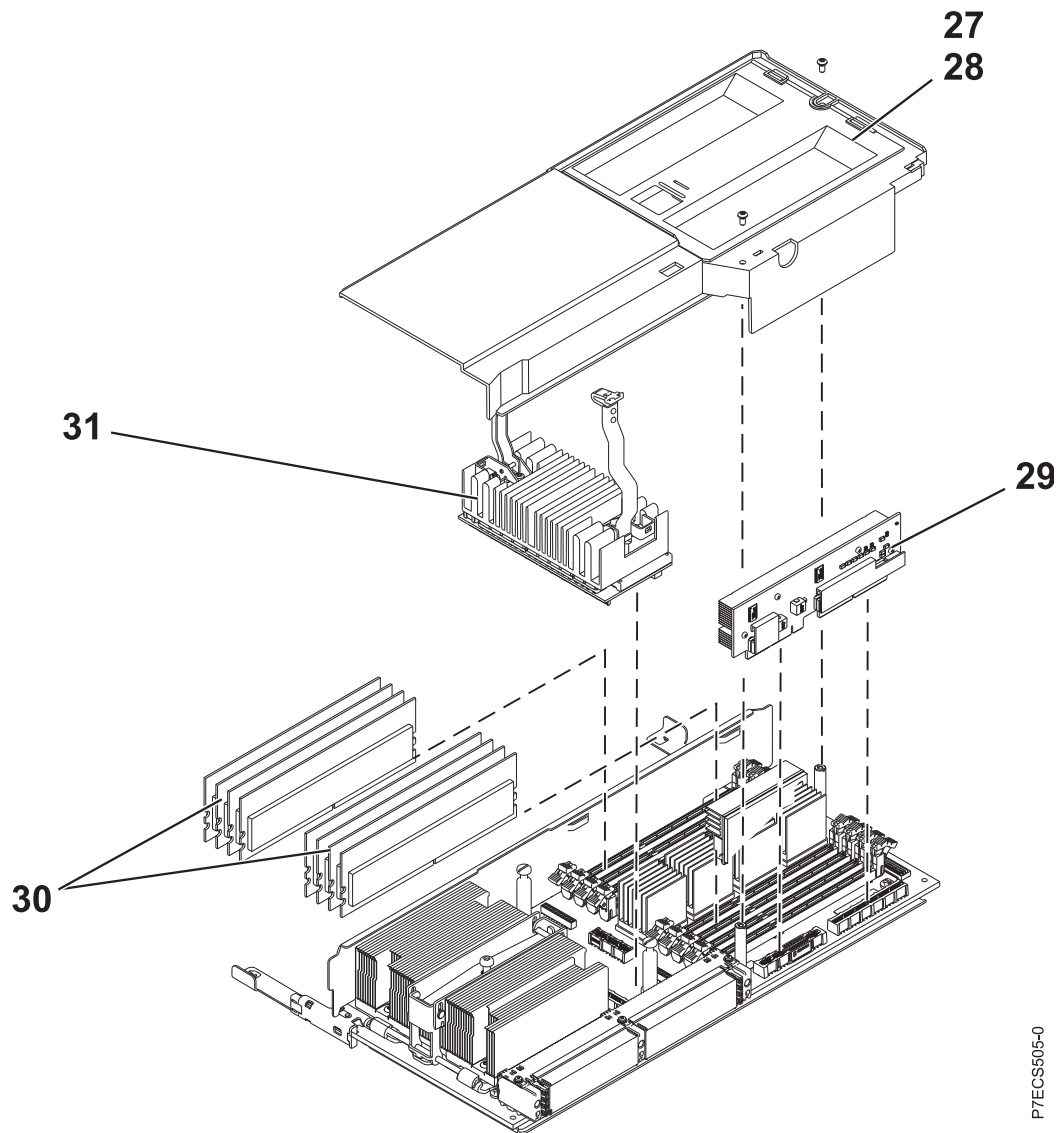


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Table 105. Rack assembly detail part numbers

Index number	CCIN	Part number	Units per assembly	Description
20		74Y1825	1	System backplane
21		NONUM	9	Backplane screw
22		NONUM	1	Front processor support
23		NONUM	5	Screw
24		NONUM	1	Card support divider
25		NONUM	1	Screw
26		42R5751	1	SAS cable, Disk drive backplane to bulkhead connector (external)
26		44V5252	1	SAS cable, Disk drive backplane to bulkhead connector, split Disk drive backplane functionality

## Rack assembly detail, continued



P7ECS05-0

Table 106. Rack assembly detail part numbers, continued.

Index number	CCIN	Part number	Units per assembly	Description
27			1	DIMM duct plate <b>Note:</b> The DIMM duct plate is part of the processor card assembly FRU and cannot be ordered separately.
28		33G3907	1	Screw
29	2A29	46K6302	1	Memory voltage regulator 95 A
30		77P8784	2-8	4 GB, 1066 MHz RDIMM (8233-E8B and 8236-E8C)
30		77P8632	2-8	8 GB, 1066 MHz RDIMM (8233-E8B and 8236-E8C)
30		77P8633	2-8	16 GB, 1066 MHz RDIMM (8233-E8B)

Table 106. Rack assembly detail part numbers, continued. (continued)

Index number	CCIN	Part number	Units per assembly	Description
31	2A2C	46K6300	1	Processor voltage regulator 30 A

Table 107. Cables

CCIN/CIN	Description	Part number
	0.6 meter InfiniBand cable	42V2129
	1 meter SAS cable	44V4147
	1.5 meter GX Dual-Port 12X Channel Attach adapter to GX cable	15R8139
	1.5 meter InfiniBand cable	42V2130
	2 meter SPCN cable	22R5217
6006	3 meter SPCN cable	22R5239
	3 meter SAS cable	44V4148
1482	meter RIO-2 cable	39J2554
	3 meter InfiniBand cable	42V2132
	3 meter InfiniBand cable, DDR	15R8140
System p5 <sup>®</sup> model: 1464, System i5 <sup>®</sup> and System p5 models: 6008	6 meter SPCN cable	22R5219
	8 meter InfiniBand cable	42R6160
	10 meter InfiniBand cable	15R8141
	10.5 SAS cable for tape drive	42R5815
System i5 model: 1465, System p5 model: 6007	15 meter SPCN cable	22R5221
System i5 model: 1466, System i5 and System p5 models: 6029	30 meter SPCN cable	22R5222
	SCSI2 cable	52G4291
	SCSI cable	52G4233
	SCSI cable	42R4756
	Serial cable	10N6535
	Operator panel round cable	42R6069
	Operator panel flat ribbon cable	44V7190

Table 108. Miscellaneous parts

CCIN	Description	Part number
	Removable media	See Managing devices.
	External cables and cords	See Planning for cables.
	Cable configuration	See Enclosures and expansion units.

Table 108. Miscellaneous parts (continued)

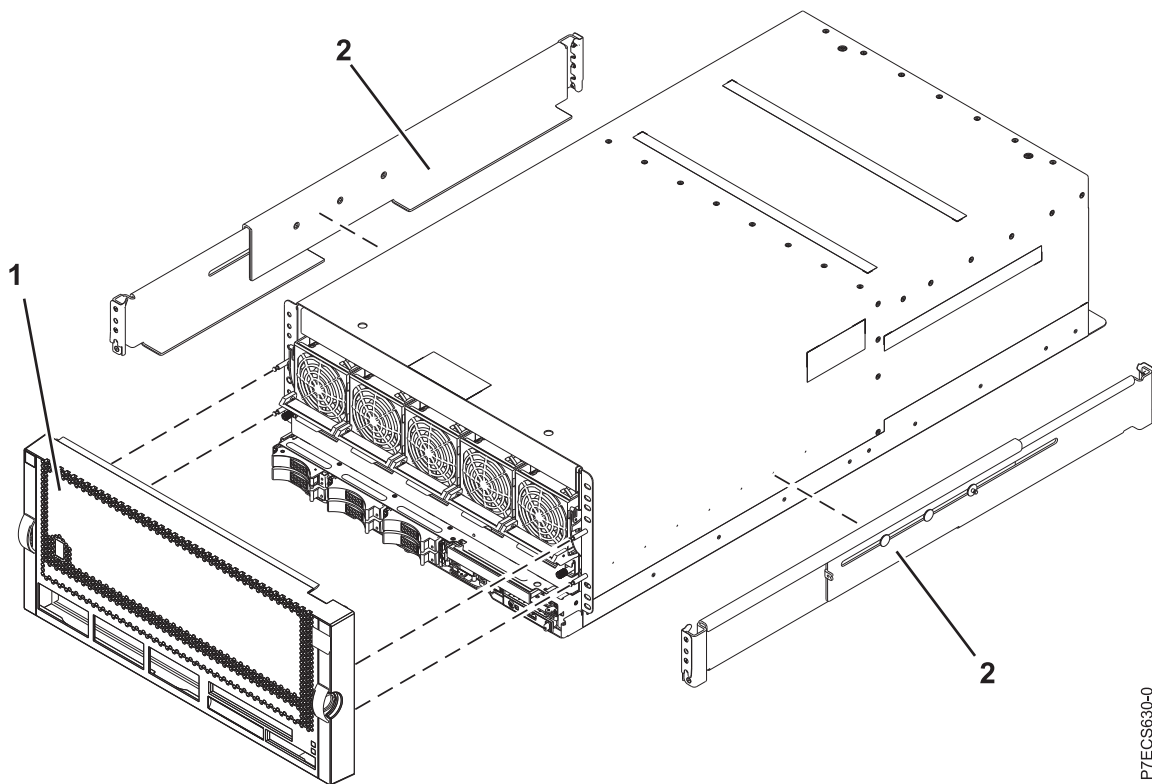
CCIN	Description	Part number
	PCI adapters	See Managing PCI adapters.
52B6	VPD card (8233-E8B)	46K6943
52CB	VPD card (8236-E8C)	46K8089
	Wrap plug	12R9314
	Wrap plug	03N6070
	Wrap plug	87H3439
	Wrap plug	87H3442
	Wrap plug	93H5270
	Wrap plug	87H3588
	Wrap plug	12R9315
	Wrap plug	42R4761
	Wrap plug	87H3311
	Wrap plug	33F8985
	Wrap plug	73H2508
	Power supply filler	44V4069
	Battery	16G8095

## 8248-L4T, 8408-E8D, or 9109-RMD system parts

Indexed drawings show system part numbers.

**Note:** When upgrading, make sure that the dual inline memory module (DIMM) is compatible with the firmware level of the system.

## Cover assemblies



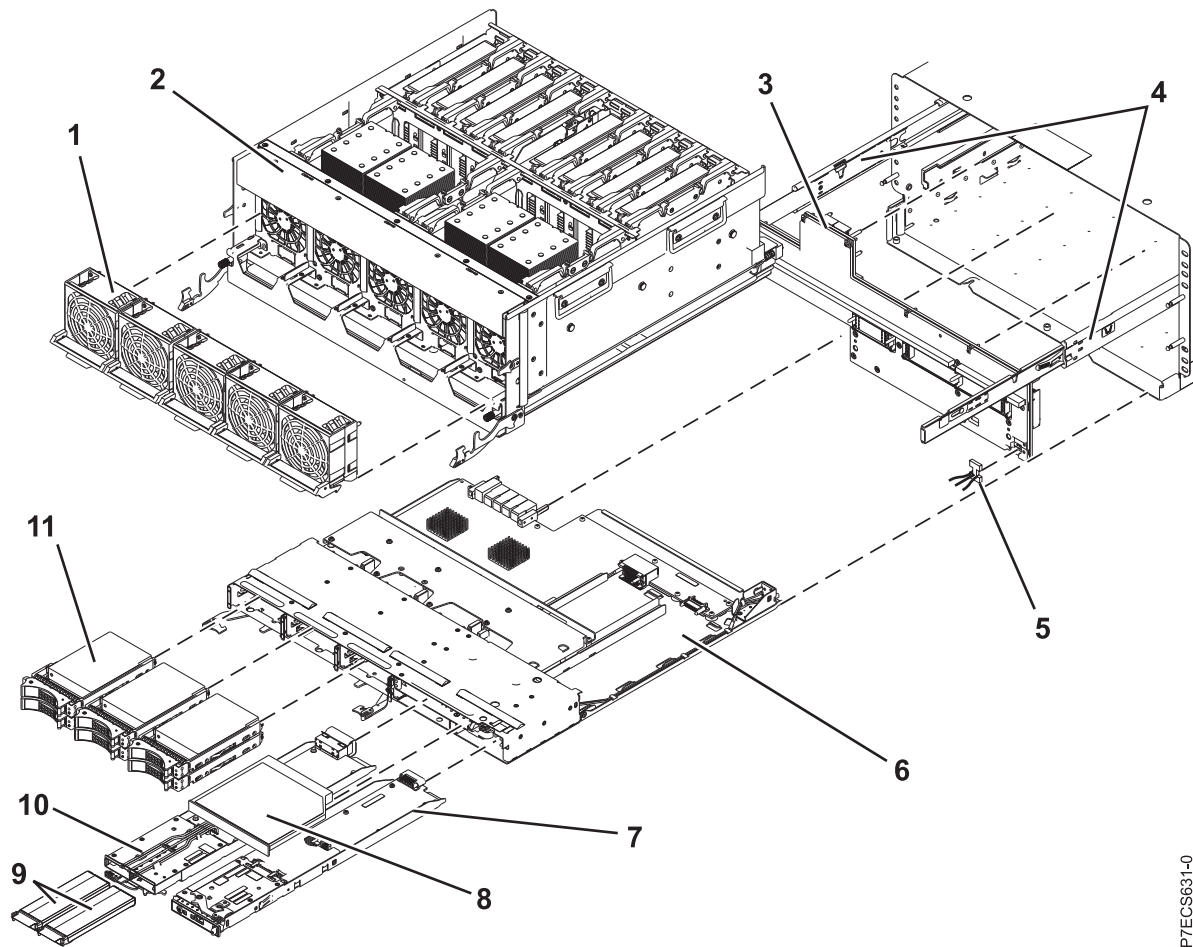
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Table 109. Cover assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1		00FW143	1	Front cover assembly (8248-L4T only)
1		00E6545	1	Front cover assembly (8408-E8D only)
1		00E8047	1	Front cover assembly (9109-RMD only)
1		00E7085	1	Front cover assembly (OEM)
2		46K6362	1	Rack rail kit



## Final assembly (front)



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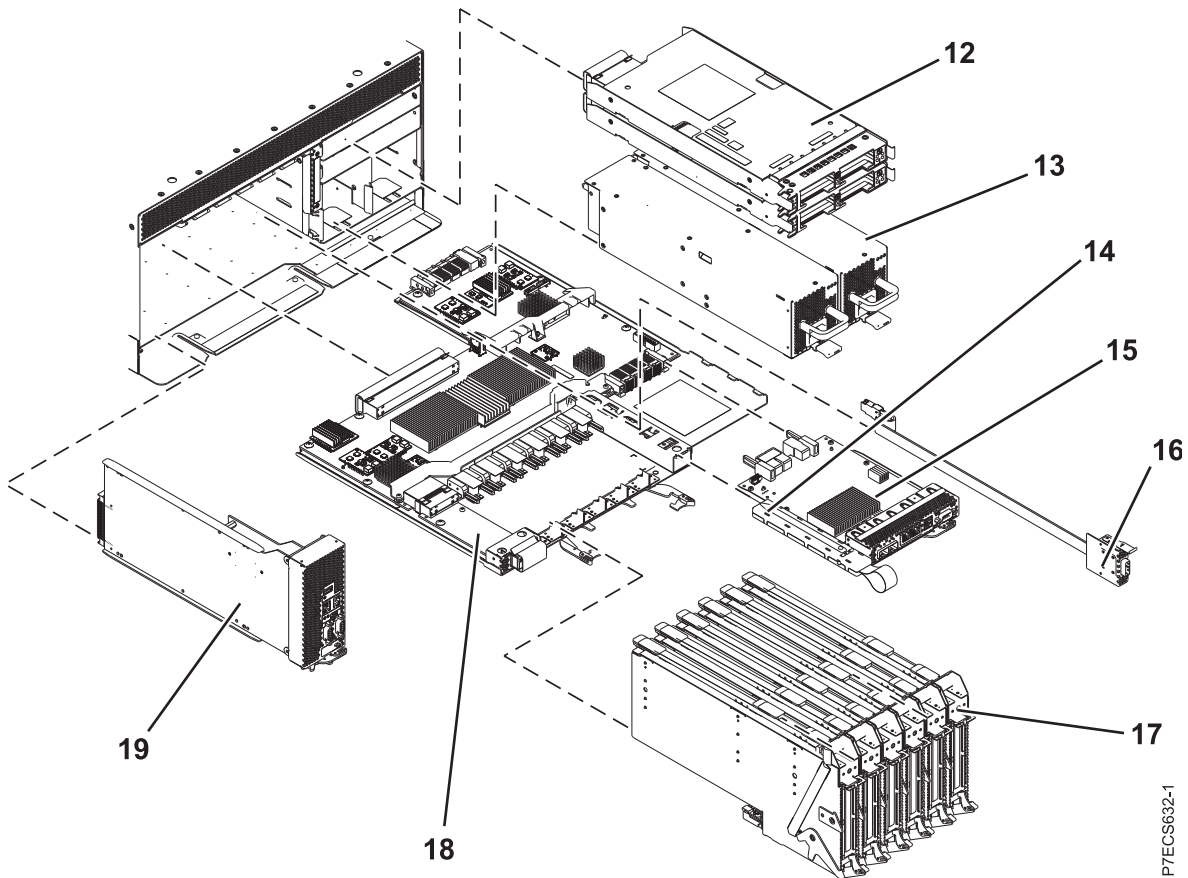
Table 110. Final assembly (front)

Index number	CCIN	Part number	Units per assembly	Description
1		00E7691	5	Fan assembly (single fan)
2	2B61	00E1385		System processor assembly
3	2B62	00E0957	1	Midplane
4		00E8717	1	System processor assembly guide rail kit
5		00E6658	1	Midplane light pipe
6	2BBE	00E7753	1	Small form factor SAS disk drive backplane with embedded SAS adapters <b>Note:</b> If feature code 5662 is not installed, the embedded SAS adapters report CCINs of 57C7. If feature code 5662 is installed, the embedded SAS adapters report CCINs of 57CF.
7	2B68	00E1636	1	Control panel
8			1	Media device. See Managing devices.
9		00E5725	2	Cache battery pack

Table 110. Final assembly (front) (continued)

Index number	CCIN	Part number	Units per assembly	Description
10	2BC2	00E5681	1	175 MB cache RAID and dual storage IOA enablement card <b>Note:</b> If feature code 5662 is installed, the embedded SAS adapters report CCINs of 57CF.
11			1 - 6	See Disk drive and solid-state drive system parts.

### Final assembly (rear)



P7ECS632-1

Table 111. Final assembly part numbers (rear)

Index number	CCIN	Part number	Units per assembly	Description
12	2BC3	73Y9518	2	I/O hub 12X adapter card
12	2B94	00E2818	2	GX++ 2-port PCIe2 x8 adapter
13	2BED	00E8277	2	Power supply 1925 W
14	52F4	00E1299	1	Vital product data (VPD) card (8408-E8D or 9109-RMD only)
14	560C	00E3153	1	Vital product data (VPD) card (8248-L4T only)
15	2B57	00E0784	1	Optical - 2 x 1 GbE and 2 x 10 GbE integrated multifunction card

Table 111. Final assembly part numbers (rear) (continued)

Index number	CCIN	Part number	Units per assembly	Description
15	2B56	00E0778	1	Twinaxial - 2 x 1 GbE and 2 x 10 GbE integrated multifunction card
15	2C4D	74Y3843	1	Optical - 2 x 10 GbE and 2 x 10 GbE integrated multifunction card
15	2C4C	74Y3832	1	Twinaxial - 2 x 10 GbE and 2 x 10 GbE integrated multifunction card
16		44V7563	0 - 1	Internal SAS cable for triple-split disk drive backplane
16		44V7564	0 - 1	Internal SAS cable for RAID
17		00E2031	6	PCIe blind swap cassette
17	4765	00E2033	6	PCIe blind swap cassette
18	2B65	00E2747	1	I/O backplane
19	2B67	00E3214	1	Service processor card

## Final assembly

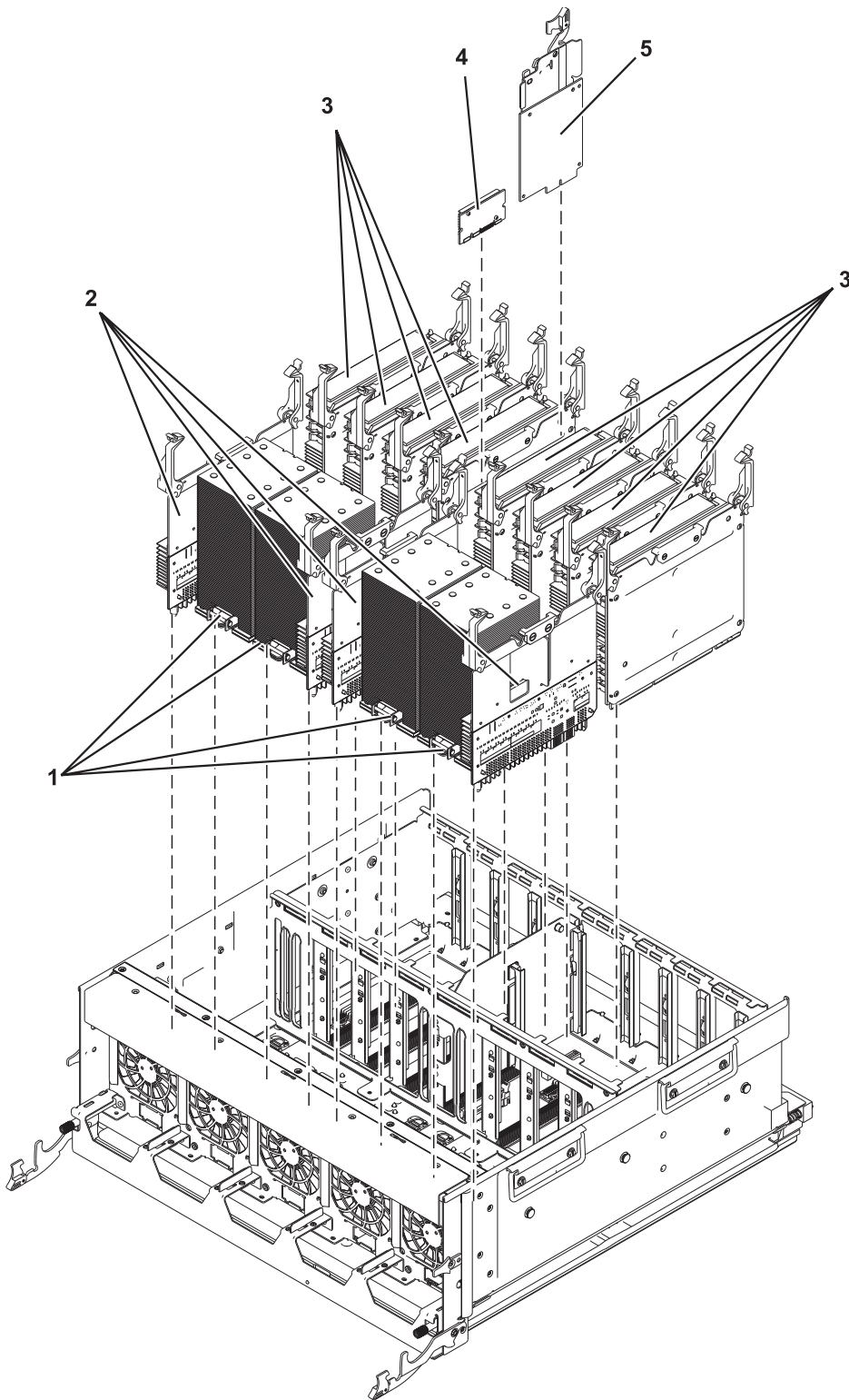


Table 112. Final assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1	54A1	00E8721	1 - 4	8 core 3.50 GHz processor card FRU kit (8408-E8D or 8248-L4T only)
1	54A3	00E8720	1 - 4	8 core 4.06 GHz processor card FRU kit (8408-E8D or 8248-L4T only)
1	548C	00E8718	1 - 4	12 core 3.14 GHz processor card FRU kit (9109-RMD only)
1	54A6	00E8719	1 - 4	12 core 3.42 GHz processor card FRU kit (9109-RMD only)
1		00E8868	As required	Heat sink
2	2B63	00E7689	4	Processor card regulator
3	2C1C	00E2097	1 - 8	Memory riser
3	31F3	78P0554	4 - 64	4 GB 1066 MHz DIMM
3	31FA	78P1914	4 - 64	8 GB 1066 MHz DIMM
3	31FB	78P1915	4 - 64	16 GB 1066 MHz DIMM
3	31F7	78P1539	4 - 64	32 GB 1066 MHz DIMM (8408-E8D or 9109-RMD only)
4	2B64	00E8923	1	Processor card regulator (memory)
5	2B49	74Y2939	1	Thermal and power management device (TPMD) card

Table 113. Miscellaneous parts

Description	Part number
Removable media	See Managing devices.
External cables and cords	See Planning for cables.
Cable configuration	See Enclosures and expansion units.
PCI adapters	See Managing PCI adapters.
Keyboard parts	See Keyboard parts.
Wrap plug	See Wrap plug.

## Disk drive and solid-state drive system parts

Disk drive and solid-state drive system parts information.

Table 114. System unit disk drive and solid-state drive system parts

CCIN	Part number	Description
58B0	44V6821**	69 GB small form factor solid-state SAS drive
58B3	00E6051* 74Y5294**	177 GB small form factor solid-state SAS drive
58B8	74Y9524*	387 GB small form factor solid-state SAS drive
59E6	00E8670*	387 GB small form factor solid-state SAS drive
5B0E	00LY322*	387 GB (528 block size) small form factor solid-state SAS drive
59C0	00E8702*	775 GB small form factor solid-state SAS drive
59EA	00E8671*	775 GB small form factor solid-state SAS drive

Table 114. System unit disk drive and solid-state drive system parts (continued)

CCIN	Part number	Description
5B0F	00LY323*	775 GB (528 block size) small form factor solid-state SAS drive
198B	00E6165* 44V4429**	69 GB 15K small form factor SAS disk drive (IBM i)
6600	42R8391**	73 GB 10K small form factor SAS disk drive (AIX and Linux)
198B	00E6168* 44V4426**	73 GB 15K small form factor SAS disk drive (AIX and Linux)
198C	00E6166* 44V6844**	139 GB 15K small form factor SAS disk drive (IBM i)
169C	42R8392**	146 GB 10K small form factor SAS disk drive (AIX and Linux)
198C	00E6169* 44V6845**	146 GB 15K small form factor SAS disk drive (AIX and Linux)
198D	00E6164* 74Y4896**	283 GB 10K small form factor SAS disk drive (IBM i)
19A1	74Y6495*	283 GB 15K small form factor SAS disk drive (IBM i)
59E0	00E9906*	283 GB 15K small form factor SAS disk drive (IBM i)
59E1	00E9966*	283 GB 15K small form factor SAS disk drive (IBM i)
198D	00E6167* 44V6833**	300 GB 10K small form factor SAS disk drive (AIX and Linux)
19A1	74Y6496*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
59E0	00E9912*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
59E1	00E9972*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19A3	74Y4897*	571 GB 10K small form factor SAS disk drive (IBM i)
59CE	00E8648*	571 GB 15K small form factor SAS disk drive (IBM i)
59E4	00E9908*	571 GB 15K small form factor SAS disk drive (IBM i)
59E5	00E9968*	571 GB 15K small form factor SAS disk drive (IBM i)
19A3	74Y4900*	600 GB 10K small form factor SAS disk drive (AIX and Linux)
59CE	00E8653*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59E4	00E9914*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59E5	00E9974*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
19A4	74Y9271*	857 GB 10K small form factor SAS disk drive (IBM i)
19A4	74Y9272*	900 GB 10K small form factor SAS disk drive (AIX and Linux)
59C8	00E8606*	1.14 TB 10K small form factor SAS disk drive (IBM i)
59C8	00E8614*	1.2 TB 10K small form factor SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 115. 5886 disk drive and solid-state drive system parts

CCIN	Part number	Description
58B0	44V6819**	3.5-inch 69 GB solid-state SAS drive
433B	42R6690*	3.5-inch 69 GB 15K SAS disk drive (IBM i)
433B	10N7230*	3.5-inch 73.4 GB 15K SAS disk drive (AIX and Linux)
433C	42R6691*	3.5-inch 139 GB 15K SAS disk drive (IBM i)
433C	10N7232*	3.5-inch 146.8 GB 15K SAS disk drive (AIX and Linux)
433D	42R6692*	3.5-inch 283 GB 15K SAS disk drive (IBM i)
433D	10N7234*	3.5-inch 300 GB 15K SAS disk drive (AIX and Linux)
198E	44V4434*	3.5-inch 428 GB 15K SAS disk drive (IBM i)
198E	44V4432*	3.5-inch 450 GB 15K SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 116. 5887 disk drive and solid-state drive system parts

CCIN	Part number	Description
58B4	00E6053*	177 GB small form factor solid-state SAS drive
	74Y5296**	
58B9	74Y9526*	387 GB solid-state SAS drive
5B10	00LY336*	387 GB (4K block size) small form factor solid-state SAS drive
59C2	00E8709*	775 GB small form factor solid-state SAS drive
5B11	00LY337*	775 GB (4K block size) small form factor solid-state SAS drive
5B12	00LY338*	1551 GB (4K block size) small form factor solid-state SAS drive
5B16	00LY327*	387 GB (528 block size) small form factor solid-state SAS drive
5B17	00LY328*	775 GB (528 block size) small form factor solid-state SAS drive
19B0	00E6171*	139 GB 15K small form factor SAS disk drive (IBM i)
	46K4804**	
19B0	00E6173*	146 GB 15K small form factor SAS disk drive (AIX and Linux)
	46K4806**	
19B1	74Y6497*	283 GB 15K small form factor SAS disk drive (IBM i)
19B1	74Y6498*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19B7	00E6170*	283 GB 10K small form factor SAS disk drive (IBM i)
	74Y4898**	
59C9	00E8681*	283 GB 15K small form factor SAS disk drive (IBM i)
19B7	00E6172*	300 GB 10K small form factor SAS disk drive (AIX and Linux)
	46K4812**	
59C9	00E8687*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19B3	74Y4899*	571 GB 10K small form factor SAS disk drive (IBM i)
59CF	00E8660*	571 GB 15K small form factor SAS disk drive (IBM i)
59CC	00E8683*	571 GB 15K small form factor SAS disk drive (IBM i)

Table 116. 5887 disk drive and solid-state drive system parts (continued)

CCIN	Part number	Description
19B3	74Y4901*	600 GB 10K small form factor SAS disk drive (AIX and Linux)
59CF	00E8665*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59CC	00E8689*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
19B4	74Y9285*	857 GB 10K small form factor SAS disk drive (IBM i)
19B4	74Y9286*	900 GB 10K small form factor SAS disk drive (AIX and Linux)
59CD	00E8623*	1.14 TB 10K small form factor SAS disk drive (IBM i)
59CD	00E8631*	1.2 TB 10K small form factor SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 117. 5888 and EDR1 disk drive and solid-state drive system parts

CCIN	Part number	Description
58BB	00V5433*	1.8 inch 387 GB solid-state SAS drive
59BE	00E8692*	1.8 inch 387 GB solid-state SAS drive

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

## Keyboard parts

Keyboard parts information.

