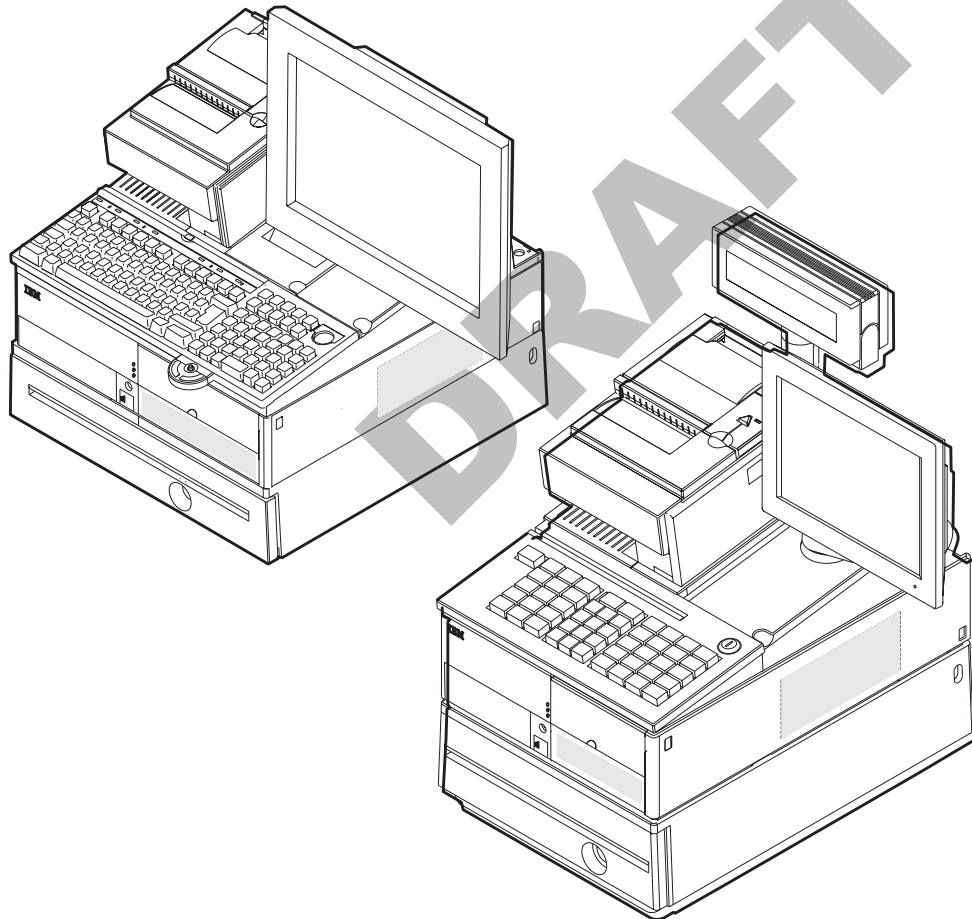


SurePOS 700 Series



SurePOS 700-722/742/782, 723/743/783 Operating System Installation Guide



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SurePOS 700 Series



SurePOS 700-722/742/782, 723/743/783 Operating System Installation Guide

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Note

Before using this information and the product it supports, be sure to read the general information under Appendix A, "Safety information," on page 25 and Appendix B, "Notices," on page 31.

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Second Edition (October 2007)

| This edition applies to the SurePOS 722/742/782 and SurePOS 723/743/783.

Current versions of Retail Store Solutions documentation are available on the IBM Retail Store Solutions Web site at <http://www.ibm.com/solutions/retail/store/support>. Click **Publications**.

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About this guide

Publications accessibility

The soft-copy version of this guide and other related publications are accessibility-enabled.

Who should read this guide

This guide is intended for the person who will install the operating environment for the IBM® SurePOS 722/742/782 and SurePOS 723/743/783.

How this guide is organized

This guide is organized as follows:

- Chapter 1, “Preparing for the installation,” on page 1 describes what is needed before you begin your installation.
 - Installation procedures are described in these sections:
 - Chapter 2, “Installing Windows 2000,” on page 5
 - Chapter 3, “Installing Windows XP,” on page 11
 - Chapter 4, “Installing DOS 2000,” on page 17
-

Related publications

These IBM publications are also available from the IBM Retail Store Solutions Web site at <http://www.ibm.com/solutions/retail/store/support>.

- *Safety Information – Read This First*, GA27-4004
- *SurePOS 700 Series SurePOS 700-723/743/783 Systems, Installation, and Operations Guide*, GA27-4998
- *SurePOS 700-721/741/781, 722/742/782 Planning, Installation, and Operation Guide*, GA27-4328
- *SurePOS 700-723/743/783 Hardware Service Guide*, GY27-0424
- *SurePOS 700-721/741/781, 722/742/782 Hardware Service Guide*, SA27-4329
- *Store Systems: Options and I/O Devices Service Guide*, GC30-9737
- *SureMark Printers: User’s Guide*, GA27-4151
- *SureMark Printers: Hardware Service Guide*, GY27-0355
- *Point of Sale Subsystem: Programming Reference and User’s Guide*, SC30-3560
- *Point of Sale Subsystem: Installation, Operation and Keyboards*, GC30-3623
- *4820 SurePoint Solution: Installation and Service Guide*, GA27-4231
- *4820 SurePoint Solution: System Reference*, SA27-4249

Diagnostic programs that are media independent are downloadable from the IBM Retail Store Solutions Web site at <http://www.ibm.com/solutions/retail/store/support>. The use of generic drivers from manufacturer web sites is not recommended.

