



Integrated xSeries Adapter (IXA)

Version 5, Release 3





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Integrated xSeries Adapter

This topic describes how to install the Integrated xSeries[®] Adapter (IXA) for attachment to an iSeries[™] server. This is a customer task. You can perform this task yourself, or contact a service provider to perform the task for you. You might be charged a fee by the service provider for this service.

What's new as of January 2007: The following updates are included in this version of the Integrated xSeries Adapter topic:

- Information about installing xSeries 460 was added.
- Other miscellaneous technical changes were made.

What's new as of October 2004: The following updates are included in this version of the Integrated xSeries Adapter topic:

- Information about the machine type 1519 model 200–2689 card was added.
- Information about installing xSeries 236 was added.
- Information about installing xSeries 346 was added.
- Other miscellaneous technical changes were made.
- This topic is now separate from the PCI Adapter topic.

What's new as of April 2004: The following updates are included in this version of the Integrated xSeries Adapter topic:

- Information about installing xSeries 365 was added.
- Other miscellaneous technical changes were made.

The Integrated xSeries Adapter (IXA) is identified as card number 2689 or machine type 1519 model 100 or model 200. The model you install in your xSeries server depends on the type of xSeries server you have. Refer to your xSeries server documentation as requested to complete some of the steps.

Before continuing, it is recommended that you refer to the iSeries Integrated xSeries solutions Web site at <http://www.ibm.com/servers/eserver/series/integratedxseries/>. This site has the latest Integrated xSeries Adapter information, including information about program temporary fixes (PTFs) that are required to run Windows[®] servers that are integrated with the iSeries system.

If you encounter any problems while installing the Integrated xSeries Adapter, refer to the IXA

Installation Problem Determination Guide  .

To install the Integrated xSeries Adapter, follow the instructions in “Install Integrated xSeries Adapter.”

Install Integrated xSeries Adapter

Use these procedures to install machine type 1519 model 100–2689 card or machine type 1519 model 200–2689 card.

Prerequisites

Ensure that you have the following before starting your installation:

- Machine type 1519 model 100– or 200–2689 card assembly including the following :
 - Integrated xSeries Adapter card (CCIN 2689).
 - RS-485 shielded cable, black (P/N 21P4162).

- RS-485 shielded cable, gray (P/N 01R1484). This cable is included with machine type 1519 model 100 EC level H86427 or later. This cable may be ordered separately if needed.

Note: This cable is intended for use only with xSeries 366 models. Do not use this cable with any other xSeries model.

- System Power Control Network (SPCN) connection block (P/N 04N2652).
- Advanced Systems Management (ASM) Interconnect Module (P/N 03K9315). This is not required for some xSeries models.
- Terminator plug (P/N 59P2951). This is not required for some xSeries models.
- High-speed link (HSL) cable strain relief (P/N 97P6530). This is included only with machine type 1519 model 200. This is not required for some xSeries models.
- Remote Supervisor Adapter option (P/N 09N7585 or regional equivalent) or Remote Supervisor Adapter II option (P/N 59P2984 or regional equivalent). This is required with some xSeries models. On other xSeries models, the Remote Supervisor Adapter II Slimline option (P/N 73P9341) might be required. See model-specific instructions that follow.
- xSeries server **without** disk units.
- Mouse, keyboard, and display for the xSeries server. (These might also be attached through the use of a KVM switch.)
- High-speed link (HSL) cable. (More than one might be needed for an HSL loop.)
- System power control network (SPCN) cable. (More than one might be needed for an SPCN loop.)
- A minimum Version 5 Release 1 operating system for machine type 1519 model 100, or a minimum Version 5 Release 2 operating system for model 200.

Prepare the server

You must turn the boot fail counter and virus detection off before installing this card.

- ___ 1. Turn on the xSeries server.
- ___ 2. Press F1 as soon as the IBM® eServer™ logo appears on the display to go to setup.
- ___ 3. Select **Start Options**. Press Enter.
- ___ 4. Select **Boot Fail Count** using the down arrow (↓).
- ___ 5. Change the value to **Disabled** using the right arrow (→).
- ___ 6. Select **Virus Detection** using the down arrow (↓).
- ___ 7. Change the value to **Disabled** using the right arrow (→).
- ___ 8. Press **Esc** two times to exit.
- ___ 9. Select **Yes** from the Exit Setup display.
- ___ 10. Turn off the xSeries server. Go to the information you received with your xSeries for instructions to turn it off.

Note: Do not change the remote signon default user ID/password (USERID/PASSWORD) for the Advanced System Management hardware installed in the xSeries server or the server will not be able to communicate with the xSeries server. It is not recommended that the Advanced System Management hardware be permanently connected to a network, as it might interfere with the server's control of the IXA-attached xSeries server.

Download the server firmware

You must update your xSeries server with the latest version of system basic input/output system (BIOS) and Advanced Systems Management firmware before installing the IXA card. The firmware is available for download from <http://www.pc.ibm.com/support> using the following instructions:

- ___ 1. On the main page, in the **Use Quick path** field, enter the product number for your xSeries server.
- ___ 2. Click **Go**.

- ___ 3. On the main support page for your server, in the View by document type menu, select the **Downloads and drivers** link.
- ___ 4. On the next page, find the **BIOS** heading and select the link for **Flash BIOS Update (DOS Update Package)**.

Attention: Be sure to use the DOS version of the package, since the update will be done prior to installing an operating system.
- ___ 5. The next page contains links to download the self-extracting executable file that will create the update diskette and a text file explaining the update. There is also a link with instructions on how to download and create the diskette. Follow these instructions to create the diskette.
- ___ 6. When you have created the diskette, click the **Back** button on your browser to return to the main Downloads and drivers page.
- ___ 7. On this page, find the heading for the appropriate Advanced Systems Management hardware you will be using in your xSeries server and click on the appropriate link. Depending on your server, the heading title/link will be one of the following:
 - Advanced Systems Management heading / Advanced System Management Processor firmware link
 - Remote Supervisor Adapter heading / Remote Supervisor Adapter Firmware update (DOS update package) link
 - Remote Supervisor Adapter II heading / Remote Supervisor Adapter II Firmware update or Remote Supervisor Adapter II Firmware update (Packet files only) link
- ___ 8. The content of the next page differs based on the Advanced Systems Management hardware type your xSeries server has:
 - For Advanced Systems Management Processor or Remote Supervisor Adapter hardware, the page contains links to download one or more self-extracting executable files for creating update diskettes and a text file explaining the update. There is also a link with instructions on how to download and create the diskettes. Follow these directions to create the diskettes.
 - For all Remote Supervisor Adapter II hardware, the page contains links to download a .zip file with the update package and a text file explaining the update. The .zip file should be downloaded and the package extracted from it onto a diskette.
- ___ 9. Once you have completed the previous step, click the Back button on your browser to return to the Downloads and drivers main page.
- ___ 10. Depending on the model of xSeries server, there might also be another Advanced Systems Management hardware component to update. Locate one of the following under the **Advanced Systems Management** heading and click on the appropriate link to download:
 - Integrated System Management Processor update
 - Baseboard Management Controller update

Download and create the diskette or diskettes as for BIOS.
- ___ 11. Once you have completed the downloads, you can “Update the server firmware.”

Update the server firmware

You must update your xSeries server with the latest version of system BIOS and Advanced Systems Management firmware before installing the IXA card. If a Remote Supervisor Adapter option is required for your xSeries model, it must be installed before updating this firmware. Refer to the model specific instructions to determine if your xSeries model requires this option before proceeding. You can download the latest version of system BIOS and Advanced Systems Management firmware. For information, go to “Download the server firmware” on page 2.

Note: The procedures that follow are intended as general guidelines for updating the server firmware. Refer to the README file included on the downloaded diskettes when performing these updates.

Update system BIOS

- ___ 1. Turn on the xSeries server.
- ___ 2. When prompted, insert the diskette containing the latest system BIOS.
- ___ 3. Press F1.
- ___ 4. Select option 1, **Update POST/BIOS** and press Enter.
- ___ 5. To move the current code to the backup location within the flash ROM, select Y.
- ___ 6. Select N for the next several display prompts about updating serial numbers, model/type and so forth.
- ___ 7. Select N for the prompt to **Save current flash code to disk**.
- ___ 8. Select the appropriate language. The update will begin.
- ___ 9. When the update is complete, remove the diskette and press Enter to restart the system.

Update Advanced System Management firmware

This procedure works only for systems with Advanced System Management hardware other than Remote Supervisor Adapter II. For the Remote Supervisor Adapter II, refer to “**Update Remote Supervisor Adapter II or Remote Supervisor Adapter II Slimline firmware**”. The update procedure for Integrated System Management Processors and Baseboard Management Controllers is not included here, since the procedure varies depending on the xSeries server model. Refer to the README file on the diskette for the update procedure.

To update Advanced System Management firmware, do the following:

- ___ 1. Turn on the xSeries server.
- ___ 2. When prompted from the Insert diskette display, insert diskette number 1 containing the Advanced Systems Management Processor firmware or the Remote Supervisor Adapter firmware.
- ___ 3. Press F1.
- ___ 4. At the IBM Remote Supervisor Utility display, select **Update System Management Firmware**.
- ___ 5. Press Enter.
- ___ 6. Select **Normal Flash — All subsystems**.
- ___ 7. Press Enter.
- ___ 8. If prompted to insert another diskette with a specific file, insert the other firmware diskette. This might happen more than once.
- ___ 9. Press Enter.
- ___ 10. At the Advanced Management firmware update completed display, press Enter.
- ___ 11. At the IBM Remote Supervisor Utility display, select **Exit Utility**.
- ___ 12. Press Enter. When complete, turn off the server.

Update Remote Supervisor Adapter II or Remote Supervisor Adapter II Slimline firmware

This procedure requires the use of a separate computer, capable of attachment to an Ethernet network and capable of running Web browser software. Configure the computer with an IP address of 192.168.70.101 and subnet mask 255.255.255.0 to match the default IP address subnet for the Remote Supervisor Adapter II. Connect the computer and Remote Supervisor Adapter II in a simple Ethernet configuration using a single Ethernet crossover cable or a hub and two Ethernet cables. Be sure to use the Remote Supervisor Adapter II Ethernet port when making this connection; the xSeries server might also have other Ethernet ports that will not work for this procedure.

To update Remote Supervisor Adapter II or Remote Supervisor Adapter II Slimline firmware, do the following:

- ___ 1. Turn off the xSeries server.

- ___ 2. Place the diskette with the downloaded firmware update in the diskette drive of the computer connected to Remote Supervisor Adapter II.
- ___ 3. Start a Web browser window on the attached computer and type 192.168.70.125 in the URL field.
- ___ 4. Wait several minutes for a small signon window to appear.
- ___ 5. Sign on with a user name of user ID and password PASSWORD (where the 0 is zero, not the letter O).
- ___ 6. Select a timeout value on the next display.
- ___ 7. Look for the navigation pane on the left side of the next display.
- ___ 8. Choose the **Firmware Update** option.
- ___ 9. On the next display, select **Browse** and navigate to the diskette containing the firmware update.
- ___ 10. Select one of the two files with a .PKT or .PKC extension and select **Open**. The full path of the selected file will appear in the **Browse** field.
- ___ 11. To start the update process, click **Update**. A progress indicator opens as the file is transferred to temporary storage on the Remote Supervisor Adapter II. A confirmation display will be shown when the file transfer is complete.
- ___ 12. Verify that the file shown on the Confirm Firmware Update display is the one you want to update. If not, click **Cancel**.
- ___ 13. To complete the update process, click **Continue**. A progress indicator opens as the firmware on the Remote Supervisor Adapter II is flashed. A confirmation display will be displayed when the update has successfully completed.
- ___ 14. Repeat the update procedure for the other .PKT or .PKC file on the diskette.
- ___ 15. The Remote Supervisor Adapter II on some servers might have a shared serial/ASM Interconnect port for which ASM Interconnect support needs to be enabled. Find the navigation pane on the left side of the display and select the **Serial Port** option, if present.
- ___ 16. Select **ASM Interconnect** on the menu for COM2, if present.
- ___ 17. When the updates are complete, select **Restart ASM** on the navigation pane to restart the Remote Supervisor Adapter II.
- ___ 18. Click **OK** to confirm that you want to restart it.
- ___ 19. A display will then be displayed advising that the browser window will be closed. Click **OK** to continue.
- ___ 20. Remove the cable from the Remote Supervisor Adapter II's Ethernet port once the browser window closes.

Note: It is not recommended that the Remote Supervisor Adapter II be permanently connected to a network, as it might interfere with the server's control of the IXA-attached xSeries server.

Update Integrated System Management Processor or Baseboard Management Controller firmware

1. Turn on the xSeries server.
2. When prompted, insert the diskette containing the latest firmware update.
3. Press **F1**.
4. The server will now boot to a main option menu or will directly begin to load the firmware update. If you see a menu, select the option to update the firmware, it should read something like "Update System Management Processor".
5. When the update completes, remove the diskette from the drive and press **Enter** to restart the system.

Card placement

Refer to the following list for the Integrated Adapter for xSeries card placement in the different servers. For a current list of xSeries servers, go to:

<http://www.ibm.com/servers/eserver/iseries/integratedxseries/>

Server	Card position
7100	1 or 2
7600	1 or 2
xSeries 235	5 (For models 11X, 1AX, 21X, 2AX, 31X, 3AX, 41X, and 4AX, use card position 4.)
xSeries 236	4
xSeries 250	1 or 2
xSeries 255	2
xSeries 346	4
xSeries 350	2
xSeries 360	3
xSeries 365	3
xSeries 366	2
xSeries 440	2
xSeries 445	2
xSeries 460	2

Install the card

Select your xSeries server to install the machine type 1519 model 100 card:

- “Server 7100, 7600 or xSeries 250”
- “xSeries 235” on page 10
- “xSeries 255” on page 19
- “xSeries 350” on page 28
- “xSeries 360” on page 32
- “xSeries 365” on page 36
- “xSeries 366 or xSeries 460” on page 40
- “xSeries 440” on page 44
- “xSeries 445” on page 48

Select your xSeries server to install the machine type 1519 model 200 card:

- “xSeries 236” on page 15
- “xSeries 346” on page 24

Server 7100, 7600 or xSeries 250

The IXA card can be installed only with the iSeries server system power off.

To install the card, complete the following steps. You might need to refer to your xSeries server information for some of the steps.

DANGER

Electrical voltage and current from power, telephone, and communication cables are hazardous.

To avoid a shock hazard:

- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- Connect all power cords to a properly wired and grounded electrical outlet. Ensure 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 below when installing, moving, or opening covers on this product or attached devices.

To Disconnect:

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

To Connect:

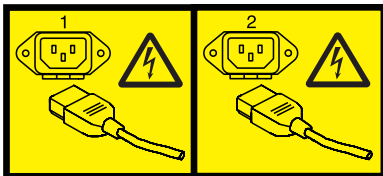
1. Turn everything OFF (unless instructed otherwise)
2. Attach all cables to devices.
3. Attach signal cables to connectors.
4. Attach power cords to outlet.
5. Turn device ON.

(D005)

- 1. Ensure that the xSeries server power is off.
- 2. Unplug the xSeries server power cord from the electrical outlet.

Note: This system might be equipped with a second power supply. Before continuing with this procedure, ensure that all power sources to the system have been completely disconnected.