Table 118. Keyboard parts

Description	Part number
Keyboard, Arabic	10N9442
Keyboard, Belgium, and UK	10N9427
Keyboard, Brazilian Portuguese	10N9421
Keyboard, Bulgaria	10N9430
Keyboard, China	10N9424
Keyboard, Czechoslovakian	10N9439
Keyboard, Danish	10N9429
Keyboard, Dutch	10N9433
Keyboard, French	10N9415
Keyboard, French Canadian	10N9425
Keyboard, German/Austrian	10N9417
Keyboard, Greek	10N9435
Keyboard, Hebrew	10N9436
Keyboard, Hungarian	10N9422



Table 118. Keyboard parts (continued)

Description	Part number
Keyboard, Italian	10N9416
Keyboard, Japanese	10N9420
Keyboard, Korea	10N9423
Keyboard, Latin American (Spanish)	10N9441
Keyboard, Norwegian	10N9432
Keyboard, Portuguese	10N9434
Keyboard, Polish	10N9437
Keyboard, Russian	10N9444
Keyboard, Slovak	10N9438
Keyboard, Slovenia	10N9445
Keyboard, Spanish	10N9419
Keyboard, Sweden, and Finland	10N9428
Keyboard, Swiss, French, and German	10N9431
Keyboard, Thailand	10N9443
Keyboard, Turkish	10N9440
Keyboard, UK English	10N9418
Keyboard, US English	10N9414
Keyboard, US or Europe	10N9446

## Wrap plug parts

Wrap plug information.

Table 119. Wrap plug

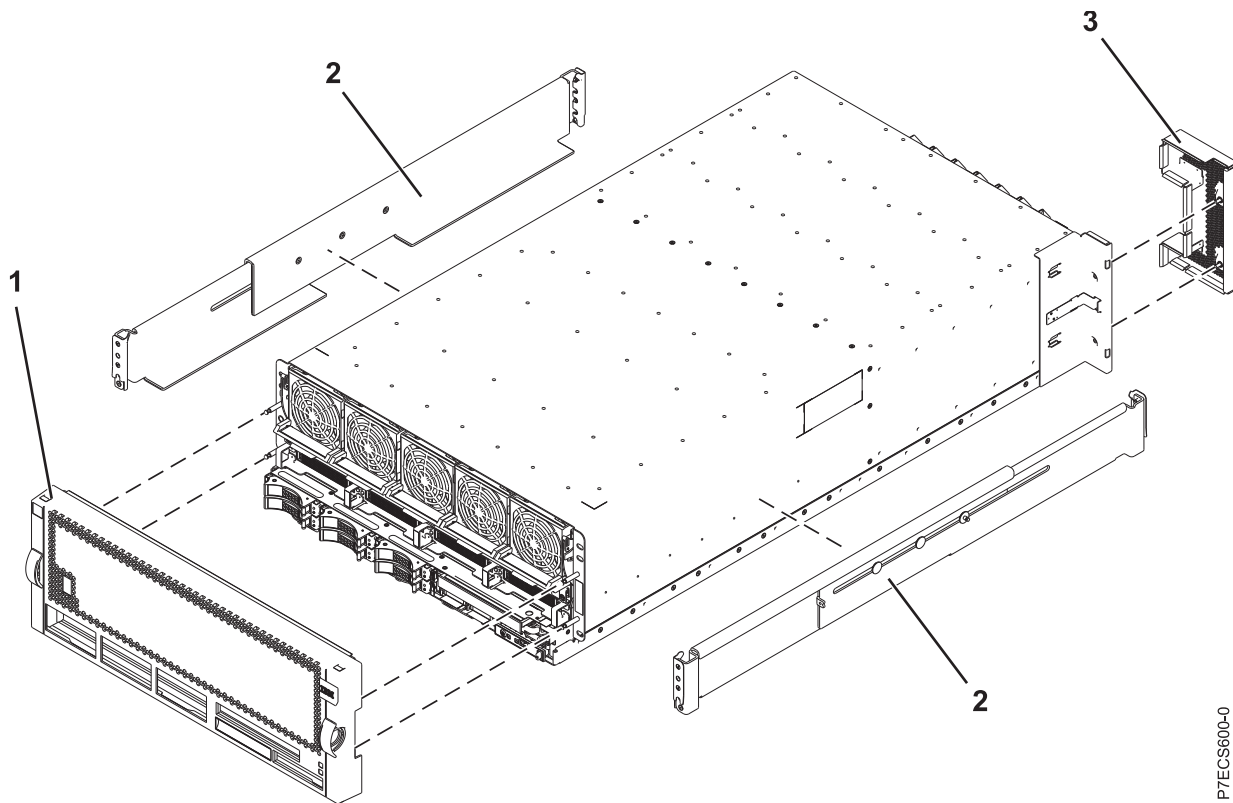
Description	Part number
Wrap plug	12R9314
	12R9315
	42R4761
	6165899
	73H2508
	87H3311
	87H3439
	87H3442
	93H5270
	03N6070

## 9117-MMB and 9179-MHB system parts

Indexed drawings show system part numbers.

**Note:** When upgrading, make sure DIMM is compatible with the firmware level of the system.

## Cover assemblies

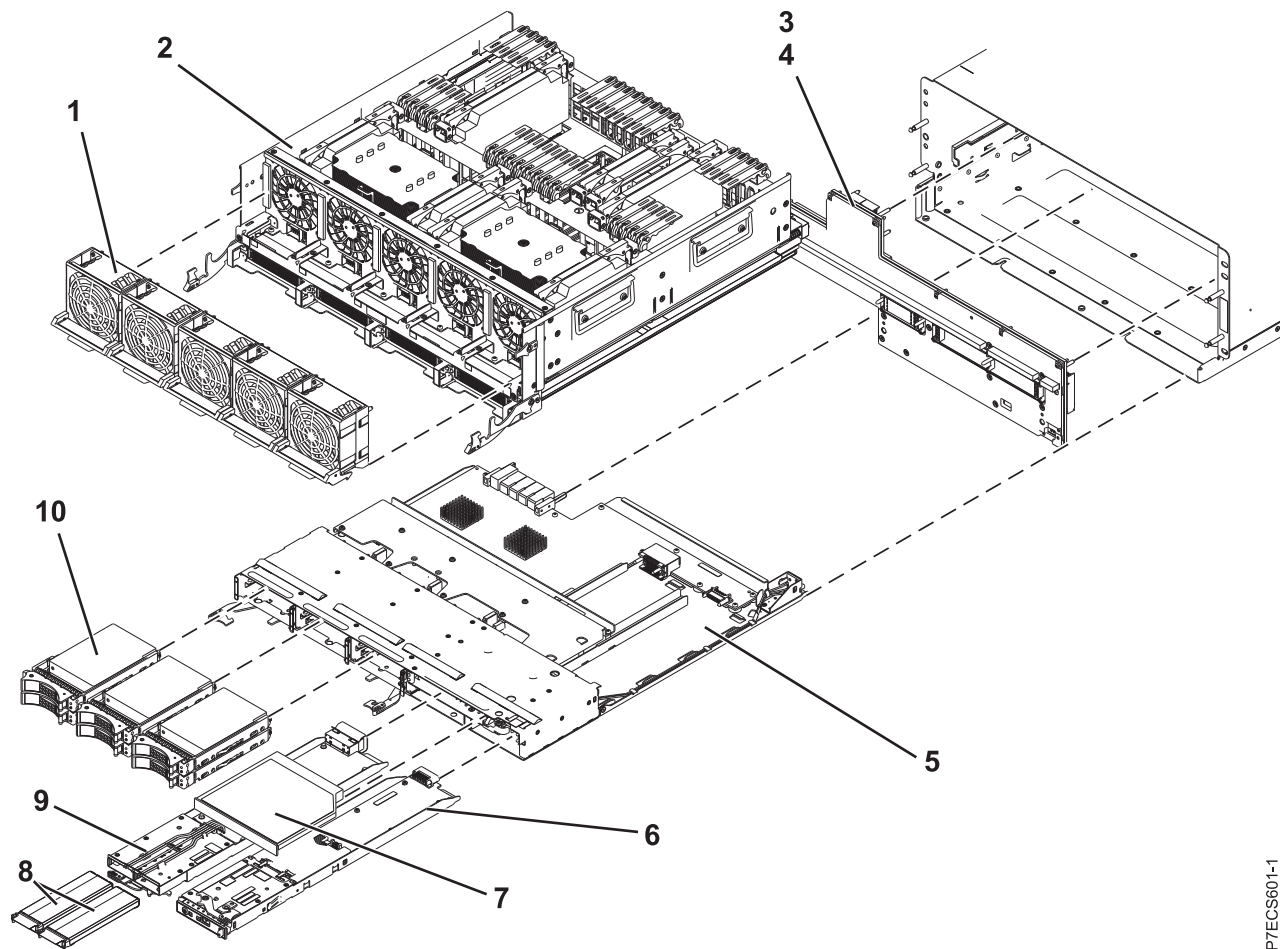


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Table 120. Cover assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1		44V7403	1	Front cover assembly (9117-MMB)
1		46K6220	1	Front cover assembly (9179-MHB)
2		46K6362	1	Rack rail kit
3		46K5179	1	FSP cover plate

## Final assembly (front)



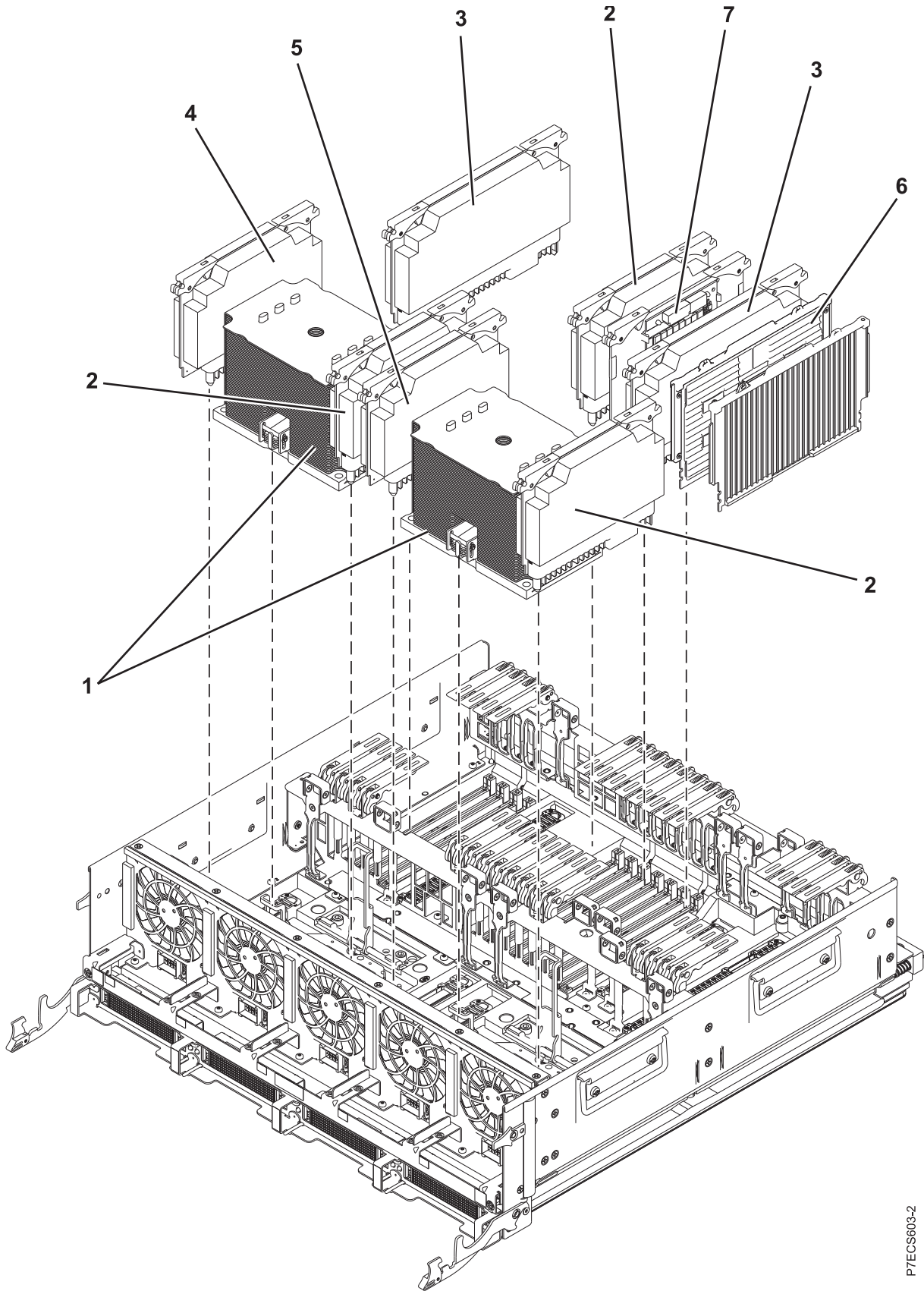
P7ECS601-1

Table 121. Final assembly (front)

Index number	CCIN	Part number	Units per assembly	Description
1		46K4939	5	Fan assembly (single fan)
2	497B	74Y5976	1	System processor assembly FRU kit (9117-MMB and 9179-MHB)
3		74Y1747	1	Mid-plane
4		46K4625	1	Mid-plane light pipe
5	2BBE	74Y5511	1	Small form factor SAS disk drive backplane with embedded SAS adapters <b>Note:</b> If feature code 5662 is not installed, the embedded SAS adapters report CCINs of 57C7. If feature code 5662 is installed the embedded SAS adapters report CCINs of 57CF.
6		74Y5685	1	Op panel
7		44V4220	1	Removable media
8		42R8705	2	Cache battery pack

Table 121. Final assembly (front) (continued)

Index number	CCIN	Part number	Units per assembly	Description
9	2BC2	74Y6441	1	175 MB cache RAID and dual storage IOA enablement card <b>Note:</b> If feature code 5662 is installed the embedded SAS adapters report CCINs of 57CF.
10			1 - 6	See Disk drive and solid-state drive system parts.

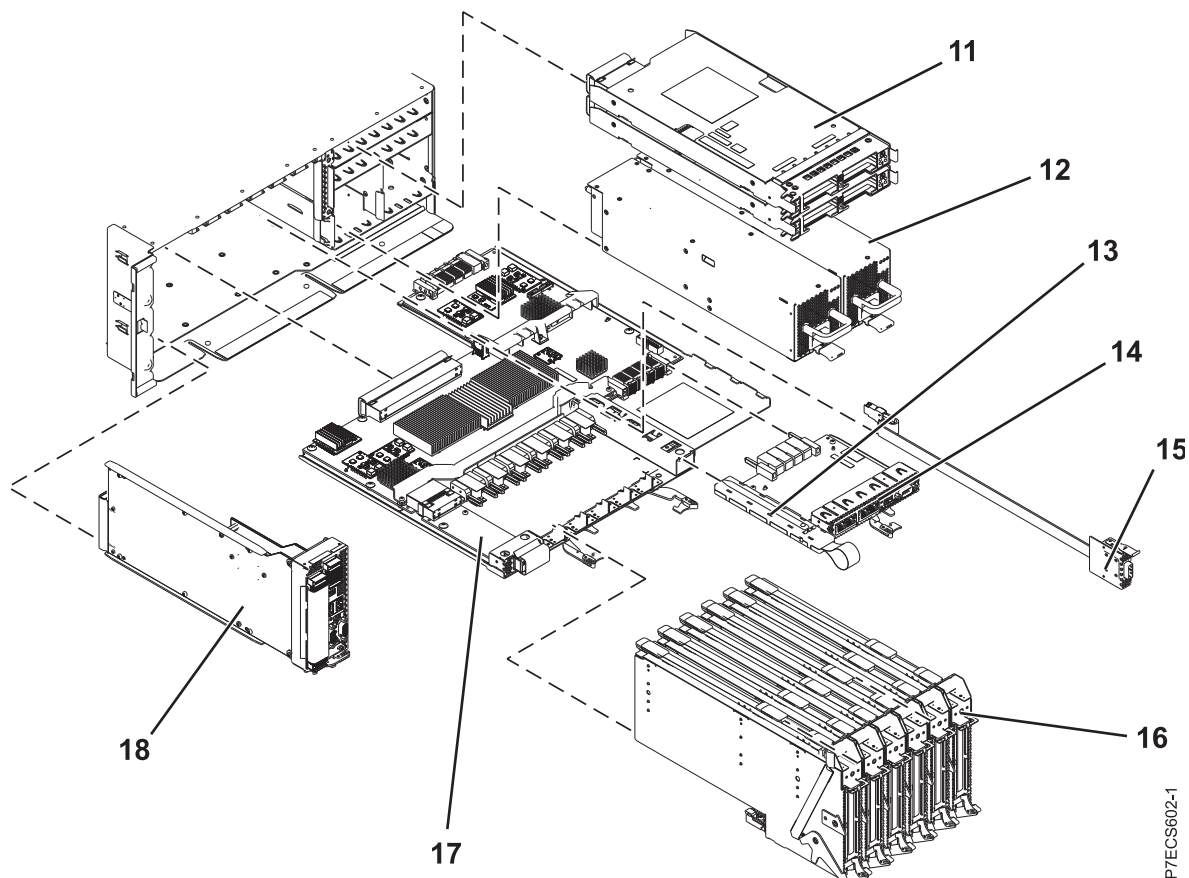


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Table 122. Final assembly part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
1	536C	74Y4915	2	6 core 3.5 GHz processor card FRU kit (9117-MMB)
1	536D	74Y4914	2	8 core 3.1 GHz processor card FRU kit (9117-MMB)
1	536E	74Y4913	2	8 core 3.86 GHz processor card FRU kit (9179-MHB)
2	2BC7	46K5854	3	Processor voltage regulator module (VRM)
3	2BC8	46K5856	2	Memory VRM
4	2BC9	46K5858	1	Processor card regulator 1 (40P)
5	2BCA	46K5860	1	Processor card regulator 3 (20P)
6	31CB	45D7238	4-16	8 GB 1066 MHz DIMM
6	31D4	45D5670	4-16	8 GB 1066 MHz DIMM
6	31CC	45D7242	4-16	16 GB 1066 MHz DIMM
6	31D5	45D5674	4-16	16 GB 1066 MHz DIMM
6	31D6	45D8424	4-16	32 GB 1066 MHz DIMM
7	2A14	46K7288	1	TPMD card

### Final assembly (back)



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Table 123. Assembly

Index number	CCIN	Part number	Units per assembly	Description
11	2BC3	45D7063	2	IO Hub 12X adapter card
12		74Y4926	2	Power supply 1725 W
13	52B7	46K8127	1	VPD card
14	2BC4	46K5965	1	4 x 1 GbE Host Ethernet Adapter card
14	2BDC	46K5538	1	Optical - 2 x 1 GbE and 2 x 10 GbE Host Ethernet Adapter card
14	2BC6	46K5534	1	TwinAx - 2 x 1 GbE and 2 x 10 GbE Host Ethernet Adapter card
15		44V7563	0-1	Internal SAS cable for triple split disk drive backplane
15		44V7564	0-1	Internal SAS cable for RAID
16		46K5440	6	PCIe blind swap cassette
17	2BB9	44V5668	1	I/O backplane
18	2BBB	74Y2418	1	FSP card (drawers 1 and 2)
18	2BBC	44V8599	1	FSP Passthru card (drawers 3 and 4)

Table 124. Cables

CCIN	Description	Part number
	SMP left short 2 cable	44V6211
	SMP right short 2 cable	44V6212
	SMP left long 2 cable	44V6213
	SMP right long 2 cable	44V6214
	SMP left 3 drawer cable	44V7639
	SMP right 3 drawer cable	44V7641
	SMP left 4 drawer cable	44V7643
	FSP 2 drawer cable	44V6218
	FSP 3 drawer cable	44V6219
	FSP 4 drawer cable	44V6220

Table 125. Miscellaneous parts

Description	Part number
Removable media	See Managing devices.
External cables and cords	See Planning for cables.
Cable configuration	See Enclosures and expansion units.
PCI adapters	See Managing PCI adapters.
Wrap plug	See Wrap plug.
Time-of-day battery	016G8095
Keyboard parts	See Keyboard parts.

## Disk drive and solid-state drive system parts

Disk drive and solid-state drive system parts information.

Table 126. System unit disk drive and solid-state drive system parts

CCIN	Part number	Description
58B0	44V6821**	69 GB small form factor solid-state SAS drive
58B3	00E6051* 74Y5294**	177 GB small form factor solid-state SAS drive
58B8	74Y9524*	387 GB small form factor solid-state SAS drive
59E6	00E8670*	387 GB small form factor solid-state SAS drive
5B0E	00LY322*	387 GB (528 block size) small form factor solid-state SAS drive
59C0	00E8702*	775 GB small form factor solid-state SAS drive
59EA	00E8671*	775 GB small form factor solid-state SAS drive
5B0F	00LY323*	775 GB (528 block size) small form factor solid-state SAS drive
198B	00E6165* 44V4429**	69 GB 15K small form factor SAS disk drive (IBM i)
6600	42R8391**	73 GB 10K small form factor SAS disk drive (AIX and Linux)
198B	00E6168* 44V4426**	73 GB 15K small form factor SAS disk drive (AIX and Linux)
198C	00E6166* 44V6844**	139 GB 15K small form factor SAS disk drive (IBM i)
169C	42R8392**	146 GB 10K small form factor SAS disk drive (AIX and Linux)
198C	00E6169* 44V6845**	146 GB 15K small form factor SAS disk drive (AIX and Linux)
198D	00E6164* 74Y4896**	283 GB 10K small form factor SAS disk drive (IBM i)
19A1	74Y6495*	283 GB 15K small form factor SAS disk drive (IBM i)
59E0	00E9906*	283 GB 15K small form factor SAS disk drive (IBM i)
59E1	00E9966*	283 GB 15K small form factor SAS disk drive (IBM i)
198D	00E6167* 44V6833**	300 GB 10K small form factor SAS disk drive (AIX and Linux)
19A1	74Y6496*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
59E0	00E9912*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
59E1	00E9972*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19A3	74Y4897*	571 GB 10K small form factor SAS disk drive (IBM i)
59CE	00E8648*	571 GB 15K small form factor SAS disk drive (IBM i)
59E4	00E9908*	571 GB 15K small form factor SAS disk drive (IBM i)
59E5	00E9968*	571 GB 15K small form factor SAS disk drive (IBM i)
19A3	74Y4900*	600 GB 10K small form factor SAS disk drive (AIX and Linux)
59CE	00E8653*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59E4	00E9914*	600 GB 15K small form factor SAS disk drive (AIX and Linux)



Table 126. System unit disk drive and solid-state drive system parts (continued)

CCIN	Part number	Description
59E5	00E9974*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
19A4	74Y9271*	857 GB 10K small form factor SAS disk drive (IBM i)
19A4	74Y9272*	900 GB 10K small form factor SAS disk drive (AIX and Linux)
59C8	00E8606*	1.14 TB 10K small form factor SAS disk drive (IBM i)
59C8	00E8614*	1.2 TB 10K small form factor SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 127. 5886 disk drive and solid-state drive system parts

CCIN	Part number	Description
58B0	44V6819**	3.5-inch 69 GB solid-state SAS drive
433B	42R6690*	3.5-inch 69 GB 15K SAS disk drive (IBM i)
433B	10N7230*	3.5-inch 73.4 GB 15K SAS disk drive (AIX and Linux)
433C	42R6691*	3.5-inch 139 GB 15K SAS disk drive (IBM i)
433C	10N7232*	3.5-inch 146.8 GB 15K SAS disk drive (AIX and Linux)
433D	42R6692*	3.5-inch 283 GB 15K SAS disk drive (IBM i)
433D	10N7234*	3.5-inch 300 GB 15K SAS disk drive (AIX and Linux)
198E	44V4434*	3.5-inch 428 GB 15K SAS disk drive (IBM i)
198E	44V4432*	3.5-inch 450 GB 15K SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 128. 5887 disk drive and solid-state drive system parts

CCIN	Part number	Description
58B4	00E6053*	177 GB small form factor solid-state SAS drive
	74Y5296**	
58B9	74Y9526*	387 GB solid-state SAS drive
5B10	00LY336*	387 GB (4K block size) small form factor solid-state SAS drive
59C2	00E8709*	775 GB small form factor solid-state SAS drive
5B11	00LY337*	775 GB (4K block size) small form factor solid-state SAS drive
5B12	00LY338*	1551 GB (4K block size) small form factor solid-state SAS drive
5B16	00LY327*	387 GB (528 block size) small form factor solid-state SAS drive
5B17	00LY328*	775 GB (528 block size) small form factor solid-state SAS drive
19B0	00E6171*	139 GB 15K small form factor SAS disk drive (IBM i)
	46K4804**	
19B0	00E6173*	146 GB 15K small form factor SAS disk drive (AIX and Linux)
	46K4806**	

Table 128. 5887 disk drive and solid-state drive system parts (continued)

CCIN	Part number	Description
19B1	74Y6497*	283 GB 15K small form factor SAS disk drive (IBM i)
19B1	74Y6498*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19B7	00E6170*	283 GB 10K small form factor SAS disk drive (IBM i)
	74Y4898**	
59C9	00E8681*	283 GB 15K small form factor SAS disk drive (IBM i)
19B7	00E6172*	300 GB 10K small form factor SAS disk drive (AIX and Linux)
	46K4812**	
59C9	00E8687*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19B3	74Y4899*	571 GB 10K small form factor SAS disk drive (IBM i)
59CF	00E8660*	571 GB 15K small form factor SAS disk drive (IBM i)
59CC	00E8683*	571 GB 15K small form factor SAS disk drive (IBM i)
19B3	74Y4901*	600 GB 10K small form factor SAS disk drive (AIX and Linux)
59CF	00E8665*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59CC	00E8689*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
19B4	74Y9285*	857 GB 10K small form factor SAS disk drive (IBM i)
19B4	74Y9286*	900 GB 10K small form factor SAS disk drive (AIX and Linux)
59CD	00E8623*	1.14 TB 10K small form factor SAS disk drive (IBM i)
59CD	00E8631*	1.2 TB 10K small form factor SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 129. 5888 and EDR1 disk drive and solid-state drive system parts

CCIN	Part number	Description
58BB	00V5433*	1.8 inch 387 GB solid-state SAS drive
59BE	00E8692*	1.8 inch 387 GB solid-state SAS drive

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

## Keyboard parts

Keyboard parts information.