Locating the IBM SurePOS 700 support web site

Throughout this document, you are referred to go to the IBM Retail Store Solutions Web site at <http://www.ibm.com/solutions/retail/store/support>. From this web site, select **IBM SurePOS 700 series** to open the support information available for the IBM SurePOS 700 product.

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Summary of changes

GA27-4357-01

This edition adds or changes information for installing operating system software on the SurePOS 723/743/783.

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Providing feedback

Your feedback is important in helping IBM provide accurate and high-quality information.

You can use either of these ways to provide feedback:

- Go to <http://www.ibm.com/solutions/retail/store>. Click **Support**, then click **Publications**. Click the **publication comments** within the introductory text. Provide the requested information and your comments. Be sure to include the name and form number of the document in the [Publication ID] field.
- Print and complete the form at the end of this document. Return the form to IBM by mail or by giving it to an IBM representative.

If applicable, include a reference to the specific location of the text (for example, the page or table number) on which you are commenting.

Between major revisions of this document, there might be minor technical updates. The latest version of this document is available on the Retail Store Solutions Web site at www.ibm.com/solutions/retail/store/support/publications/.

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Chapter 1. Preparing for the installation

This section provides information and procedures to prepare for your installation.

Important driver information

The SurePOS 722/742/782 and SurePOS 723/743/783 require new POS I/O and LAN drivers. Existing drivers for Models 4694 and Models 4800 will not work properly with these products. This notice applies to all operating systems: DOS, 4690, Windows®, and Linux®. Additionally, a hard drive image for a predecessor product will not work properly. Be sure and download the appropriate drivers from the IBM Retail Store Solutions Web site at <http://www.ibm.com/solutions/retail/store/support>.

BIOS settings

For externally attached USB fixed disk drive and CD-ROM devices, the default setting of the PC USB ports is disabled. This setting is a security feature to prevent booting to these devices in the store environment. These ports must be set to enabled in the Advanced BIOS Features section in the basic input/output system (BIOS). Follow the procedures in “Steps to enter setup and change the first boot device” to enable the ports.

Steps to enter setup and change the first boot device

Follow these steps to change your system’s first boot device:

1. Power on the system unit. When prompted, press the **Delete** key and then continue.
2. Select **Advanced BIOS Features**.
3. Select **First Boot Device** setting.
4. Select the required boot device (CD-ROM or USB-FDD) for first boot device.
5. Press the **F10** key to save your selections and exit.

Your new settings will take effect upon the next reboot.

Updating the system BIOS

One of your first installation steps is to ensure that the BIOS for your system is current. Locate the current BIOS for your system from the IBM Retail Store Solutions Web site at <http://www.ibm.com/solutions/retail/store/support>. If your BIOS is not current, download the current one and update your system.

Steps to install a current BIOS level

Note: Before you begin, fully format a 1.44 floppy diskette. Do not skip this requirement. Do not assume that a new diskette has been fully formatted. At the command prompt, type this command:

```
format a: /u /f:1.44
```

To install the BIOS update, follow these steps:

1. Download the BIOS Update file from the IBM Retail Store Solutions Web site at <http://www.ibm.com/solutions/retail/store/support>. If you are a network

administrator and are performing a flash update using the IBM Remote Deployment Manager software, download the *LCCM Bios update*.

2. Ensure that the formatted diskette is not write protected, and insert the diskette.
3. Browse to the location of the downloaded BIOS flash image and double-click on the executable file
4. Follow the on-screen instructions to create the bootable BIOS diskette.

Note: If you encounter problems with creating the diskette, try another diskette or another PC to create the diskette. You can also download the image from the Internet again.

5. Insert the diskette into the diskette drive, power on the machine, and allow it to boot using the diskette.

The system will automatically power off when the BIOS update is complete.

Note: If you encounter problems getting the diskette to boot the system, remove the diskette, reboot and follow the steps “Steps to enter setup and change the first boot device” on page 1 to ensure that the floppy diskette drive (FDD) is enabled as a boot device.

Partitioning the hard disk

You can partition the hard disk by using the FDISK and FORMAT utilities.

Note: Use the version of FDISK on the PC DOS 2000 diskettes.

1. Boot the system from the DOS Network/CD-ROM Boot Disk.
2. At the command prompt, type **FDISK** and press **Enter**.
3. FDISK will ask if large disk support should be enabled. For Windows NT® 4.0, choose **N**. For Windows 2000 and Windows XP, choose **Y**.
4. When the FDISK Options menu appears, press **4** then press **Enter**. This will display all partitions defined in the partition table.
5. Record all partitions and their types. Press **Esc** when finished.
6. To delete all partitions defined in the partition table, press **3** then press **Enter**. A menu will appear which allows the partitions to be deleted. Each partition must be deleted individually.
7. After the deletion of all partitions, a new primary DOS partition must be created. At the FDISK Options menu, press **1** and then **Enter**.
8. Once the **Create DOS Partition or Logical DOS Drive** menu has appeared, press **1** then press **Enter**.
9. In a few moments, the next menu will appear. The system will ask if all available space should be used for the installation and if it should make the partition active. Press **Y** for yes then press **Enter**.
10. Press any key to restart the system.
11. Repeat Steps 1 and 2 of this procedure.
12. After the command prompt appears, type **format c: /u**. This will perform an unconditional format.
13. The question Proceed with Format? will appear. Press **Y** for yes.
14. After formatting completes, enter a volume label.
15. Clear the master boot record to ensure that any previous boot loaders are removed. This can be done by typing **fdisk /mbr** from the command prompt.
16. Restart the system.