(L003)



or



___ 3. **Attention:**

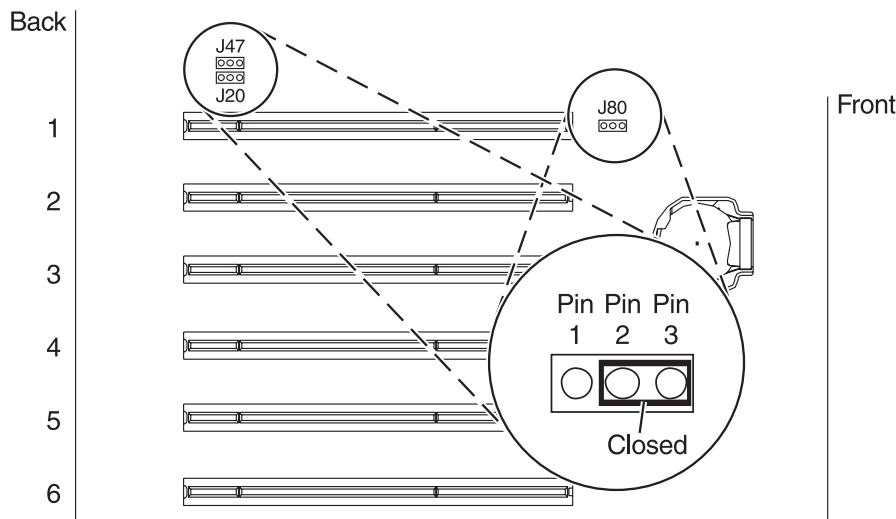
Attach a wrist strap to an unpainted metal surface of your hardware to prevent electrostatic discharge from damaging your hardware.

When using a wrist strap, follow all electrical safety procedures. A wrist strap is for static control. It does not increase or decrease your risk of receiving electric shock when using or working on electrical equipment.

If you do not have a wrist strap, just prior to removing the product from ESD packaging and installing or replacing hardware, touch an unpainted metal surface of the system for a minimum of 5 seconds.

___ 4. Provide 3.3v standby power for the card position.

- ___ a. Locate J47 if installing in card position 1, or J20 if installing in card position 2.



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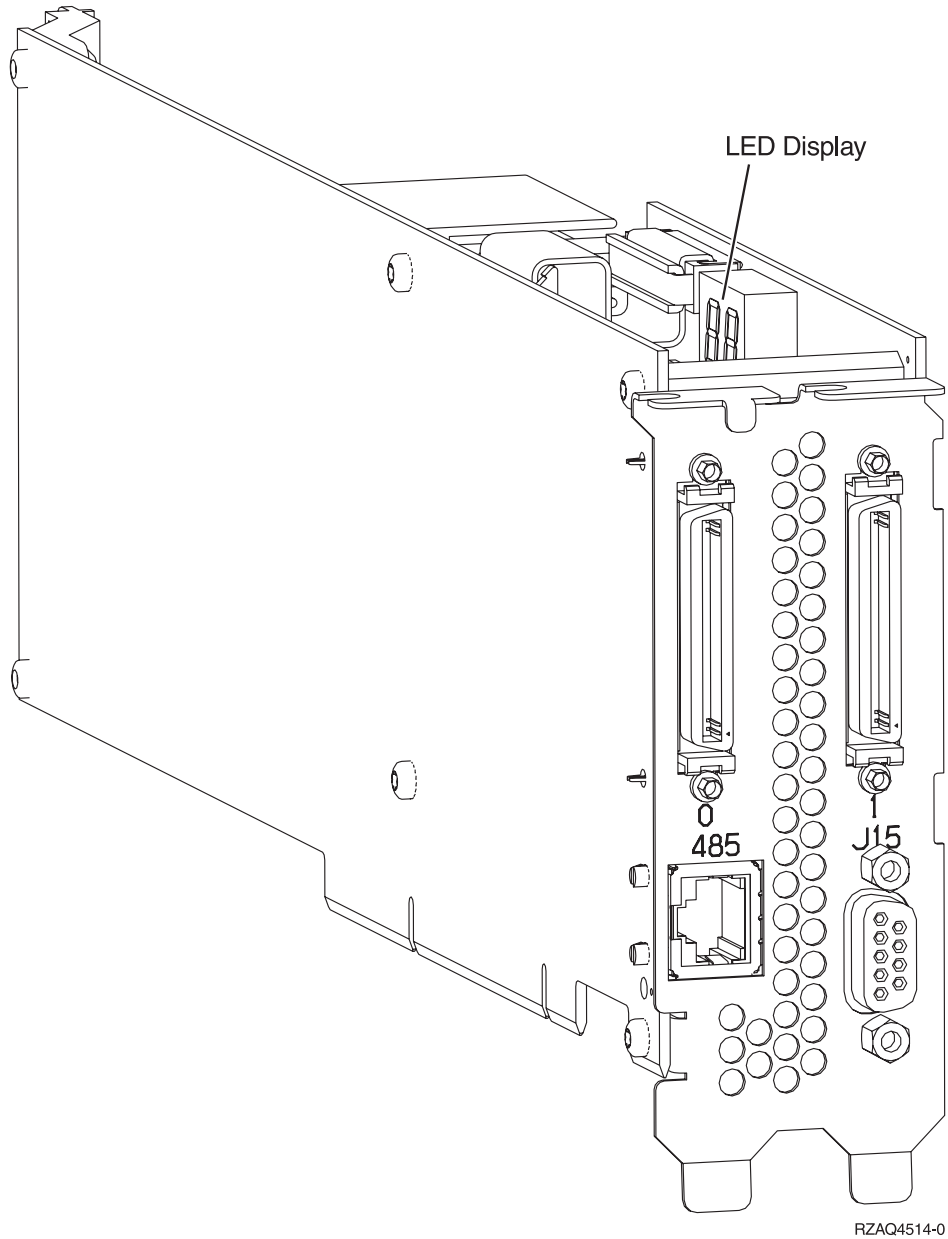
- ___ b. Move the jumper from pins 2 and 3 to pins 1 and 2.

Note: You might need to remove the memory card to access J47 or J20. Refer to your xSeries server information.

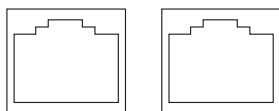
___ 5. Refer to the xSeries information to install the card in card position 1 or 2.

Note: Two card positions are used by the card, so you might need to move an existing card to install the Integrated xSeries Adapter (IXA) card in the correct position.

- 6. After the card is installed, return to these instructions.
- 7. Connect the SPCN Connection Block (P/N 04N2652) to the IXA card J15 position. Connect the cable to the SPCN network of your system. Ensure that the cable is routed to maintain a recommended minimum 6-inch separation from any alternating current (ac) power cord.



- 8. Connect RS-485 shielded cable (P/N 21P4162) to the IXA card 485 label.
- 9. Connect the other end of the cable to either RS-485 port on the server.



A RS485 B

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- ___ 10. Connect any high-speed link (HSL) cables that you ordered to the card 0 and 1 label. For more information, refer to High-speed link (HSL) information in the IBM eServer Hardware Information Center.
- ___ 11. Plug the xSeries server into an electrical outlet.
- ___ 12. Start the iSeries server.
- ___ 13. Wait for the iSeries server to detect that the IXA card is installed and to turn on the xSeries server.

Attention: Do not turn on the xSeries server using the xSeries power switch. Do not turn on the xSeries server using hardware service manager.

Note: Power-on might take several minutes because the IXA card's SPCN firmware might require automatic update to complete.

- ___ 14. To complete the installation, go to Windows environment on iSeries in the iSeries Information Center.

xSeries 235

The IXA card can be installed only with the iSeries server system power off.

To install the card, complete the following steps. You might need to refer to your xSeries server information for some of the steps.

DANGER

Electrical voltage and current from power, telephone, and communication cables are hazardous.

To avoid a shock hazard:

- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- Connect all power cords to a properly wired and grounded electrical outlet. Ensure 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 below when installing, moving, or opening covers on this product or attached devices.

To Disconnect:

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

To Connect:

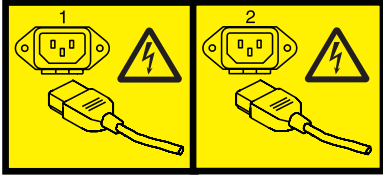
1. Turn everything OFF (unless instructed otherwise)
2. Attach all cables to devices.
3. Attach signal cables to connectors.
4. Attach power cords to outlet.
5. Turn device ON.

(D005)

- 1. A Remote Supervisor Adapter card (P/N 09N7585 or regional equivalent) or a Remote Supervisor Adapter II card (P/N 59P2984 or regional equivalent) must be installed in this server before installing the Integrated xSeries Adapter (IXA) card. Refer to xSeries documentation for information on installing a Remote Supervisor Adapter card. Refer to Remote Supervisor Adapter II documentation for information on installing a Remote Supervisor Adapter II. Do not install the external power supply included with either the Remote Supervisor Adapter and Remote Supervisor Adapter II. Plug the xSeries display into the video connector on the Remote Supervisor Adapter II rather than into the built-in xSeries video connector. The system BIOS and Remote Supervisor Adapter's firmware must be updated to the latest level once the Remote Supervisor Adapter has been installed. For information, go to "Update the server firmware" on page 3.
- 2. Ensure that the xSeries server power is off.
- 3. **Unplug the xSeries server power cord from the electrical outlet.**

Note: This system might be equipped with a second power supply. Before continuing with this procedure, ensure that all power sources to the system have been completely disconnected.

(L003)



or

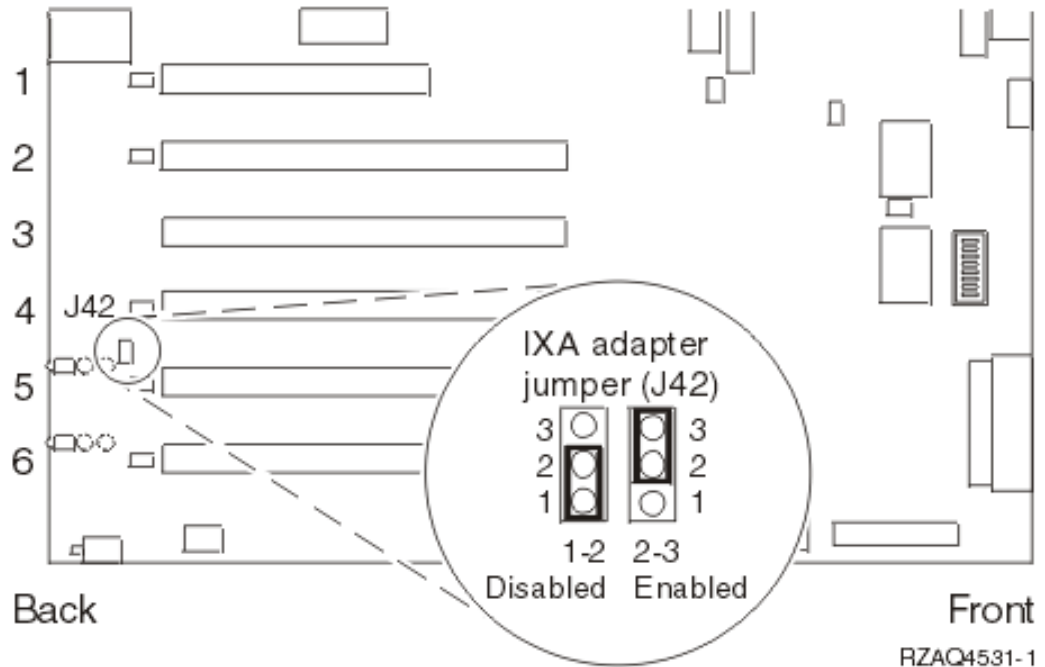


- ___ 4. For models 11X 1AX, 21X, 2AX, 31X, 3AX, 41X, and 4AX, refer to the xSeries information to install the card in card position 4. (Install in card position 4 even though card position 5 might be specified in other documentation.)
- ___ 5. For all other models, follow these steps:
 - a. **Attention:**

Attach a wrist strap to an unpainted metal surface of your hardware to prevent electrostatic discharge from damaging your hardware.

When using a wrist strap, follow all electrical safety procedures. A wrist strap is for static control. It does not increase or decrease your risk of receiving electric shock when using or working on electrical equipment.

If you do not have a wrist strap, just prior to removing the product from ESD packaging and installing or replacing hardware, touch an unpainted metal surface of the system for a minimum of 5 seconds.
 - b. Provide 3.3v standby power for the card position.
 - ___ 1) Locate J42.



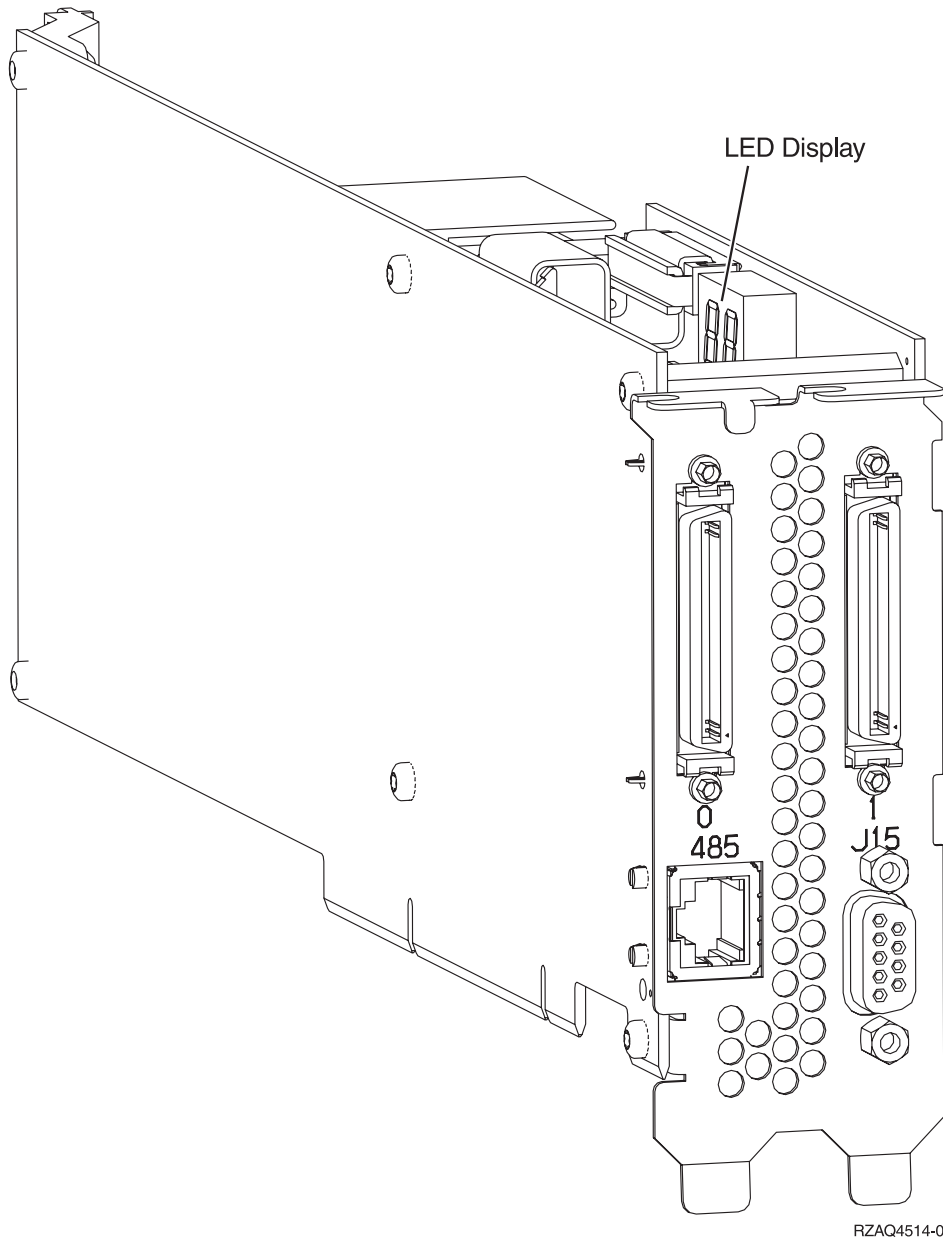
__ 2) Move the jumper from pins 1 and 2 to pins 2 and 3.

c. Refer to the xSeries information to install the card in card position 5.