Table 130. Keyboard parts

Description	Part number
Keyboard, Arabic	10N9442
Keyboard, Belgium, and UK	10N9427

Table 130. Keyboard parts (continued)

Description	Part number
Keyboard, Brazilian Portuguese	10N9421
Keyboard, Bulgaria	10N9430
Keyboard, China	10N9424
Keyboard, Czechoslovakian	10N9439
Keyboard, Danish	10N9429
Keyboard, Dutch	10N9433
Keyboard, French	10N9415
Keyboard, French Canadian	10N9425
Keyboard, German/Austrian	10N9417
Keyboard, Greek	10N9435
Keyboard, Hebrew	10N9436
Keyboard, Hungarian	10N9422
Keyboard, Italian	10N9416
Keyboard, Japanese	10N9420
Keyboard, Korea	10N9423
Keyboard, Latin American (Spanish)	10N9441
Keyboard, Norwegian	10N9432
Keyboard, Portuguese	10N9434
Keyboard, Polish	10N9437
Keyboard, Russian	10N9444
Keyboard, Slovak	10N9438
Keyboard, Slovenia	10N9445
Keyboard, Spanish	10N9419
Keyboard, Sweden, and Finland	10N9428
Keyboard, Swiss, French, and German	10N9431
Keyboard, Thailand	10N9443
Keyboard, Turkish	10N9440
Keyboard, UK English	10N9418
Keyboard, US English	10N9414
Keyboard, US or Europe	10N9446

## Wrap plug parts

Wrap plug information.

Table 131. Wrap plug

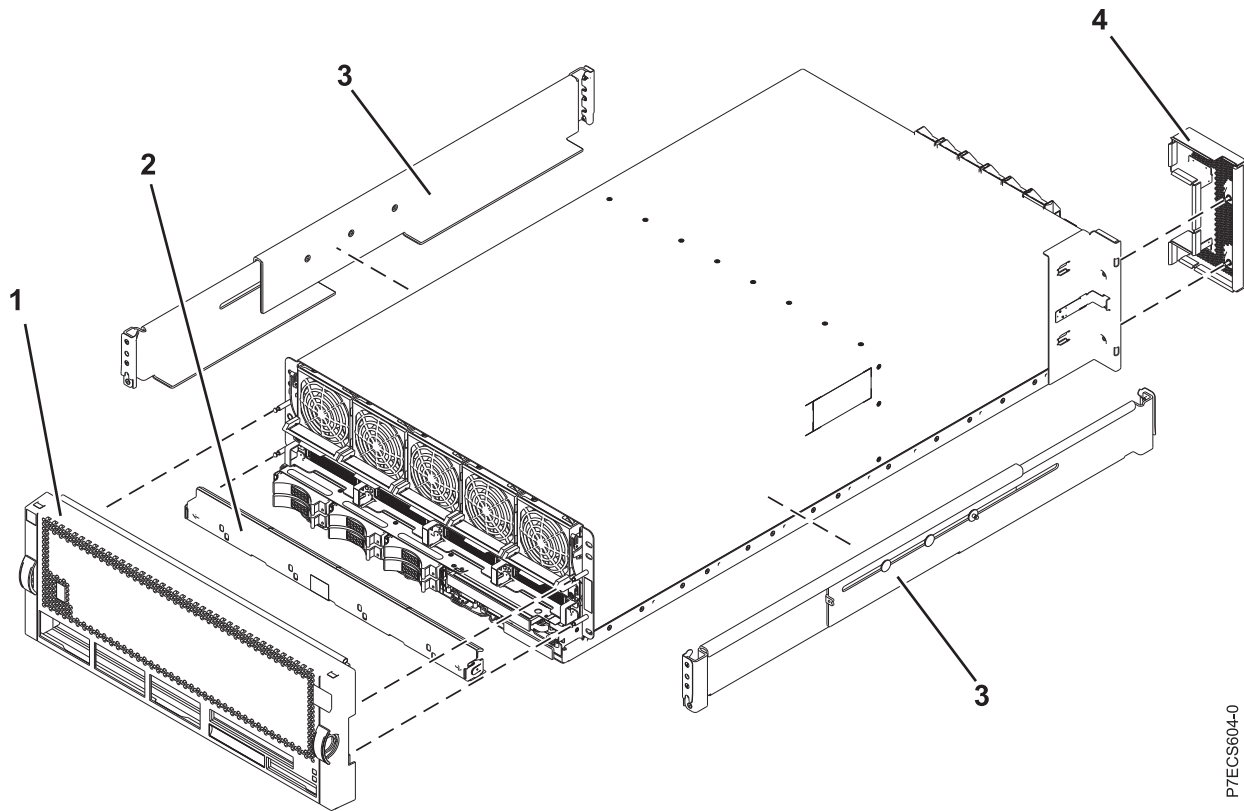
Description	Part number
Wrap plug	12R9314
	12R9315
	42R4761
	6165899
	73H2508
	87H3311
	87H3439
	87H3442
	93H5270
03N6070	

## 8412-EAD, 9117-MMC, 9117-MMD, 9179-MHC, or 9179-MHD system parts

Indexed drawings show system part numbers.

**Note:** When upgrading, make sure that the Dual inline memory module (DIMM) is compatible with the firmware level of the system.

## Cover assemblies

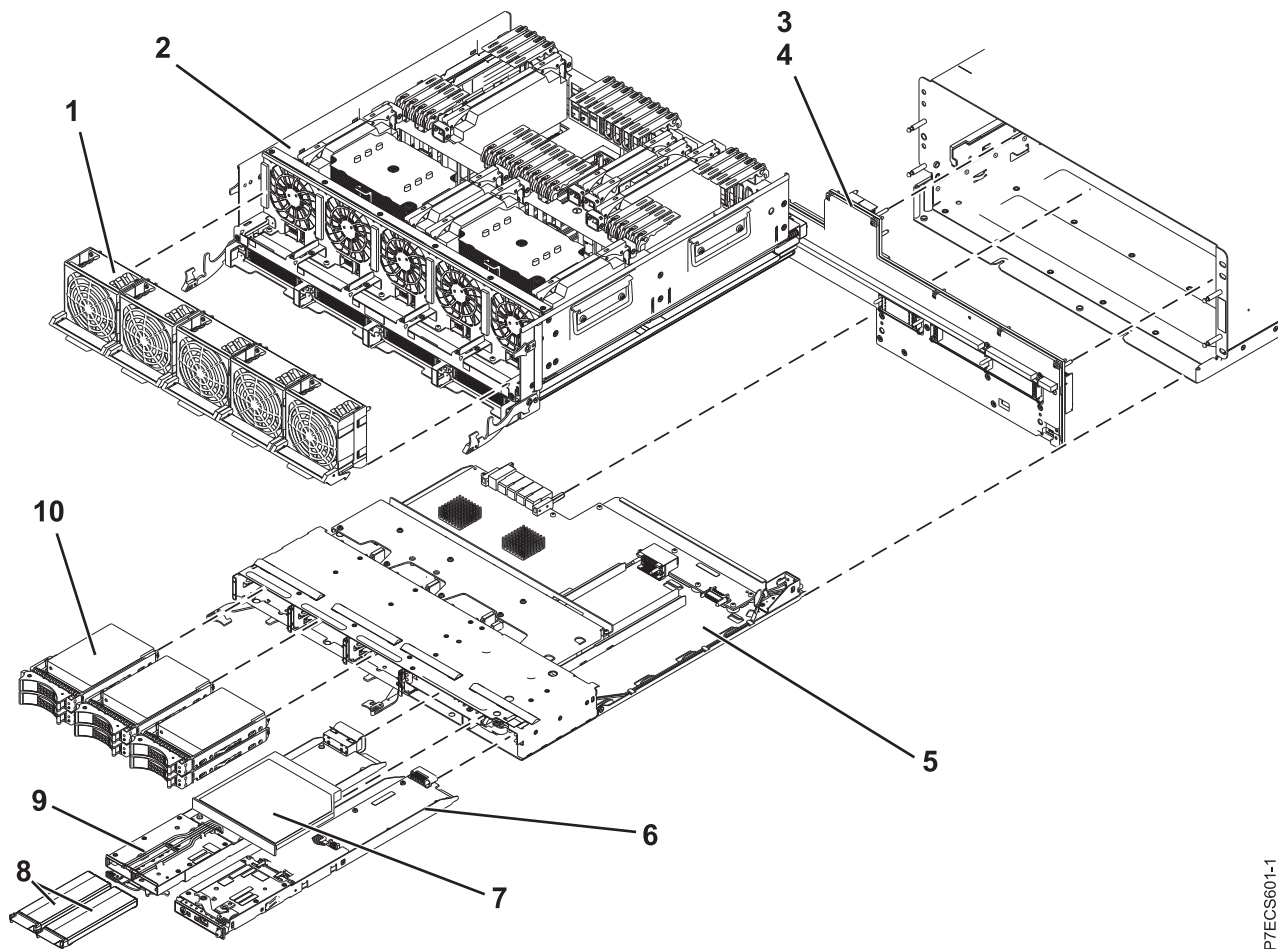


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Table 132. Cover assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1		00FW205	1	Front cover assembly (8412-EAD)
1		74Y9542	1	Front cover assembly (9117-MMC and 9117-MMD)
1		74Y9543	1	Front cover assembly (9179-MHC and 9179-MHD)
1		74Y9544	1	Front cover assembly (OEM)
2		00J0038	1	ESD shield assembly
3		46K6362	1	Rack rail kit
4		46K5179	1	FSP cover plate

## Final assembly (9117-MMC or 9179-MHC with two-processor system unit)



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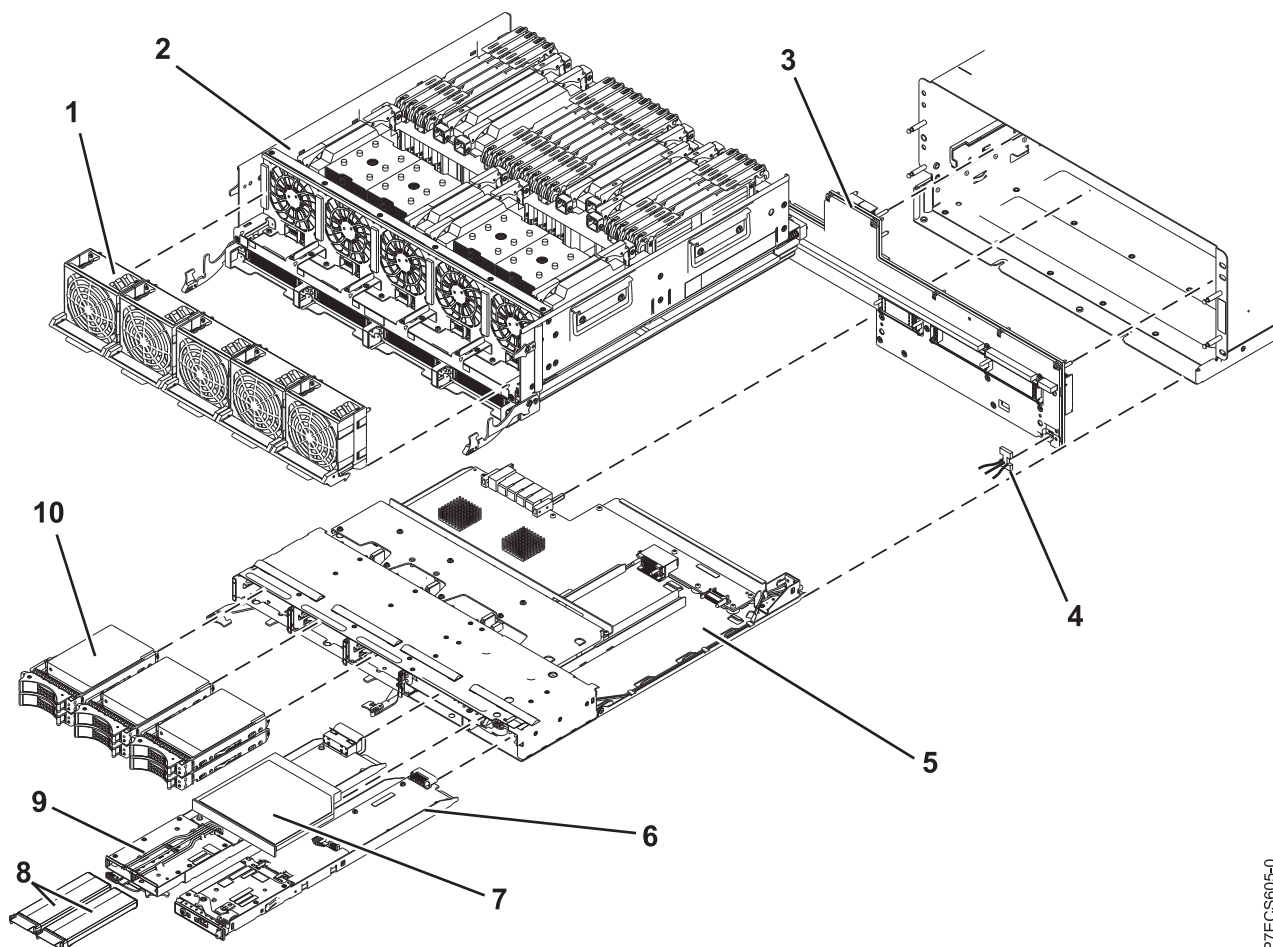
Table 133. Final assembly (front)

Index number	CCIN	Part number	Units per assembly	Description
1		74Y9391	5	Fan assembly (single fan)
2	497B	00E0699	1	System processor assembly FRU kit (9117-MMC and 9179-MHC with two-processor system unit)
3	2BBD	74Y3890	1	Mid-plane
4		00E6658	1	Mid-plane light pipe
5	2BBE	74Y9514	1	Small form factor SAS disk drive backplane with embedded SAS adapters <b>Note:</b> If feature code 5662 is not installed, the embedded SAS adapters report CCINs of 57C7. If feature code 5662 is installed, the embedded SAS adapters report CCINs of 57CF.
6	2B9F	74Y3957	1	Control panel
7			1	DVD drive. See Managing DVD drives.
8		00E5725	2	Cache battery pack

Table 133. Final assembly (front) (continued)

Index number	CCIN	Part number	Units per assembly	Description
9	2BC2	00E5681	1	175 MB cache RAID and dual storage IOA enablement card <b>Note:</b> If feature code 5662 is installed, the embedded SAS adapters report CCINs of 57CF.
10				See Disk drive and solid-state drive system parts.

**Final assembly (8412-EAD, 9117-MMD, 9179-MHC with four-processor system unit, or 9179-MHD)**



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Table 134. Final assembly (front)

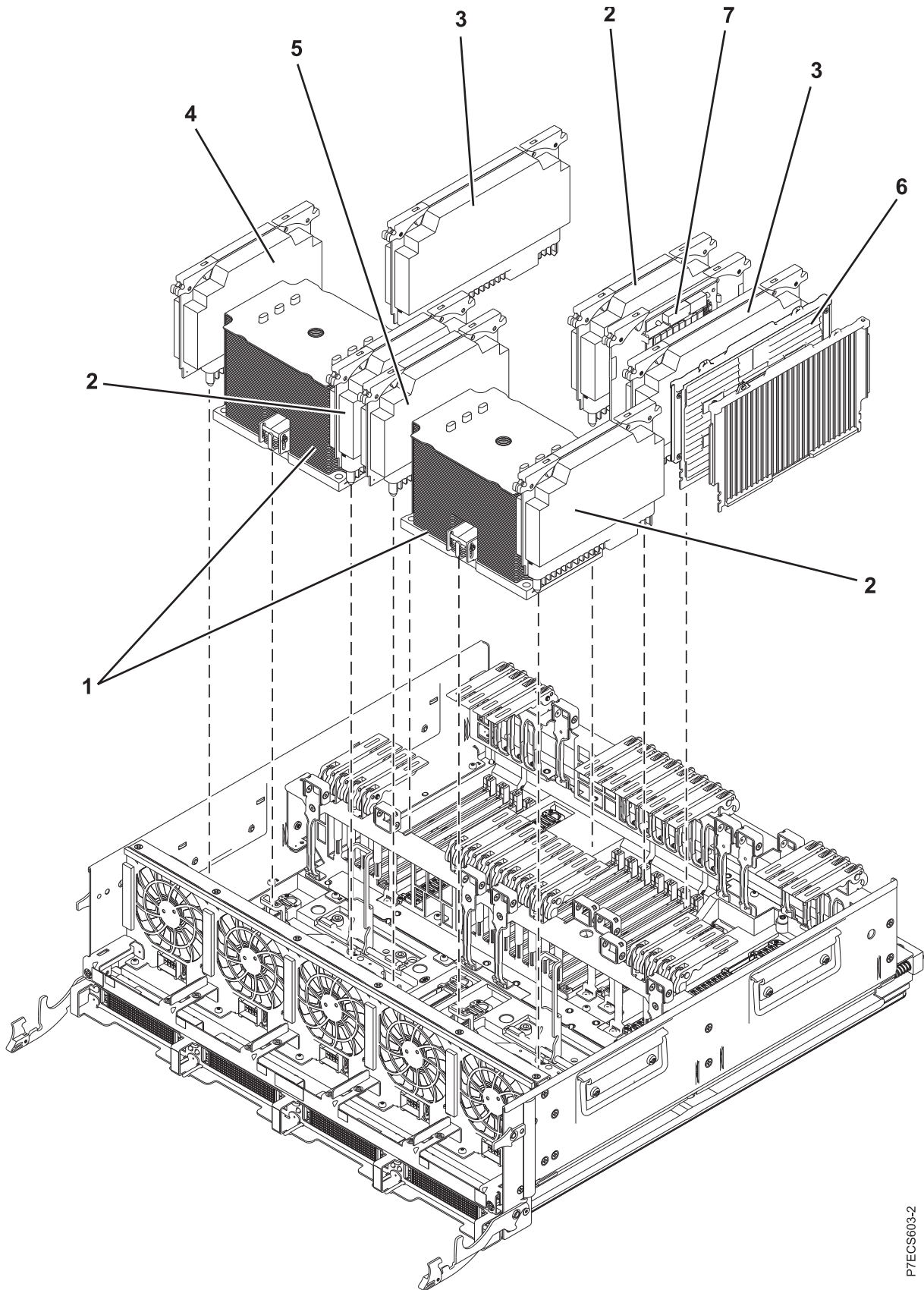
Index number	CCIN	Part number	Units per assembly	Description
1		74Y9391	5	Fan assembly (single fan)
2	2C4E	00E1253	1	System processor assembly FRU kit (9179-MHC with four-processor system unit)
3	2BBD	74Y3890	1	Midplane
4		00E6658	1	Midplane light pipe

Table 134. Final assembly (front) (continued)

Index number	CCIN	Part number	Units per assembly	Description
5	2BBE	74Y9514	1	Small form factor SAS disk drive backplane with embedded SAS adapters <b>Note:</b> If feature code 5662 is not installed, the embedded SAS adapters report CCINs of 57C7. If feature code 5662 is installed, the embedded SAS adapters report CCINs of 57CF.
6	2B9F	74Y3957	1	Control panel (9179-MHC)
6	2B01	00E1635	1	Control panel (8412-EAD, 9117-MMD, or 9179-MHD)
7			1	DVD drive. See Managing DVD drives.
8		00E5725	2	Cache battery pack
9	2BC2	00E5681	1	175 MB cache RAID and dual storage IOA enablement card <b>Note:</b> If feature code 5662 is installed, the embedded SAS adapters report CCINs of 57CF.
10			1 - 6	See Disk drive and solid-state drive system parts.



# Final assembly (9117-MMC or 9179-MHC with two-processor system unit)

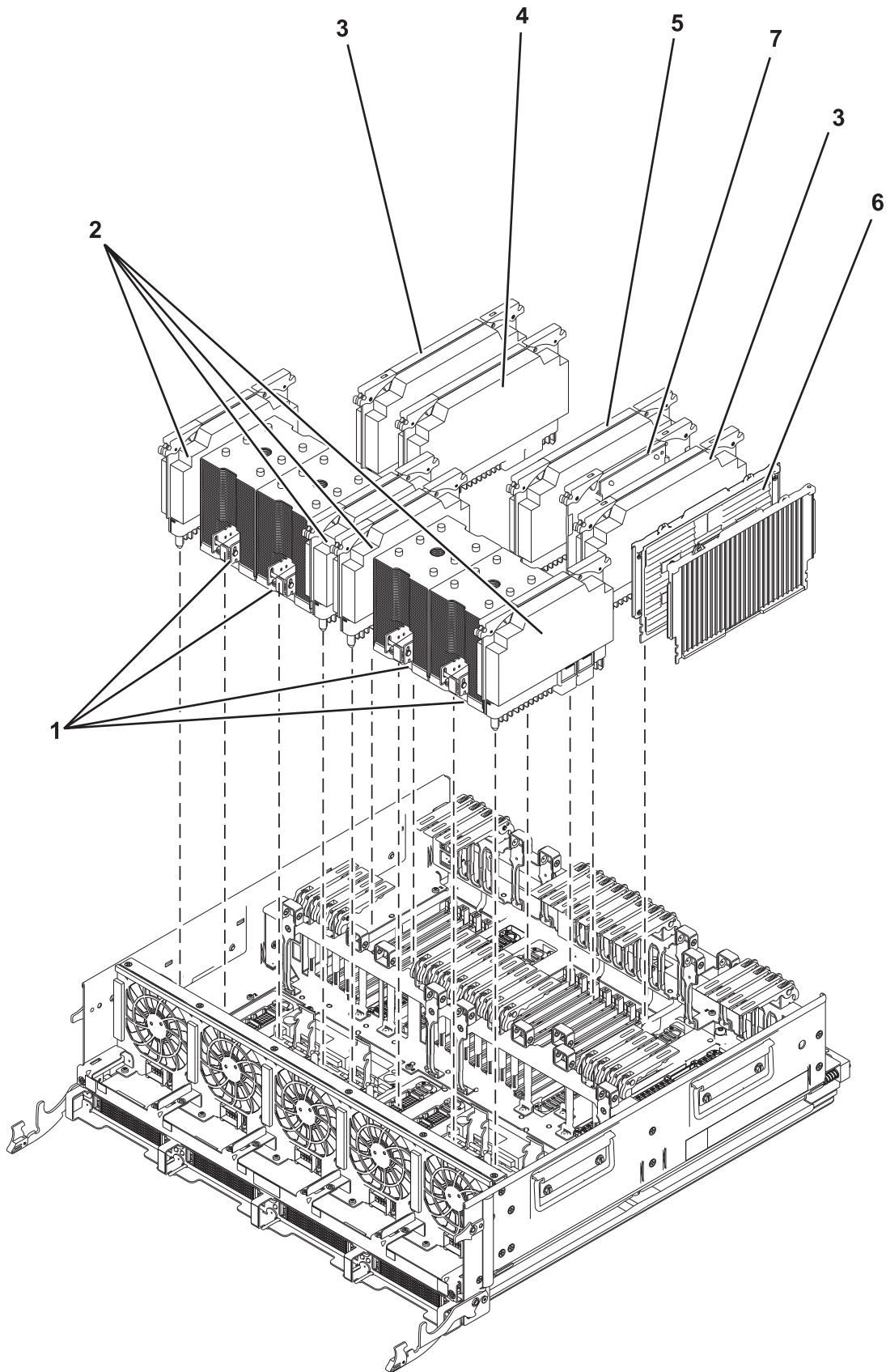


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Table 135. Final assembly part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
1	544C	74Y8855	2	6 core 3.724 GHz processor card FRU kit (9117-MMC)
1	544E	74Y8860	2	8 core 3.304 GHz processor card FRU kit (9117-MMC)
1	544B	74Y8865	2	8 core 3.920 GHz processor card FRU kit (9179-MHC with two-processor system unit)
2	2BC7	74Y8267	3	Processor Voltage Regulator Module (Proc VRM)
3	2BC8	00RR727	2	Memory Voltage Regulator Module (Mem2 VRM)
4	2BC9	00E7432	1	Voltage Regulator Module 1 (40P VRM)
5	2BCA	74Y8271	1	Voltage Regulator Module 3 (20P VRM)
6	31CB	45D8414	4 - 16	8 GB 1066 MHz DIMM
6	31D4	00V5404	4 - 16	8 GB 1066 MHz DIMM
6	31CC	45D8418	4 - 16	16 GB 1066 MHz DIMM
6	31D5	41T8254	4 - 16	16 GB 1066 MHz DIMM
6	31CD	45D8424	4 - 16	32 GB 1066 MHz DIMM
6	31D6	41T8258	4 - 16	32 GB 1066 MHz DIMM
6	31D3	00V5416	4 - 16	64 GB 1066 MHz DIMM
7	2A14	74Y2876	1	Thermal and power management device (TPMD) card

**Final assembly (8412-EAD, 9117-MMD, 9179-MHC with four-processor system unit, or 9179-MHD)**



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Table 136. Final assembly part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
1	53A5	74Y9242	4	6 core 3.444 GHz processor card FRU kit (9179-MHC four-processor system unit)
1	AAF4	00E7180	4	3 core 4.228 GHz processor card FRU kit (8412-EAD, 9117-MMD, or 9179-MHD)
1	AAF6	00E7181	4	4 core 3.808 GHz processor card FRU kit (8412-EAD, 9117-MMD, or 9179-MHD)
1	54A8	00E7182	4	4 core 4.424 GHz processor card FRU kit (8412-EAD, 9117-MMD, or 9179-MHD)
1	54B4	00E7184	4	8 core 3.724 GHz processor card FRU kit (8412-EAD, 9117-MMD, or 9179-MHD)
2	2BF8	00RR726	4	Processor Voltage Regulator Module (Proc2 VRM)
3	2BC8	00RR727	2	Memory Voltage Regulator Module (Mem2 VRM)
4	2BF9	01AF394	1	Processor card regulator (30P VRM)
5	2BF9	01AF394	1	Processor card regulator (30P VRM)
6	31CB	45D8414	4 - 16	8 GB 1066 MHz DIMM
6	31D4	00V5404	4 - 16	8 GB 1066 MHz DIMM
6	31CC	45D8418	4 - 16	16 GB 1066 MHz DIMM
6	31D5	41T8254	4 - 16	16 GB 1066 MHz DIMM
6	31CD	45D8424	4 - 16	32 GB 1066 MHz DIMM
6	31D6	41T8258	4 - 16	32 GB 1066 MHz DIMM
6	31D3	00V5416	4 - 16	64 GB 1066 MHz DIMM
7	2A14	74Y2876	1	TPMD card

## Final assembly (rear)

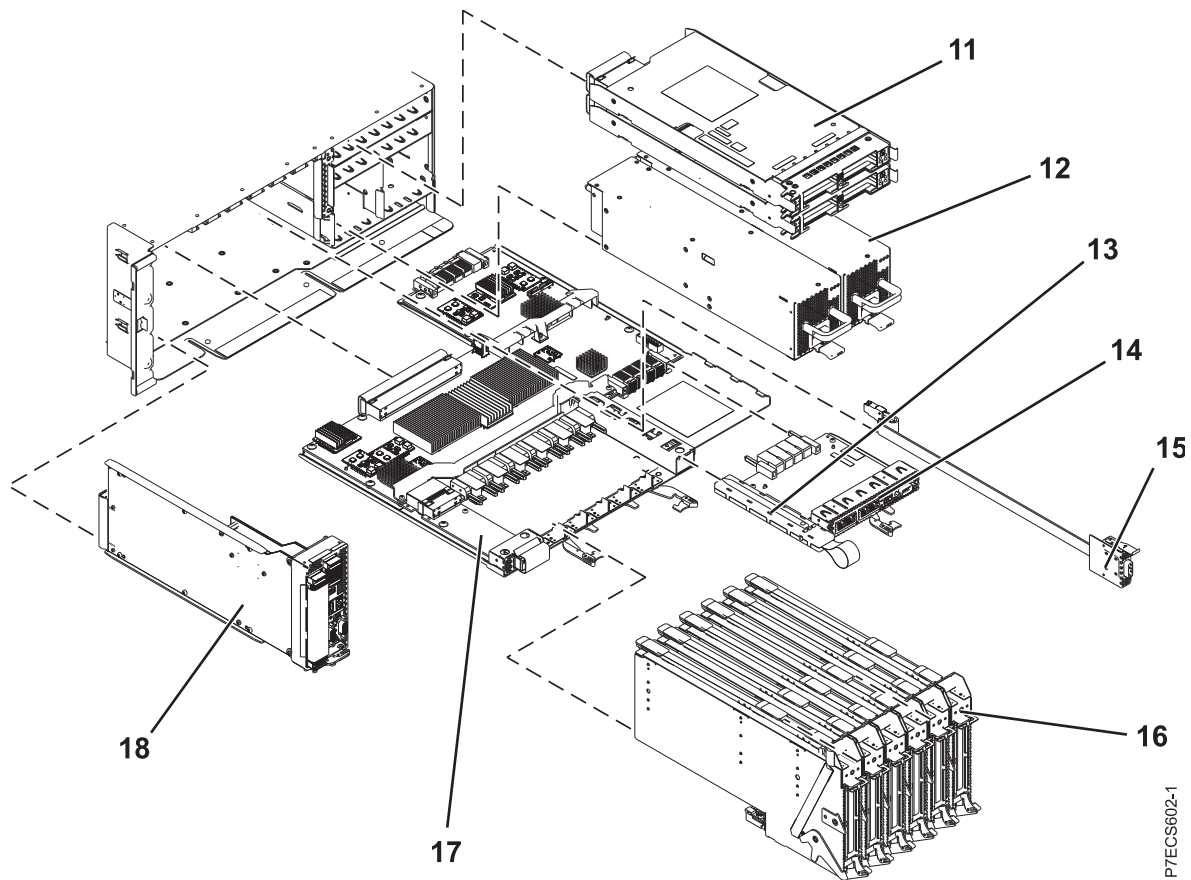


Table 137. Assembly

Index number	CCIN	Part number	Units per assembly	Description
11	2BC3	74Y0532	2	I/O hub 12X adapter card
11	2B94	00E1457	2	GX++ 2-port PCIe2 x8 adapter
12	2BED	00J0439	2	Power supply 1925 W
13	560B	00E3232	1	VPD card (8412-EAD)
13	52CF	00E0944	1	VPD card (9117-MMC or 9179-MHC)
13	521C	00E1757	1	VPD card (9117-MMD or 9179-MHD)
14	2B57	00E0784	1	Optical - 2 x 1 GbE and 2 x 10 GbE integrated multifunction card
14	2B56	00E0778	1	Twinaxial - 2 x 1 GbE and 2 x 10 GbE integrated multifunction card
15		44V7563	0 - 1	Internal SAS cable for triple-split disk drive backplane
15		44V7564	0 - 1	Internal SAS cable for RAID
16		74Y3982	6	PCIe blind swap cassette
17	2B59	74Y3050	1	I/O backplane
18	2BBB	00E1248	1	FSP card (drawers 1 and 2) (9117-MMC or 9179-MHC)

Table 137. Assembly (continued)

Index number	CCIN	Part number	Units per assembly	Description
18	2BBB	00E1662	1	FSP card (drawers 1 and 2) (8412-EAD, 9117-MMD, or 9179-MHD)
18	2BBC	74Y2861	1	FSP Passthru card (drawers 3 and 4)

Table 138. Cables

Description	Part number
SMP cable 1 (outer left - outer left, span two drawers)	74Y7525
SMP cable 2 (outer right - outer right, span two drawers)	74Y7526
SMP cable 3 (inner left - outer left, span three drawers)	74Y7529
SMP cable 4 (inner left - inner left, span two drawers)	74Y7527
SMP cable 5 (outer left - outer left, span four drawers)	74Y7531
SMP cable 6 (inner right - outer right, span three drawers)	74Y7530
SMP cable 7 (inner right - inner right, span two drawers)	74Y7528
FSP two drawer cable	74Y7532
FSP three drawer cable	74Y7533
FSP four drawer cable	74Y7534

Table 139. Miscellaneous parts

Description	Part number
Removable media	See Managing devices.
External cables and cords	See Planning for cables.
Cable configuration	See Enclosures and expansion units.
PCI adapters	See Managing PCI adapters.
Keyboard parts	See Keyboard parts.
Time-of-day battery	016G8095
Wrap plug	See Wrap plug.