Enabling the enhanced Serial ATA hard disk driver interface

IBM SurePOS 700 Models 742, 782, 723, 743, and 783 have an embedded Serial ATA (SATA) controller with Advanced Host Controller Interface (AHCI) and Redundant Array of Independent Disks (RAID) support. To take advantage of either of these features, they must be enabled prior to operating system installation and the driver must be installed during the installation of the operating system. Once the operating system is installed, the mode of operation can not be changed without reinstalling the operating system.

AHCI and Native Command Queueing

Models 742, 782, 723, 743, and 783 can enable the AHCI mode of operation, if they have a hard drive installed. Currently, AHCI mode does not provide any measurable performance benefit with the standard hard disk drive installed in Models 742 or 782. However, the Native Command Queueing (NCQ) is becoming a standard feature on hard disk drives and will provide a performance benefit, if the AHCI controller is enabled.

IBM will not provide a replacement or an upgrade of customer hard disk drives should this feature become standard. If the application requires a drive with NCQ support, you should submit an RPQ through your IBM Sales Representative. This information is provided to allow customers to prepare OS/Application images properly for future use.

RAID 0 and RAID 1

Enabling the native RAID application requires a Models 742, 782, 723, 743, and 783 with one or two hard disk drives. To take full advantage of the RAID function, you must install two drives. With two drives installed, the native RAID function supports both RAID 0 and RAID 1. For two drive implementations, RAID 1 is the recommended mode of operation.

Enabling RAID and using the RAID driver is the recommended mode of operation for one and two drive configurations. The RAID mode of operation will take advantage of NCQ¹ with single drive systems. Also, single drive systems with RAID enabled can be later upgraded to two drive systems by just adding the second hard disk drive, booting the OS and using the RAID utility to create an array without requiring the OS or applications to be reinstalled.

RAID 0 (striping)

Increases the system hard disk performance, however the overall reliability is reduced as a single drive failure will result in total data loss.

RAID 1 (mirroring)

Does not increase performance, but the drives are maintained as identical copies. If one hard disk drive experiences a hardware failure, the system will continue to function until the failing drive can be serviced.

Note: RAID does not prevent or eliminate errors caused by OS issues, application failures, corrupt files, viruses and other software induced problems that are often perceived as hard drive failures. RAID 1 can only minimize the impact of a single hard drive hardware failure.

1. Dependant upon the NCQ feature becoming the standard in the industry.

Procedures for enabling RAID or the AHCI mode

These procedures are for the Windows XP or 2000 CD-ROM installation.

1. Press **Delete** during BIOS power-on self-test (POST).
2. Select **Integrated Peripherals** and press **Enter**.
3. Select **INTEL OnChip IDE Device** and press **Enter**.
4. Select **SATA mode** and press **Enter**.
5. Select **AHCI** or **RAID**.
6. Select **Save & Exit**.

Note: If you selected RAID mode, continue with these steps:

7. Follow the on-screen instructions to enter the RAID configuration utility during BIOS POST.
8. Select **Create RAID Volume** and press **Enter**.
9. Name the new RAID Volume and press **Enter**.
10. Select the RAID mode of operation (RAID 0 or RAID 1).
11. Press **Enter** to use the entire hard drive for RAID.
12. Press **Enter** to verify that you want to create the RAID Volume.
13. Press **Y** to answer the question, Are you sure you want to create this volume?
14. Press **Esc** to exit.
15. Press **Y** to answer the question, Are you sure you want to exit?

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Chapter 2. Installing Windows 2000

This section describes the installation steps for Windows 2000 using either the network or a CD-ROM

Hardware and software requirements

This installation requires a SurePOS 722/742/782 or SurePOS 723/743/783 with a minimum configuration as follows:

- 128 MB read access memory (RAM)
- 40 GB minimum hard disk drive
- USB or PS/2 keyboard
- Internal CD-ROM or external USB CD-ROM drive
- External USB floppy disk drive for certain installation configurations
- Windows 2000 installation CD or LAN server with required installation files (for network installation)
- Intel® AHCI/RAID diskette if installing on Models 742, 782, 723, 743, and 783 with AHCI (Advanced Host Controller Interface) or RAID enabled (diskette image available from the IBM Retail Store Solutions Web site at <http://www.ibm.com/solutions/retail/store/support>)
- Windows 2000 Professional CD
- DOS Network/CD-ROM boot disk
- Partitioned and formatted hard disk. See “Partitioning the hard disk” on page 2.

CD-ROM preinstallation steps

Follow these steps before you begin:

1. Boot the system with the DOS Network/CD-ROM Boot Disk.

Important

Steps 2 and 3 below are not required; however, they aid in field support because operating system components can be added and removed in the field without the need of a CD-ROM drive.