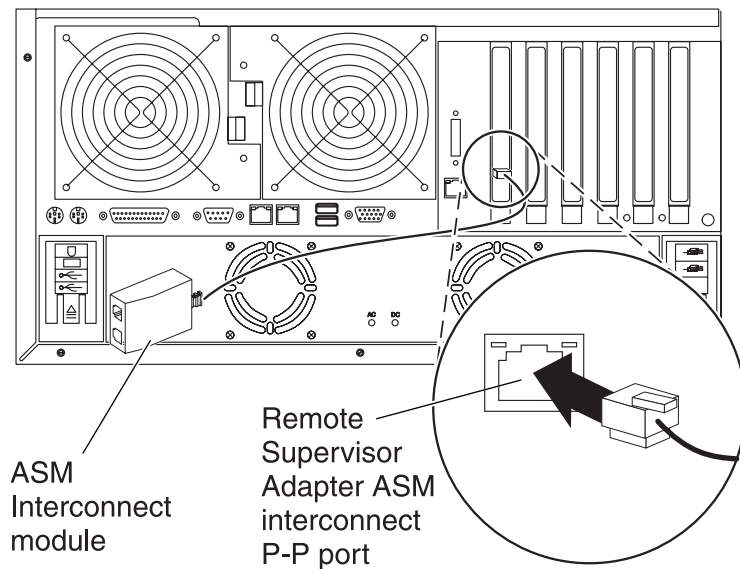
Note: Two card positions are used by the card, so you might need to move an existing card to install the Integrated xSeries Adapter (IXA) card in the correct position. Also, you might need to remove the IXA card extender prior to installing the IXA card.

__ 6. After the card is installed, return to these instructions.

__ 7. Connect the SPCN Connection Block (P/N 04N2652) to the IXA card J15 position. Connect the cable to the SPCN network of your system. Ensure that the cable is routed to maintain a recommended minimum 15 centimeter (6-inch) separation from any alternating current (ac) power cord.



- ___ 8. Connect RS-485 shielded cable (P/N 21P4162) to the IXA card 485 label.
- ___ 9. Based on the remote supervisor adapter installed, connect the other end of the cable as follows:
 - With a Remote Supervisor Adapter installed, connect the other end of the cable to one of the two ports on the ASM (Advanced System Management) Interconnect Module (P/N 03K9315).
 - With a Remote Supervisor Adapter II installed, connect the other end of the cable to one of the two ASM RS-485 connectors on the Advanced System Management breakout cable included with the Remote Supervisor Adapter II.
- ___ 10. Connect the terminator plug, P/N 59P2951, to the unused port on either the ASM Interconnect Module or the Advanced System Management breakout cable.
- ___ 11. Based on the remote supervisor adapter installed,
 - With a Remote Supervisor Adapter installed, connect the plug end of the ASM Interconnect Module to the Remote Supervisor Adapter ASM interconnect port, 485 label.



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- With a Remote Supervisor Adapter II installed, connect the plug end of the Advanced System Management breakout cable to the ASM connector on the Remote Supervisor Adapter II (if not already installed). For more information, see the documentation for the Remote Supervisor Adapter II.
- ___ 12. Connect any high-speed link (HSL) cables that you ordered to the card 0 and 1 label. For more information, refer to High-speed link (HSL) information in the IBM eServer Hardware Information Center.
 - ___ 13. Plug the xSeries server into an electrical outlet.
 - ___ 14. Start the iSeries server.
 - ___ 15. Wait for the iSeries server to detect that the IXA card is installed and to turn on the xSeries server.

Attention: Do not turn on the xSeries server using the xSeries power switch. Do not turn on the xSeries server using hardware service manager.

Note: Power-on might take several minutes because the IXA card's SPCN firmware might require automatic update to complete.

- ___ 16. To complete the installation, go to Windows environment on iSeries in the iSeries Information Center.

xSeries 236

The IXA card can be installed only with the iSeries server system power off.

To install the card, complete the following steps. You might need to refer to your xSeries server information for some of the steps.

DANGER

Electrical voltage and current from power, telephone, and communication cables are hazardous.

To avoid a shock hazard:

- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- Connect all power cords to a properly wired and grounded electrical outlet. Ensure 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 below when installing, moving, or opening covers on this product or attached devices.

To Disconnect:

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

To Connect:

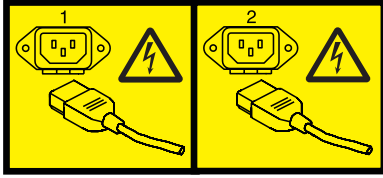
1. Turn everything OFF (unless instructed otherwise)
2. Attach all cables to devices.
3. Attach signal cables to connectors.
4. Attach power cords to outlet.
5. Turn device ON.

(D005)

- 1. A Remote Supervisor Adapter II Slimline option (P/N 73P9341) must be installed in this xSeries server before installing the Integrated xSeries Adapter (IXA) card. Some xSeries 236 models come with the Remote Supervisor Adapter II Slimline option already installed. Refer to the Remote Supervisor Adapter II Slimline option documentation for information on installing a Remote Supervisor Adapter II Slimline option. The xSeries server's BIOS, Baseboard Management Controller firmware, and Remote Supervisor Adapter II Slimline option firmware must be updated to the latest level after the Remote Supervisor Adapter II Slimline option has been installed in the xSeries server. For more information, go to "Update the server firmware" on page 3.
- 2. Ensure that the xSeries server power is off.
- 3. **Unplug the xSeries server power cord from the electrical outlet.**

Note: This system might be equipped with a second power supply. Before continuing with this procedure, ensure that all power sources to the system have been completely disconnected.

(L003)



or



___ 4. **Attention:**

Attach a wrist strap to an unpainted metal surface of your hardware to prevent electrostatic discharge from damaging your hardware.

When using a wrist strap, follow all electrical safety procedures. A wrist strap is for static control. It does not increase or decrease your risk of receiving electric shock when using or working on electrical equipment.

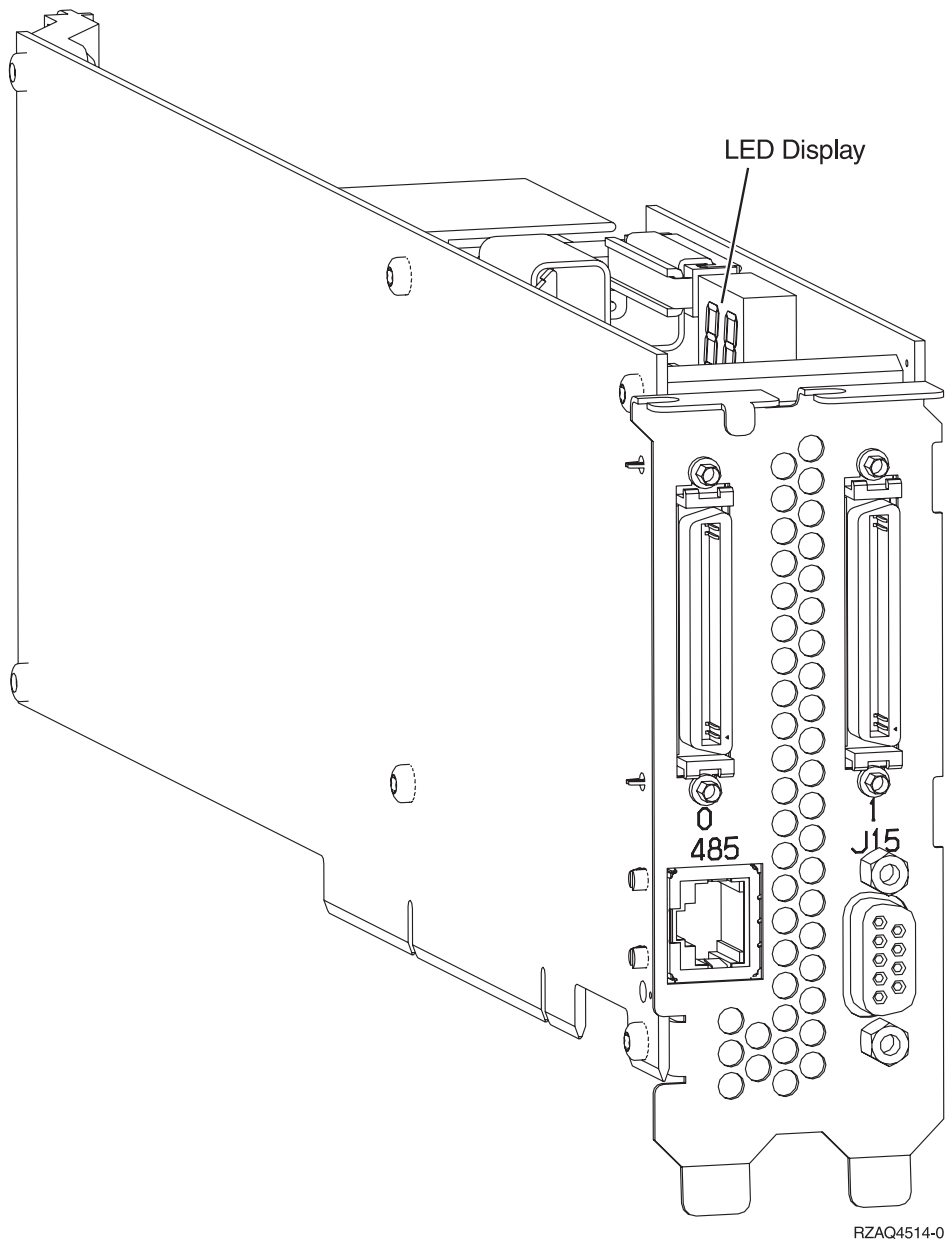
If you do not have a wrist strap, just prior to removing the product from ESD packaging and installing or replacing hardware, touch an unpainted metal surface of the system for a minimum of 5 seconds.

___ 5. Refer to the xSeries information to install the card in card position 4.

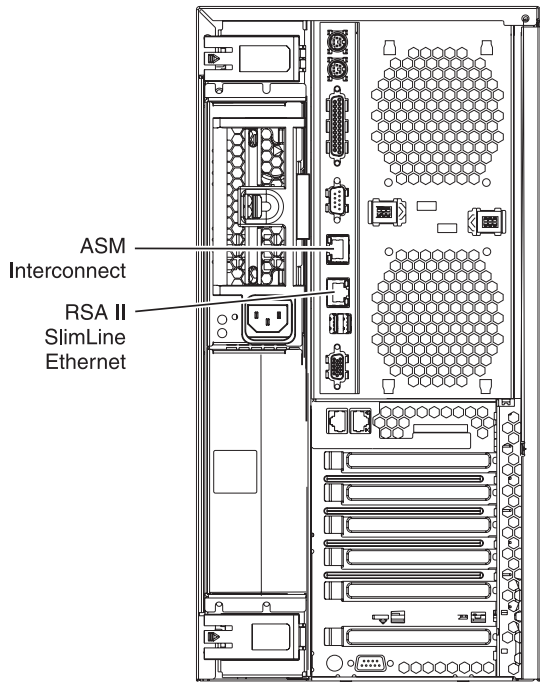
Note: Two card positions are used by the card, so you might need to move an existing card to install the Integrated xSeries Adapter (IXA) card in the correct position. Also, you will need to remove the blue card extender from the IXA card prior to installing it.

___ 6. After the card is installed, return to these instructions.

___ 7. Connect the SPCN Connection Block (P/N 04N2652) to the IXA card J15 position. Connect the cable to the SPCN network of your system. Ensure that the cable is routed to maintain a recommended minimum 6-inch separation from any alternating current (ac) power cord.



- ___ 8. Connect RS-485 shielded cable (P/N 21P4162) to the IXA card 485 label.
- ___ 9. Connect the other end of the RS-485 shielded cable to one of the two ports on the ASM (Advanced System Management) Interconnect Module, P/N 03K9315.
- ___ 10. Connect the terminator plug, P/N 59P2951, to the unused port on the ASM Interconnect Module.
- ___ 11. Connect the plug end of the ASM Interconnect Module to the RS-485 (ASM Interconnect) port on the rear of the xSeries server.



IPHBE501-0

- ___ 12. Connect any high-speed link (HSL) cables that you ordered to the card 0 and 1 label. For more information, refer to High-speed link (HSL) information in the IBM eServer Hardware Information Center.
- ___ 13. Plug the xSeries server into an electrical outlet.
- ___ 14. Start the iSeries server.
- ___ 15. Wait for the iSeries server to detect that the IXA card is installed and to turn on the xSeries server.

Attention: Do not turn on the xSeries server using the xSeries power switch. Do not turn on the xSeries server using hardware service manager.

Note: Power-on might take several minutes because the IXA card's SPCN firmware might require automatic update to complete.

- ___ 16. To complete the installation, go to Windows environment on iSeries in the iSeries Information Center.

xSeries 255

The IXA card can be installed only with the iSeries server system power off.

To install the card, complete the following steps. You might need to refer to your xSeries server information for some of the steps.

DANGER

Electrical voltage and current from power, telephone, and communication cables are hazardous.

To avoid a shock hazard:

- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- Connect all power cords to a properly wired and grounded electrical outlet. Ensure 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 below when installing, moving, or opening covers on this product or attached devices.

To Disconnect:

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

To Connect:

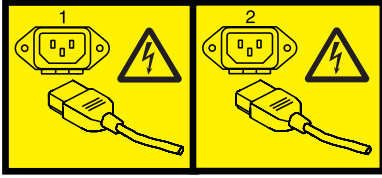
1. Turn everything OFF (unless instructed otherwise)
2. Attach all cables to devices.
3. Attach signal cables to connectors.
4. Attach power cords to outlet.
5. Turn device ON.

(D005)

- 1. A Remote Supervisor Adapter card (P/N 09N7585 or regional equivalent) or a Remote Supervisor Adapter II card (P/N 59P2984 or regional equivalent) must be installed in this server before installing the Integrated xSeries Adapter (IXA) card. Refer to xSeries documentation for information on installing a Remote Supervisor Adapter card. Refer to Remote Supervisor Adapter II documentation for information on installing a Remote Supervisor Adapter II. Do not install the external power supply included with either the Remote Supervisor Adapter and Remote Supervisor Adapter II. Plug the xSeries display into the video connector on the Remote Supervisor Adapter II rather than into the built-in xSeries video connector. The system BIOS and Remote Supervisor Adapter's firmware must be updated to the latest level once the Remote Supervisor Adapter has been installed. For information, go to "Update the server firmware" on page 3.
- 2. Ensure that the xSeries server power is off.
- 3. **Unplug the xSeries server power cord from the electrical outlet.**

Note: This system might be equipped with a second power supply. Before continuing with this procedure, ensure that all power sources to the system have been completely disconnected.

(L003)



or



___ 4. **Attention:**

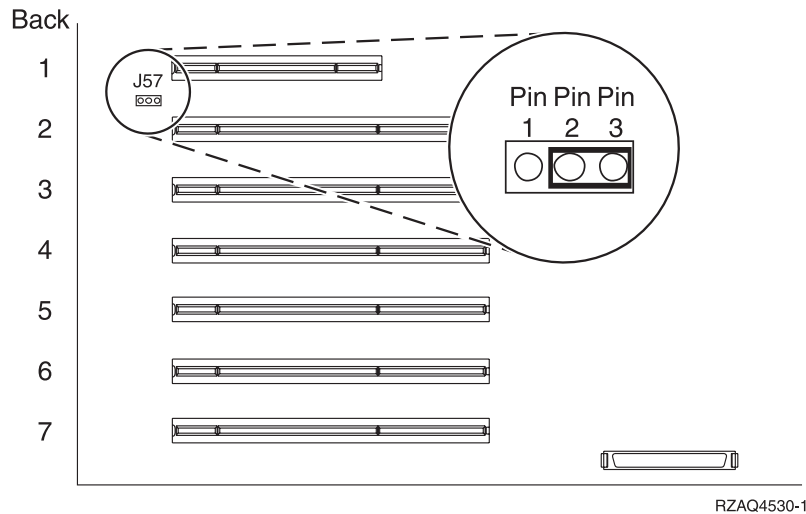
Attach a wrist strap to an unpainted metal surface of your hardware to prevent electrostatic discharge from damaging your hardware.