## Disk drive and solid-state drive system parts

Disk drive and solid-state drive system parts information.

Table 140. System unit disk drive and solid-state drive system parts

CCIN	Part number	Description
58B0	44V6821**	69 GB small form factor solid-state SAS drive
58B3	00E6051* 74Y5294**	177 GB small form factor solid-state SAS drive
58B8	74Y9524*	387 GB small form factor solid-state SAS drive
59E6	00E8670*	387 GB small form factor solid-state SAS drive
5B0E	00LY322*	387 GB (528 block size) small form factor solid-state SAS drive
59C0	00E8702*	775 GB small form factor solid-state SAS drive
59EA	00E8671*	775 GB small form factor solid-state SAS drive

Table 140. System unit disk drive and solid-state drive system parts (continued)

CCIN	Part number	Description
5B0F	00LY323*	775 GB (528 block size) small form factor solid-state SAS drive
198B	00E6165* 44V4429**	69 GB 15K small form factor SAS disk drive (IBM i)
6600	42R8391**	73 GB 10K small form factor SAS disk drive (AIX and Linux)
198B	00E6168* 44V4426**	73 GB 15K small form factor SAS disk drive (AIX and Linux)
198C	00E6166* 44V6844**	139 GB 15K small form factor SAS disk drive (IBM i)
169C	42R8392**	146 GB 10K small form factor SAS disk drive (AIX and Linux)
198C	00E6169* 44V6845**	146 GB 15K small form factor SAS disk drive (AIX and Linux)
198D	00E6164* 74Y4896**	283 GB 10K small form factor SAS disk drive (IBM i)
19A1	74Y6495*	283 GB 15K small form factor SAS disk drive (IBM i)
59E0	00E9906*	283 GB 15K small form factor SAS disk drive (IBM i)
59E1	00E9966*	283 GB 15K small form factor SAS disk drive (IBM i)
198D	00E6167* 44V6833**	300 GB 10K small form factor SAS disk drive (AIX and Linux)
19A1	74Y6496*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
59E0	00E9912*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
59E1	00E9972*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19A3	74Y4897*	571 GB 10K small form factor SAS disk drive (IBM i)
59CE	00E8648*	571 GB 15K small form factor SAS disk drive (IBM i)
59E4	00E9908*	571 GB 15K small form factor SAS disk drive (IBM i)
59E5	00E9968*	571 GB 15K small form factor SAS disk drive (IBM i)
19A3	74Y4900*	600 GB 10K small form factor SAS disk drive (AIX and Linux)
59CE	00E8653*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59E4	00E9914*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59E5	00E9974*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
19A4	74Y9271*	857 GB 10K small form factor SAS disk drive (IBM i)
19A4	74Y9272*	900 GB 10K small form factor SAS disk drive (AIX and Linux)
59C8	00E8606*	1.14 TB 10K small form factor SAS disk drive (IBM i)
59C8	00E8614*	1.2 TB 10K small form factor SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 141. 5886 disk drive and solid-state drive system parts

CCIN	Part number	Description
58B0	44V6819**	3.5-inch 69 GB solid-state SAS drive
433B	42R6690*	3.5-inch 69 GB 15K SAS disk drive (IBM i)
433B	10N7230*	3.5-inch 73.4 GB 15K SAS disk drive (AIX and Linux)
433C	42R6691*	3.5-inch 139 GB 15K SAS disk drive (IBM i)
433C	10N7232*	3.5-inch 146.8 GB 15K SAS disk drive (AIX and Linux)
433D	42R6692*	3.5-inch 283 GB 15K SAS disk drive (IBM i)
433D	10N7234*	3.5-inch 300 GB 15K SAS disk drive (AIX and Linux)
198E	44V4434*	3.5-inch 428 GB 15K SAS disk drive (IBM i)
198E	44V4432*	3.5-inch 450 GB 15K SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 142. 5887 disk drive and solid-state drive system parts

CCIN	Part number	Description
58B4	00E6053*	177 GB small form factor solid-state SAS drive
	74Y5296**	
58B9	74Y9526*	387 GB solid-state SAS drive
5B10	00LY336*	387 GB (4K block size) small form factor solid-state SAS drive
59C2	00E8709*	775 GB small form factor solid-state SAS drive
5B11	00LY337*	775 GB (4K block size) small form factor solid-state SAS drive
5B12	00LY338*	1551 GB (4K block size) small form factor solid-state SAS drive
5B16	00LY327*	387 GB (528 block size) small form factor solid-state SAS drive
5B17	00LY328*	775 GB (528 block size) small form factor solid-state SAS drive
19B0	00E6171*	139 GB 15K small form factor SAS disk drive (IBM i)
	46K4804**	
19B0	00E6173*	146 GB 15K small form factor SAS disk drive (AIX and Linux)
	46K4806**	
19B1	74Y6497*	283 GB 15K small form factor SAS disk drive (IBM i)
19B1	74Y6498*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19B7	00E6170*	283 GB 10K small form factor SAS disk drive (IBM i)
	74Y4898**	
59C9	00E8681*	283 GB 15K small form factor SAS disk drive (IBM i)
19B7	00E6172*	300 GB 10K small form factor SAS disk drive (AIX and Linux)
	46K4812**	
59C9	00E8687*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19B3	74Y4899*	571 GB 10K small form factor SAS disk drive (IBM i)
59CF	00E8660*	571 GB 15K small form factor SAS disk drive (IBM i)
59CC	00E8683*	571 GB 15K small form factor SAS disk drive (IBM i)



Table 142. 5887 disk drive and solid-state drive system parts (continued)

CCIN	Part number	Description
19B3	74Y4901*	600 GB 10K small form factor SAS disk drive (AIX and Linux)
59CF	00E8665*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59CC	00E8689*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
19B4	74Y9285*	857 GB 10K small form factor SAS disk drive (IBM i)
19B4	74Y9286*	900 GB 10K small form factor SAS disk drive (AIX and Linux)
59CD	00E8623*	1.14 TB 10K small form factor SAS disk drive (IBM i)
59CD	00E8631*	1.2 TB 10K small form factor SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 143. 5888 and EDR1 disk drive and solid-state drive system parts

CCIN	Part number	Description
58BB	00V5433*	1.8 inch 387 GB solid-state SAS drive
59BE	00E8692*	1.8 inch 387 GB solid-state SAS drive

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

## Keyboard parts

Keyboard parts information.

Table 144. Keyboard parts

Description	Part number
Keyboard, Arabic	10N9442
Keyboard, Belgium, and UK	10N9427
Keyboard, Brazilian Portuguese	10N9421
Keyboard, Bulgaria	10N9430
Keyboard, China	10N9424
Keyboard, Czechoslovakian	10N9439
Keyboard, Danish	10N9429
Keyboard, Dutch	10N9433
Keyboard, French	10N9415
Keyboard, French Canadian	10N9425
Keyboard, German/Austrian	10N9417
Keyboard, Greek	10N9435
Keyboard, Hebrew	10N9436
Keyboard, Hungarian	10N9422

Table 144. Keyboard parts (continued)

Description	Part number
Keyboard, Italian	10N9416
Keyboard, Japanese	10N9420
Keyboard, Korea	10N9423
Keyboard, Latin American (Spanish)	10N9441
Keyboard, Norwegian	10N9432
Keyboard, Portuguese	10N9434
Keyboard, Polish	10N9437
Keyboard, Russian	10N9444
Keyboard, Slovak	10N9438
Keyboard, Slovenia	10N9445
Keyboard, Spanish	10N9419
Keyboard, Sweden, and Finland	10N9428
Keyboard, Swiss, French, and German	10N9431
Keyboard, Thailand	10N9443
Keyboard, Turkish	10N9440
Keyboard, UK English	10N9418
Keyboard, US English	10N9414
Keyboard, US or Europe	10N9446

## Wrap plug parts

Wrap plug information.

Table 145. Wrap plug

Description	Part number
Wrap plug	12R9314
	12R9315
	42R4761
	6165899
	73H2508
	87H3311
	87H3439
	87H3442
	93H5270
	03N6070

# 9119-FHB system parts

Indexed drawings show system part numbers of each part.

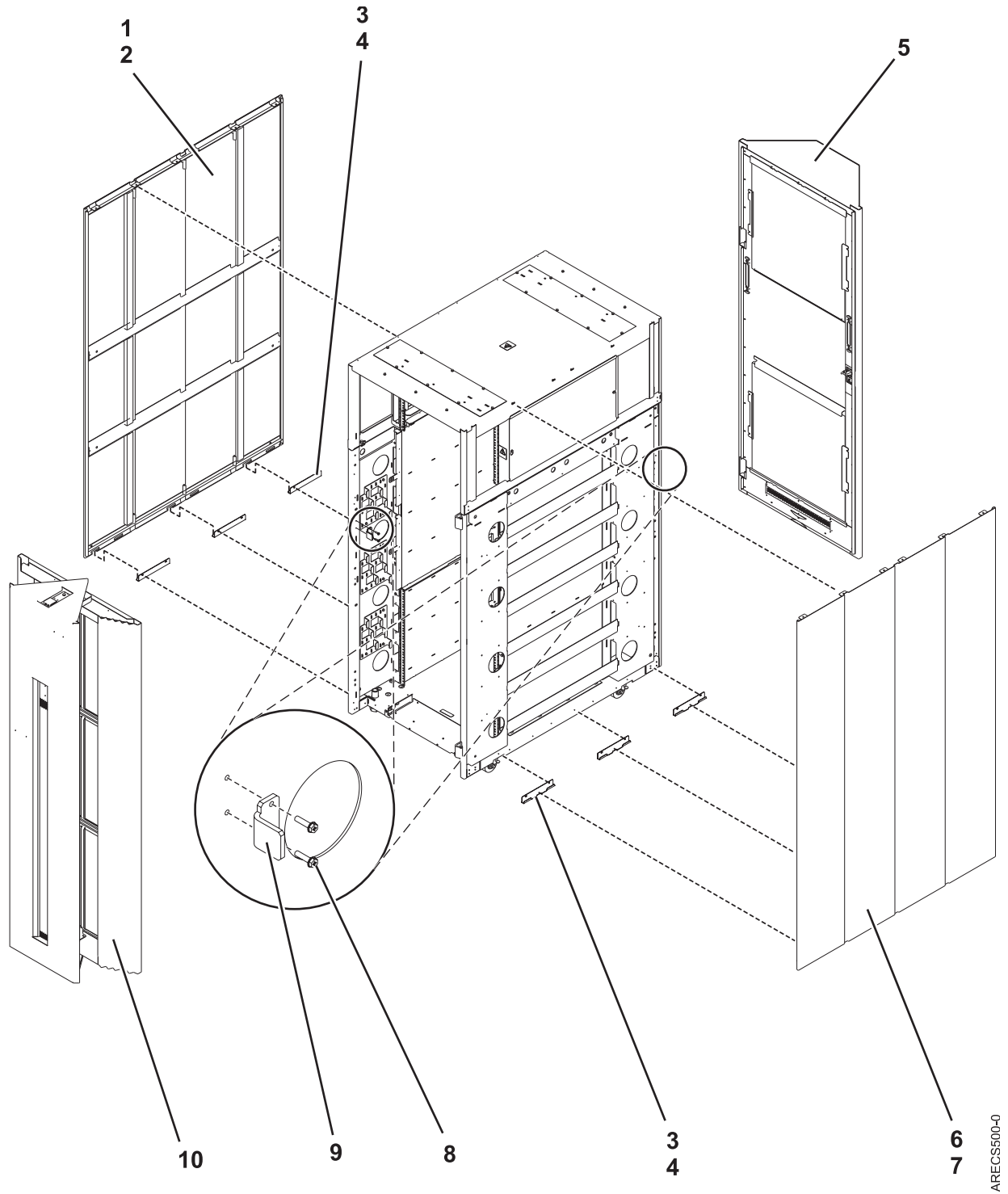
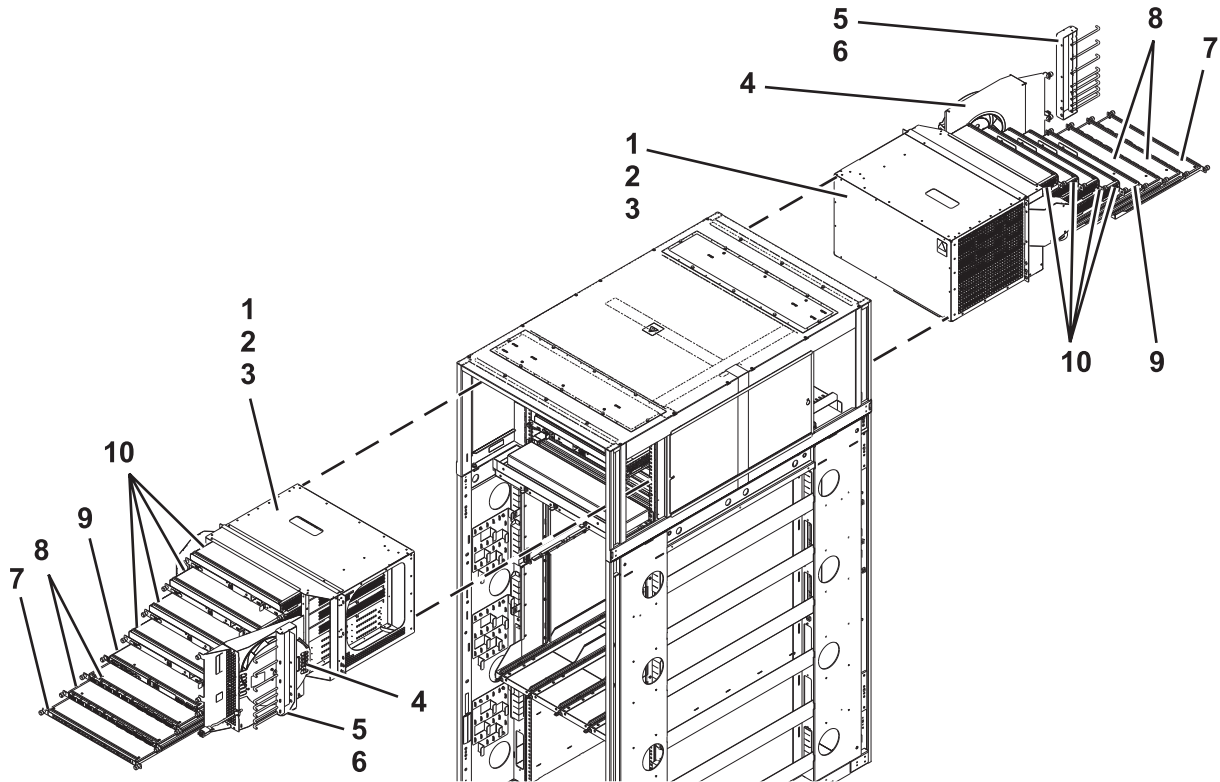


Table 146. Final assembly (assembly 1)

Index number	CCIN	Part number	Units	Description
1		45D3406	1	Cover assembly (left)

Table 146. Final assembly (assembly 1) (continued)

Index number	CCIN	Part number	Units	Description
2		2665528	6	Screw
3		42V2119	6	J-bracket assembly, side cover
4		2665528	12	Screw
5		45D4167	1	Acoustic rear cover
6		45D3405	1	Cover assembly (right)
7		2665528	6	Screw
8		2665525	4	Screw
9		41V2376	2	Latch bracket
10		45D7950	1	Acoustic front cover



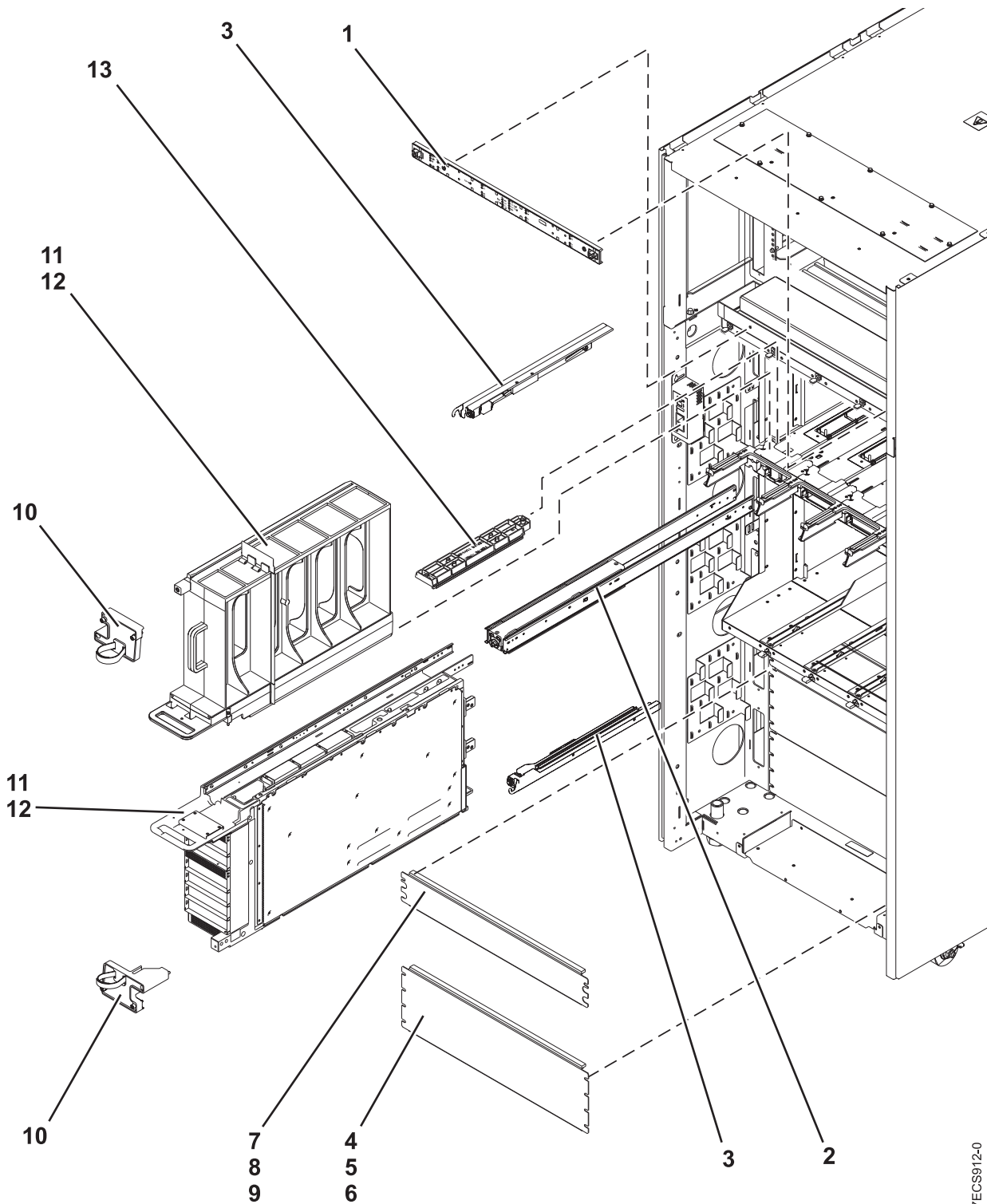
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Table 147. Final assembly (assembly 2)

Index number	CCIN	Part number	Units	Description
1		45D7779	2	Bulk power enclosure (BPE) assembly (new installation only)
1		45D2463	2	BPE assembly (model upgrades only)
2		77G0599	10	Screw
3		74F1823	10	Nut clip
4		41V2374	As required	Bulk power fan (BPF) assembly
4		41V2453	As required	BPF filler plate, front only
5		15R9306	2	Cable bracket assembly

Table 147. Final assembly (assembly 2) (continued)

Index number	CCIN	Part number	Units	Description
6		77G0599	6	Screw
7	2C34	45D2991	2	Bulk power hub (BPH)
8	2C32	41U9484	As required	Bulk power distribution (BPD) assembly
8		31L8609	As required	BPD filler assembly
9	2C19	45D8506	2	Bulk power controller (BPC) assembly
10	2C7B	45D7780	As required	Bulk power regulator (BPR) assembly (new installation only)
10	2C36	45D0639	As required	BPR assembly (model upgrades only)
10		15R7647	As required	BPR filler assembly



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Table 148. Final assembly (assembly 3)

Index number	CCIN	Part number	Units	Description
1		45D5694	1	Light strip, front
2		45D2986	4	Actuator assembly (top and bottom)
3		45D2965	8	Node lock assembly

Table 148. Final assembly (assembly 3) (continued)

Index number	CCIN	Part number	Units	Description
4		44P2994	As required	Filler plate
5		77G0599	4	Screw
6		74F1823	4	Nut clip
7		44P2462	As required	Filler plate
8		77G0599	2	Screw
9		74F1823	2	Nut clip
10		45D9112	8	Node locking bracket assembly (front)
11		73Y4218	As required	Node assembly, unpopulated
11		95Y5058	As required	Node assembly, 6 core
11		95Y5144	As required	Node assembly, 8 core with 4cTurboCore option
11		95Y5163	As required	Node assembly (unpopulated)
12		15R7507	As required	Node filler assembly
13		45D0534	As required	EMI cover

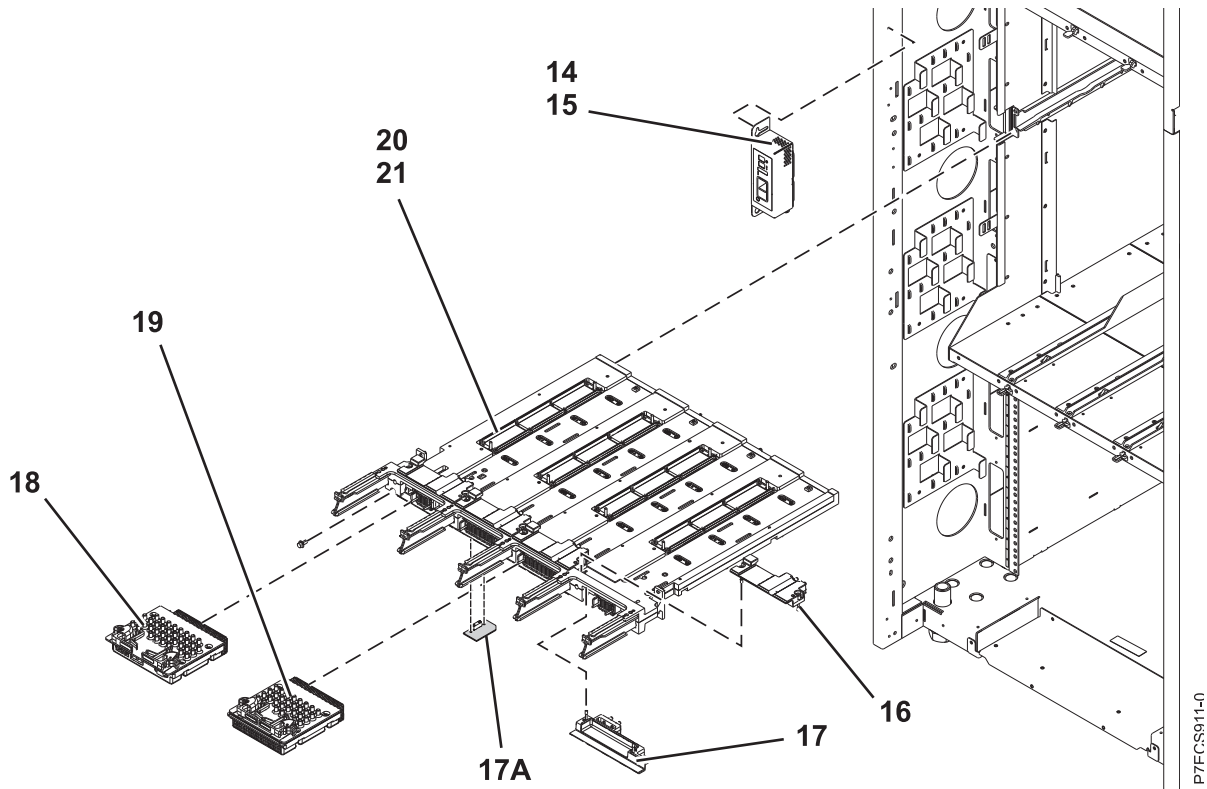


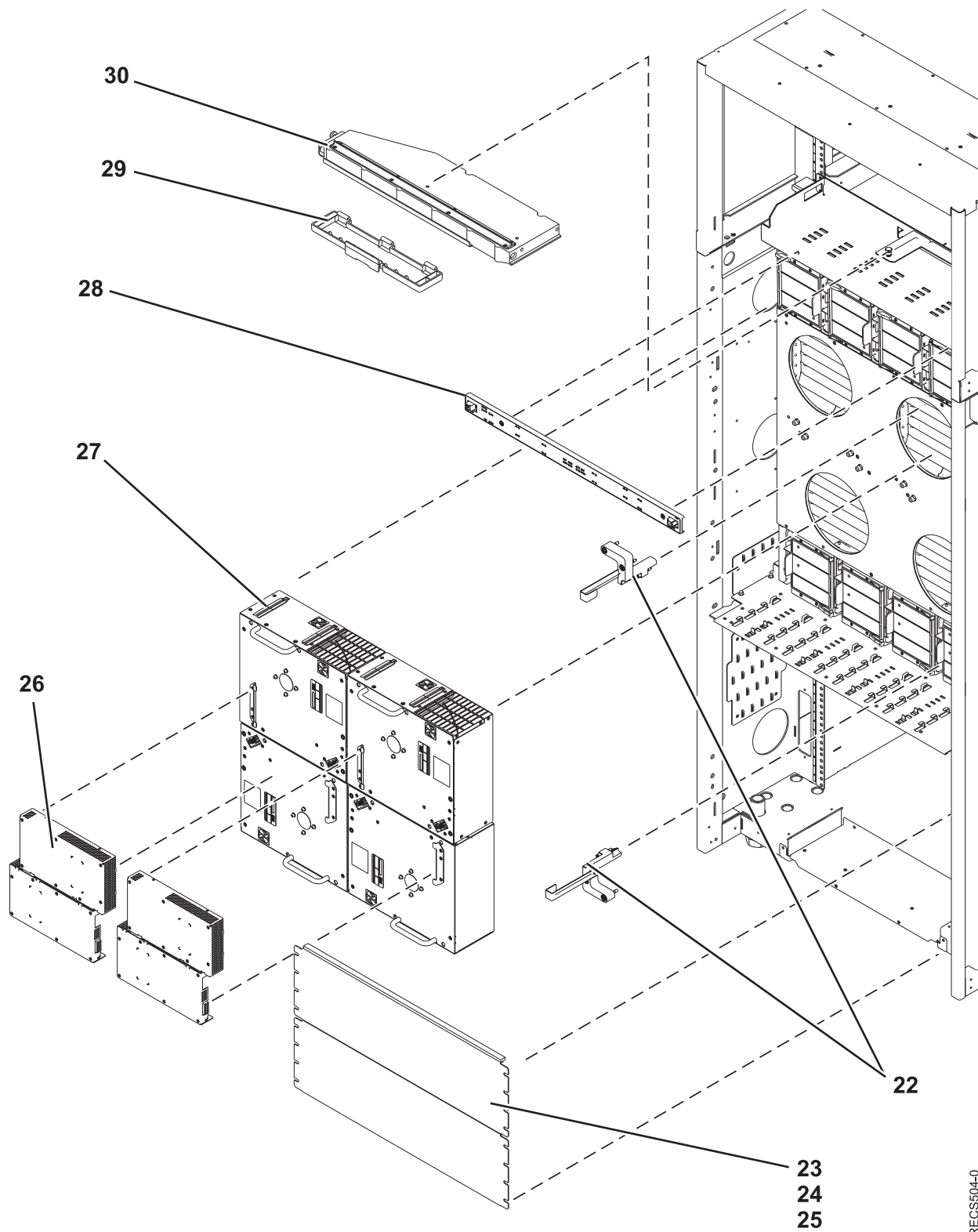
Table 149. Final assembly (assembly 4)