As a performance tip, using the SmartDrive DOS utility prior to the installation of Windows 2000 Professional will greatly reduce the amount of time spent copying files. The syntax is **smartdrv c+**.

2. To create a directory on the hard disk which will store the Windows 2000 Professional installation files, type **mkdir c:\wininst** from a command prompt.
3. To copy the Windows 2000 Professional Installation files from the CD-ROM to the hard disk, type **copy x:\i386*. * c:\wininst** from a command prompt.

Note: The Windows 2000 Professional installation files can be found in the i386 directory of the CD-ROM. These are the only files on the CD that are required for installation.

4. Continue with “CD-ROM installation steps” on page 6.

CD-ROM installation steps

Models 742, 782, 723, 743, and 783 only

During installation, the Windows install screen prompts you to **Press F6 if you need to install any 3rd party SCSI or RAID Driver**. Follow these steps to continue:

1. Press **F6**.
2. Press **S** to obtain the driver from the RAID Driver diskette.
3. Insert the RAID Driver diskette in the floppy drive and press **Enter**.
4. Select the **Intel(R) 82801FR SATA RAID Controller (Desktop ICH6R)** option.
5. Press **Enter** to allow the installation to continue.

All models

1. Go to c:\wininst on the hard disk.
2. Type **winnt**. This will launch Windows 2000 Professional Workstation setup.
3. After the file copying portion of setup completes, remove the network boot disk floppy from the floppy drive and press **Enter**.
4. The system will reboot in to the second portion of Windows 2000 Professional setup. The "Welcome to Setup" screen will appear. Press **Enter** to continue installing Windows 2000 Professional.
5. The license agreement will appear. Read the agreement by paging down. If you agree to follow the license agreement, press **F8** to continue.
6. A menu will appear which allows the install partition to be chosen. Only one partition will appear. Press **Enter** to continue.
7. If conversion to NTFS is desired, you can perform the conversion on the next screen. If the current file system is sufficient, press **Enter** to continue.
8. After the file copying procedure has completed, press **Enter** to restart the system.
9. The system will reboot in to the graphical portion of Windows 2000 Professional setup. Click **Next** to continue.
10. The locale settings can be modified on this screen. The default settings should be sufficient. Click **Next** to continue.
11. Enter a valid name and the name of your organization. Click **Next** to continue.
12. Enter the Product ID listed on the Windows 2000 Professional CD case and click **Next** to continue.
13. Enter a unique computer name.
14. Enter a password for the Administrator account and click **Next**.
15. The time zone settings can be adjusted on this screen. Make any necessary adjustments and click **Next**.
16. Windows 2000 setup will continue unattended from this point forward. Restart the system when prompted.
17. On the first reboot after Windows 2000 completes, the **Network Identification Wizard** will appear. Click **Next** to start the wizard.
18. Choose a user name a password to log on to the system automatically, or force the user to enter a user name password every time the system starts. Click **Next** after you have made your choice.
19. Click **Finish**.
20. Login to Windows 2000 with the Administrator ID.

21. Download the Windows 2000 Network Driver package from the web.
22. Extract the package to a blank floppy disk.
23. Right-click **My Computer** on the Desktop and click **Properties**.
24. Click the **Hardware** tab.
25. Click **Device Manager**.
26. Double-click **Ethernet Controller** under **Other Devices**.
27. Click the **Driver** tab.
28. Click **Update Driver**.
29. Click **Next**.
30. Insert the floppy disk containing the Windows 2000 Network Driver in to the A: drive.
31. Click **Search for a suitable driver** for my device and click **Next**.
32. Ensure the checkbox beside **Floppy disk drives** is checked and click **Next**.
33. Windows will find the proper driver on the floppy disk. After the search has completed, click **Next** to continue.
34. Click **Finish** to complete the installation process.
35. Click **Close** to exit the **Ethernet Controller** properties.

Network installation of Windows 2000

Prerequisites

- Windows 2000 Professional CD or Windows 2000 Professional installation files
- A server with a shared CD-ROM or a shared folder
- A partitioned and formatted DOS Network/CD-ROM Boot Disk

Network installation steps

Models 742, 782, 723, 743, and 783 only

During installation, the Windows install screen prompts you to **Press F6 if you need to install any 3rd party SCSI or RAID Driver**. Follow these steps:

1. Press **F6**.
2. Press **S** to obtain the driver from the RAID Driver diskette.
3. Insert the RAID Driver diskette in the floppy drive and press **Enter**.
4. Select the **Intel(R) 82801FR SATA RAID Controller (Desktop ICH6R)** option.
5. Press **Enter** to complete the installation.

All models

Follow these steps to install Windows 2000 from a network:

1. Boot the system with the DOS Network/CD-ROM Boot Disk.
2. After booting has completed, to map a network drive to the server containing the Windows 2000 Professional CD-ROM/Installation files, type **net use x: \\servername\sharename** from a command prompt.

Important

Steps 3 and 4 below are not required; however, they aid in field support because operating system components can be added and removed in the field without the need of a CD-ROM drive.

As a performance tip, using the SmartDRIVE DOS utility prior to the installation of Windows 2000 Professional will greatly reduce the amount of time spent copying files. The syntax is **smartdrv c+**.