When using a wrist strap, follow all electrical safety procedures. A wrist strap is for static control. It does not increase or decrease your risk of receiving electric shock when using or working on electrical equipment.

If you do not have a wrist strap, just prior to removing the product from ESD packaging and installing or replacing hardware, touch an unpainted metal surface of the system for a minimum of 5 seconds.

___ 5. Provide 3.3v standby power for the card position.

___ a. Locate J57.

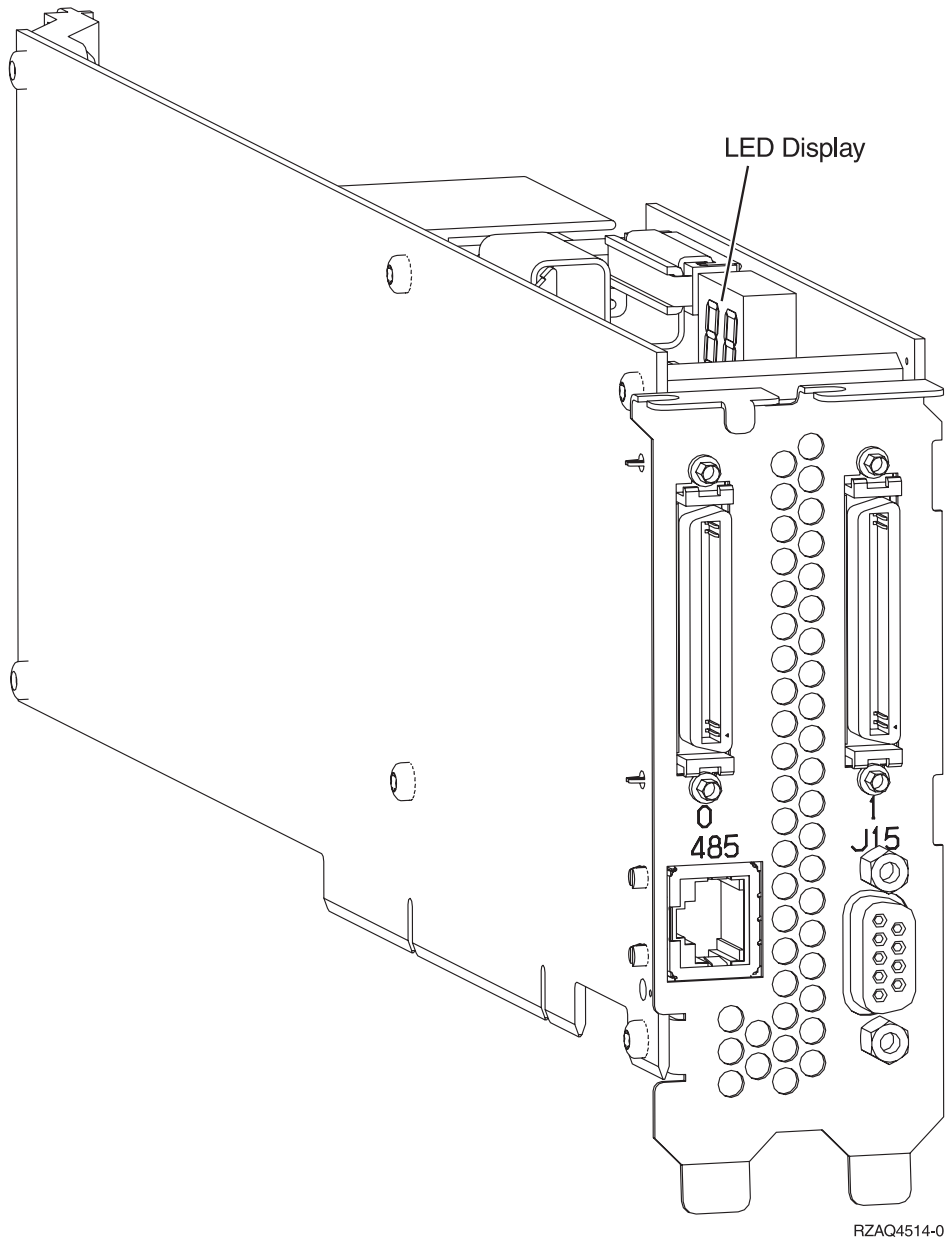


RZAQ4530-1

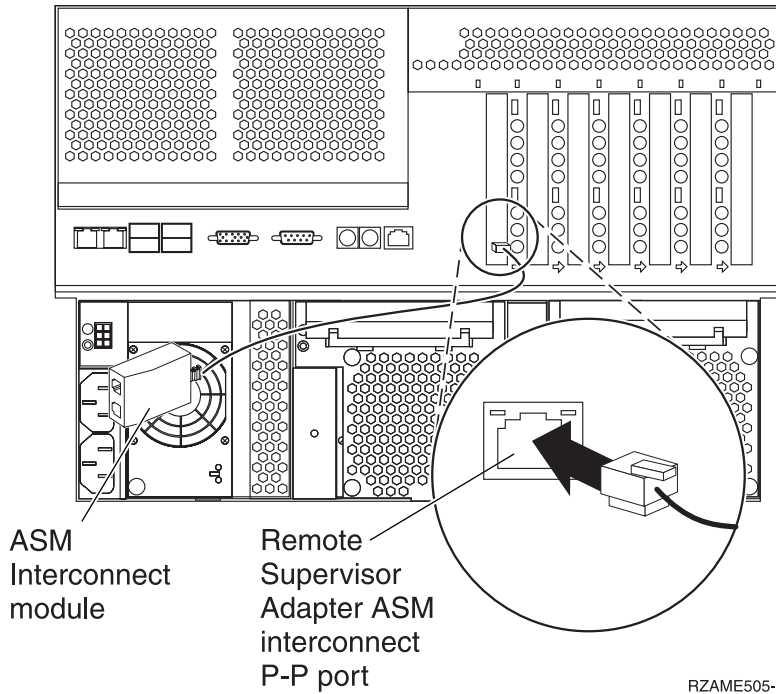
- ___ b. Move the jumper from pins 1 and 2 to pins 2 and 3.
- ___ 6. Refer to the xSeries information to install the card in card position 2.

Note: Two card positions are used by the card, so you might need to move an existing card to install the Integrated xSeries Adapter (IXA) card in the correct position.

- ___ 7. After the card is installed, return to these instructions.
- ___ 8. Connect the SPCN Connection Block (P/N 04N2652) to the IXA card J15 position. Connect the cable to the SPCN network of your system. Ensure that the cable is routed to maintain a recommended minimum 6-inch separation from any alternating current (ac) power cord.



- ___ 9. Connect RS-485 shielded cable (P/N 21P4162) to the IXA card 485 label.
- ___ 10. Based on the remote supervisor adapter installed, connect the other end of the cable as follows:
 - With a Remote Supervisor Adapter installed, connect the other end of the cable to one of the two ports on the ASM (Advanced System Management) Interconnect Module (P/N 03K9315).
 - With a Remote Supervisor Adapter II installed, connect the other end of the cable to one of the two ASM RS-485 connectors on the Advanced System Management breakout cable included with the Remote Supervisor Adapter II.
- ___ 11. Connect the terminator plug, P/N 59P2951, to the unused port on either the ASM Interconnect Module or the Advanced System Management breakout cable.
- ___ 12. Based on the remote supervisor adapter installed,
 - With a Remote Supervisor Adapter installed, connect the plug end of the ASM Interconnect Module to the Remote Supervisor Adapter ASM interconnect port, 485 label.



- With a Remote Supervisor Adapter II installed, connect the plug end of the Advanced System Management breakout cable to the ASM connector on the Remote Supervisor Adapter II (if not already installed). For more information, see the documentation for the Remote Supervisor Adapter II.

- ___ 13. Connect any high-speed link (HSL) cables that you ordered to the card 0 and 1 label. For more information, refer to High-speed link (HSL) information in the IBM eServer Hardware Information Center.
- ___ 14. Plug the xSeries server into an electrical outlet.
- ___ 15. Start the iSeries server.
- ___ 16. Wait for the iSeries server to detect that the IXA card is installed and to turn on the xSeries server.

Attention: Do not turn on the xSeries server using the xSeries power switch. Do not turn on the xSeries server using hardware service manager.

Note: Power-on might take several minutes because the IXA card's SPCN firmware might require automatic update to complete.

- ___ 17. To complete the installation, go to Windows environment on iSeries in the iSeries Information Center.

xSeries 346

The IXA card can be installed only with the iSeries server system power off.

To install the card, complete the following steps. You might need to refer to your xSeries server information for some of the steps.

DANGER

Electrical voltage and current from power, telephone, and communication cables are hazardous.

To avoid a shock hazard:

- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- Connect all power cords to a properly wired and grounded electrical outlet. Ensure 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 below when installing, moving, or opening covers on this product or attached devices.

To Disconnect:

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

To Connect:

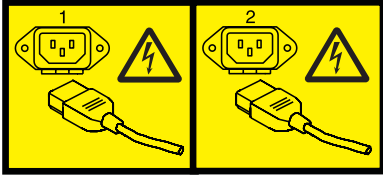
1. Turn everything OFF (unless instructed otherwise)
2. Attach all cables to devices.
3. Attach signal cables to connectors.
4. Attach power cords to outlet.
5. Turn device ON.

(D005)

- 1. A Remote Supervisor Adapter II Slimline option (P/N 73P9341) must be installed in this xSeries server before installing the Integrated xSeries Adapter (IXA) card. Some xSeries 346 models come with the Remote Supervisor Adapter II Slimline option already installed. Refer to the Remote Supervisor Adapter II Slimline option documentation for information on installing a Remote Supervisor Adapter II Slimline option. The xSeries server's BIOS, Baseboard Management Controller firmware, and Remote Supervisor Adapter II Slimline option firmware must be updated to the latest level after the Remote Supervisor Adapter II Slimline option has been installed in the xSeries server. For more information, go to "Update the server firmware" on page 3.
- 2. Ensure that the xSeries server power is off.
- 3. **Unplug the xSeries server power cord from the electrical outlet.**

Note: This system might be equipped with a second power supply. Before continuing with this procedure, ensure that all power sources to the system have been completely disconnected.

(L003)



or



___ 4. **Attention:**

Attach a wrist strap to an unpainted metal surface of your hardware to prevent electrostatic discharge from damaging your hardware.

When using a wrist strap, follow all electrical safety procedures. A wrist strap is for static control. It does not increase or decrease your risk of receiving electric shock when using or working on electrical equipment.

If you do not have a wrist strap, just prior to removing the product from ESD packaging and installing or replacing hardware, touch an unpainted metal surface of the system for a minimum of 5 seconds.

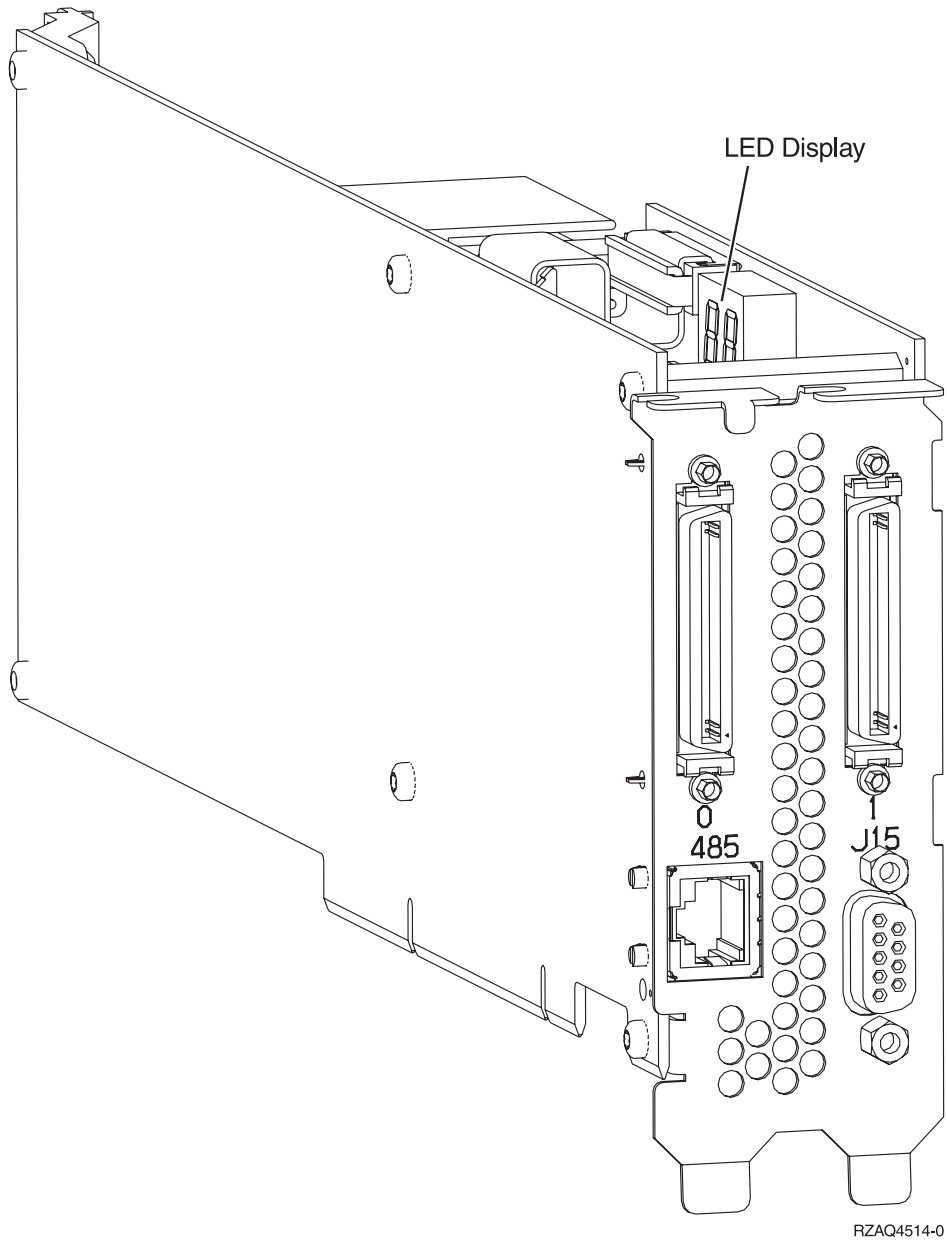
___ 5. Refer to the xSeries information to install the card in card position 4, located in the PCI riser card cage.

Note: Both card positions in the PCI riser card cage are used by the card, so you might need to move an existing card to install the Integrated xSeries Adapter (IXA) card in the correct position. Also, you will need to remove the blue card extender from the IXA card prior to installing it.