Index number	CCIN	Part number	Units	Description
14		45D1994	1	UEPO assembly
15		2665528	2	Screw
16		45D5199	4	Actuator bracket assembly

Table 149. Final assembly (assembly 4) (continued)

Index number	CCIN	Part number	Units	Description
17		45D5201	4	Actuator assembly (lower left)
17A	52C4	73Y4020	1	System VPD card
17A	52D3	73Y3768	1	Controlled system VPD card (Tier 3)
18	2C17	73Y3847	2	System controller (FSP)
19	2C00	73Y3804	2	Clock card
20	2BAA	73Y3800	1	System backplane
21		1624790	2	Screw, backplane mounting





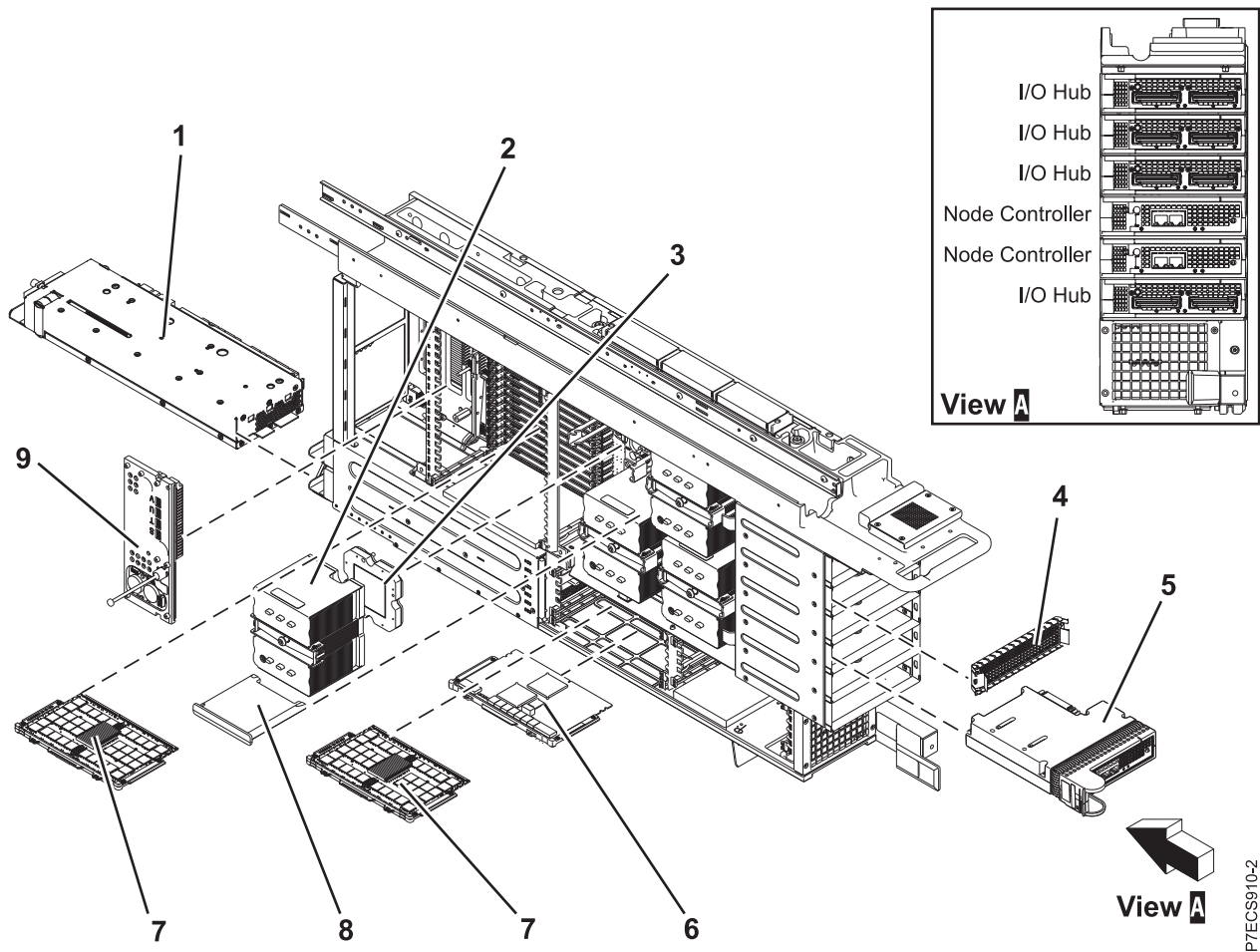
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Table 150. Final assembly (assembly 5)

Index number	CCIN	Part number	Units	Description
22			8	Lubricated node locking bracket assembly (rear)

Table 150. Final assembly (assembly 5) (continued)

Index number	CCIN	Part number	Units	Description
23		44P2994	As required	Filler plate
23		44P2462	As required	Filler plate
24		77G0599	4	Screw
25		74F1823	4	Nut clip
26		74Y0996	As required	MDA-EZ assembly
27		15R8873	As required	Blower assembly
28		46K3997	1	Light strip (rear)
29		45D2818	1	Connector cover
30		45D7497	1	Node service tool



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Table 151. Final assembly (assembly 6)

Index number	CCIN	Part number	Units	Description
1		45D8502	As required	DCA assembly
2			As required	Heat sink (included with the processor assembly)
3	538F	73Y4115	As required	Processor assembly, 8 core with 4cTurboCore option

Table 151. Final assembly (assembly 6) (continued)

Index number	CCIN	Part number	Units	Description
3	539C	73Y4114	As required	Processor assembly, 6 core
4		41V0922	As required	Book filler assembly
5	295B	45D9096	As required	I/O hub card
5	2B74	73Y8782	As required	GX++ 2-port 10 Gb FCoE CNA SR optical adapter
5	2B9B	73Y8776	As required	GX++ 2-port 16 Gb fibre channel adapter
5	2C18	73Y4133	As required	Node controller
6	2BB6	74Y2424	1	TPMD card
7	31CB	45D7238	As required	8 GB, DDR3 DIMM
7	31DD	41T8254	As required	16 GB, DDR3 DIMM
7	31CC	45D7242	As required	16 GB, DDR3 DIMM
7	31DE	41T8258	As required	32 GB, DDR3 DIMM
7	31CD	45D7248	As required	32 GB, DDR3 DIMM
7	31D3	00V5416	As required	64 GB, DDR3 DIMM
8		45D3046	1	Rubber air dam
9	555A	60H5045	1	LED service card

Table 152. Cables

CCIN	Part number	Description
	95P4084	SAS cable
	44V4147	1-meter SAS cable
	44V4817	2-meter SAS cable
	44V4148	3-meter SAS cable
	44V4154	3-meter SAS cable
	44V4158	3-meter SAS cable
	44V4163	3-meter SAS cable
	44V4149	6-meter SAS cable
	44V4155	6-meter SAS cable
	44V4159	6-meter SAS cable
	44V4164	6-meter SAS cable
	44V4156	15-meter SAS cable
	44V4160	15-meter SAS cable
	52G4233	SCSI cable
	41Y0596	1-meter SCSI cable
	41Y0597	3-meter SCSI cable
	41Y0598	5-meter SCSI cable
	41Y0599	10-meter SCSI cable
	41Y0600	20-meter SCSI cable
	22R5217	2-meter SPCN cable
	22R5239	3-meter SPCN cable

Table 152. Cables (continued)

CCIN	Part number	Description
036A	39J5820	3-meter SPCN cable
	22R5219	6-meter SPCN cable
	22R5221	15-meter SPCN cable
	22R5222	30-meter SPCN cable
	39J2561	10-meter HSL2 cable
	42V2129	.6-meter 12X IB cable
	42V2131	2.5-meter 12X IB cable
	42R6160	8-meter 12X IB cable
	32N1311	2-meter external cable
	31P6132	8-meter cable
	41V2507	BPCA to BPCB cable
	15R6779	Bulk power distribution cable
	15R6780	Bulk power distribution cable
	41V2172	Bulk power regulator cable
	41V0570	IBF cable
	39J5836	UPS adapter cable
	95P4049	DVD cable
	11P4606	Cable clamp
	0524519	Cable tie
	15R8270	Cable tool
	95P4048	VPD cable

Table 153. Keyboards

CCIN	Part number	Description
	10N6984	Keyboard, Arabic
	32N1233	Keyboard, Arabic
	32N1212	Keyboard, Brazilian
	10N6963	Keyboard, Brazilian/Portuguese
	10N6972	Keyboard, Bulgarian
	32N1221	Keyboard, Bulgarian
	32N1217	Keyboard, CANFRC
	32N1215	Keyboard, Chinese
	10N6966	Keyboard, Chinese/US
	10N6981	Keyboard, Czechoslovakian
	32N1230	Keyboard, Czechoslovakian
	10N6971	Keyboard, Danish
	32N1220	Keyboard, Danish
	32N1206	Keyboard, French
	10N6957	Keyboard, French
	10N6967	Keyboard, French Canadian

Table 153. Keyboards (continued)

CCIN	Part number	Description
	10N6968	Keyboard, French Canadian
	32N1216	Keyboard, French Canadian
	10N6973	Keyboard, French/German
	10N6959	Keyboard, German
	32N1208	Keyboard, German
	10N6977	Keyboard, Greek
	32N1226	Keyboard, Greek
	10N6978	Keyboard, Hebrew
	32N1227	Keyboard, Hebrew
	10N6964	Keyboard, Hungarian
	32N1213	Keyboard, Hungarian
	10N6958	Keyboard, Italian
	32N1207	Keyboard, Italian
	32N1211	Keyboard, Japanese
	10N6962	Keyboard, Japanese
	32N1214	Keyboard, Korean
	10N6965	Keyboard, Korean
	10N6983	Keyboard, LA Spanish
	32N1232	Keyboard, LA Spanish
	10N6974	Keyboard, Norwegian
	32N1223	Keyboard, Norwegian
	10N6979	Keyboard, Polish
	32N1228	Keyboard, Polish
	10N6975	Keyboard, Portuguese
	10N6976	Keyboard, Portuguese
	32N1224	Keyboard, Portuguese
	32N1225	Keyboard, Portuguese
	10N6986	Keyboard, Russian
	32N1235	Keyboard, Russian
	10N6980	Keyboard, Slovakia
	32N1229	Keyboard, Slovakia
	32N1236	Keyboard, Slovakia
	10N6961	Keyboard, Spanish
	32N1210	Keyboard, Spanish
	10N6970	Keyboard, Sweden/Finland
	32N1219	Keyboard, Sweden/Finland
	32N1234	Keyboard, Thailand
	10N6985	Keyboard, Thailand
	10N6982	Keyboard, Turkey
	32N1231	Keyboard, Turkey

Table 153. Keyboards (continued)

CCIN	Part number	Description
	10N6960	Keyboard, United Kingdom
	32N1209	Keyboard, United Kingdom
	10N6956	Keyboard, United Kingdom
	10N6988	Keyboard, US EMEA
	32N1205	Keyboard, US
	10N6987	Keyboard, Yugoslavian/Latin

Table 154. Miscellaneous parts

CCIN	Part number	Description
	External cables and cords	See Site and hardware planning.
	Cable configuration	See Enclosures and expansion units.
	45D2504	4 MM socket driver
	45D1756	Bridge assembly bracket
	7336725	Cover packaging or Slimline non-powered, bolt on expansion rack door without IBM logo
	45D1990	Cross-member
	11P3990	Door key
	45D8467	Frame cover for 9119-FHA to 9119-FHB slim conversion (front)
	45D4063	Frame cover for acoustic powered expansion rack cover set with IBM logos (rear)
	45D4169	Frame cover for Slimline non-powered, bolt on expansion rack door without IBM logo (rear)
	45D8467	Frame cover for Slimline non-powered, bolt on expansion rack door without IBM logo (front)
	45D2430	Frame stiffening bracket
	45D3131	Gear box assembly
	44V8038	Indium pad 2-pack (tab-shaped with adhesive kapton dots)
	45D2454	Latch bracket
	31L8313	Leveling pad wrench
	45D2808	Node service adapter (with side jack screws)
	45D2822	Rail (Left bottom)
	45D2824	Rail (Right bottom)
	45D2826	Rail (Left top)
	45D2828	Rail (Right top)
	1621549	Screw, M 8 x 40
	1673730	Screw, M 5 x 12
	15R8943	Single chip module (SCM) tweezers
	45D2506	SCM 5 NM clutch torque tool
	45D2645	SCM air pump
	7336772	SCM container

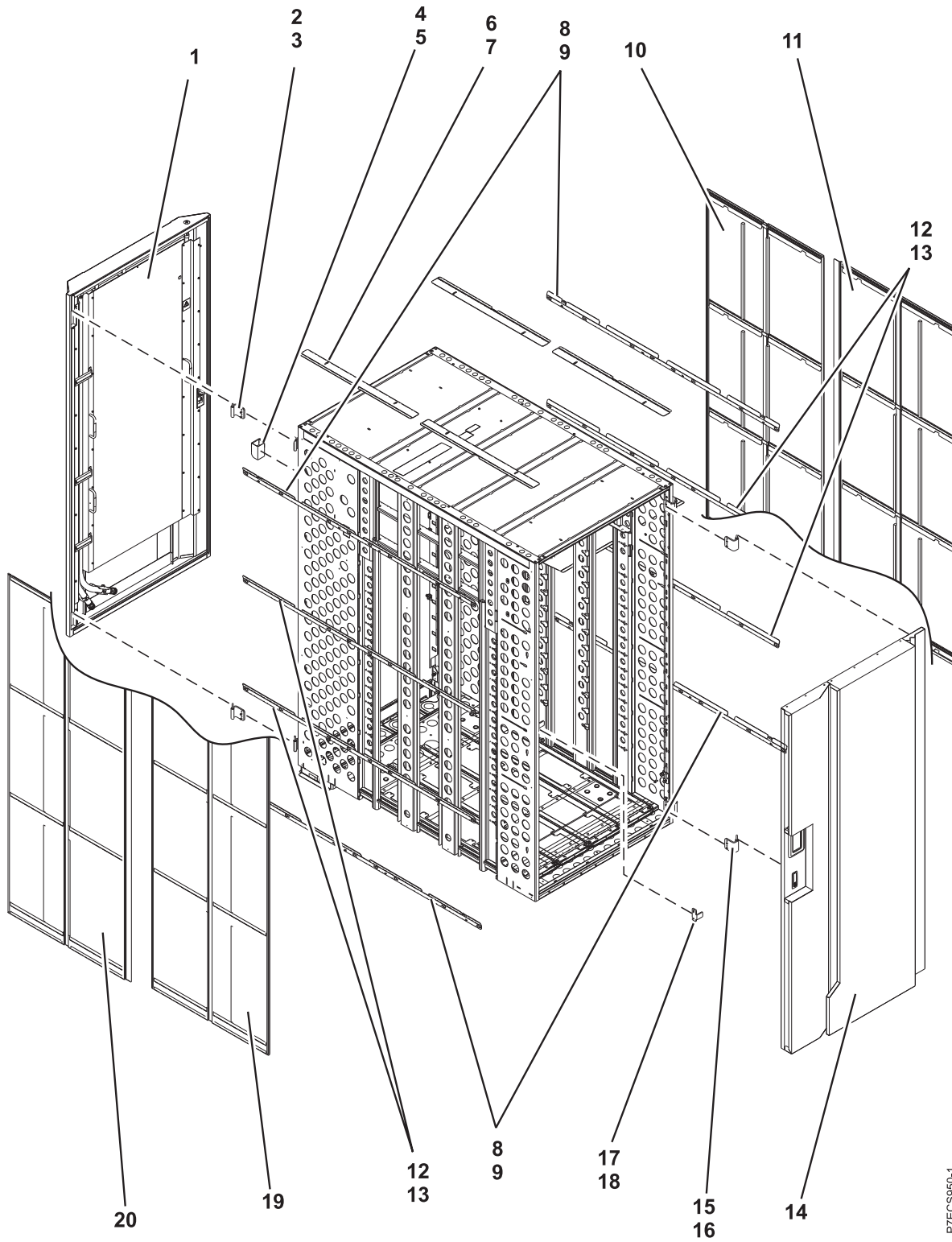
Table 154. Miscellaneous parts (continued)

CCIN	Part number	Description
	45D2624	SCM interposer cover
	45D7265	SCM module
	44V8405	SCM module handle
	54G2882	Screw
	45D2288	Tailgate
	45D3627	Tailgate assembly
	45D1986	Vertical bracket (left)
	45D1987	Vertical bracket (right)
	45D1677	Weight distribution plate kit
	03N6070	Wrap plug
	12R9314	Wrap plug
	12R9315	Wrap plug
	42R4761	Wrap plug
	42R5143	Wrap plug
	87H3311	Wrap plug
	87H3439	Wrap plug
	87H3442	Wrap plug

## 9125-F2C system parts

Indexed drawings show system part numbers of each part.

# Cover assembly



P7ECS950-1



Table 155. Cover assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1		41U7736	1	Rear door heat exchanger
2		74Y0502	2	Rear cover hinge (upper)  <b>Note:</b> The rear, front cover hinges, latch brackets, and attaching screws are part of the front or rear door hardware-mounting kit field-replacement unit (FRU) and cannot be ordered separately.
3		74Y0502	2	Attaching screw for rear cover hinge  <b>Note:</b> The rear, front cover hinges, latch brackets, and attaching screws are part of the front or rear door hardware-mounting kit field-replacement unit (FRU) and cannot be ordered separately.
4		74Y0502	2	Rear cover latch bracket  <b>Note:</b> The rear, front cover hinges, latch brackets, and attaching screws are part of the front or rear door hardware-mounting kit field-replacement unit (FRU) and cannot be ordered separately.
5		74Y0502	2	Attaching screw for rear cover latch bracket  <b>Note:</b> The rear, front cover hinges, latch brackets, and attaching screws are part of the front or rear door hardware-mounting kit field-replacement unit (FRU) and cannot be ordered separately.
6		45D7506	4	Side cover top retainer
7		1624775	8	Attaching screw for side cover top retainer
8		45D7504	2	Side cover mounting hardware (upper left and lower left)
9		45D7504	2	Side cover mounting hardware (upper right and lower right)
10		45D7503	1	Cover assembly (right)
10		74Y0541	1	Cover assembly without branding (right)
11		1624775	2	Attaching screw for cover assembly (right)
12		45D7505	2	Side cover mounting hardware (mid left and mid right)
13		45D7505	2	Side cover mounting hardware (mid lower left and mid lower right)
14		46K3436	1	Front cover
15		74Y0502	2	Front cover hinge (upper)  <b>Note:</b> The rear, front cover hinges, latch brackets and attaching screws are part of the front or rear door hardware mounting kit field-replacement unit (FRU) and cannot be ordered separately.

Table 155. Cover assembly part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
16		74Y0502	2	Attaching screw for front cover hinge  <b>Note:</b> The rear, front cover hinges, latch brackets, and attaching screws are part of the front or rear door hardware-mounting kit field-replacement unit (FRU) and cannot be ordered separately.
17		74Y0502	2	Front cover latch bracket  <b>Note:</b> The rear, front cover hinges, latch brackets, and attaching screws are part of the front or rear door hardware-mounting kit field-replacement unit (FRU) and cannot be ordered separately.
18		74Y0502	2	Attaching screw for front cover latch bracket  <b>Note:</b> The rear, front cover hinges, latch brackets, and attaching screws are part of the front or rear door hardware-mounting kit field-replacement unit (FRU) and cannot be ordered separately.
19		45D7503	1	Cover assembly (left)
19		74Y0541	1	Cover assembly without branding (left)
20		1624775	2	Attaching screw for cover assembly (left)

## Final assembly

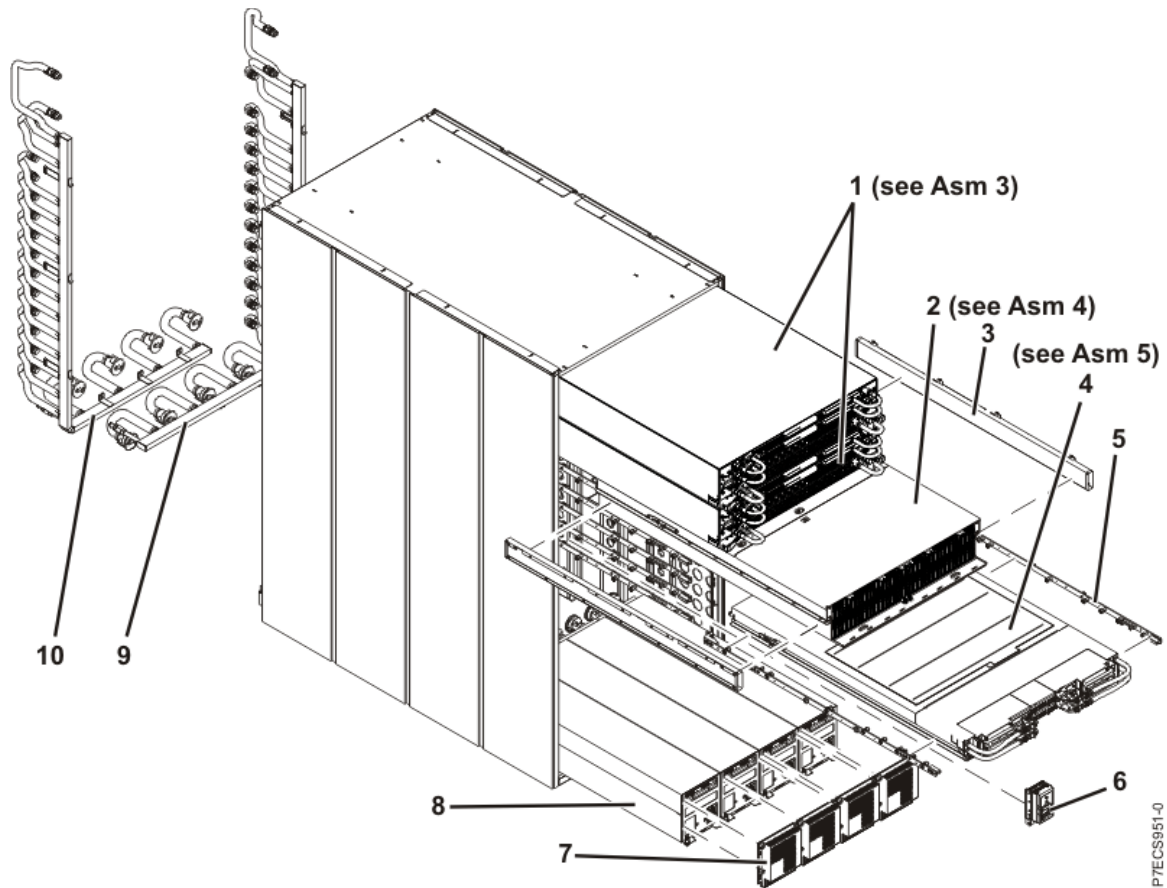
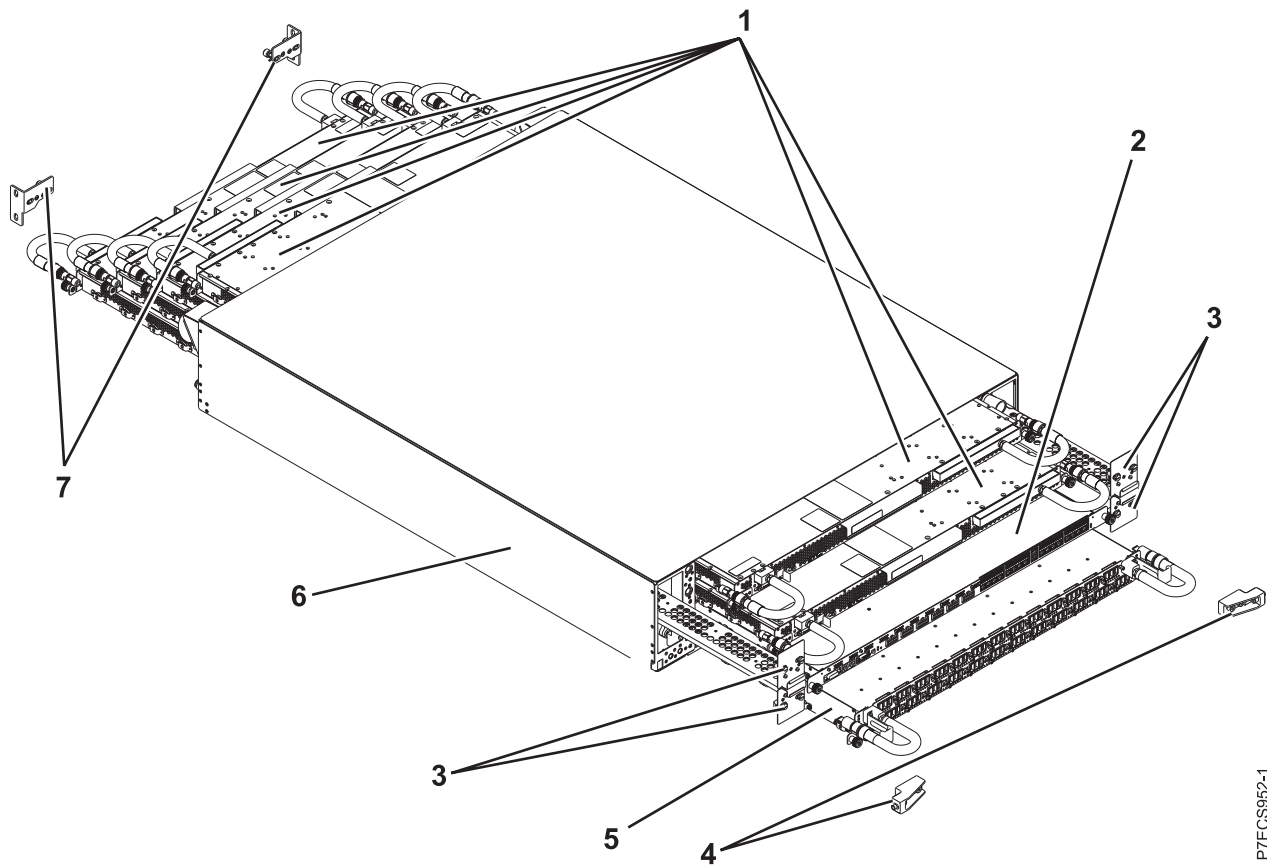


Table 156. Final assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1		41T8007	2	Bulk power and control enclosure (BPCE)
2		46K3779	1	Disk enclosure
3		45D9496	1	Disk enclosure rail (right)
3		45D9466	1	Disk enclosure rail (left)
4			2 - 12	Node assembly
5		45D9467	2	Rail for node assembly (right)
6		45D9869	1	Unit emergency power off (UEPO) assembly
7		41U8423	1 - 4	Motor drive assembly (MDA)
8		15R9424	1 - 4	Water conditioning unit (WCU)
9		46K2571	1	Supply manifold
10		46K2572	1	Return manifold