3. To create a directory on the hard disk that will store the Windows 2000 Professional installation files, type **mkdir c:\wininst** from a command prompt.
 4. To copy the Windows 2000 Professional Installation files from the server to the hard disk, type **copy x:\i386*. * c:\wininst** from a command prompt.
- Note:** The Windows 2000 Professional installation files can be found in the i386 directory of the CD-ROM. These are the only files on the CD that are required for installation.
5. Download and extract the Ethernet drivers for the SurePOS 700 to a directory on the same share as the one that is used to store the Windows 2000 Professional files.
 6. Create a directory in the root of the hard disk which will store the various drivers required by the system. Call the directory drivers. Inside the drivers directory, create a directory for the Ethernet drivers called ethernet.
 7. To copy the Ethernet drivers extracted to the network shares in to c:\drivers\ethernet, type **xcopy x:\drivers*. * c:\drivers\ethernet /s** from the command prompt.
 8. Go to c:\wininst on the hard disk.
 9. Type **winnt**. This will launch Windows 2000 Professional Workstation setup.
 10. After the file copying portion of setup completes, remove the network boot disk floppy from the floppy drive and press **Enter**.
 11. The system will reboot in to the second portion of Windows 2000 Professional setup. The "Welcome to Setup" screen will appear. Press **Enter** to continue installing Windows 2000 Professional.
 12. The license agreement will appear. Read the agreement by paging down. If you agree to follow the license agreement, press **F8** to continue.
 13. A menu will appear which allows the install partition to be chosen. Only one partition will appear. Press **Enter** to continue.
 14. If conversion to NTFS is desired, you can perform the conversion on the next screen. If the current file system is sufficient, press **Enter** to continue.
 15. After the file copying procedure has completed, press **Enter** to restart the system.
 16. The system will reboot in to the graphical portion of Windows 2000 Professional setup. Click **Next** to continue.
 17. The locale settings can be modified on this screen. The default settings should be sufficient. Click **Next** to continue.
 18. Enter a valid name and the name of your organization. Click **Next** to continue.
 19. Enter the Product ID listed on the Windows 2000 Professional CD case and click **Next** to continue.
 20. Enter a unique computer name.

21. Enter a password for the Administrator account and click **Next**.
22. The time zone settings can be adjusted on this screen. Make any necessary adjustments and click **Next**.
23. Windows 2000 setup will continue unattended from this point forward. Restart the system when prompted.
24. On the first reboot after Windows 2000 completes, the **Network Identification Wizard** will appear. Click **Next** to start the wizard.
25. Choose a user name a password to log on to the system automatically, or force the user to enter a user name password every time the system starts. Click **Next** after you have made your choice.
26. Click **Finish**.
27. Login to Windows 2000 with the Administrator ID.
28. Download the Windows 2000 Network Driver package from the web.
29. Extract the package to a blank floppy disk.
30. Right-click **My Computer** on the Desktop and click **Properties**.
31. Click the **Hardware** tab.
32. Click **Device Manager**.
33. Double-click **Ethernet Controller** under **Other Devices**.
34. Click the **Driver** tab.
35. Click **Update Driver**.
36. Click **Next**.
37. Insert the floppy disk containing the Windows 2000 Network Driver in to the A: drive.
38. Click **Search for a suitable driver** for my device and click **Next**.
39. Ensure the checkbox beside **Floppy disk drives** is checked and click **Next**.
40. Windows will find the proper driver on the floppy disk. After the search has completed, click **Next** to continue.
41. Click **Finish** to complete the installation process.
42. Click **Close** to exit the **Ethernet Controller** properties.

Installing the drivers

These drivers and update packages must be downloaded and installed in the order shown below to ensure that the system functions properly.

Note: Check the IBM Retail Store Solutions Web site at <http://www.ibm.com/solutions/retail/store/support> for the latest driver updates.

Installation sequence for base drivers

Note: Check the readme.txt files for specific driver information.

1. Chipset
2. Network
3. Windows Service Pack 2 and other patches
4. Video
5. Intel Application Accelerator
6. Audio
7. Base/PCI Serial Ports

Post-installation procedures (Models 742, 782, 723, 743, and 783 only)

Install **Intel Application Accelerator**. This program will post a warning message when one of the RAID disks degrades or disappears. It also automatically starts **Rebuilding the RAID** volume when Windows restarts. Rebuilding scans the entire disk and can take a considerable time to complete; however, the program displays the percentage of completeness of the rebuilding.

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Chapter 3. Installing Windows XP

Hardware and software requirements

The minimum requirements for this installation:

- 128 MB read access memory (RAM)
- 40 GB minimum hard disk drive
- USB or PS/2 keyboard
- Internal CD-ROM or external USB CD-ROM drive
- External USB floppy disk drive for certain installation configurations
- Windows XP Professional installation CD or LAN server with required installation files (for network installation)
- Intel AHCI/RAID diskette if installing on Models 742, 782, 723, 743, and 783 with AHCI or RAID enabled (diskette image available from the IBM Retail Store Solutions Web site at <http://www.ibm.com/solutions/retail/store/support>)
- DOS Network/CD-ROM boot disk
- Partitioned and formatted hard disk. See “Partitioning the hard disk” on page 2.

Preinstallation steps

Follow these steps before you begin:

1. Boot the system with the DOS Network/CD-ROM Boot Disk.

Important

Steps 2 and 3 below are not required; however, they aid in field support because operating system components can be added and removed in the field without the need of a CD-ROM drive.