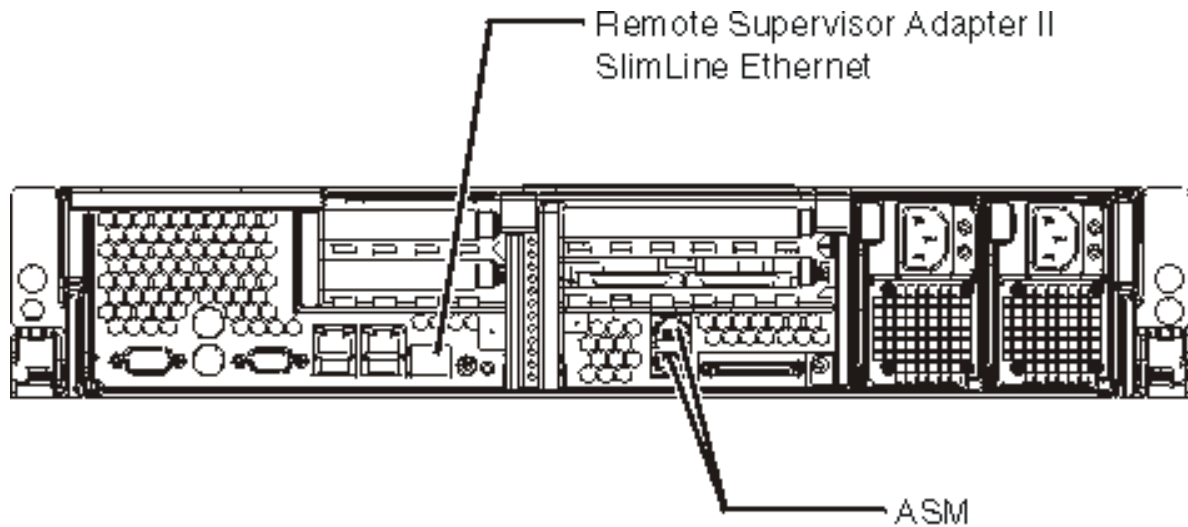
___ 6. After the card is installed, return to these instructions.

___ 7. Install the HSL strain relief bracket (P/N 97P5742) onto the rear of the xSeries server by orienting the bracket with the indented center support down, then inserting the tabs on the bracket into the matching slots above and below the IXA card's HSL connectors (labelled 0 and 1) as installed in the xSeries server. These slots are in the rear of the xSeries server, not on the IXA card itself. Then slide the bracket to the left to lock it in place.

___ 8. Connect the SPCN Connection Block (P/N 04N2652) to the IXA card J15 position. Connect the cable to the SPCN network of your system. Ensure that the cable is routed to maintain a recommended minimum 6-inch separation from any alternating current (ac) power cord.



- ___ 9. Connect RS-485 shielded cable (P/N 21P4162) to the IXA card 485 label.
- ___ 10. Connect the other end of the RS-485 shielded cable to the upper of two ASM ports on the rear of the xSeries server
- ___ 11. Connect the terminator plug, P/N 59P2951, to the unused ASM port on the rear of the xSeries server.



IPHBE500-0

- __ 12. Connect any high-speed link (HSL) cables that you ordered to the card 0 and 1 label. For more information, refer to High-speed link (HSL) information in the IBM eServer Hardware Information Center.
- __ 13. Plug the xSeries server into an electrical outlet.
- __ 14. Start the iSeries server.
- __ 15. Wait for the iSeries server to detect that the IXA card is installed and to turn on the xSeries server.

Attention: Do not turn on the xSeries server using the xSeries power switch. Do not turn on the xSeries server using hardware service manager.

Note: Power-on might take several minutes because the IXA card's SPCN firmware might require automatic update to complete.

- __ 16. To complete the installation, go to Windows environment on iSeries in the iSeries Information Center.

xSeries 350

The IXA card can be installed only with the iSeries server system power off.

To install the card, complete the following steps. You might need to refer to your xSeries server information for some of the steps.

DANGER

Electrical voltage and current from power, telephone, and communication cables are hazardous.

To avoid a shock hazard:

- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- Connect all power cords to a properly wired and grounded electrical outlet. Ensure 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 below when installing, moving, or opening covers on this product or attached devices.

To Disconnect:

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

To Connect:

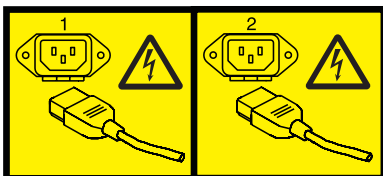
1. Turn everything OFF (unless instructed otherwise)
2. Attach all cables to devices.
3. Attach signal cables to connectors.
4. Attach power cords to outlet.
5. Turn device ON.

(D005)

- 1. Ensure that the xSeries server power is off.
- 2. Unplug the xSeries server power cord from the electrical outlet.

Note: This system might be equipped with a second power supply. Before continuing with this procedure, ensure that all power sources to the system have been completely disconnected.

(L003)



or



___ 3. **Attention:**

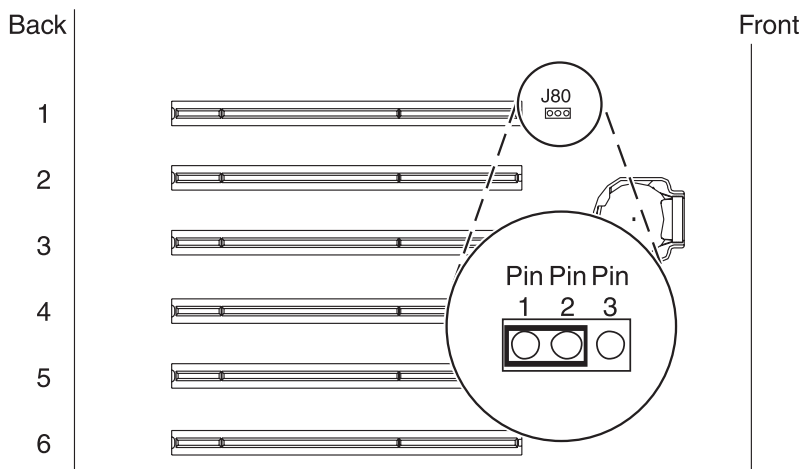
Attach a wrist strap to an unpainted metal surface of your hardware to prevent electrostatic discharge from damaging your hardware.

When using a wrist strap, follow all electrical safety procedures. A wrist strap is for static control. It does not increase or decrease your risk of receiving electric shock when using or working on electrical equipment.

If you do not have a wrist strap, just prior to removing the product from ESD packaging and installing or replacing hardware, touch an unpainted metal surface of the system for a minimum of 5 seconds.

___ 4. Provide 3.3v standby power for the card position.

a. Locate J80.



RZAQ4527-1

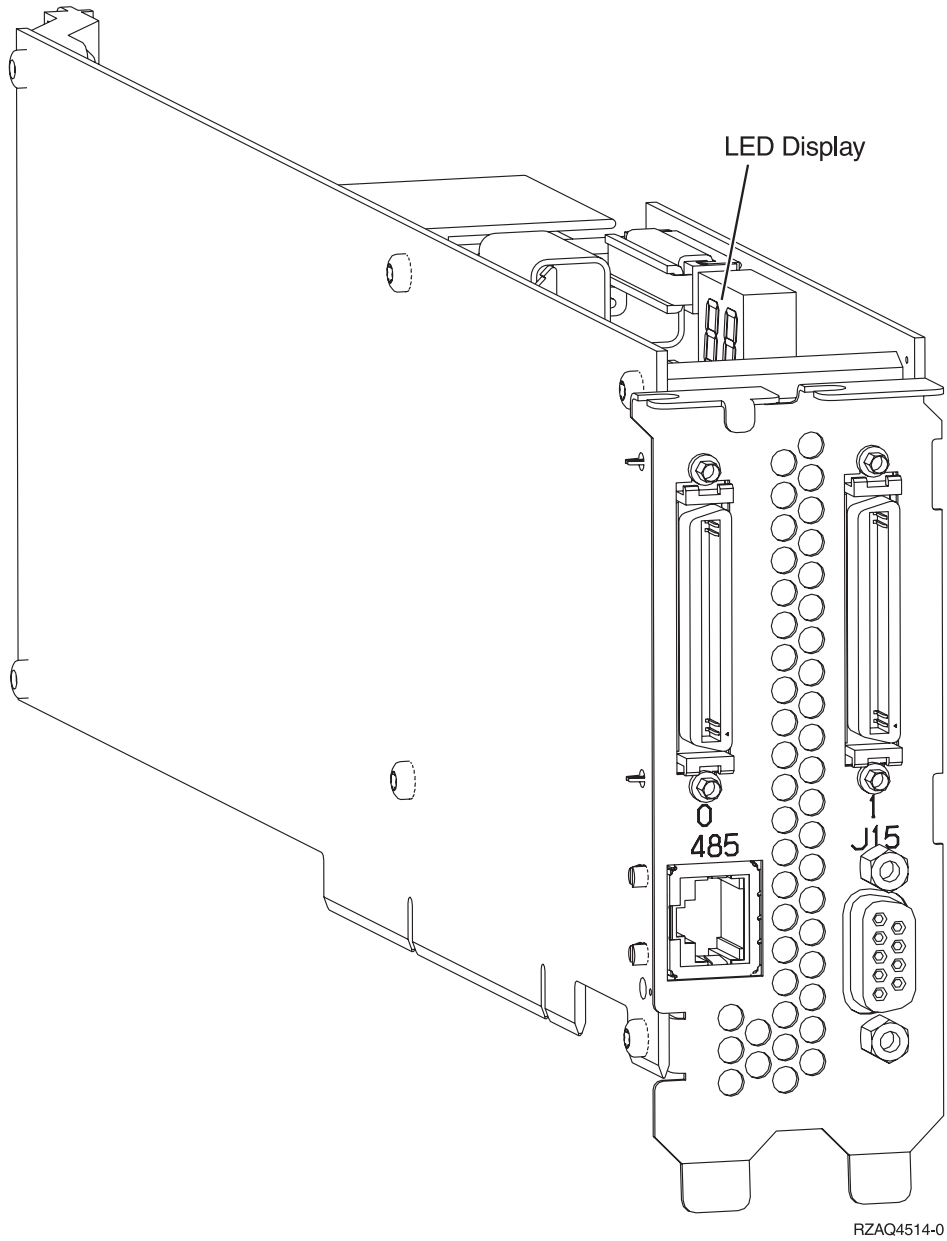
b. Move the jumper from pins 2 and 3 to pins 1 and 2.

___ 5. Refer to the xSeries information to install the card in card position 2.

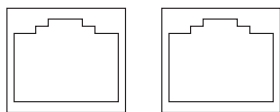
Note: Two card positions are used by the card, so you might need to move an existing card to install the Integrated xSeries Adapter (IXA) card in the correct position.

___ 6. After the card is installed, return to these instructions.

- ___ 7. Connect the SPCN Connection Block (P/N 04N2652) to the IXA card J15 position. Connect the cable to the SPCN network of your system. Ensure that the cable is routed to maintain a recommended minimum 6-inch separation from any alternating current (ac) power cord.



- ___ 8. Connect RS-485 shielded cable (P/N 21P4162) to the IXA card 485 label.
- ___ 9. Connect the other end of the cable to either RS-485 port on the server.



A RS485 B

RZAQ4517-0

- ___ 10. Connect any high-speed link (HSL) cables that you ordered to the card 0 and 1 label. For more information, refer to High-speed link (HSL) information in the IBM eServer Hardware Information Center.
- ___ 11. Plug the xSeries server into an electrical outlet.

- __ 12. Start the iSeries server.
- __ 13. Wait for the iSeries server to detect that the IXA card is installed and to turn on the xSeries server.

Attention: Do not turn on the xSeries server using the xSeries power switch. Do not turn on the xSeries server using hardware service manager.

Note: Power-on might take several minutes because the IXA card's SPCN firmware might require automatic update to complete.

- __ 14. To complete the installation, go to Windows environment on iSeries in the iSeries Information Center.

xSeries 360

The IXA card can be installed only with the iSeries server system power off.

To install the card, complete the following steps. You might need to refer to your xSeries server information for some of the steps.

DANGER

Electrical voltage and current from power, telephone, and communication cables are hazardous.

To avoid a shock hazard:

- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- Connect all power cords to a properly wired and grounded electrical outlet. Ensure 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 below when installing, moving, or opening covers on this product or attached devices.

To Disconnect:

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

To Connect:

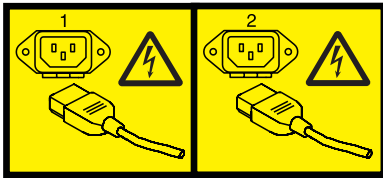
1. Turn everything OFF (unless instructed otherwise)
2. Attach all cables to devices.
3. Attach signal cables to connectors.
4. Attach power cords to outlet.
5. Turn device ON.

(D005)

- __ 1. Ensure that the xSeries server power is off.
- __ 2. **Unplug the xSeries server power cord from the electrical outlet.**

Note: This system might be equipped with a second power supply. Before continuing with this procedure, ensure that all power sources to the system have been completely disconnected.

(L003)



or



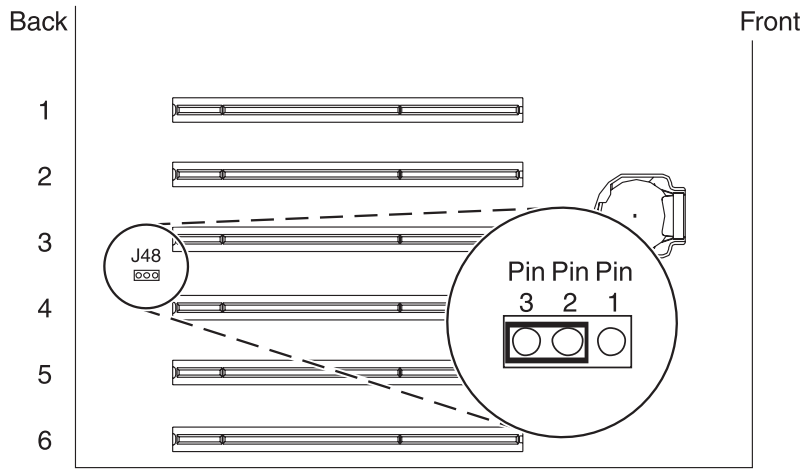
___ 3. **Attention:**

Attach a wrist strap to an unpainted metal surface of your hardware to prevent electrostatic discharge from damaging your hardware.

When using a wrist strap, follow all electrical safety procedures. A wrist strap is for static control. It does not increase or decrease your risk of receiving electric shock when using or working on electrical equipment.

If you do not have a wrist strap, just prior to removing the product from ESD packaging and installing or replacing hardware, touch an unpainted metal surface of the system for a minimum of 5 seconds.

- ___ 4. Provide 3.3v standby power for the card position.
- Locate J48.