## Bulk power and control enclosure

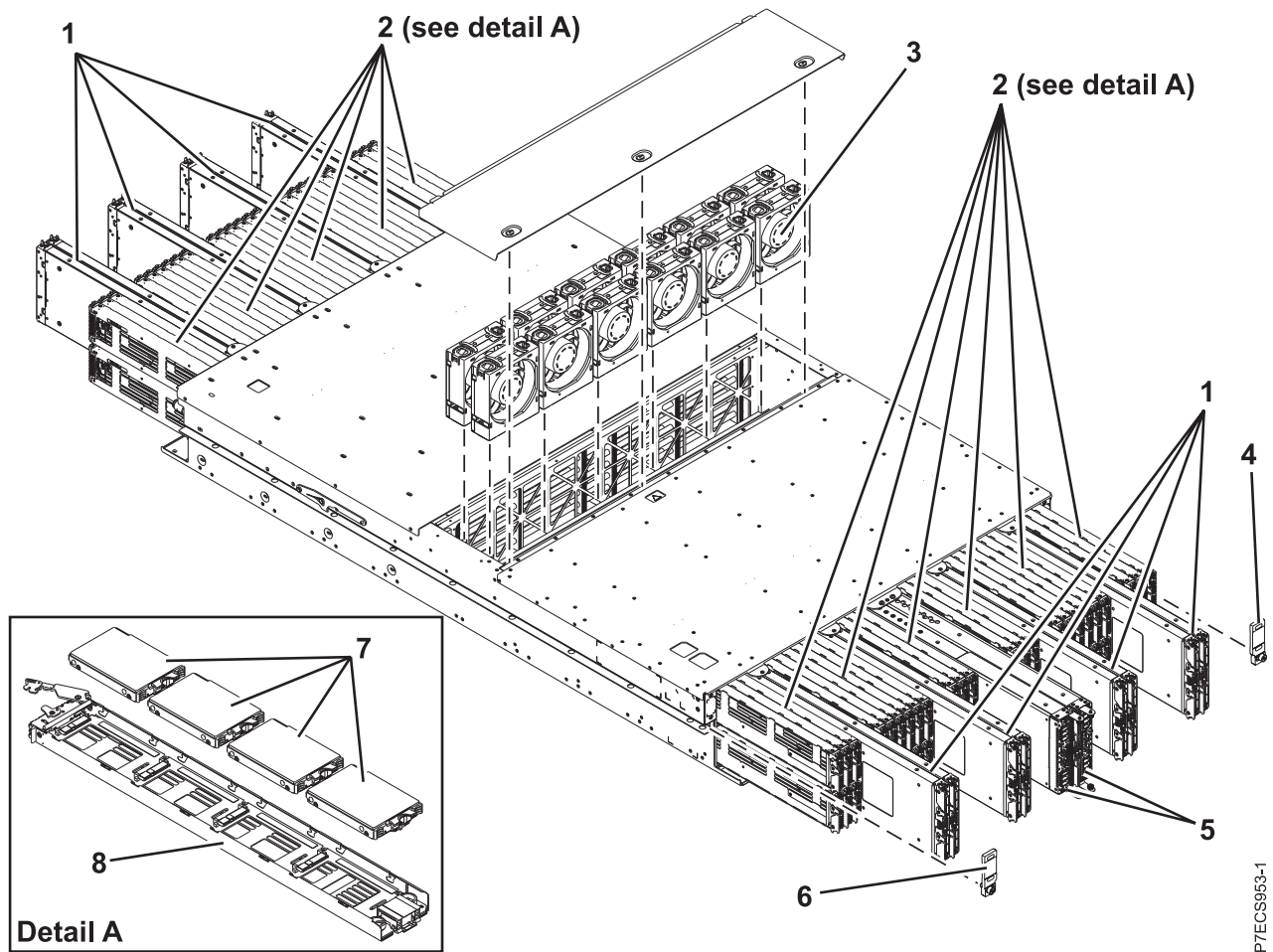


P7ECS952-1

Table 157. BPR assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1	2C81	46K3802	2	Bulk power regulator (BPR)
2	2C82	41U7874	1	Bulk power control and communications hub (BPCH)
3		41U8369	2	Bulk power fan (BPF)
4		45D9113	2	Mounting bracket (front)
4		46K4159	1	Mounting bracket (rear right)
4		46K4160	1	Mounting bracket (rear left)
5	2C83	45D9863	1	Bulk power distribution (BPD)
6		41U8368	2	Bulk power enclosure (BPE)

## Disk enclosure



P7ECS953-1

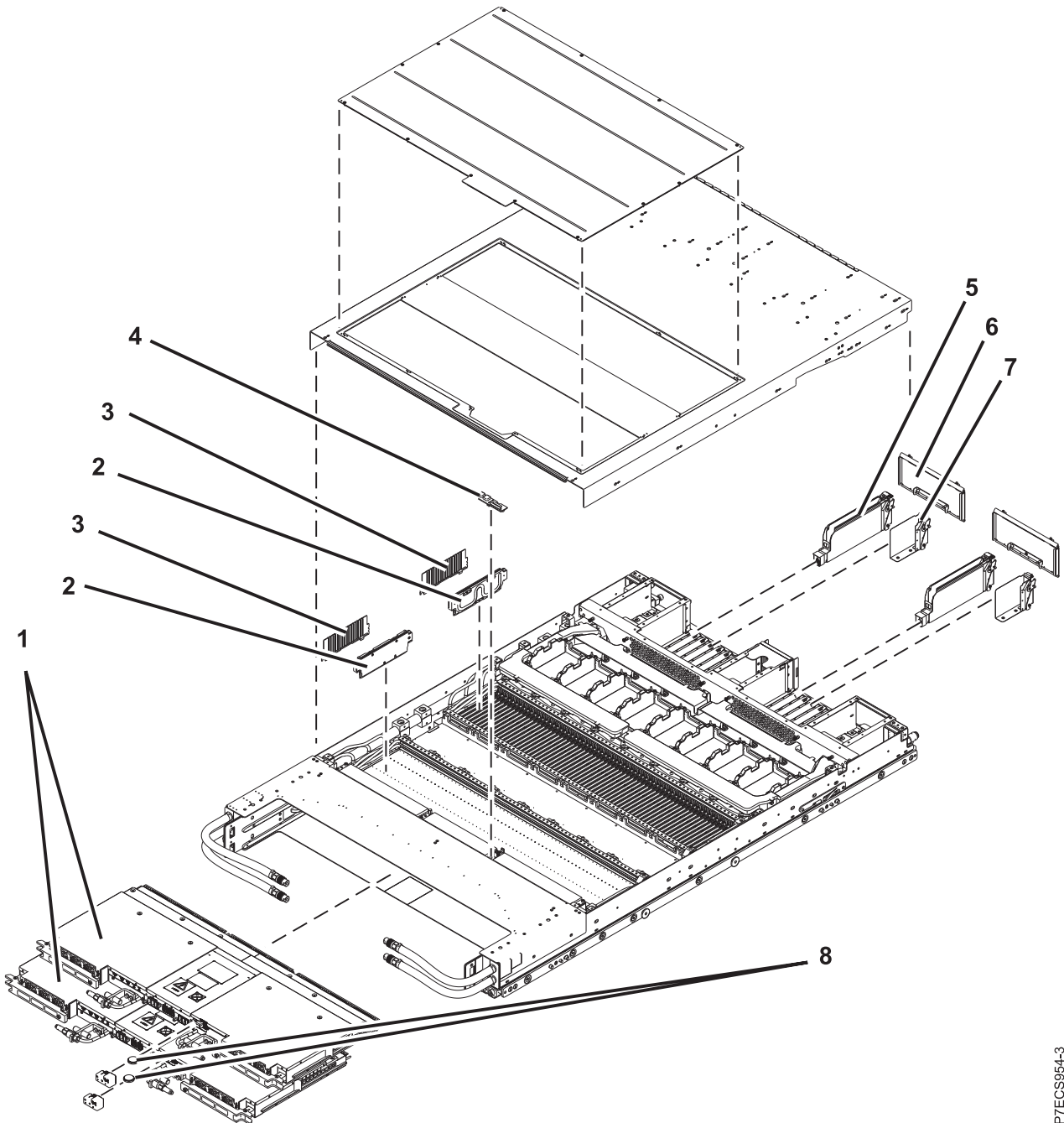
Table 158. Final assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1		46K3785		SAS expander card
1		46K3232	2 - 16	2 port disk enclosure (DE) SAS expander card
1	2A4A	46K3230	2 - 16	4 port DE SAS expander card
2			1	Disk assembly
2		41U9323		Disk enclosure chassis
3	2C80	45D9868	12	Disk enclosure fan assembly
4		74Y7329	2	Retention block (right)
4		1624793	2	Attaching screw for retention block (right)
5	2A4D	46K3779	2	Disk enclosure - Direct converter and control assembly (DE - DCCA)
6		74Y7328	2	Retention block (left)
6		1624793	2	Attaching screw for retention block (left)
7		74Y4936	1 - 4	600 GB small form factor SAS 10k rpm, hard-disk drive

Table 158. Final assembly part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
7		74Y5497	1 - 4	200 GB small form factor SAS, solid-state drive (SSD)
7	6600	74Y9528	1 - 4	2.5 inch 400 GB SAS, SSD
8	2A4C	41U8213	1	SAS drive carrier

## Node assembly

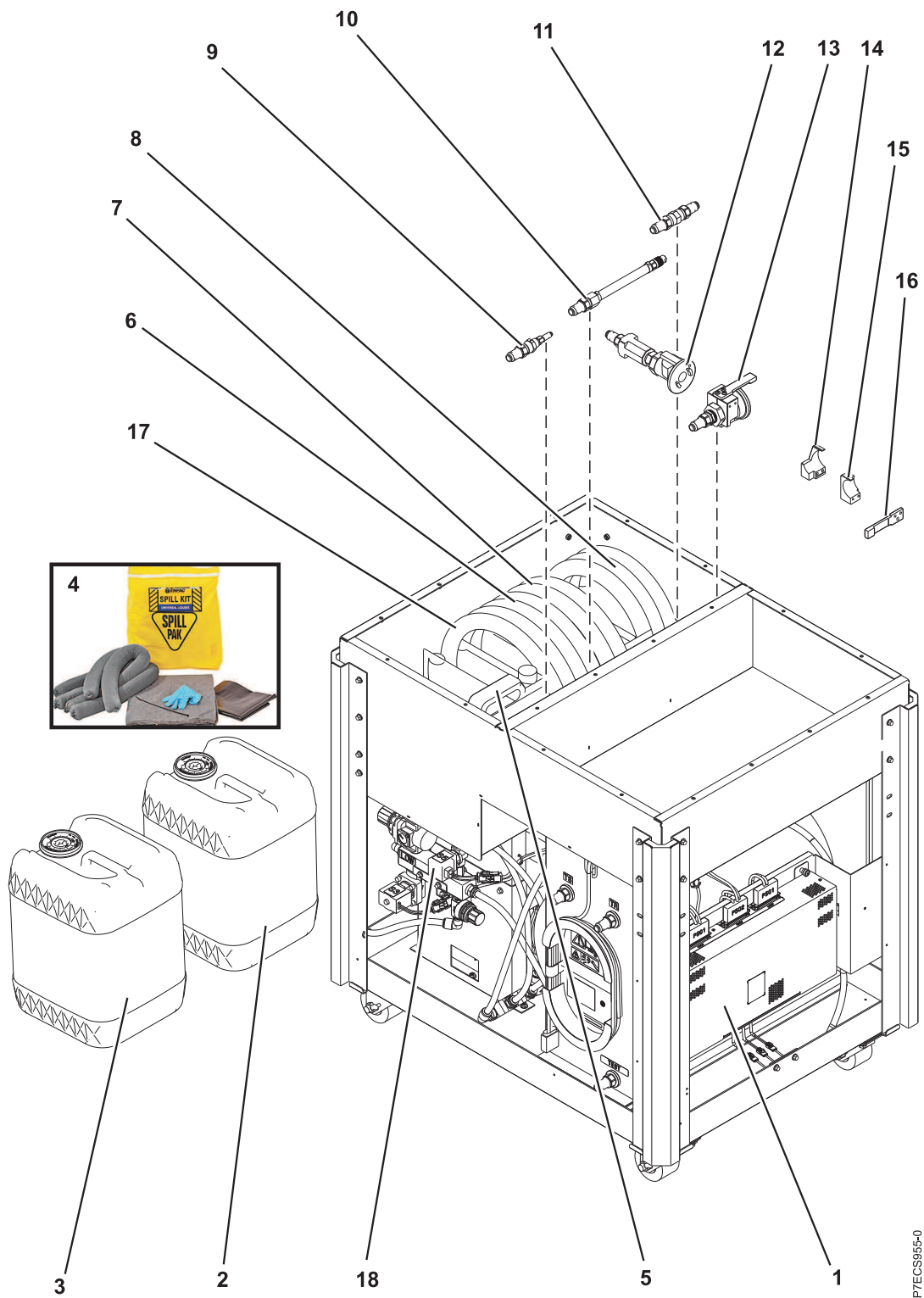


P7ECS954-3

Table 159. CEC assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1	2C84	15R9510	2	Distributed converter and control assembly (DCCA)
2	31D7	45D9443	1 - 32	8 GB DIMM
2	31D0	45D9446	1 - 32	16 GB DIMM
3		42R4696	1 - 32	DIMM filler assembly
4	52C6	74Y0244	1	System VPD card
5		00J0077	1	PCIe multiple slot filler (8 slot)
5		00J0079	1	PCIe multiple slot filler (9 slot)
6		74Y5969	1 - 16	PCIe single filler
7	2E00	74Y1141	1 - 16	PCIe adapter
7		41U7865	1 - 16	4 port PCIe SAS adapter
7		41U7862	1 - 16	2 port PCIe SAS adapter
8		44V4359	2	Flexible service processor (FSP) battery

## Fill and drain toolkit



P7EC8965-0

Table 160. Fill and drain toolkit parts

Index number	Part number	Description
	45D6928	Fill and drain tool (FDT) kit



Table 160. Fill and drain toolkit parts (continued)

Index number	Part number	Description
1	46K3778	FDT MDA card
2	45D2124	BTA water container (with water)
3	45D3063	BTA water container (without water)
4	45D6312	BTA spill kit
5	45D8560	FDT customer water plastic bottle
6	45D8561	FDT hose assembly. HA1
7	45D8562	FDT hose assembly. HA2
8	45D8563	FDT hose assembly. HA6
9	45D8565	FDT hose adapter A1
10	45D8566	FDT hose adapter A2
11	45D8567	FDT hose adapter A3
12	45D8568	FDT hose adapter A4
13	45D8569	FDT hose adapter A5
14	45D8570	FDT bracket, adapter AQ A5
15	45D8571	FDT bracket, adapter AQ A5
16	45D8572	FDT key, adapter AQ A5
17	45D8564	FDT THA-BTA XFER FDT hose assembly
18	41U9324	FDT valve assembly

Table 161. Miscellaneous parts

Description	Part number
External cables and cords	See Planning for cables.
Removable media	See Managing devices.
Cable configuration	See Enclosures and expansion units.
UEPO cable (A-side)	45D7560
UEPO cable (B-side)	45D7561
Cross-communication cable	45D7562
Cross-power cable	45D7563
Power cord (ac 480 V, 100 A)	45D6091
Power cord (ac 200-240 V, 100 A)	45D6092
Power cord (ac 200-480 V, 125 A)	45D6093
Power cord (dc 380/520 V, 100 A)	45D9649
BPR filler	74Y0611
Optical cable brackets	45D9604 (left) 45D9605 (right)
D-Link optical cable (0.66 meter) (up to three racks)	74Y0469

Table 161. Miscellaneous parts (continued)

Description	Part number
D-Link optical cable (1.06 meter) (up to three racks)	74Y0470
D-Link optical cable (4.8 meter) (up to three racks)	74Y0471
D-Link optical cable (5.6 meter) (up to three racks)	74Y0472
D-Link optical cable (6.6 meter) (up to three racks)	74Y0473
D-Link optical cable (10 meter) (more than three racks)	45D0354
D-Link optical cable (15 meter) (more than three racks)	45D8080
D-Link optical cable (20 meter) (more than three racks)	45D8117
D-Link optical cable (30 meter) (more than three racks)	45D8216
D-Link optical cable (40 meter) (more than three racks)	45D8309
D-Link optical cable (50 meter) (more than three racks)	45D8362
DCCA power cable	74Y0367 (long) 74Y0368 (medium) 74Y0369 (short)
DCCA communications cable	15R8392 (2 meter) 15R8393 (3 meter) 15R8394 (4 meter)
SAS cables	45D7822 (1.5 meter) 45D9124 (3.25 meter)
SAS HD cables	74Y0399 (1.5 meter) 74Y0401 (3.25 meter)
Hand tools kit	74Y0988

## 5786, 5787, 7031-D24, and 7031-T24 system parts

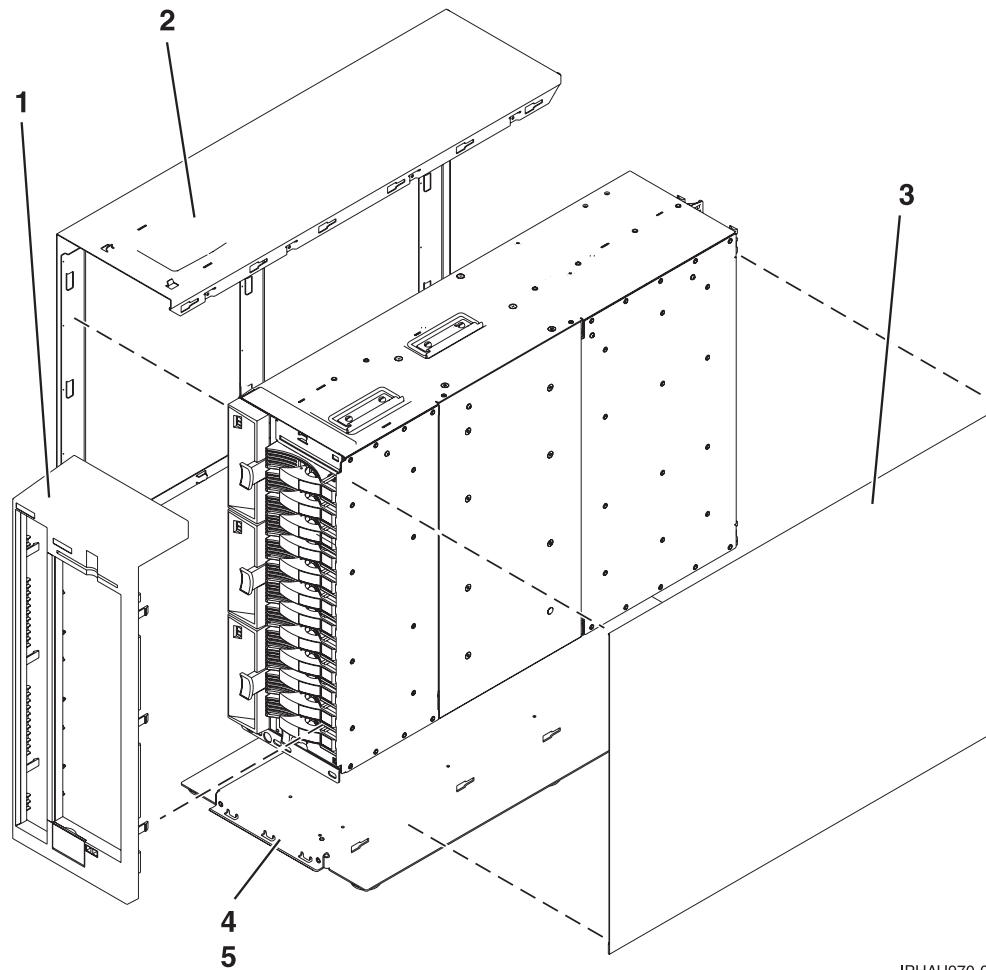
Indexed drawings show system part numbers.

### Notes:

- For external cable FRU part number and description for your I/O enclosure, see the *Site and hardware planning*, order number SA76-0091.
- For procedures on cabling your I/O enclosure, see *Customer-Installable Features for the IBM p 570 (9117-MMA)*, order number SA76-0104. and go the topic "Connecting the 5786, 5787, 7031-D24 or 7031-T24 SCSI disk drive enclosure".

- Throughout this topic, the abbreviation RoHS is used. RoHS refers to European Union Directive 2002/95/EC on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment *Site and hardware planning* All part numbers are suitable for the 7031-T24, 7031-D24, 5786, and 5787 unless otherwise indicated.

## Cover assemblies



IPHAU970-0

Table 162. Stand-alone cover assembly part numbers for 5787 and 7031-T24

Index number	CCIN	Part number	Units per assembly	Description
1		12R8505*	1	Front cover assembly stand-alone
2		12R8373*	1	Side cover assembly stand-alone, left
3		12R8376*	1	Side cover assembly stand-alone, right
4		12R8379*	1	Footstand assembly stand-alone
5		1624741*	4	Screw, M3 x 4 pan head

\* Designed to comply with RoHS requirement

\*\* Not designed to comply with RoHS requirement

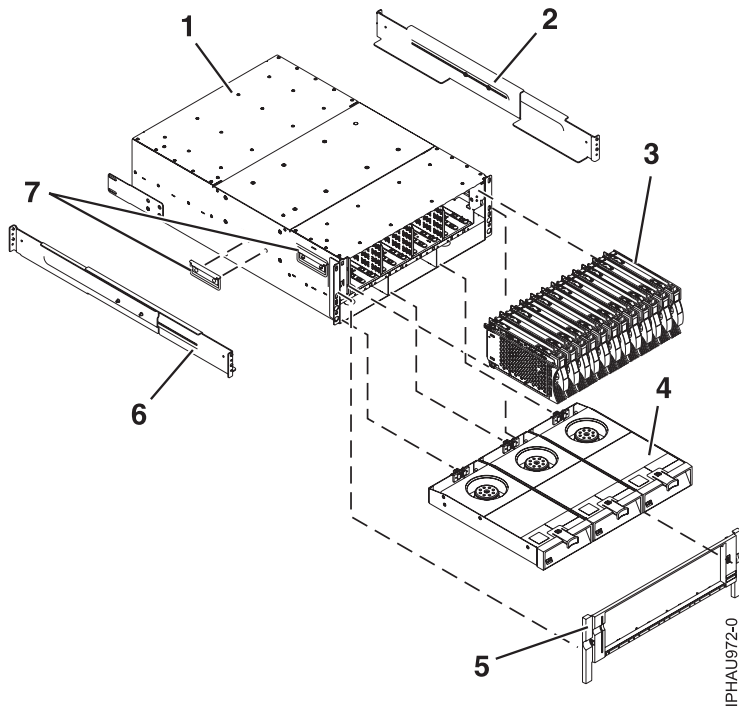


Table 163. I/O enclosure assembly (front view)

Index number	CCIN	Part number	Units per assembly	Description
1		41U0299*	1	Rack configured chassis assembly (includes chassis, disk drive backplane, VPD card). Removal and replacement procedures are sent with the FRU.
1		41U0301*	1	Stand-alone configured chassis assembly (includes chassis, disk drive backplane, VPD card). Removal and replacement procedures are sent with the FRU.
2		39J2051*	1	Mount Rail assembly (7031-D24 only)
2		97P4178* 3P5556**		Disk drive bezel (not shown)
2		97P4179* 53P6213**		Disk drive filler panel (not shown)
3		03N5260* 00P3833**	1-12 per side	73.4 GB Disk drive with U320 carrier, 10K RPM, 80 pin
3		03N6325* 00P3072**	1-12 per side	73.4 GB Disk drive with U320 carrier, 10K RPM, 80 pin
3		03N5265* 00P3835**	1-12 per side	146.8 GB Disk drive with U320 carrier, 10K RPM, 80 pin
3		03N6330* 00P2665**	1-12 per side	146.8 GB Disk drive with U320 carrier, 10K RPM, 80 pin
3		03N5270* 80P3157**	1-12 per side	300 GB Disk drive with U320 carrier, 10K RPM, 80 pin
3		03N6335* 80P3400**	1-12 per side	300 GB Disk drive with U320 carrier, 10K RPM, 80 pin

Table 163. I/O enclosure assembly (front view) (continued)

Index number	CCIN	Part number	Units per assembly	Description
3		03N5275* 80P3159**	1-12 per side	36.4 GB Disk drive with U320 carrier, 15K RPM, 80 pin
3		03N6340* 00P2693**	1-12 per side	36.4 GB Disk drive with U320 carrier, 15K RPM, 80 pin
3		03N5280* 80P3163**	1-12 per side	73.4 GB Disk drive with U320 carrier, 15K RPM, 80 pin
3		03N6345* 00P2685**	1-12 per side	73.4 GB Disk drive with U320 carrier, 15K RPM, 80 pin
3		03N5285* 80P3911**	1-12 per side	3.5 inch 146 GB SCSI disk drive, 15 K RPM
3		10N8578*	1-12 per side	300 GB Disk drive with U320 carrier, 15K RPM, 80 pin
3		03N5270* 80P3157**		300 GB Ultra320 10K rpm 80 pin SCSI disk drive/carrier
3	4326	39J3695	1-12 per side	3.5 inch 35 GB SCSI disk drive, 15K RPM (IBM i)
3	4327	39J3696	1-12 per side	3.5 inch 70 GB SCSI disk drive, 15K RPM (IBM i)
3	4328	39J3697	1-12 per side	3.5 inch 141 GB SCSI disk drive, 15K RPM (IBM i)
3	4329	42R6676	1-12 per side	3.5 inch 282 GB SCSI disk drive, 15K RPM (IBM i)
4		15R6792* 12R9950**	3	Fan assembly
5		41U0264*	1	Front bezel (Rack unit only)
6		39J2051*	1	Mount Rail assembly (See index number 2 in this table)
7		12R8511* 90H9196**	3	Chassis handle

\* Designed to comply with RoHS requirement

\*\* Not designed to comply with RoHS requirement

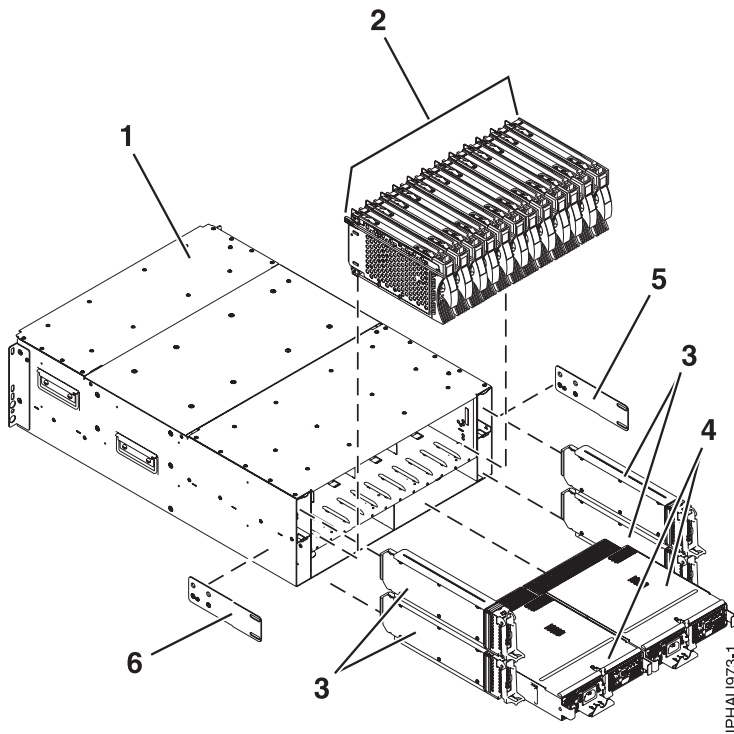


Table 164. I/O enclosure assembly (back view)

Index number	CCIN	Part number	Units per assembly	Description
1				Chassis assembly (refer to table 2 for part number)
2				Disk drive assemblies (refer to table 2 for part number)
3	506E	12R9042* 12R7477**	1-4	SCSI repeater card assembly single
3	506D	12R9040* 12R7475**	1-4	SCSI repeater card assembly dual
3		12R7457*	1-3	SCSI repeater card filler assembly (not shown)
4		12R9078**	1-2	966 W power supply <b>Note:</b> Use with a power supply that has the same wattage. If a 966 W power supply is not available, replace both 966 W power supplies with 845 W power supplies.
4		15R7998*	1-2	845 W power supply <b>Note:</b> Use with a power supply that has the same wattage.
4		12R7454*	1	Power supply filler assembly (not shown)
5		12R6121*	1	Left chassis bracket
6		12R6122*	1	Right chassis bracket

\* Designed to comply with RoHS requirement

\*\* Not designed to comply with RoHS requirement

## 5796 and 7314-G30 system parts

Indexed drawings show system part numbers.