As a performance tip, using the SmartDrive DOS utility prior to the installation of Windows XP Professional will greatly reduce the amount of time spent copying files. The syntax is `smartdrv c+`.

2. To create a directory on the hard disk which will store the Windows XP Professional installation files, type `mkdir c:\wininst` from a command prompt.
3. To copy the Windows XP Professional Installation files from the CD-ROM to the hard disk, type `copy x:\i386*. * c:\wininst` from a command prompt.

Note: The Windows XP Professional installation files can be found in the i386 directory of the CD-ROM. These are the only files on the CD that are required for installation.

4. Continue with “CD-ROM installation steps.”

CD-ROM installation steps

Models 742, 782, 723, 743, and 783 only

During installation, the Windows install screen prompts you to **Press F6 if you need to install any 3rd party SCSI or RAID Driver**. Follow these steps to continue:

1. Press **F6**.
2. Press **S** to obtain the driver from the RAID Driver diskette.

3. Insert the RAID Driver diskette in the floppy drive and press **Enter**.
4. Select the **Intel(R) 82801FR SATA RAID Controller (Desktop ICH6R)** option.
5. Press **Enter** to allow the installation to continue.

All models

1. Go to c:\wininst on the hard disk.
2. Type **winnt**. This will launch Windows XP Professional Workstation setup.
3. After the file copying portion of setup completes, remove the network boot disk floppy from the floppy drive and press **Enter**.
4. The system will reboot in to the second portion of Windows XP Professional setup. The "Welcome to Setup" screen will appear. Press **Enter** to continue installing Windows XP Professional.
5. The license agreement will appear. Read the agreement by paging down. If you agree to follow the license agreement, press **F8** to continue.
6. A menu will appear which allows the install partition to be chosen. Only one partition will appear. Press **Enter** to continue.
7. If conversion to NTFS is desired, you can perform the conversion on the next screen. If the current file system is sufficient, press **Enter** to continue.
8. After the file copying procedure has completed, press **Enter** to restart the system.
9. The system will reboot in to the graphical portion of Windows XP Professional setup. Click **Next** to continue.
10. The locale settings can be modified on this screen. The default settings should be sufficient. Click **Next** to continue.
11. Enter a valid name and the name of your organization. Click **Next** to continue.
12. Enter the Product ID listed on the Windows XP Professional CD case and click **Next** to continue.
13. Enter a unique computer name.
14. Enter a password for the Administrator account and click **Next**.
15. The time zone settings can be adjusted on this screen. Make any necessary adjustments and click **Next**.
16. Windows XP setup will continue unattended from this point forward. Restart the system when prompted.
17. On the first reboot after Windows XP completes, the **Network Identification Wizard** will appear. Click **Next** to start the wizard.
18. Choose a user name a password to log on to the system automatically, or force the user to enter a user name password every time the system starts. Click **Next** after you have made your choice.
19. Click **Finish**.
20. Login to Windows XP with the Administrator ID.
21. Download the Windows XP Network Driver package from the web.
22. Extract the package to a blank floppy disk.
23. Right-click **My Computer** on the Desktop and click **Properties**.
24. Click the **Hardware** tab.
25. Click **Device Manager**.
26. Double-click **Ethernet Controller** under **Other Devices**.
27. Click the **Driver** tab.
28. Click **Update Driver**.

29. Click **Next**.
30. Insert the floppy disk containing the Windows XP Network Driver in to the A: drive.
31. Click **Search for a suitable driver** for my device and click **Next**.
32. Ensure the checkbox beside **Floppy disk drives** is checked and click **Next**.
33. Windows will find the proper driver on the floppy disk. After the search has completed, click **Next** to continue.
34. Click **Finish** to complete the installation process.
35. Click **Close** to exit the **Ethernet Controller** properties.

Network installation

To enable RAID or AHCI mode on Models 742, 782, 723, 743, and 783, follow these procedures before you install Windows XP from a network:

1. Edit the UNATTEND.TXT file and add these lines:

```
[MassStorage Drivers]
"Intel(R) 82801FR SATA RAID Controller (Desktop ICH6R)" = OEM
```

```
[OEM BootFiles]
iaStor.inf
iaStor.sys
iaStor.cat
TxtSetup.oem
```

2. Copy the OEM boot files (see list below) from the RAID Diskette to the folder x:\i386\%OEM%\TEXTMODE. If needed, create the folder.
 - iaStor.inf
 - iaStor.sys
 - iaStor.cat
 - TxtSetup.oem

Follow these steps to install Windows XP from a network:

1. Boot the system with the DOS Network/CD-ROM Boot Disk.
2. After booting has completed, to map a network drive to the server containing the Windows XP Professional CD-ROM Installation files, type **net use x: \\servername\sharename** from a command prompt.

Important

Steps 3 and 4 below are not required; however, they aid in field support because operating system components can be added and removed in the field without the need of a CD-ROM drive.

As a performance tip, using the SmartDRIVE DOS utility prior to the installation of Windows XP Professional will greatly reduce the amount of time spent copying files. The syntax is **smartdrv c+**.

3. To create a directory on the hard disk that will store the Windows XP Professional installation files, type **mkdir c:\wininst** from a command prompt.
4. To copy the Windows XP Professional Installation files from the server to the hard disk, type **copy x:\i386*. * c:\wininst** from the command prompt.