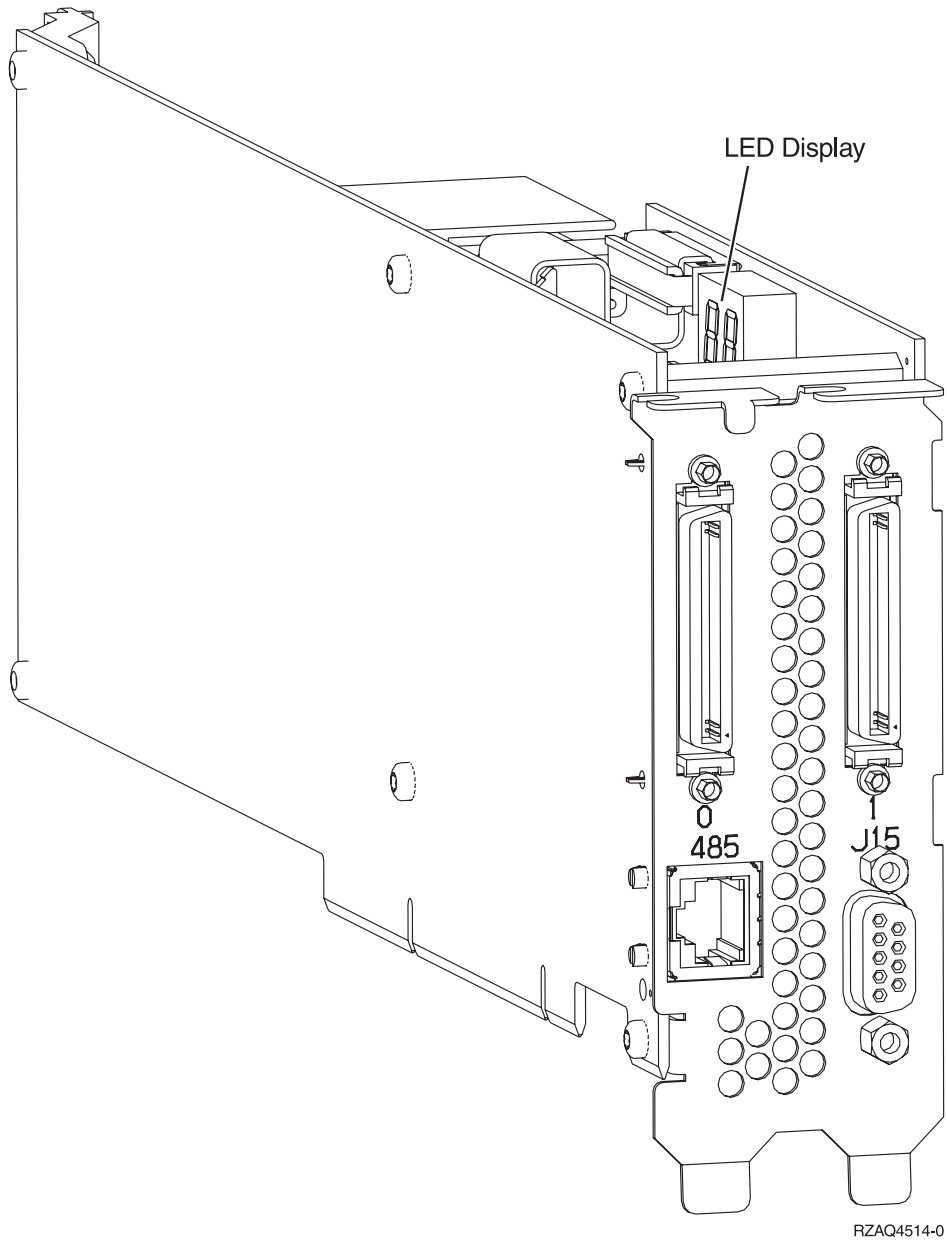


RZAQ4528-2

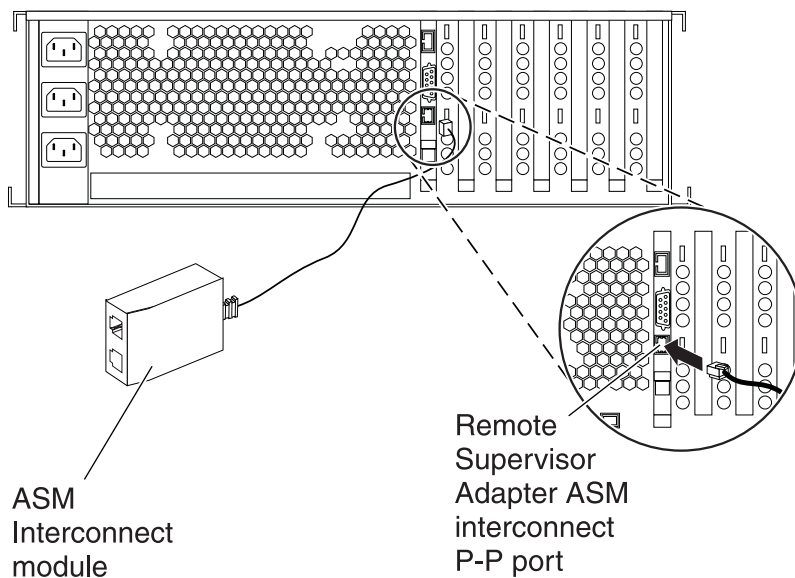
- b. Move the jumper from pins 1 and 2 to pins 2 and 3.
- ___ 5. Refer to the xSeries information to install the card in card position 3.

Note: Two card positions are used by the card, so you might need to move an existing card to install the Integrated xSeries Adapter (IXA) card in the correct position.

- ___ 6. After the card is installed, return to these instructions.
- ___ 7. Connect the SPCN Connection Block (P/N 04N2652) to the IXA card J15 position. Connect the cable to the SPCN network of your system. Ensure that the cable is routed to maintain a recommended minimum 6-inch separation from any alternating current (ac) power cord.



- 8. Connect RS-485 shielded cable (P/N 21P4162) to the IXA card 485 label.
- 9. Connect the other end of the cable to one of the two ports on the ASM (Advanced System Management) Interconnect Module (P/N 03K9315).



RZAME501-1

- ___ 10. Connect the terminator plug, P/N 59P2951, to the unused port on the ASM Interconnect Module.
- ___ 11. Connect the plug end of the ASM Interconnect Module to the Remote Supervisor Adapter ASM interconnect port, 485.
- ___ 12. Connect any high-speed link (HSL) cables that you ordered to the card 0 and 1 label. For more information, refer to High-speed link (HSL) information in the IBM eServer Hardware Information Center.
- ___ 13. Plug the xSeries server into an electrical outlet.
- ___ 14. Start the iSeries server.
- ___ 15. Wait for the iSeries server to detect that the IXA card is installed and to turn on the xSeries server.

Attention: Do not turn on the xSeries server using the xSeries power switch. Do not turn on the xSeries server using hardware service manager.

Note: Power-on might take several minutes because the IXA card's SPCN firmware might require automatic update to complete.

- ___ 16. To complete the installation, go to Windows environment on iSeries in the iSeries Information Center.

xSeries 365

The IXA card can be installed only with the iSeries server system power off.

To install the card, complete the following steps. You might need to refer to your xSeries server information for some of the steps.

DANGER

Electrical voltage and current from power, telephone, and communication cables are hazardous.

To avoid a shock hazard:

- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- Connect all power cords to a properly wired and grounded electrical outlet. Ensure 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 below when installing, moving, or opening covers on this product or attached devices.

To Disconnect:

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

To Connect:

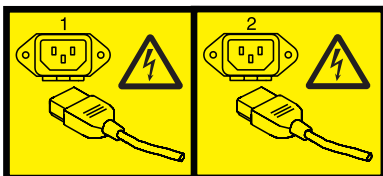
1. Turn everything OFF (unless instructed otherwise)
2. Attach all cables to devices.
3. Attach signal cables to connectors.
4. Attach power cords to outlet.
5. Turn device ON.

(D005)

- 1. You might need to enable the ASM Interconnect support on your server for the IXA attachment to work correctly. Refer to “**Update Remote Supervisor Adapter II or Remote Supervisor Adapter II Slimline firmware**” on page 4 for information about how to do this.
- 2. Ensure that the xSeries server power is off.
- 3. **Unplug the xSeries server power cord from the electrical outlet.**

Note: This system might be equipped with a second power supply. Before continuing with this procedure, ensure that all power sources to the system have been completely disconnected.

(L003)



or



— 4. **Attention:**

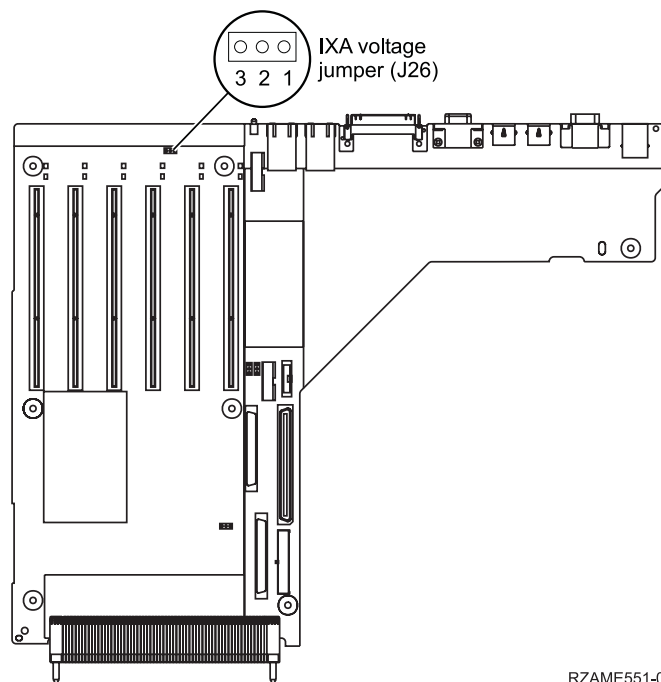
Attach a wrist strap to an unpainted metal surface of your hardware to prevent electrostatic discharge from damaging your hardware.

When using a wrist strap, follow all electrical safety procedures. A wrist strap is for static control. It does not increase or decrease your risk of receiving electric shock when using or working on electrical equipment.

If you do not have a wrist strap, just prior to removing the product from ESD packaging and installing or replacing hardware, touch an unpainted metal surface of the system for a minimum of 5 seconds.

— 5. Provide 3.3v standby power for the card position.

a. Locate J26.



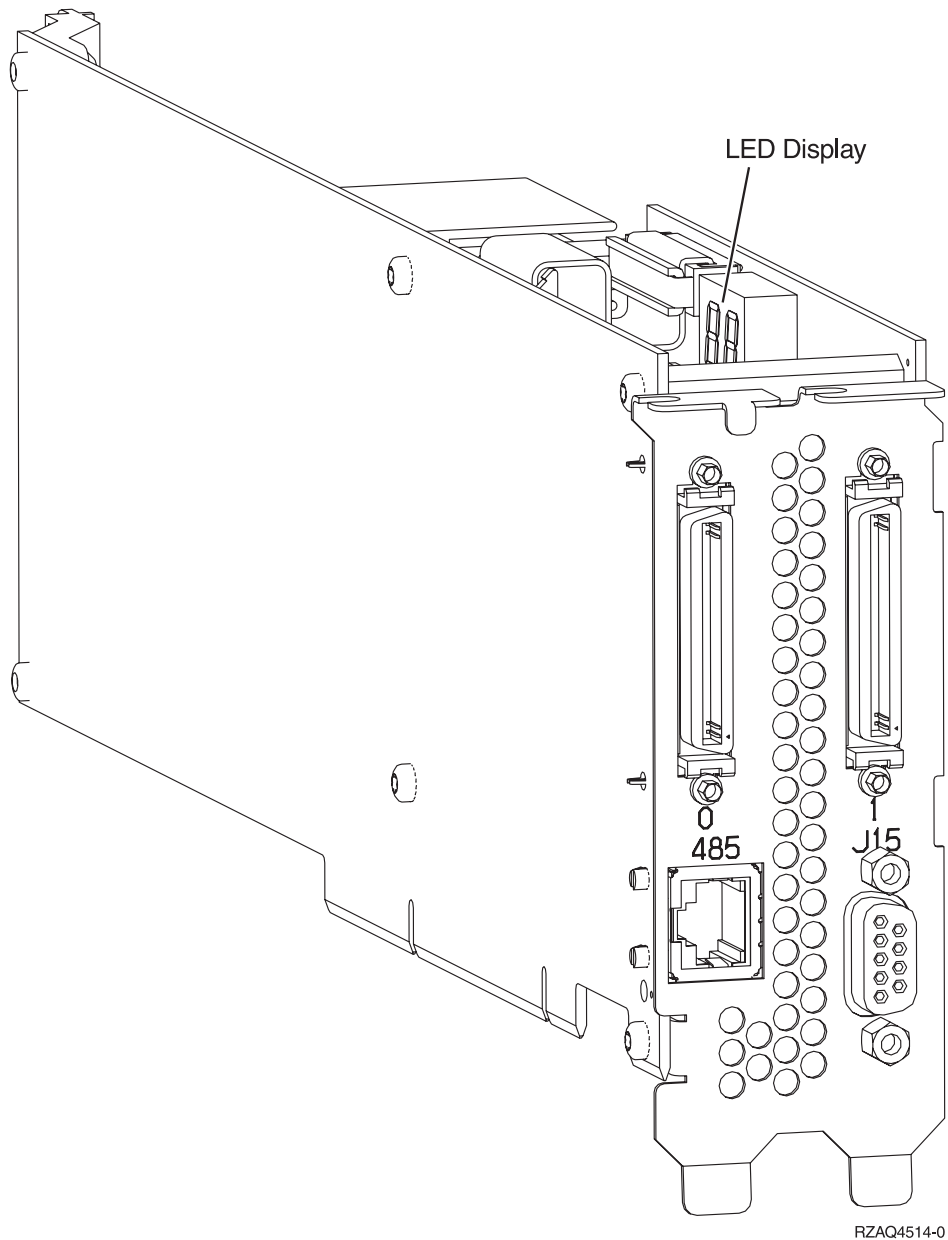
RZAME551-0

b. Move the jumper from pins 1 and 2 to pins 2 and 3.

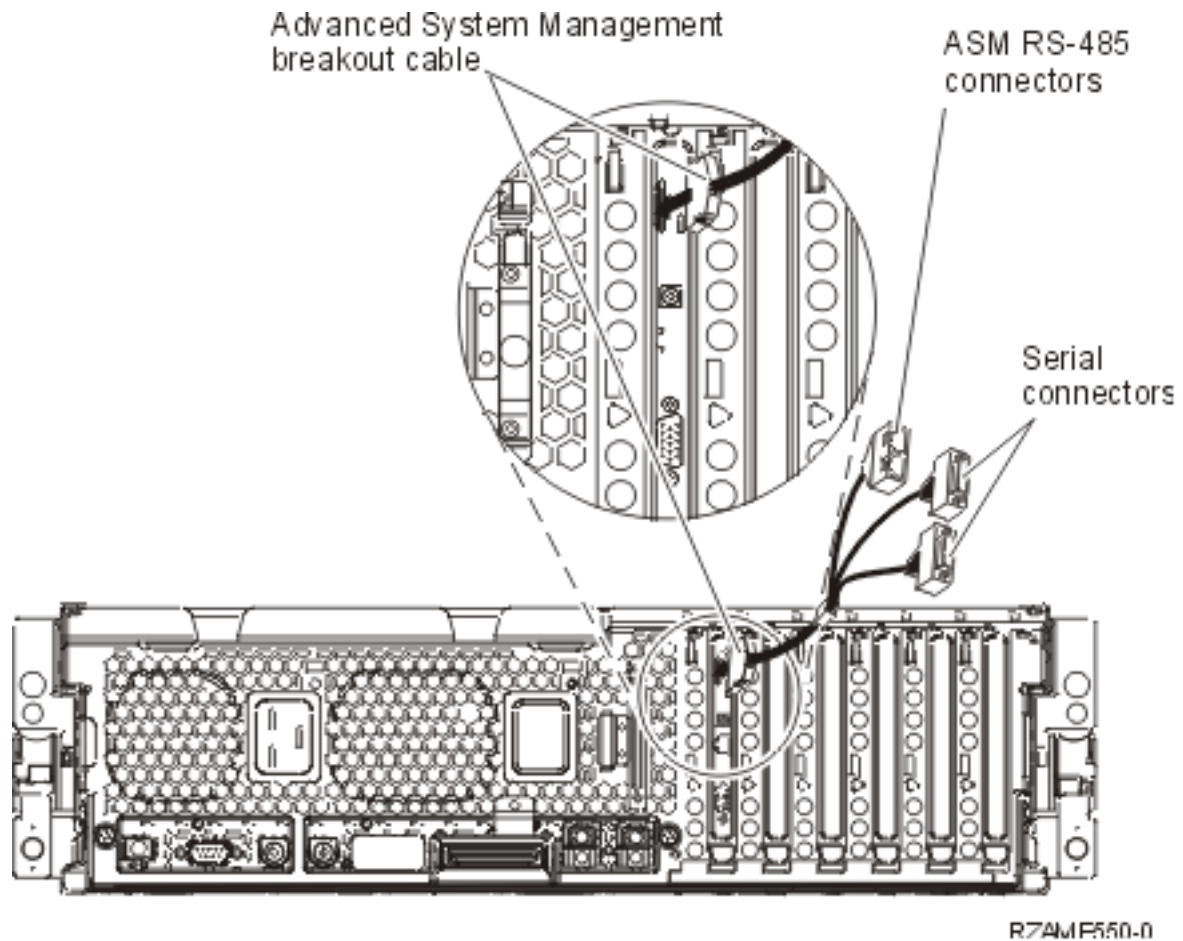
- ___ 6. Refer to the xSeries information to install the card in card position 3.