### Cover assemblies

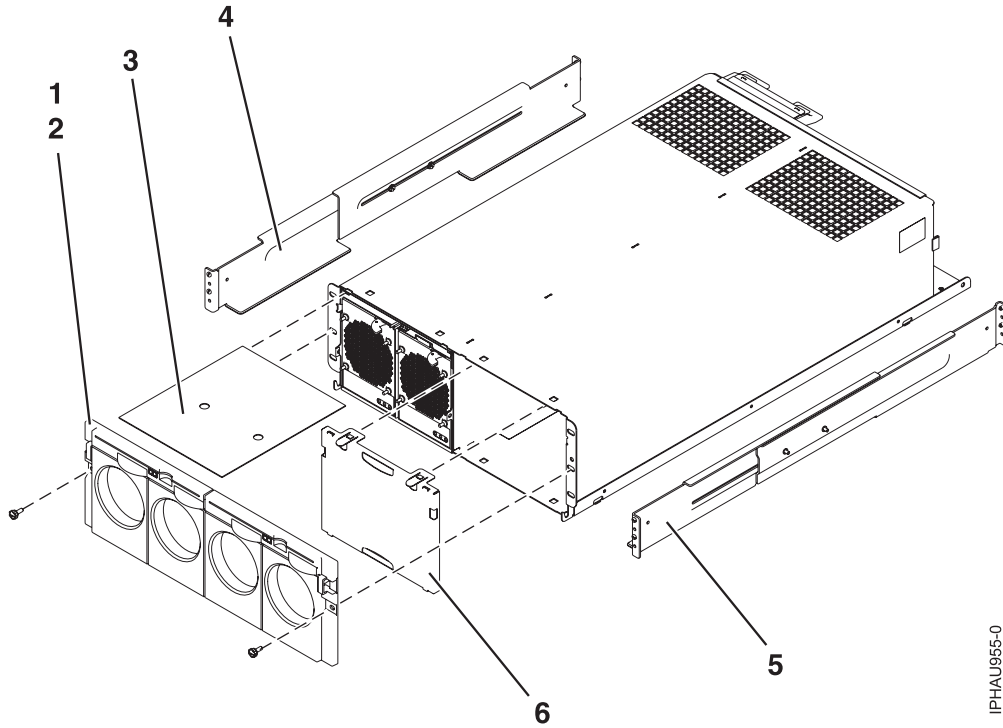
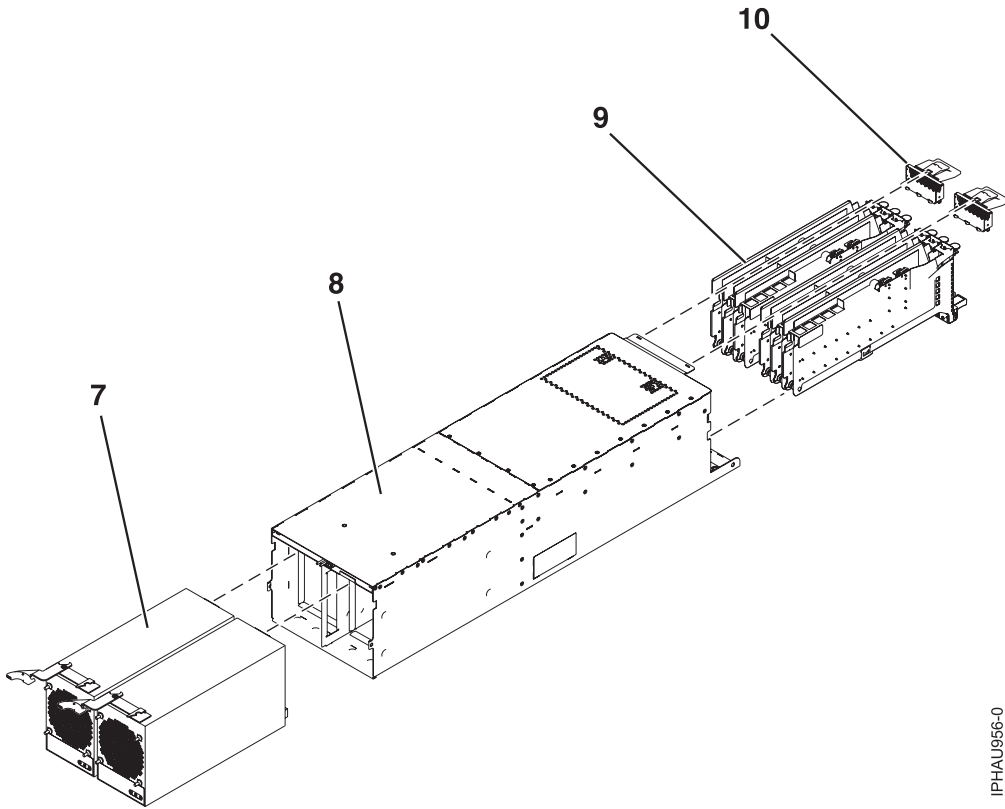


Table 165. Cover assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1		04N6587	1	Screw
2		80P5960	2	Front bezel
3		80P5955	1	Service label
4		39J5190	1	Rail assembly
5		39J5190	1	Rail assembly
6		80P6903	1	Air flow block



IPHAU956-0

Table 166. Assembly

Index number	CCIN	Part number	Units per assembly	Description
7		44V4294	2	300 W power supply
8		80P5880	1	Chassis assembly, includes power cables
9		42R4007	1	PCI adapter cassette, Gen 3 single wide (handle at bottom), long
9		42R4008	1	PCI adapter cassette, Gen 3 double wide (handle at bottom), long
10		10N7690	2	EMC shield assembly



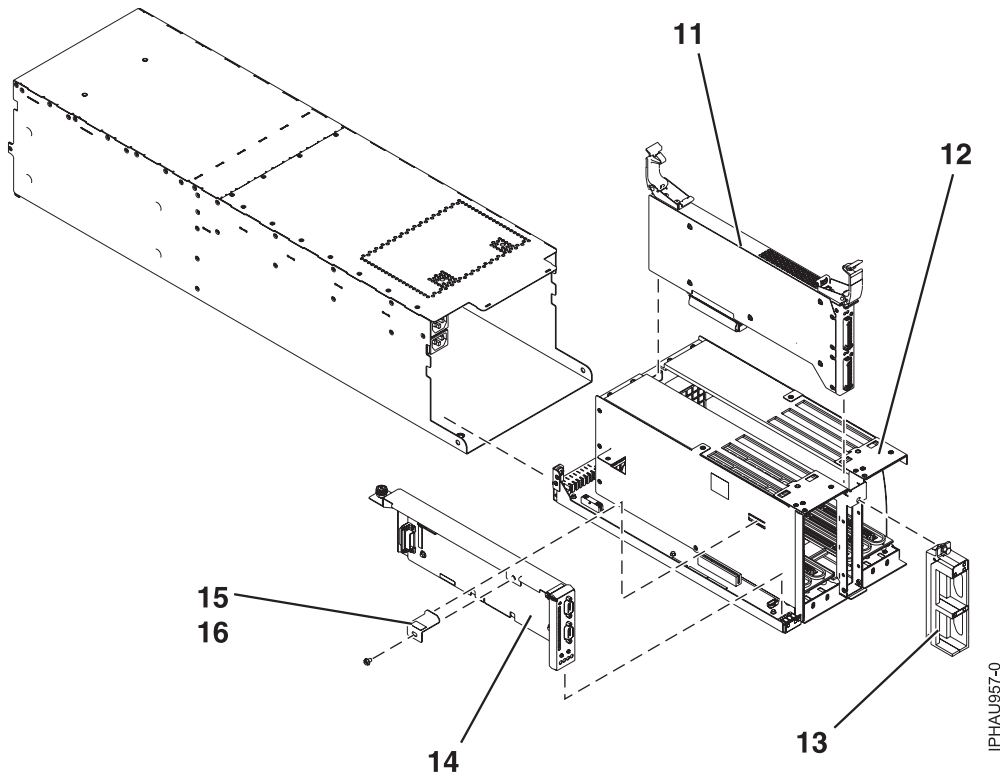


Table 167. Final assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
11		10N8782	1	GX card with hardware
11		10N7774	1	GX card with hardware
12		07P6949	1	Fabrication assembly
13		80P5940	1	Strain relief assembly (green)
13		03N5871	1	Strain relief assembly (olive)
14	520D	46K6826	1	SPCN card with hardware
15		03N5660	4	Hold down bracket
16		53P0320	4	Screw

Table 168. Cable parts

CCIN	Description	Part number
	Y cable	40H6603
	SCSI-3 cable	52G4233
	SCSI-4 cable	42R4756

Table 169. Miscellaneous parts

CCIN	Description	Part number
	External cables and cords	See Planning for cables.
	PCI adapters	See Managing PCI adapters.

Table 169. Miscellaneous parts (continued)

CCIN	Description	Part number
	Cable configuration	See Enclosures and expansion units.
	PCI filler bracket	39J0260
	Wrap plug	87H3439
	Wrap plug	87H3442
	Wrap plug	87H3311
	Wrap plug	73H2508
	Wrap plug	93H5270

## 5802 and 5877 system parts

Indexed drawings show system part numbers.

### Front assembly

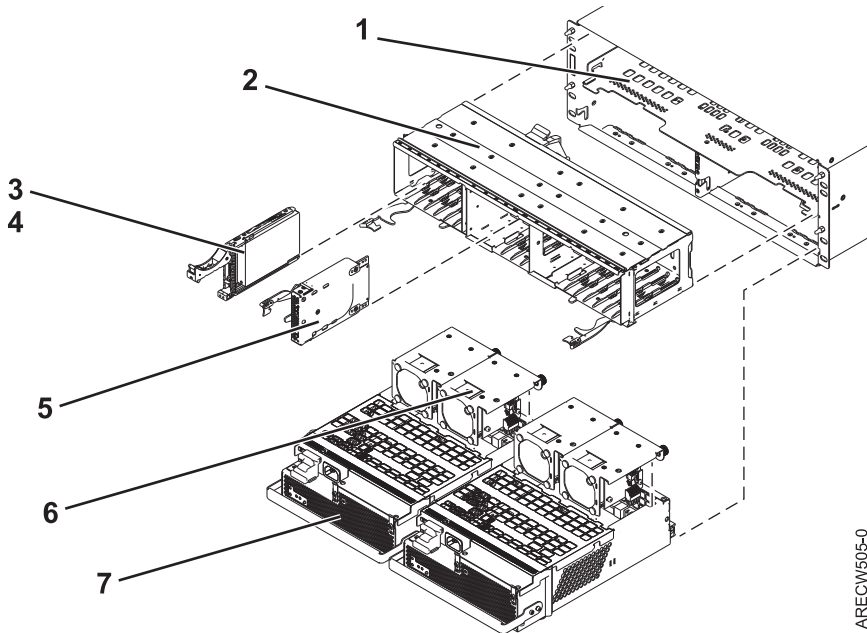


Table 170. Front assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1			1	Chassis assembly
2		45D5215	1	Disk unit cage assembly (5802 only)
2		44V7924	1	Disk unit cage filler (5877 only)
3	58B0	44V6821**	0 - 18	69 GB small form factor solid-state SAS drive
3	58B3	00E6051* 74Y5294**	0 - 18	177 GB small form factor solid-state SAS drive
3	58B8	74Y9524*	0 - 18	387 GB small form factor solid-state SAS drive
3	59C0	00E8702*	0 - 18	775 GB small form factor solid-state SAS drive

Table 170. Front assembly part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
3	198B	00E6165* 44V4429**	0 - 18	69 GB 15K small form factor SAS disk drive (IBM i)
3	6600	42R8391**	0 - 18	73 GB 10K small form factor SAS disk drive (AIX and Linux)
3	198B	00E6168* 44V4426**	0 - 18	73 GB 15K small form factor SAS disk drive (AIX and Linux)
3	198C	00E6166* 44V6844**	0 - 18	139 GB 15K small form factor SAS disk drive (IBM i)
3	169C	42R8392**	0 - 18	146 GB 10K small form factor SAS disk drive (AIX and Linux)
3	198C	00E6169* 44V6845**	0 - 18	146 GB 15K small form factor SAS disk drive (AIX and Linux)
3	198D	00E6164* 74Y4896**	0 - 18	283 GB 10K small form factor SAS disk drive (IBM i)
3	19A1	74Y6495*	0 - 18	283 GB 15K small form factor SAS disk drive (IBM i)
3	19A1	74Y6496*	0 - 18	300 GB 15K small form factor SAS disk drive (AIX and Linux)
3	198D	00E6167* 44V6833**	0 - 18	300 GB 10K small form factor SAS disk drive (AIX and Linux)
3	19A3	74Y4897*	0 - 18	571 GB 10K small form factor SAS disk drive (IBM i)
3	19A3	74Y4900*	0 - 18	600 GB 10K small form factor SAS disk drive (AIX and Linux)
3	19A4	74Y9271*	0 - 18	857 GB 10K small form factor SAS disk drive (IBM i)
3	19A4	74Y9272*	0 - 18	900 GB 10K small form factor SAS disk drive (AIX and Linux)
3	59C8	00E8606*	0 - 18	1.14 TB 10K small form factor SAS disk drive (IBM i)
3	59C8	00E8614*	0 - 18	1.2 TB 10K small form factor SAS disk drive (AIX and Linux)
4		26K8680	0 - 18	Disk unit filler (5802 only)
5		45D6918	4	Port card assembly
6		42R8429	4	Fan assembly
7		44V6774	2	Power supply

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

## Back assembly

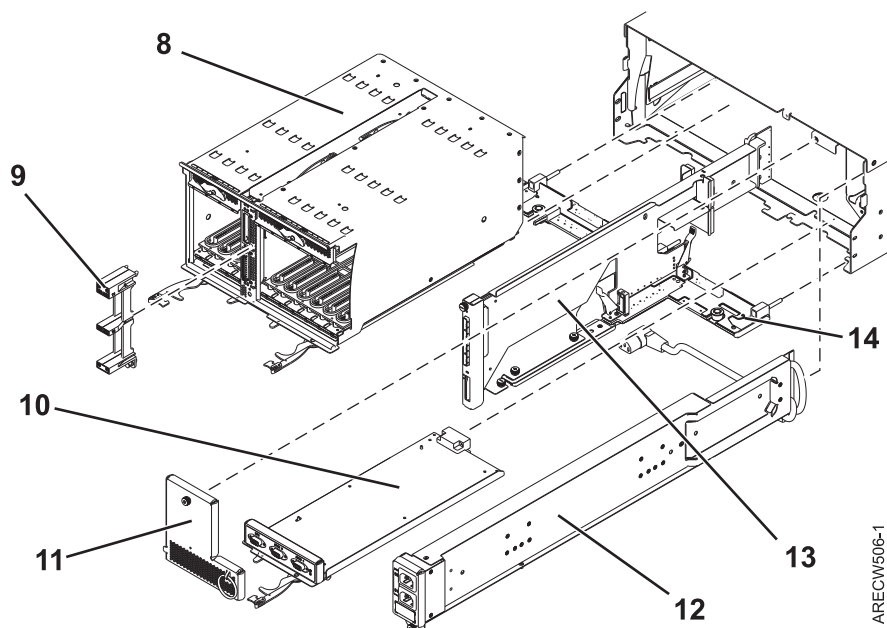


Table 171. Back assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
8		45D5321	1	PCI cage multcard assembly
9				Comes with PCI cage multcard assembly and is not a separate FRU
10		45D5229	1	EMC card assembly
11		44V5743	1	EMC filler bracket
12		44V5739	1	Power cable assembly
13		45D5008	1	SAS conduit card assembly (5802 only)
13		44V7286	1	SAS conduit card filler (5877 only)
14		45D5221	1	Midplane assembly

Table 172. Cables

CCIN	Description	Part number
	0.6 meter SAS AT cable (SAS adapter to 5802 SAS conduit card)	44V5132
	0.6 meter IB cable	45D4785
	1.5 meter IB cable	45D4786
	2.5 meter IB cable	45D4787
	3 meter IB cable	45D5271
	8 meter IB cable	45D4788

Table 173. Miscellaneous parts

CCIN	Description	Part number
	Cable management bracket (1 piece assembly)	74Y9541

Table 173. Miscellaneous parts (continued)

CCIN	Description	Part number
	Cable management bracket (3 piece assembly)	00E7992
	Generation 3 single wide blind swap cassette	44V4768
	External cables and cords	See Planning for cables.
	PCI adapters	See Managing PCI adapters.
	Cable configuration	See Enclosures and expansion units.

## 5803 and 5873 system parts

Indexed drawings show system part numbers.

### Front assembly

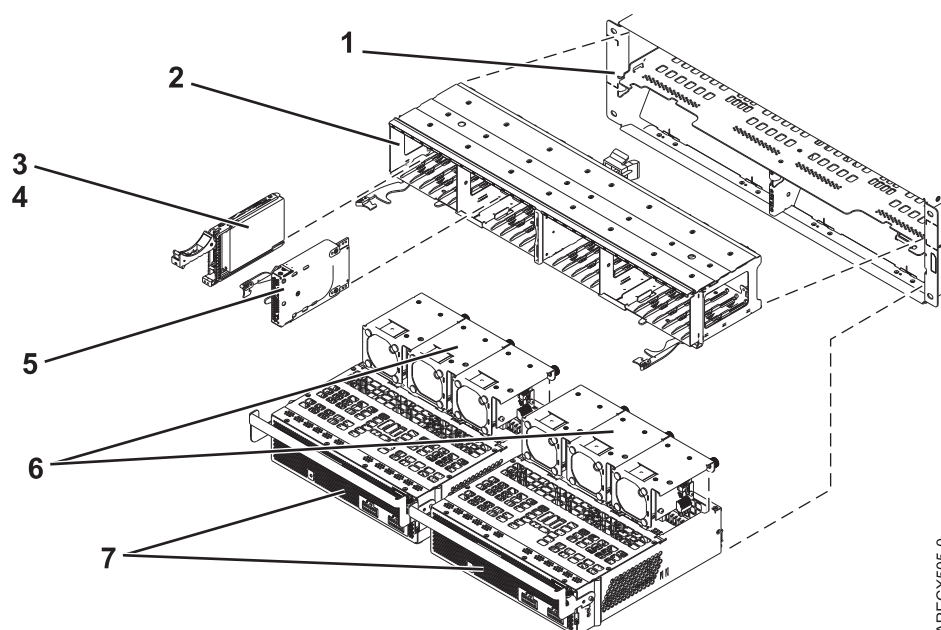


Table 174. Front assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1		44V8265	1	Chassis assembly
2		45D5223	1	Disk unit cage assembly
2		44V5898	1	Disk unit cage filler
3	58B0	44V6821**	0 - 26	69 GB small form factor solid-state SAS drive
3	58B3	00E6051* 74Y5294**	0 - 26	177 GB small form factor solid-state SAS drive
3	58B8	74Y9524*	0 - 26	387 GB small form factor solid-state SAS drive
3	59C0	00E8702*	0 - 26	775 GB small form factor solid-state SAS drive
3	198B	00E6165* 44V4429**	0 - 26	69 GB 15K small form factor SAS disk drive (IBM i)

Table 174. Front assembly part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
3	6600	42R8391**	0 - 26	73 GB 10K small form factor SAS disk drive (AIX and Linux)
3	198B	00E6168* 44V4426**	0 - 26	73 GB 15K small form factor SAS disk drive (AIX and Linux)
3	198C	00E6166* 44V6844**	0 - 26	139 GB 15K small form factor SAS disk drive (IBM i)
3	169C	42R8392**	0 - 26	146 GB 10K small form factor SAS disk drive (AIX and Linux)
3	198C	00E6169* 44V6845**	0 - 26	146 GB 15K small form factor SAS disk drive (AIX and Linux)
3	198D	00E6164* 74Y4896**	0 - 26	283 GB 10K small form factor SAS disk drive (IBM i)
3	19A1	74Y6495*	0 - 26	283 GB 15K small form factor SAS disk drive (IBM i)
3	19A1	74Y6496*	0 - 26	300 GB 15K small form factor SAS disk drive (AIX and Linux)
3	198D	00E6167* 44V6833**	0 - 26	300 GB 10K small form factor SAS disk drive (AIX and Linux)
3	19A3	74Y4897*	0 - 26	571 GB 10K small form factor SAS disk drive (IBM i)
3	19A3	74Y4900*	0 - 26	600 GB 10K small form factor SAS disk drive (AIX and Linux)
3	19A4	74Y9271*	0 - 26	857 GB 10K small form factor SAS disk drive (IBM i)
3	19A4	74Y9272*	0 - 26	900 GB 10K small form factor SAS disk drive (AIX and Linux)
3	59C8	00E8606*	0 - 26	1.14 TB 10K small form factor SAS disk drive (IBM i)
3	59C8	00E8614*	0 - 26	1.2 TB 10K small form factor SAS disk drive (AIX and Linux)
3			AR	Disk unit assembly
4		39Y8083	AR	Disk unit filler
5		45D6918	4	Port card assembly
6		42R8429	6	Fan assembly
7		45D3978	2	Power supply

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

## Back assembly

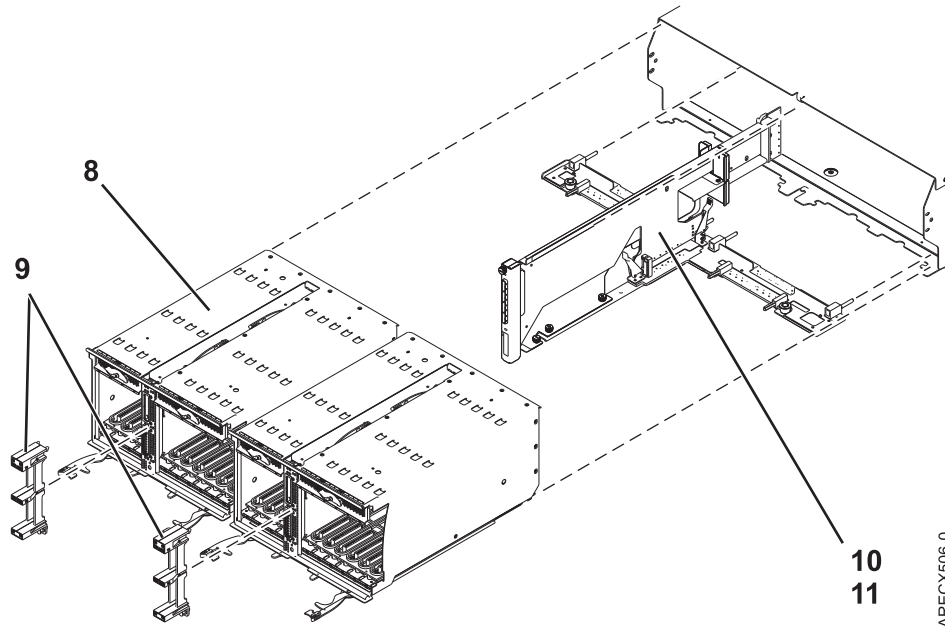


Table 175. Back assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
8		45D5321	2	PCI cage multcard assembly
9				Not a separate FRU, comes with PCI adapter
10		45D5008	1	SAS conduit card assembly
10		44V7286	1	SAS conduit card filler
11		45D5438	1	Midplane assembly

Table 176. Cables

CCIN	Description	Part number
	.6 meter IB cable	45D4785
	1.5 meter IB cable	45D4786
	2.5 meter IB cable	45D4787
	3 meter IB cable	45D5271
	8 meter IB cable	45D4788
	4 meter SAS AE1 cable for IBM 7226 Multimedia Storage Enclosure Model 1U3 (7226-1U3)	46C2900
	3 meter SAS YE1 cable for 7226-1U3	46C2902

Table 177. Miscellaneous parts

CCIN	Description	Part number
	Generation 3 single wide blind swap cassette	44V4768
	External cables and cords	See Site and hardware planning.
	PCI adapters	See Managing PCI adapters.

Table 177. Miscellaneous parts (continued)

CCIN	Description	Part number
	Cable configuration	See Enclosures and expansion units.

## 5886 system parts

Indexed drawings show system part numbers.

### Assembly

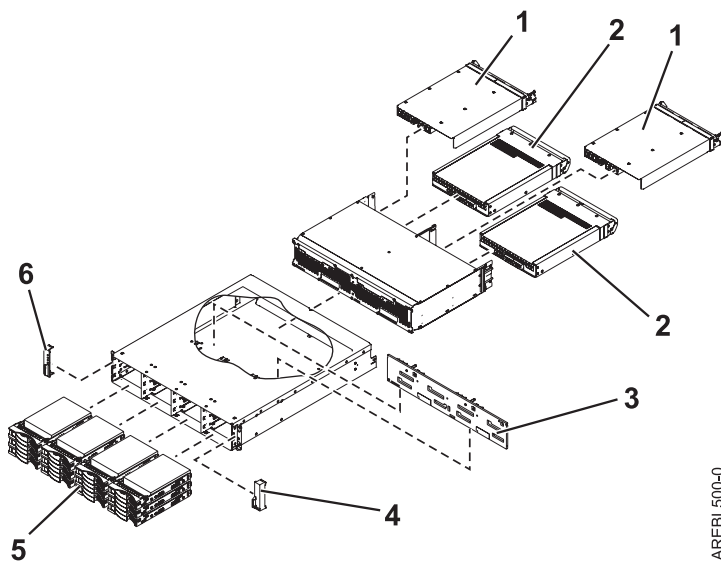


Table 178. I/O backplane and cabling assembly part numbers

Index number	CCIN	Part number	Units	Description
1	509A	44V3937	2	Enclosure Services Manager (ESM)
2	509C	42C2140	2	Power supply
3	509B	42R7898	1	Midplane
4		39R6584	1	Right bezel
5			1-12	See Disk drive and solid-state drive system parts.
6		39R6583	1	Left bezel

Table 179. Cables

CCIN	Part number	Description
	44V4041	1 meter SAS 4x AI cable
	44V4163	3 meter SAS 4x AE cable
	44V4164	6 meter SAS 4x AE cable



Table 179. Cables (continued)

CCIN	Part number	Description
	44V4147	1 meter SAS 4x EE cable
	44V4148	3 meter SAS 4x EE cable
	44V4149	6 meter SAS 4x EE cable
	44V4151	3 meter SAS 2x cable
	44V4152	6 meter SAS 2x cable
	44V4157	1.5 meter SAS YO cable
	44V4158	3 meter SAS YO cable
	44V4159	6 meter SAS YO cable
	44V4160	15 meter SAS YO cable
	44V4161	1.5 meter SAS YI cable
	44V4162	3 meter SAS YI cable
	44V4154	3 meter SAS X cable
	44V4155	6 meter SAS X cable
	44V4156	15 meter SAS X cable
	42R6748	SAS W cable

Table 180. Miscellaneous parts

CCIN	Part number	Description
	External cables and cords	See Site and hardware planning.
	Cable configuration	See Enclosures and expansion units.
	42R6748	Wrap plug
	39R6548	ESM blank
	39M4375	Disk drive blank
	39M5377	Power cord rack jumper
	39R6550	Rail kit
	22R2809	Disk drive filler

## Disk drive and solid-state drive system parts

Disk drive and solid-state drive system parts information.