Note: The Windows XP Professional installation files can be found in the i386 directory of the CD-ROM. These are the only files on the CD that are required for installation.

5. Download and extract the Ethernet drivers for the SurePOS 700 to a directory on the same share as the one used to store the Windows XP Professional files.
6. Create a directory in the root of the hard disk which will store the various drivers required by the system. Name the directory drivers. Inside the drivers directory, create a directory for the Ethernet drivers called ethernet.
7. To copy the Ethernet drivers extracted to the network shares in to c:\drivers\ethernet, type **xcopy x:\drivers*. * c:\drivers\ethernet /s** from the command prompt.
8. Go to c:\i386 on the hard disk.
9. Type **winnt**. This will launch Windows XP Professional Workstation setup.
10. After the file copying portion of setup completes, remove the network boot disk floppy from the floppy drive and press **Enter**.
11. The system will reboot in to the second portion of Windows XP Professional setup. The "Welcome to Setup" screen will appear. Press **Enter** to continue installing Windows XP Professional.
12. The license agreement will appear. Read the agreement by paging down. If you agree to follow the license agreement, press **F8** to continue.
13. A menu will appear which allows the install partition to be chosen. Only one partition will appear. Press **Enter** to continue.
14. If conversion to NTFS is desired, you can perform the conversion on the next screen. If the current file system is sufficient, press **Enter** to continue.
15. After the file copying procedure has completed, press **Enter** to restart the system.
16. The system will reboot in to the graphical portion of Windows XP Professional setup. Click **Next** to continue.
17. The locale settings can be modified on this screen. The default settings should be sufficient. Click **Next** to continue.
18. Enter a valid name and the name of your organization. Click **Next** to continue.
19. Enter the Product ID listed on the Windows XP Professional CD case and click **Next** to continue.
20. Enter a unique computer name.
21. Enter a password for the Administrator account and click **Next**.
22. The time zone settings can be adjusted on this screen. Make any necessary adjustments and click **Next**.
23. Windows XP setup will continue unattended from this point forward. Restart the system when prompted.
24. On the first reboot after Windows XP completes, the **Network Identification Wizard** will appear. Click **Next** to start the wizard.
25. Choose a user name a password to log on to the system automatically, or force the user to enter a user name password every time the system starts. Click **Next** after you have made your choice.
26. Click **Finish**.
27. Login to Windows XP with the Administrator ID.
28. Download the Windows XP Network Driver package from the web.
29. Extract the package to a blank floppy disk.

30. Right-click **My Computer** on the Desktop and click **Properties**.
31. Click the **Hardware** tab.
32. Click **Device Manager**.
33. Double-click **Ethernet Controller** under **Other Devices**.
34. Click the **Driver** tab.
35. Click **Update Driver**.
36. Click **Next**.
37. Insert the floppy disk containing the Windows XP Network Driver in to the A: drive.
38. Click **Search for a suitable driver** for my device and click **Next**.
39. Ensure the checkbox beside **Floppy disk drives** is checked and click **Next**.
40. Windows will find the proper driver on the floppy disk. After the search has completed, click **Next** to continue.
41. Click **Finish** to complete the installation process.
42. Click **Close** to exit the **Ethernet Controller** properties.

Installing the drivers

These drivers and update packages must be downloaded and installed in the order shown below to ensure the system functions properly.

Note: Check the IBM Retail Store Solutions Web site at <http://www.ibm.com/solutions/retail/store/support> for the latest driver updates.

Installation sequence for base drivers

Note: Check the readme.txt files for specific driver information.

1. Chipset
2. Network
3. Windows XP Service Pack 2 and other patches
4. Video
5. Audio
6. Base/PCI Serial Ports

Post-installation procedures

Install **Intel Application Accelerator**. This program will post a warning message when one of the RAID disks degrades or disappears. It also automatically starts **Rebuilding the RAID** volume when Windows restarts. Rebuilding scans the entire disk and can take a considerable time to complete; however, the program displays the percentage of completeness of the rebuilding.

DRAFT

Chapter 4. Installing DOS 2000

This section describes how to install DOS 2000.

Setting up the hard disk for installation of PC DOS 2000

Important

Ensure the hard disk does not have any files or operating systems that need to be saved. The installation process will modify the boot record and operating system files.

Creating and formatting a Primary FAT partition on the hard disk

This process can be done by using the FDISK and FORMAT utilities.

Note: Use the version of FDISK on the PC DOS 2000 diskettes.

1. Boot from disk 1 of 6 of the PC DOS installation diskettes.
2. When asked if the PC DOS 2000 should continue, press **N** for no.
3. At the command prompt, type **fdisk** and press **Enter**.
4. When the FDISK Options menu appears, press **4** and then **Enter**. This command displays all partitions defined in the partition table.
5. Record all partitions and their types. Press **Esc** when finished.
6. To delete all partitions defined in the partition table, press **3** and **Enter**. A menu will appear which allows the partitions to be deleted. Each partition must be deleted individually.
7. After the deletion of all partitions, a new primary DOS partition must be created. At the FDISK Options menu, press **1** and then **Enter**.
8. Once the Create DOS Partition or Logical DOS Drive menu has appeared, press **1** and then **Enter**.
9. It will take a moment for the next menu to appear. The system will ask if all available space should be used for the installation and if it should make the partition active. Press **Y** for yes and press **Enter**.
10. Press any key to restart the system.
11. Repeat Steps 1 and 2.
12. After the command prompt appears, type **format c: /u**. This command performs an unconditional format.
13. The question Proceed with Format? will appear. Press **Y** for yes.
14. After formatting completes, enter a volume label.
15. Clear the master boot record to ensure that any previous boot loaders are removed. This can be done by typing **fdisk /mbr** from the command prompt.
16. Restart the system.