Note: Two card positions are used by the card, so you might need to move an existing card to install the Integrated xSeries Adapter (IXA) card in the correct position. Also, you might need to remove the IXA card extender prior to installing the IXA card.

- ___ 7. After the card is installed, return to these instructions.
- ___ 8. Connect the SPCN Connection Block (P/N 04N2652) to the IXA card J15 position. Connect the cable to the SPCN network of your system. Ensure that the cable is routed to maintain a recommended minimum 6-inch separation from any alternating current (ac) power cord.



- ___ 9. Connect RS-485 shielded cable (P/N 21P4162) to the IXA card 485 label.
- ___ 10. Connect the other end of the cable to one of the two RS-485 ports on the Advanced System Management Breakout cable that is included with your server.



- ___ 11. Connect the terminator plug, P/N 59P2951, to the unused RS-485 port on the ASM Breakout cable.
- ___ 12. Connect the ASM breakout cable to the ASM connector on the Remote Supervisor Adapter II in your server.
- ___ 13. Connect any high-speed link (HSL) cables that you ordered to the card 0 and 1 label. For more information, refer to High-speed link (HSL) information in the IBM eServer Hardware Information Center.
- ___ 14. Plug the xSeries server into an electrical outlet.
- ___ 15. Start the iSeries server.
- ___ 16. Wait for the iSeries server to detect that the IXA card is installed and to turn on the xSeries server.

Attention: Do not turn on the xSeries server using the xSeries power switch. Do not turn on the xSeries server using hardware service manager.

Note: Power-on might take several minutes because the IXA card's SPCN firmware might require automatic update to complete.

- ___ 17. To complete the installation, go to Windows environment on iSeries in the iSeries Information Center.

xSeries 366 or xSeries 460

Note: This server requires a special version of the RS-485 shielded cable included with machine type 1519 model 100 at EC level H86427 or later. This cable is also orderable as P/N 01R1484.

The IXA card can be installed only with the iSeries server system power off.

For xSeries 460:

- If you are configuring the xSeries model 460 as a multi-node system, the Integrated xSeries Adapter (IXA) is only supported in one-node and two-node systems.
- The IXA should only be installed in the primary node when the xSeries model 460 is configured as a multi-node system. The adapter is not required or supported in the secondary node.

To install the card, complete the following steps. You might need to refer to your xSeries server information for some of the steps.

DANGER

Electrical voltage and current from power, telephone, and communication cables are hazardous.

To avoid a shock hazard:

- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- Connect all power cords to a properly wired and grounded electrical outlet. Ensure 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 below when installing, moving, or opening covers on this product or attached devices.

To Disconnect:

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

To Connect:

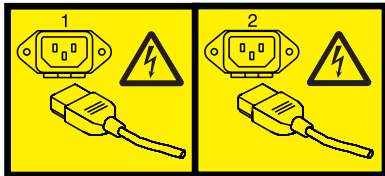
1. Turn everything OFF (unless instructed otherwise)
2. Attach all cables to devices.
3. Attach signal cables to connectors.
4. Attach power cords to outlet.
5. Turn device ON.

(D005)

- 1. A Remote Supervisor Adapter II SlimLine option (P/N 73P9341) must be installed in this xSeries server before installing the Integrated xSeries Adapter (IXA) card. Refer to the Remote Supervisor Adapter II SlimLine option documentation for information on installing a Remote Supervisor Adapter II SlimLine option. The xSeries server's BIOS, Baseboard Management Controller firmware, and Remote Supervisor Adapter II SlimLine option firmware must be updated to the latest level after the Remote Supervisor Adapter II SlimLine option has been installed in the xSeries server. For more information, go to "Update the server firmware" on page 3.
- 2. Ensure that the xSeries server power is off.
- 3. **Unplug the xSeries server power cord from the electrical outlet.**

Note: This system might be equipped with a second power supply. Before continuing with this procedure, ensure that all power sources to the system have been completely disconnected.

(L003)



or



___ 4. **Attention:**

Attach a wrist strap to an unpainted metal surface of your hardware to prevent electrostatic discharge from damaging your hardware.

When using a wrist strap, follow all electrical safety procedures. A wrist strap is for static control. It does not increase or decrease your risk of receiving electric shock when using or working on electrical equipment.

If you do not have a wrist strap, just prior to removing the product from ESD packaging and installing or replacing hardware, touch an unpainted metal surface of the system for a minimum of 5 seconds.

___ 5. Provide 3.3v standby power for the card position by doing the following:

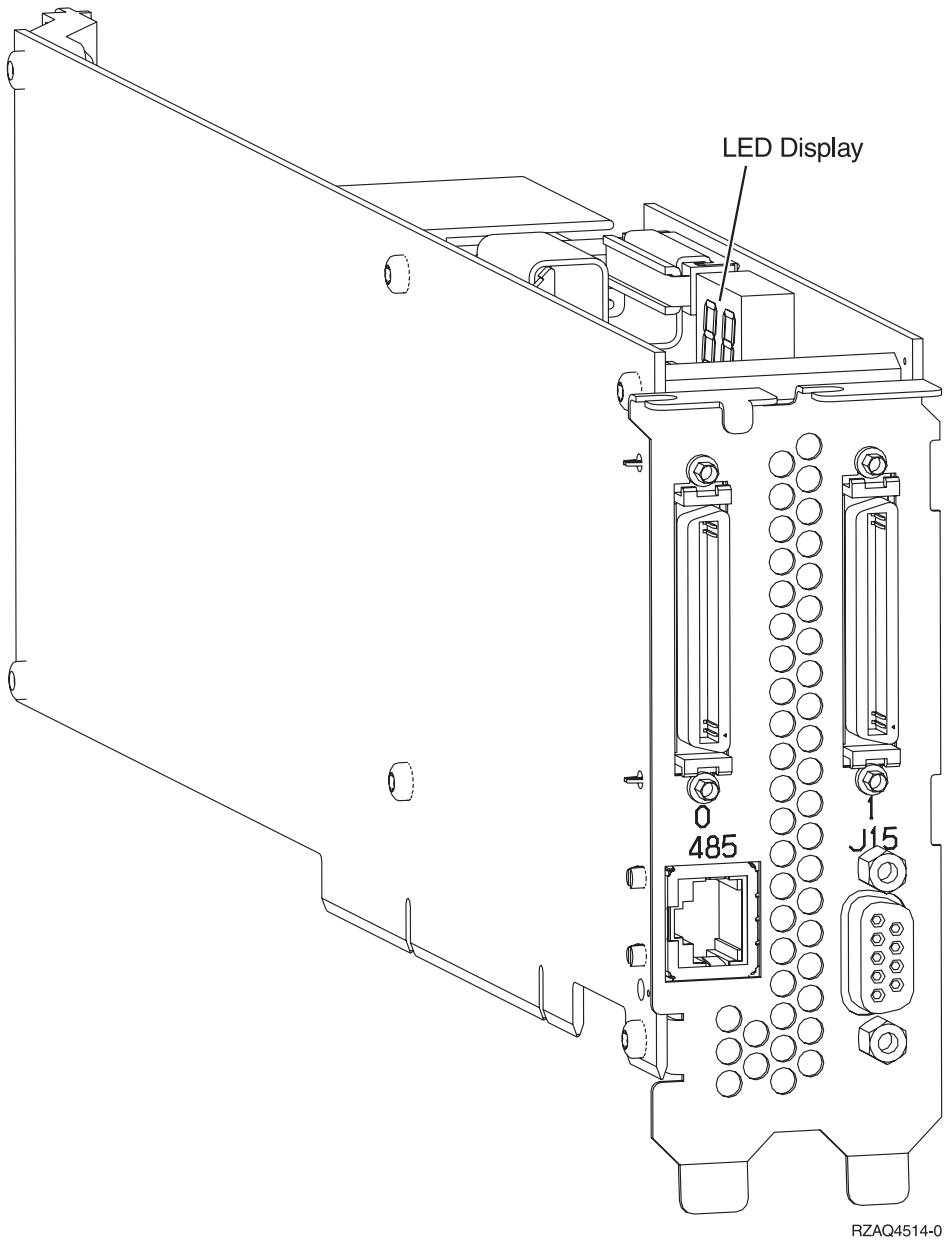
- Locate J35 and install a jumper to connect the two pins.
- Locate J40 and install a jumper to connect the two pins.

___ 6. Refer to the xSeries information to install the card in card position 2.

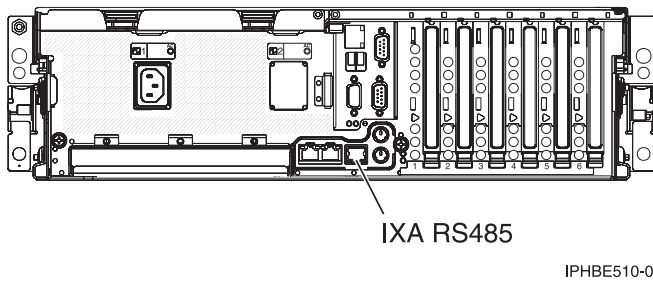
Note: Two card positions are used by the card, so you might need to move an existing card to install the Integrated xSeries Adapter (IXA) card in the correct position. Also, you will need to remove the blue card extender from the IXA card prior to installing it.

___ 7. After the card is installed, return to these instructions.

___ 8. Connect the SPCN Connection Block (P/N 04N2652) to the IXA card J15 position. Connect the cable to the SPCN network of your system. Ensure that the cable is routed to maintain a recommended minimum 6-inch separation from any alternating current (ac) power cord.



- ___ 9. Connect the gray RS-485 shielded cable (P/N 01R1484) , the end labelled "ADAPTER", to the IXA card 485 label.
- ___ 10. Connect the other end of the gray RS-485 shielded cable, the end labelled "SYSTEM", to the port labelled "SYSTEM MGMT RS-485" on the back of the xSeries server.



- __ 11. Connect any high-speed link (HSL) cables that you ordered to the card 0 and 1 label. For more information, refer to High-speed link (HSL) information in the IBM eServer Hardware Information Center.
- __ 12. Plug the xSeries server into an electrical outlet.
- __ 13. Start the iSeries server.
- __ 14. Wait for the system to detect that the IXA card is installed and to turn on the xSeries server.

Attention: Do not turn on the xSeries server using the xSeries power switch. Do not turn on the xSeries server using hardware service manager.

Note: Power-on might take several minutes because the IXA card's SPCN firmware might require automatic update to complete.

- __ 15. To complete the installation, go to Windows environment on iSeries in the iSeries Information Center.

xSeries 440

The IXA card can be installed only with the iSeries server system power off.

To install the card, complete the following steps. You might need to refer to your xSeries server information for some of the steps.

DANGER

Electrical voltage and current from power, telephone, and communication cables are hazardous.

To avoid a shock hazard:

- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- Connect all power cords to a properly wired and grounded electrical outlet. Ensure 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 below when installing, moving, or opening covers on this product or attached devices.

To Disconnect:

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

To Connect:

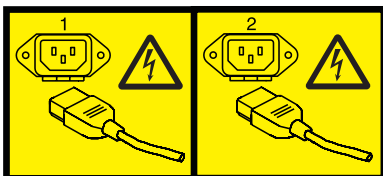
1. Turn everything OFF (unless instructed otherwise)
2. Attach all cables to devices.
3. Attach signal cables to connectors.
4. Attach power cords to outlet.
5. Turn device ON.

(D005)

- ___ 1. Ensure that the xSeries server power is off.
- ___ 2. Unplug the xSeries server power cord from the electrical outlet.

Note: This system might be equipped with a second power supply. Before continuing with this procedure, ensure that all power sources to the system have been completely disconnected.

(L003)



or



___ 3. **Attention:**

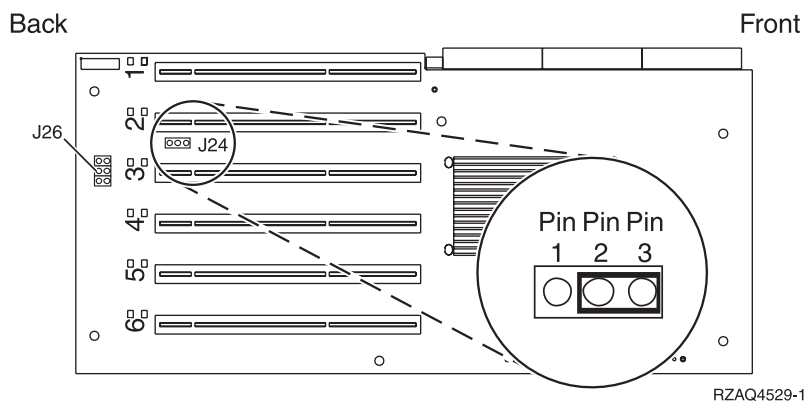
Attach a wrist strap to an unpainted metal surface of your hardware to prevent electrostatic discharge from damaging your hardware.

When using a wrist strap, follow all electrical safety procedures. A wrist strap is for static control. It does not increase or decrease your risk of receiving electric shock when using or working on electrical equipment.

If you do not have a wrist strap, just prior to removing the product from ESD packaging and installing or replacing hardware, touch an unpainted metal surface of the system for a minimum of 5 seconds.

___ 4. Provide 3.3v standby power for the card position.

___ a. Locate J24.



___ b. Move the jumper from pins 1 and 2 to pins 2 and 3.

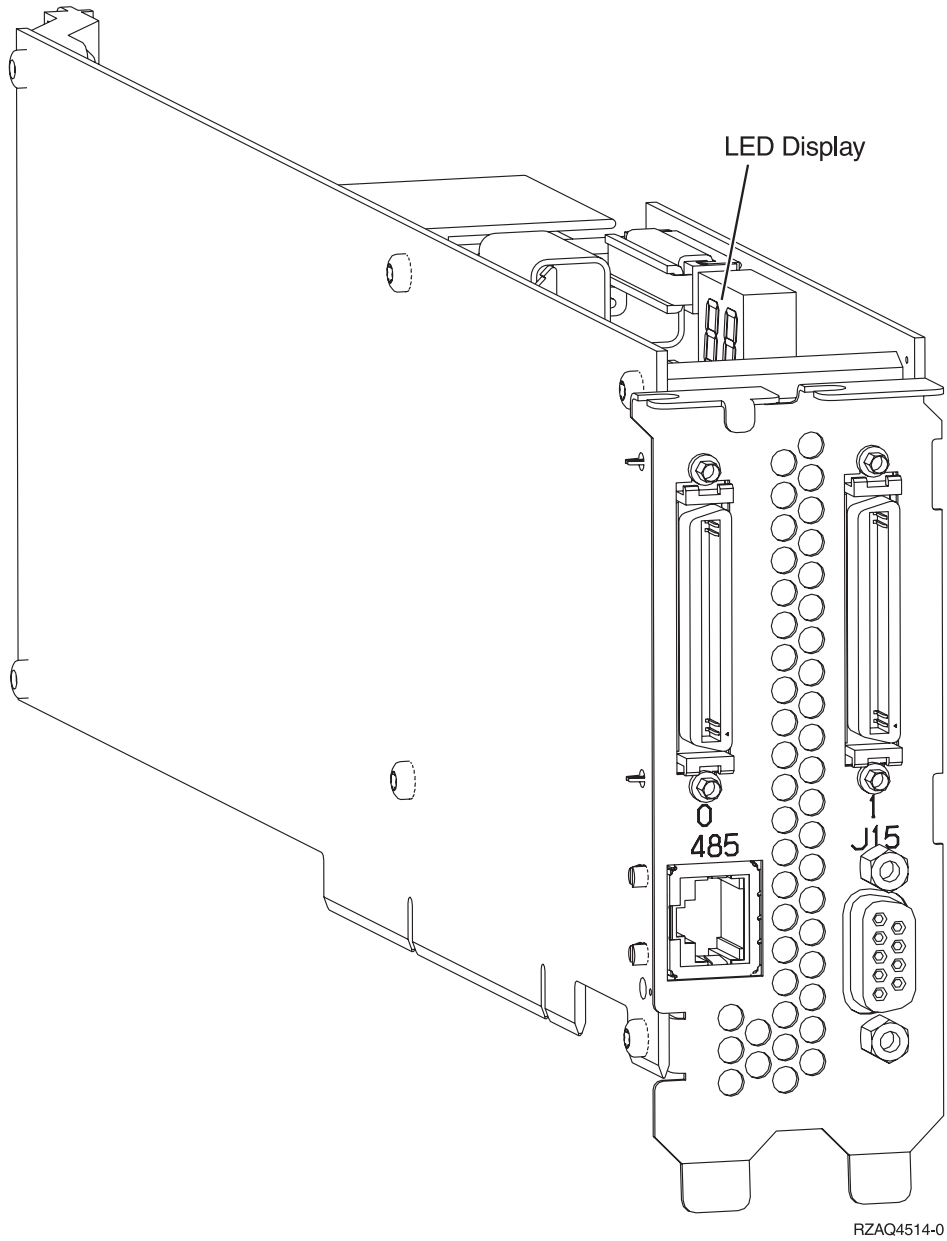
___ c. Locate J26 and install a jumper on pins 1 and 2.