Table 181. System unit disk drive and solid-state drive system parts

CCIN	Part number	Description
58B0	44V6821**	69 GB small form factor solid-state SAS drive
58B3	00E6051* 74Y5294**	177 GB small form factor solid-state SAS drive
58B8	74Y9524*	387 GB small form factor solid-state SAS drive
59E6	00E8670*	387 GB small form factor solid-state SAS drive
5B0E	00LY322*	387 GB (528 block size) small form factor solid-state SAS drive
59C0	00E8702*	775 GB small form factor solid-state SAS drive

Table 181. System unit disk drive and solid-state drive system parts (continued)

CCIN	Part number	Description
59EA	00E8671*	775 GB small form factor solid-state SAS drive
5B0F	00LY323*	775 GB (528 block size) small form factor solid-state SAS drive
198B	00E6165* 44V4429**	69 GB 15K small form factor SAS disk drive (IBM i)
6600	42R8391**	73 GB 10K small form factor SAS disk drive (AIX and Linux)
198B	00E6168* 44V4426**	73 GB 15K small form factor SAS disk drive (AIX and Linux)
198C	00E6166* 44V6844**	139 GB 15K small form factor SAS disk drive (IBM i)
169C	42R8392**	146 GB 10K small form factor SAS disk drive (AIX and Linux)
198C	00E6169* 44V6845**	146 GB 15K small form factor SAS disk drive (AIX and Linux)
198D	00E6164* 74Y4896**	283 GB 10K small form factor SAS disk drive (IBM i)
19A1	74Y6495*	283 GB 15K small form factor SAS disk drive (IBM i)
59E0	00E9906*	283 GB 15K small form factor SAS disk drive (IBM i)
59E1	00E9966*	283 GB 15K small form factor SAS disk drive (IBM i)
198D	00E6167* 44V6833**	300 GB 10K small form factor SAS disk drive (AIX and Linux)
19A1	74Y6496*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
59E0	00E9912*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
59E1	00E9972*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19A3	74Y4897*	571 GB 10K small form factor SAS disk drive (IBM i)
59CE	00E8648*	571 GB 15K small form factor SAS disk drive (IBM i)
59E4	00E9908*	571 GB 15K small form factor SAS disk drive (IBM i)
59E5	00E9968*	571 GB 15K small form factor SAS disk drive (IBM i)
19A3	74Y4900*	600 GB 10K small form factor SAS disk drive (AIX and Linux)
59CE	00E8653*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59E4	00E9914*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59E5	00E9974*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
19A4	74Y9271*	857 GB 10K small form factor SAS disk drive (IBM i)
19A4	74Y9272*	900 GB 10K small form factor SAS disk drive (AIX and Linux)
59C8	00E8606*	1.14 TB 10K small form factor SAS disk drive (IBM i)
59C8	00E8614*	1.2 TB 10K small form factor SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 182. 5886 disk drive and solid-state drive system parts

CCIN	Part number	Description
58B0	44V6819**	3.5-inch 69 GB solid-state SAS drive
433B	42R6690*	3.5-inch 69 GB 15K SAS disk drive (IBM i)
433B	10N7230*	3.5-inch 73.4 GB 15K SAS disk drive (AIX and Linux)
433C	42R6691*	3.5-inch 139 GB 15K SAS disk drive (IBM i)
433C	10N7232*	3.5-inch 146.8 GB 15K SAS disk drive (AIX and Linux)
433D	42R6692*	3.5-inch 283 GB 15K SAS disk drive (IBM i)
433D	10N7234*	3.5-inch 300 GB 15K SAS disk drive (AIX and Linux)
198E	44V4434*	3.5-inch 428 GB 15K SAS disk drive (IBM i)
198E	44V4432*	3.5-inch 450 GB 15K SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 183. 5887 disk drive and solid-state drive system parts

CCIN	Part number	Description
58B4	00E6053*	177 GB small form factor solid-state SAS drive
	74Y5296**	
58B9	74Y9526*	387 GB solid-state SAS drive
5B10	00LY336*	387 GB (4K block size) small form factor solid-state SAS drive
59C2	00E8709*	775 GB small form factor solid-state SAS drive
5B11	00LY337*	775 GB (4K block size) small form factor solid-state SAS drive
5B12	00LY338*	1551 GB (4K block size) small form factor solid-state SAS drive
5B16	00LY327*	387 GB (528 block size) small form factor solid-state SAS drive
5B17	00LY328*	775 GB (528 block size) small form factor solid-state SAS drive
19B0	00E6171*	139 GB 15K small form factor SAS disk drive (IBM i)
	46K4804**	
19B0	00E6173*	146 GB 15K small form factor SAS disk drive (AIX and Linux)
	46K4806**	
19B1	74Y6497*	283 GB 15K small form factor SAS disk drive (IBM i)
19B1	74Y6498*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19B7	00E6170*	283 GB 10K small form factor SAS disk drive (IBM i)
	74Y4898**	
59C9	00E8681*	283 GB 15K small form factor SAS disk drive (IBM i)
19B7	00E6172*	300 GB 10K small form factor SAS disk drive (AIX and Linux)
	46K4812**	
59C9	00E8687*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19B3	74Y4899*	571 GB 10K small form factor SAS disk drive (IBM i)
59CF	00E8660*	571 GB 15K small form factor SAS disk drive (IBM i)
59CC	00E8683*	571 GB 15K small form factor SAS disk drive (IBM i)

Table 183. 5887 disk drive and solid-state drive system parts (continued)

CCIN	Part number	Description
19B3	74Y4901*	600 GB 10K small form factor SAS disk drive (AIX and Linux)
59CF	00E8665*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59CC	00E8689*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
19B4	74Y9285*	857 GB 10K small form factor SAS disk drive (IBM i)
19B4	74Y9286*	900 GB 10K small form factor SAS disk drive (AIX and Linux)
59CD	00E8623*	1.14 TB 10K small form factor SAS disk drive (IBM i)
59CD	00E8631*	1.2 TB 10K small form factor SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 184. 5888 and EDR1 disk drive and solid-state drive system parts

CCIN	Part number	Description
58BB	00V5433*	1.8 inch 387 GB solid-state SAS drive
59BE	00E8692*	1.8 inch 387 GB solid-state SAS drive

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

## 5887 system parts

Indexed drawings show system part numbers.

## Final assembly

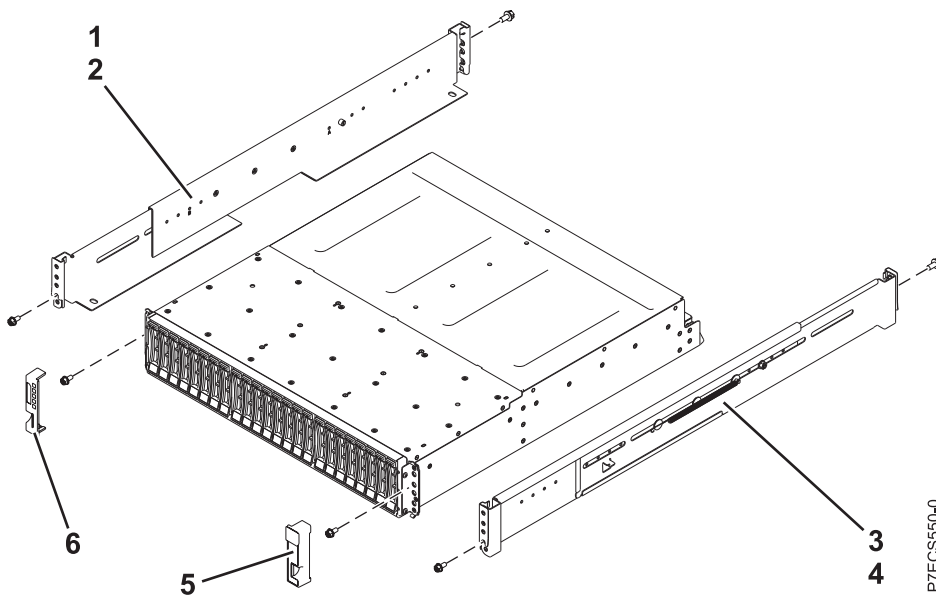


Table 185. Final assembly part numbers

Index number	CCIN	Part number	Units	Description
1		45W8836	1	Rail kit (left slide rail assembly)
2			1	Attaching screw for the left slide rail assembly
3		45W8836	1	Rail kit (right slide rail assembly)
4			1	Attaching screw for the right slide rail assembly
5			1	Right bezel
6			1	Left bezel

## System assembly

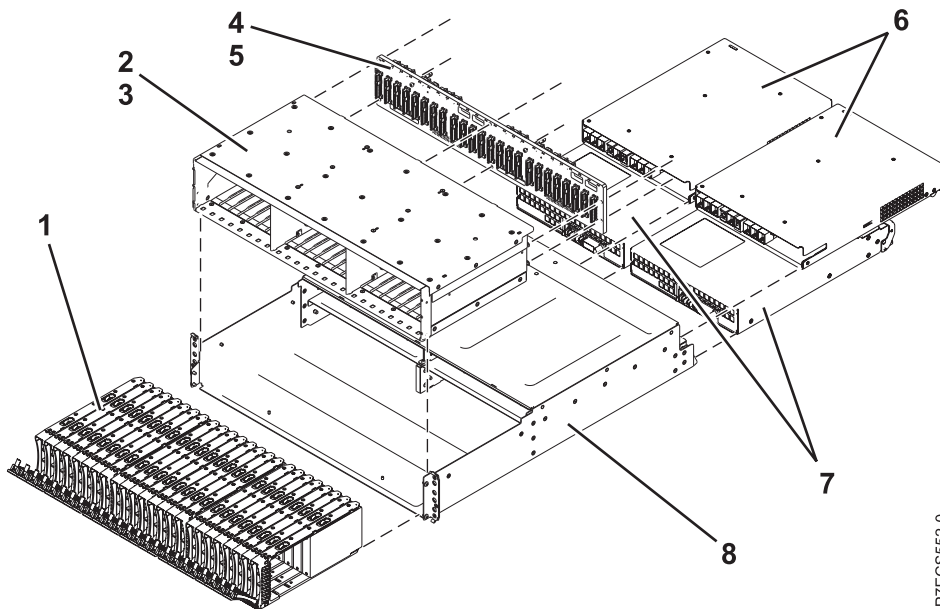


Table 186. System assembly part numbers

Index number	CCIN	Part number	Units	Description
1			1 – 24	See Disk drive and solid-state drive system parts.
2			1	Midplane assembly
3			2	Attaching screw for the midplane assembly
4	50B0	45W9576	1	Midplane
5			6	Attaching screw for the midplane
6	50B1	45W7653	2	Enclosure Services Manager (ESM)
7	50B2	45W8229	2	Power supply
8			1	Enclosure chassis

Table 187. Cables

CCIN	Part number	Description
	44V4157	1.5 meter SAS YO cable (5887 in Mode 1 connected to a single I/O adapter)
	44V4158	3 meter SAS YO cable (5887 in Mode 1 connected to a single I/O adapter)
	44V4159	6 meter SAS YO cable (5887 in Mode 1 connected to a single I/O adapter)
	44V4160	15 meter SAS YO cable (5887 in Mode 1 connected to a single I/O adapter)
	44V4161	1.5 meter SAS YI cable
	44V4162	3 meter SAS YI cable
	44V4154	3 meter SAS X cable (5887 in Mode 2 or 4 connected to dual SAS adapters)
	44V4155	6 meter SAS X cable (5887 in Mode 2 or 4 connected to dual SAS adapters)
	44V4156	15 meter SAS X cable (5887 in Mode 2 or 4 connected to dual SAS adapters)

Table 188. Miscellaneous parts

CCIN	Part number	Description
	External cables and cords	See Planning for cables.
	Cable configuration	See Enclosures and expansion units.
	39M5377	Power cord rack jumper
	45W8836	Rail kit
	45W8681	Disk drive filler

## Disk drive and solid-state drive system parts

Disk drive and solid-state drive system parts information.

Table 189. System unit disk drive and solid-state drive system parts

CCIN	Part number	Description
58B0	44V6821**	69 GB small form factor solid-state SAS drive
58B3	00E6051* 74Y5294**	177 GB small form factor solid-state SAS drive
58B8	74Y9524*	387 GB small form factor solid-state SAS drive
59E6	00E8670*	387 GB small form factor solid-state SAS drive
5B0E	00LY322*	387 GB (528 block size) small form factor solid-state SAS drive
59C0	00E8702*	775 GB small form factor solid-state SAS drive
59EA	00E8671*	775 GB small form factor solid-state SAS drive
5B0F	00LY323*	775 GB (528 block size) small form factor solid-state SAS drive
198B	00E6165* 44V4429**	69 GB 15K small form factor SAS disk drive (IBM i)
6600	42R8391**	73 GB 10K small form factor SAS disk drive (AIX and Linux)
198B	00E6168* 44V4426**	73 GB 15K small form factor SAS disk drive (AIX and Linux)
198C	00E6166* 44V6844**	139 GB 15K small form factor SAS disk drive (IBM i)
169C	42R8392**	146 GB 10K small form factor SAS disk drive (AIX and Linux)
198C	00E6169* 44V6845**	146 GB 15K small form factor SAS disk drive (AIX and Linux)
198D	00E6164* 74Y4896**	283 GB 10K small form factor SAS disk drive (IBM i)
19A1	74Y6495*	283 GB 15K small form factor SAS disk drive (IBM i)
59E0	00E9906*	283 GB 15K small form factor SAS disk drive (IBM i)
59E1	00E9966*	283 GB 15K small form factor SAS disk drive (IBM i)
198D	00E6167* 44V6833**	300 GB 10K small form factor SAS disk drive (AIX and Linux)
19A1	74Y6496*	300 GB 15K small form factor SAS disk drive (AIX and Linux)

Table 189. System unit disk drive and solid-state drive system parts (continued)

CCIN	Part number	Description
59E0	00E9912*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
59E1	00E9972*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19A3	74Y4897*	571 GB 10K small form factor SAS disk drive (IBM i)
59CE	00E8648*	571 GB 15K small form factor SAS disk drive (IBM i)
59E4	00E9908*	571 GB 15K small form factor SAS disk drive (IBM i)
59E5	00E9968*	571 GB 15K small form factor SAS disk drive (IBM i)
19A3	74Y4900*	600 GB 10K small form factor SAS disk drive (AIX and Linux)
59CE	00E8653*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59E4	00E9914*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59E5	00E9974*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
19A4	74Y9271*	857 GB 10K small form factor SAS disk drive (IBM i)
19A4	74Y9272*	900 GB 10K small form factor SAS disk drive (AIX and Linux)
59C8	00E8606*	1.14 TB 10K small form factor SAS disk drive (IBM i)
59C8	00E8614*	1.2 TB 10K small form factor SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 190. 5886 disk drive and solid-state drive system parts

CCIN	Part number	Description
58B0	44V6819**	3.5-inch 69 GB solid-state SAS drive
433B	42R6690*	3.5-inch 69 GB 15K SAS disk drive (IBM i)
433B	10N7230*	3.5-inch 73.4 GB 15K SAS disk drive (AIX and Linux)
433C	42R6691*	3.5-inch 139 GB 15K SAS disk drive (IBM i)
433C	10N7232*	3.5-inch 146.8 GB 15K SAS disk drive (AIX and Linux)
433D	42R6692*	3.5-inch 283 GB 15K SAS disk drive (IBM i)
433D	10N7234*	3.5-inch 300 GB 15K SAS disk drive (AIX and Linux)
198E	44V4434*	3.5-inch 428 GB 15K SAS disk drive (IBM i)
198E	44V4432*	3.5-inch 450 GB 15K SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 191. 5887 disk drive and solid-state drive system parts

CCIN	Part number	Description
58B4	00E6053*	177 GB small form factor solid-state SAS drive
	74Y5296**	
58B9	74Y9526*	387 GB solid-state SAS drive
5B10	00LY336*	387 GB (4K block size) small form factor solid-state SAS drive
59C2	00E8709*	775 GB small form factor solid-state SAS drive



Table 191. 5887 disk drive and solid-state drive system parts (continued)

CCIN	Part number	Description
5B11	00LY337*	775 GB (4K block size) small form factor solid-state SAS drive
5B12	00LY338*	1551 GB (4K block size) small form factor solid-state SAS drive
5B16	00LY327*	387 GB (528 block size) small form factor solid-state SAS drive
5B17	00LY328*	775 GB (528 block size) small form factor solid-state SAS drive
19B0	00E6171* 46K4804**	139 GB 15K small form factor SAS disk drive (IBM i)
19B0	00E6173* 46K4806**	146 GB 15K small form factor SAS disk drive (AIX and Linux)
19B1	74Y6497*	283 GB 15K small form factor SAS disk drive (IBM i)
19B1	74Y6498*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19B7	00E6170* 74Y4898**	283 GB 10K small form factor SAS disk drive (IBM i)
59C9	00E8681*	283 GB 15K small form factor SAS disk drive (IBM i)
19B7	00E6172* 46K4812**	300 GB 10K small form factor SAS disk drive (AIX and Linux)
59C9	00E8687*	300 GB 15K small form factor SAS disk drive (AIX and Linux)
19B3	74Y4899*	571 GB 10K small form factor SAS disk drive (IBM i)
59CF	00E8660*	571 GB 15K small form factor SAS disk drive (IBM i)
59CC	00E8683*	571 GB 15K small form factor SAS disk drive (IBM i)
19B3	74Y4901*	600 GB 10K small form factor SAS disk drive (AIX and Linux)
59CF	00E8665*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
59CC	00E8689*	600 GB 15K small form factor SAS disk drive (AIX and Linux)
19B4	74Y9285*	857 GB 10K small form factor SAS disk drive (IBM i)
19B4	74Y9286*	900 GB 10K small form factor SAS disk drive (AIX and Linux)
59CD	00E8623*	1.14 TB 10K small form factor SAS disk drive (IBM i)
59CD	00E8631*	1.2 TB 10K small form factor SAS disk drive (AIX and Linux)

\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

Table 192. 5888 and EDR1 disk drive and solid-state drive system parts

CCIN	Part number	Description
58BB	00V5433*	1.8 inch 387 GB solid-state SAS drive
59BE	00E8692*	1.8 inch 387 GB solid-state SAS drive

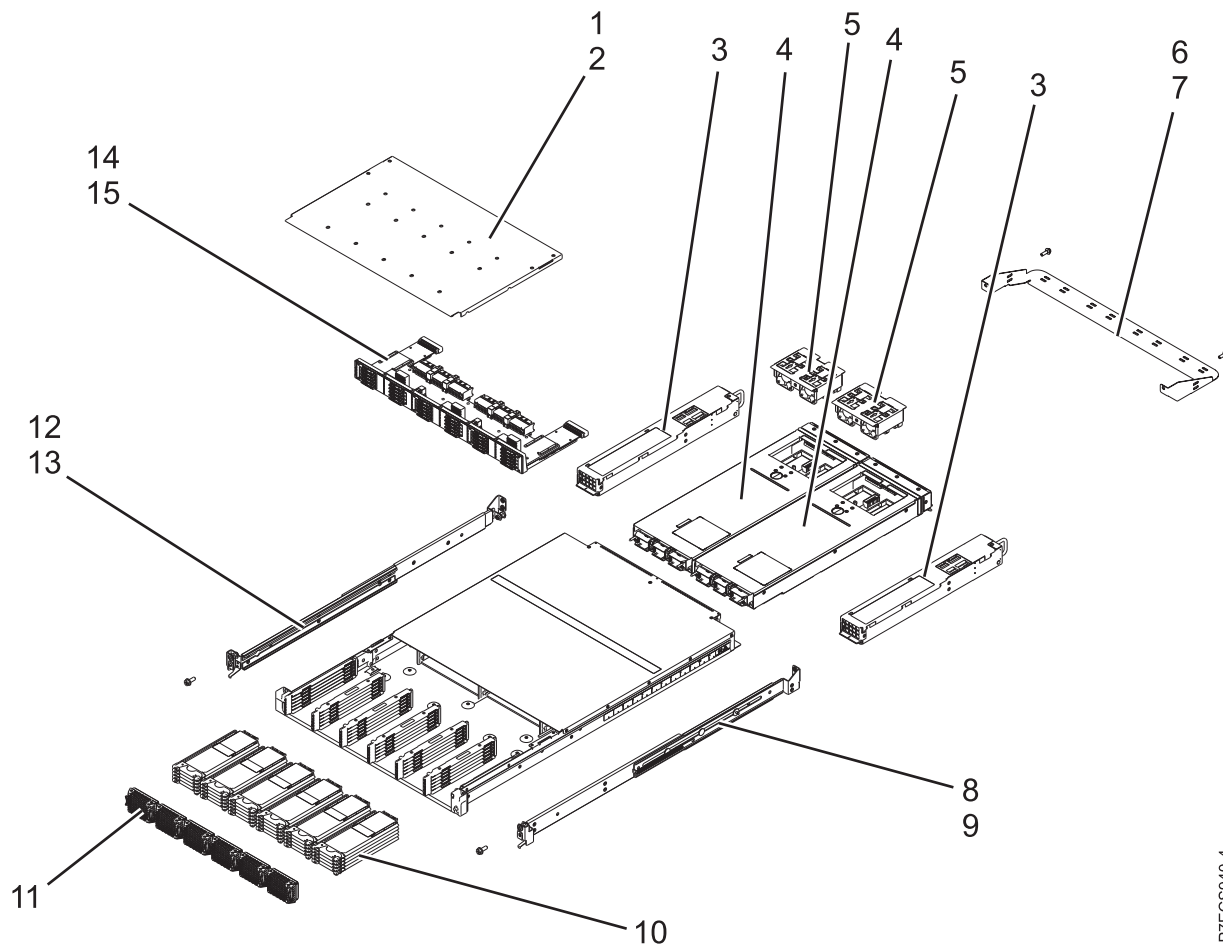
\*Designed to comply with RoHS requirement

\*\*Not designed to comply with RoHS requirement

## 5888 or EDR1 PCIe storage enclosure system parts

Indexed drawings show system part numbers.

### System assembly



P7ECS940-4

Table 193. System assembly part numbers

Index number	CCIN	Part number	Units	Description
1		46K3617	1	Top access cover assembly
2		45D4772	17	Attaching screw for top access cover assembly (upper)
2		45D4772	10	Attaching screw for top access cover assembly (lower)
3		41T8211	2	Power supply
4	57C3	00E6451	2	Enclosure RAID module (ERM) for FC 5888 PCIe storage enclosure
4	57C3	00E7704	2	Enclosure RAID module (ERM) for FC EDR1 PCIe storage enclosure
5		41T8234	2	Fan assembly

Table 193. System assembly part numbers (continued)

Index number	CCIN	Part number	Units	Description
6		73Y9667	1	Cable management bracket
7		46C6380	2	Attaching screw for cable management bracket
8		41T8061	1	Slide rail assembly (right)
9		12J5289	2	Attaching screw for slide rail assembly (right)
10	58BB	00V5433	6 - 30	1.8 inch 387 GB solid-state drive (SSD)
10	59BE	00E8692	6 - 30	387 GB small form factor solid-state SAS drive
10		41U7852	0 - 24	SSD filler assembly
11		41T8767	6	Bezel assembly
12		41T8062	1	Slide rail assembly (left)
13		12J5289	1	Attaching screw for slide rail assembly (left)
14		41T8138	1	Midplane assembly for FC 5888 PCIe storage enclosure
14		41T8962	1	Midplane assembly for FC EDR1 PCIe storage enclosure
15		46K4260	7	Attaching screw for midplane assembly

Table 194. Cables

Part number	Description
46K3769	PCIe 8x cable, 1.5 meter (4.9 feet)
46K3770	PCIe 8x cable, 3 meter (9.8 feet)
41U8581	PCIe cable, 8 meter (26.2 feet)

Table 195. Miscellaneous parts

Part number	Description
External cables and cords	See Planning for cables.
Cable configuration	See Enclosures and expansion units.
39M5377	Power cord
45W8836	Rail kit
45W8681	Disk drive filler
46K2851	Attaching screw for side SSD rails
41T8311	Service card



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**Note:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## **Industry Canada Compliance Statement**

This Class A digital apparatus complies with Canadian ICES-003.

## **Avis de conformité à la réglementation d'Industrie Canada**

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

## **European Community Compliance Statement**

This product is in conformity with the protection requirements of EU Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility. IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-IBM option cards.

This product has been tested and found to comply with the limits for Class A Information Technology Equipment according to European Standard EN 55022. The limits for Class A equipment were derived for commercial and industrial environments to provide reasonable protection against interference with licensed communication equipment.

European Community contact:  
IBM Deutschland GmbH  
Technical Regulations, Department M372  
IBM-Allee 1, 71139 Ehningen, Germany  
Tele: +49 7032 15 2941  
email: lugi@de.ibm.com

**Warning:** This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

## VCCI Statement - Japan

この装置は、クラスA 情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

VCCI-A

The following is a summary of the VCCI Japanese statement in the box above:

This is a Class A product based on the standard of the VCCI Council. If this equipment is used in a domestic environment, radio interference may occur, in which case, the user may be required to take corrective actions.

### Japanese Electronics and Information Technology Industries Association (JEITA) Confirmed Harmonics Guideline (products less than or equal to 20 A per phase)

高調波ガイドライン適合品

### Japanese Electronics and Information Technology Industries Association (JEITA) Confirmed Harmonics Guideline with Modifications (products greater than 20 A per phase)

高調波ガイドライン準用品

## Electromagnetic Interference (EMI) Statement - People's Republic of China

### 声 明

此为 A 级产品, 在生活环境中, 该产品可能会造成无线电干扰。在这种情况下, 可能需要用户对其干扰采取切实可行的措施。

Declaration: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may need to perform practical action.



## Electromagnetic Interference (EMI) Statement - Taiwan

警告使用者：  
這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

The following is a summary of the EMI Taiwan statement above.

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user will be required to take adequate measures.

### IBM Taiwan Contact Information:

台灣IBM 產品服務聯絡方式：  
台灣國際商業機器股份有限公司  
台北市松仁路7號3樓  
電話：0800-016-888

## Electromagnetic Interference (EMI) Statement - Korea

이 기기는 업무용(A급)으로 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다.

## Germany Compliance Statement

### Deutschsprachiger EU Hinweis: Hinweis für Geräte der Klasse A EU-Richtlinie zur Elektromagnetischen Verträglichkeit

Dieses Produkt entspricht den Schutzanforderungen der EU-Richtlinie 2004/108/EG zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit in den EU-Mitgliedsstaaten und hält die Grenzwerte der EN 55022 Klasse A ein.

Um dieses sicherzustellen, sind die Geräte wie in den Handbüchern beschrieben zu installieren und zu betreiben. Des Weiteren dürfen auch nur von der IBM empfohlene Kabel angeschlossen werden. IBM übernimmt keine Verantwortung für die Einhaltung der Schutzanforderungen, wenn das Produkt ohne Zustimmung von IBM verändert bzw. wenn Erweiterungskomponenten von Fremdherstellern ohne Empfehlung von IBM gesteckt/eingebaut werden.

EN 55022 Klasse A Geräte müssen mit folgendem Warnhinweis versehen werden:  
"Warnung: Dieses ist eine Einrichtung der Klasse A. Diese Einrichtung kann im Wohnbereich Funk-Störungen verursachen; in diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen zu ergreifen und dafür aufzukommen."

#### **Deutschland: Einhaltung des Gesetzes über die elektromagnetische Verträglichkeit von Geräten**

Dieses Produkt entspricht dem "Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG)". Dies ist die Umsetzung der EU-Richtlinie 2004/108/EG in der Bundesrepublik Deutschland.

#### **Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) (bzw. der EMC EG Richtlinie 2004/108/EG) für Geräte der Klasse A**

Dieses Gerät ist berechtigt, in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen.

Verantwortlich für die Einhaltung der EMV Vorschriften ist der Hersteller:  
International Business Machines Corp.  
New Orchard Road  
Armonk, New York 10504  
Tel: 914-499-1900

Der verantwortliche Ansprechpartner des Herstellers in der EU ist:  
IBM Deutschland GmbH  
Technical Regulations, Abteilung M372  
IBM-Allee 1, 71139 Ehningen, Germany  
Tel: +49 7032 15 2941  
email: lugi@de.ibm.com

Generelle Informationen:

**Das Gerät erfüllt die Schutzanforderungen nach EN 55024 und EN 55022 Klasse A.**

#### **Electromagnetic Interference (EMI) Statement - Russia**

**ВНИМАНИЕ!** Настоящее изделие относится к классу А.  
В жилых помещениях оно может создавать радиопомехи, для снижения которых необходимы дополнительные меры

#### **Class B Notices**

The following Class B statements apply to features designated as electromagnetic compatibility (EMC) Class B in the feature installation information.

#### **Federal Communications Commission (FCC) statement**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an IBM-authorized dealer or service representative for help.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Proper cables and connectors are available from IBM-authorized dealers. IBM is not responsible for any radio or television interference caused by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### **Industry Canada Compliance Statement**

This Class B digital apparatus complies with Canadian ICES-003.

### **Avis de conformité à la réglementation d'Industrie Canada**

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

### **European Community Compliance Statement**

This product is in conformity with the protection requirements of EU Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility. IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-IBM option cards.

This product has been tested and found to comply with the limits for Class B Information Technology Equipment according to European Standard EN 55022. The limits for Class B equipment were derived for typical residential environments to provide reasonable protection against interference with licensed communication equipment.

European Community contact:  
IBM Deutschland GmbH  
Technical Regulations, Department M372  
IBM-Allee 1, 71139 Ehningen, Germany  
Tele: +49 7032 15 2941  
email: [lugi@de.ibm.com](mailto:lugi@de.ibm.com)

## VCCI Statement - Japan

この装置は、クラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。 VCCI-B

## Japanese Electronics and Information Technology Industries Association (JEITA) Confirmed Harmonics Guideline (products less than or equal to 20 A per phase)

高調波ガイドライン適合品

## Japanese Electronics and Information Technology Industries Association (JEITA) Confirmed Harmonics Guideline with Modifications (products greater than 20 A per phase)

高調波ガイドライン準用品

## IBM Taiwan Contact Information

台灣IBM 產品服務聯絡方式：  
台灣國際商業機器股份有限公司  
台北市松仁路7號3樓  
電話：0800-016-888

## Electromagnetic Interference (EMI) Statement - Korea

이 기기는 가정용(B급)으로 전자과적합기기로  
서 주로 가정에서 사용하는 것을 목적으로 하  
며, 모든 지역에서 사용할 수 있습니다.

## Germany Compliance Statement

Deutschsprachiger EU Hinweis: Hinweis für Geräte der Klasse B EU-Richtlinie zur  
Elektromagnetischen Verträglichkeit

Dieses Produkt entspricht den Schutzanforderungen der EU-Richtlinie 2004/108/EG zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit in den EU-Mitgliedsstaaten und hält die Grenzwerte der EN 55022 Klasse B ein.

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#### **Deutschland: Einhaltung des Gesetzes über die elektromagnetische Verträglichkeit von Geräten**

Dieses Produkt entspricht dem "Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG)". Dies ist die Umsetzung der EU-Richtlinie 2004/108/EG in der Bundesrepublik Deutschland.

#### **Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) (bzw. der EMC EG Richtlinie 2004/108/EG) für Geräte der Klasse B**

Dieses Gerät ist berechtigt, in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen.

Verantwortlich für die Einhaltung der EMV Vorschriften ist der Hersteller:  
International Business Machines Corp.  
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IBM Deutschland GmbH  
Technical Regulations, Abteilung M372  
IBM-Allee 1, 71139 Ehningen, Germany  
Tel: +49 7032 15 2941  
email: lugi@de.ibm.com

Generelle Informationen:

**Das Gerät erfüllt die Schutzanforderungen nach EN 55024 und EN 55022 Klasse B.**

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