___ 5. Refer to the xSeries information to install the card in card position 2.

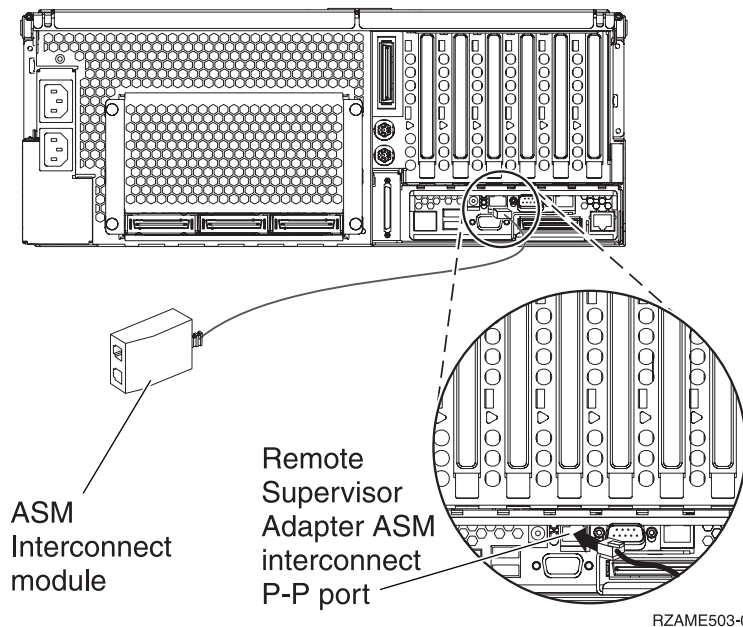
Note: Two card positions are used by the card, so you might need to move an existing card to install the Integrated xSeries Adapter (IXA) card in the correct position. Also, you might need to remove the IXA card extender prior to installing the IXA card.

___ 6. After the card is installed, return to these instructions.

- ___ 7. Connect the SPCN Connection Block (P/N 04N2652) to the IXA card J15 position. Connect the cable to the SPCN network of your system. Ensure that the cable is routed to maintain a recommended minimum 6-inch separation from any alternating current (ac) power cord.



- ___ 8. Connect RS-485 shielded cable (P/N 21P4162) to the IXA card 485 label.
- ___ 9. Connect the other end of the cable to one of the two ports on the ASM (Advanced System Management) Interconnect Module (P/N 03K9315).



- ___ 10. Connect the terminator plug, P/N 59P2951, to the unused port on the ASM Interconnect Module.
- ___ 11. Connect the plug end of the ASM Interconnect Module to the Remote Supervisor Adapter ASM interconnect port, 485.
- ___ 12. Connect any high-speed link (HSL) cables that you ordered to the card 0 and 1 label. For more information, refer to High-speed link (HSL) information in the IBM eServer Hardware Information Center.
- ___ 13. Plug the xSeries server into an electrical outlet.
- ___ 14. Start the iSeries server.
- ___ 15. Wait for the iSeries server to detect that the IXA card is installed and to turn on the xSeries server.

Attention: Do not turn on the xSeries server using the xSeries power switch. Do not turn on the xSeries server using hardware service manager.

Note: Power-on might take several minutes because the IXA card's SPCN firmware might require automatic update to complete.

- ___ 16. To complete the installation, go to Windows environment on iSeries in the iSeries Information Center.

xSeries 445

The IXA card can be installed only with the iSeries server system power off.

To install the card, complete the following steps. You might need to refer to your xSeries server information for some of the steps.

DANGER

Electrical voltage and current from power, telephone, and communication cables are hazardous.

To avoid a shock hazard:

- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- Connect all power cords to a properly wired and grounded electrical outlet. Ensure 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 below when installing, moving, or opening covers on this product or attached devices.

To Disconnect:

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

To Connect:

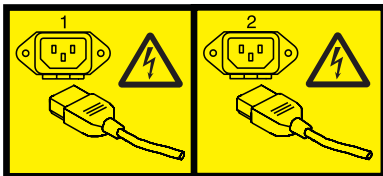
1. Turn everything OFF (unless instructed otherwise)
2. Attach all cables to devices.
3. Attach signal cables to connectors.
4. Attach power cords to outlet.
5. Turn device ON.

(D005)

- 1. Ensure that the xSeries server power is off.
- 2. Unplug the xSeries server power cord from the electrical outlet.

Note: This system might be equipped with a second power supply. Before continuing with this procedure, ensure that all power sources to the system have been completely disconnected.

(L003)



or



___ 3. **Attention:**

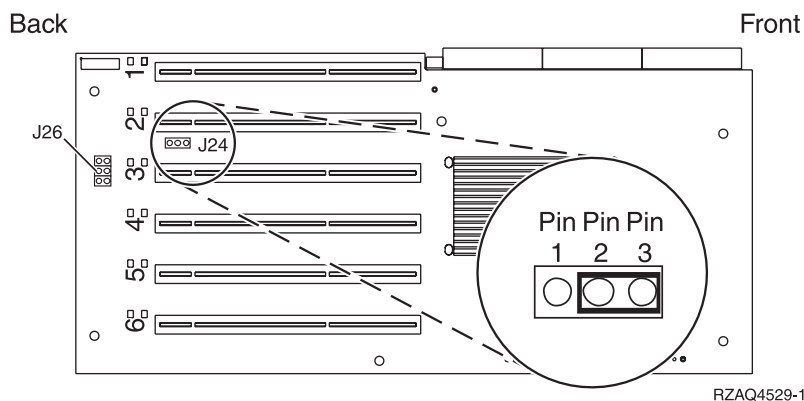
Attach a wrist strap to an unpainted metal surface of your hardware to prevent electrostatic discharge from damaging your hardware.

When using a wrist strap, follow all electrical safety procedures. A wrist strap is for static control. It does not increase or decrease your risk of receiving electric shock when using or working on electrical equipment.

If you do not have a wrist strap, just prior to removing the product from ESD packaging and installing or replacing hardware, touch an unpainted metal surface of the system for a minimum of 5 seconds.

___ 4. Provide 3.3v standby power for the card position.

a. Locate J24.



RZAQ4529-1

b. Move the jumper from pins 1 and 2 to pins 2 and 3.

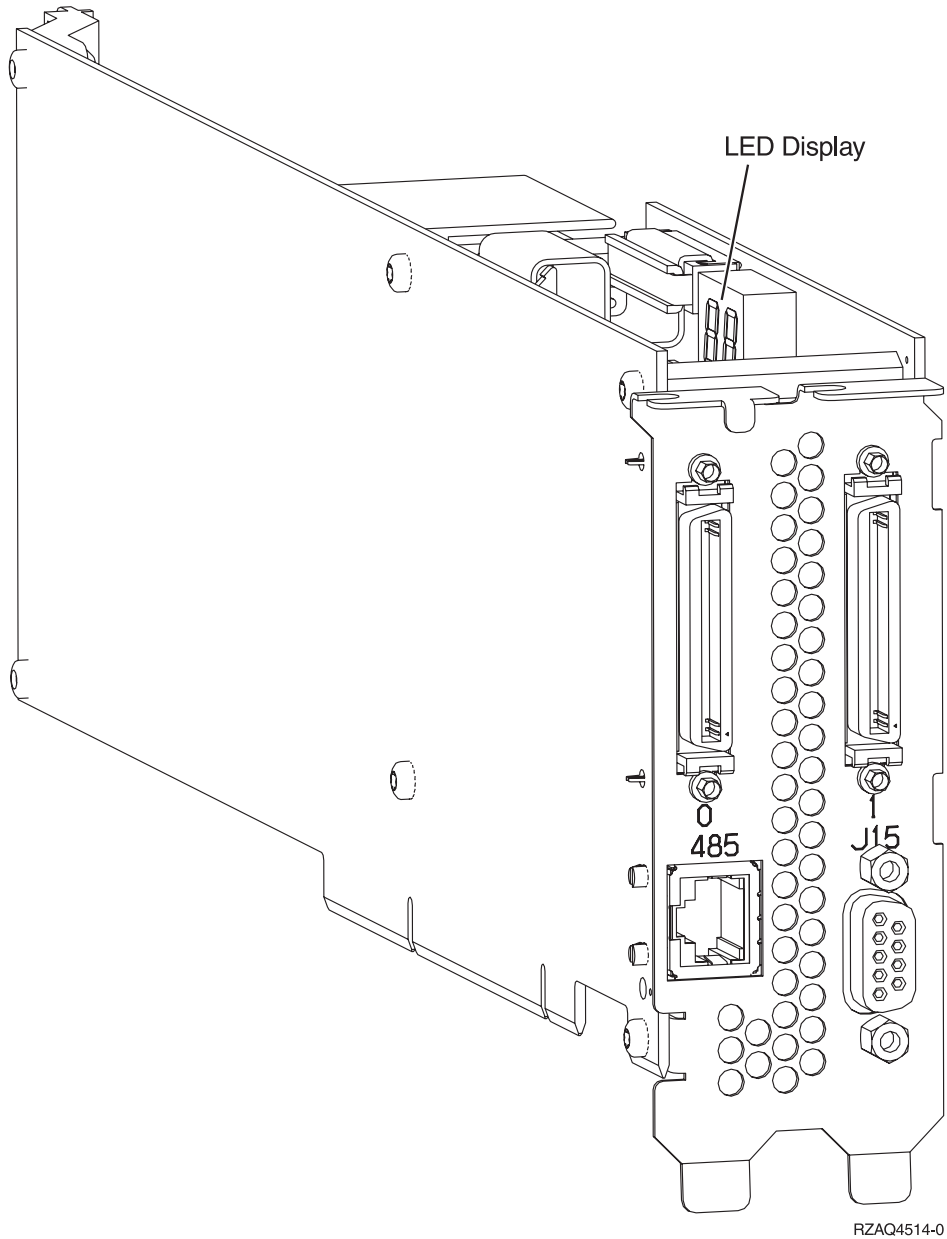
c. Locate J26 and install a jumper on pins 1 and 2.

___ 5. Refer to the xSeries information to install the card in card position 2.

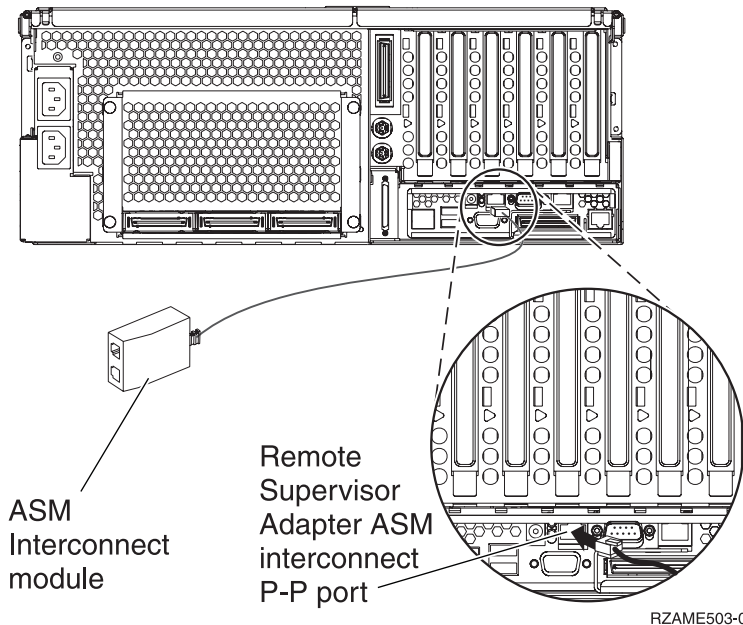
Note: Two card positions are used by the card, so you might need to move an existing card to install the Integrated xSeries Adapter (IXA) card in the correct position. Also, you might need to remove the IXA card extender prior to installing the IXA card.

___ 6. After the card is installed, return to these instructions.

- ___ 7. Connect the SPCN Connection Block (P/N 04N2652) to the IXA card J15 position. Connect the cable to the SPCN network of your system. Ensure that the cable is routed to maintain a recommended minimum 6-inch separation from any alternating current (ac) power cord.



- ___ 8. Connect RS-485 shielded cable (P/N 21P4162) to the IXA card 485 label.
- ___ 9. Based on the remote supervisor adapter installed, connect the other end of the cable as follows:
- With a Remote Supervisor Adapter installed, connect the other end of the cable to one of the two ports on the ASM (Advanced System Management) Interconnect Module (P/N 03K9315).



- With a Remote Supervisor Adapter II-EXA installed, connect the other end of the cable to one of the two ASM Interconnect RS-485 connectors on the RSA II-EXA breakout cable (P/N 73P9280). (A diagram of the x445 with the RSA II-EXA and breakout cable can be found in the x445 User's Guide)
- ___ 10. Connect the terminator plug (P/N 59P2951) to the unused port on either the ASM Interconnect Module of the RSA II-EXA breakout cable.
 - ___ 11. Connect the plug end of the ASM Interconnect Module to the Remote Supervisor Adapter ASM interconnect port, 485. Based on the remote supervisor adapter installed:
 - With a Remote Supervisor Adapter installed, connect the plug end of the ASM Interconnect Module to the Remote Supervisor Adapter ASM interconnect port.
 - With a Remote Supervisor Adapter II-EXA installed, connect the plug end of the RSA II-EXA breakout cable to the RSA II-EXA breakout port on the server.
 - ___ 12. Connect any high-speed link (HSL) cables that you ordered to the card 0 and 1 label. For more information, refer to High-speed link (HSL) information in the IBM eServer Hardware Information Center.
 - ___ 13. Plug the xSeries server into an electrical outlet.
 - ___ 14. Start the iSeries server.
 - ___ 15. Wait for the iSeries server to detect that the IXA card is installed and to turn on the xSeries server.

Attention: Do not turn on the xSeries server using the xSeries power switch. Do not turn on the xSeries server using hardware service manager.

Note: Power-on might take several minutes because the IXA card's SPCN firmware might require automatic update to complete.

- ___ 16. To complete the installation, go to Windows environment on iSeries in the iSeries Information Center.

Note: Be sure to connect the video cable for the xSeries console to the Remote Supervisor Adapter II-EXA video port if the xSeries server has an Remote Supervisor Adapter II-EXA installed.



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