Steps to install PC DOS 2000

1. Boot from disk 1 of 6 of the PC DOS installation diskettes.
2. When prompted if the PC DOS 2000 should continue, press **Y** for yes.
3. Follow the on screen prompts to complete the installation of PC DOS 2000. For further instructions, see the PC DOS 2000 readme.txt.

Network installation

Numerous options are available when installing networking on the IBM SurePOS 700. The most common method is using a DOS network redirector. This section describes how to install Microsoft® LAN Manager 2.2c with TCP/IP.

Installing Microsoft LAN Manager 2.2c

Prerequisites

- SurePOS 700 with PC DOS 2000 installed
- Microsoft LAN Manager 2.2c diskettes
- SurePOS 700 DOS Ethernet driver diskette

Installation steps

1. Boot PC DOS 2000.
2. After the command prompt appears, insert disk 1 of 4 of the Microsoft LAN Manager 2.2c diskette set.
3. At the command prompt, type **a:\setup.exe** and then press **Enter**.
4. Press **Enter** after the first Microsoft LAN Manager Setup prompt appears.
5. Press **Enter** after the Using the Keyboard in Setup prompt appears.
6. Accept the default directory and press **Enter**.
7. Choose **LAN Manager Enhanced** and press **Enter**.
8. Insert the DOS DRIVERS 1 diskette (Disk 2 of 4) and press **Enter**.
9. At the Network Adapter Drivers screen, press **Alt** to install a custom driver.
10. Insert the SurePOS 700 DOS Ethernet driver diskette.
11. Choose the **Intel 82593 Motherboard LAN Module** from the list and press **Enter**.
12. Select **MS TCP/IP**, press the **Spacebar** and press **Enter**.
13. Press **Enter** to accept defaults and then press **Enter** again.
14. The TCP/IP Settings page lets you configure the IP address. If you can use DHCP, press **Enter** to continue; otherwise, configure the IP address and/or WINS server and press **Enter**.
15. Set the computer name and domain name on the Workstation Settings page. See the network administrator for assistance with these settings. Press **Enter** when finished.
16. The Support for the Windows Environment page appears. Choose **No** and press **Enter**.
17. The Memory Management page appears. Choose **Yes** to maximize the amount of memory in the system available to programs.
18. The Configuration Complete page appears. Press **Enter** to save the changes made during this session.
19. Insert the DOS DRIVERS 2 diskette (Disk 3 of 4) and press **Enter**.
20. After file copying has completed, press **Enter** to exit setup.
21. Configure the networking environment to support the SurePOS 700 Ethernet adapter. Follow these directions very carefully to ensure a smooth installation:
 - a. From a command prompt, type: **copy a:\dos\e100b.dos c:\lanman.dos\drivers\ethernet\mlm** and press **Enter**.
 - b. From a command prompt, type **e config.sys** and press **Enter**. Change all occurrences of I82539 to e100b.

- c. Remove NoEms from the line containing emm386.exe. Press **F2** to save and then press **F3** to exit.
 - d. From a command prompt, type **e c:\lanman.dos\protocol.ini**.
 - 1) Under the [MLM_NIF] entry, change the DRIVERNAME from I82593\$\$ to e100b\$.
 - 2) Delete these entries: IOADDRESS, INTERRUPT, DMACHAN0, DMACHAN1, INBUFFER(K), OUTBUFFER(K).
 - 3) Press **F2** to save and then press **F3** to exit.
22. Restart the system and networking should be functional. For further instructions, refer to the readme.txt.

Table 1 contains additional protocol.ini parameters that can be passed to further configure the 4800 Ethernet adapter.

Table 1. Keyword valid values

| Keyword | Value |
|-----------------|--|
| SPEED | 0 = Auto detect |
| | 10 = Hard link 10 Mbps |
| | 100 = Hard link 100 Mbps |
| LINKDUPLEX | 0 = Auto detect |
| | 1 = Hard link half duplex |
| | 2 = Hard link full duplex |
| NODE | Temporary MAC address (for example, 0009629000fff) |
| TRANSMITBUFFERS | Number of transmit buffers (2-38) Note: TRANSMITBUFFERS + RECEIVEBUFFERS must be less than or equal to 40. |
| RECEIVEBUFFERS | Number of receive buffers (2-38) Note: TRANSMITBUFFERS + RECEIVEBUFFERS must be less than or equal to 40 |

PCI serial port configuration in PC DOS 2000

Prerequisites

- SurePOS 700 with PC DOS 2000 installed
- IBM PCI Serial Port Mapper

The configuration of the PCI serial ports in DOS is accomplished through the IBM PCI Serial Port Mapper. The IBM PCI Serial Port Mapper maps the PCI serial ports down in to the BIOS data area (BDA) where you can use them in a similar manner as a legacy DOS serial port. Table 2 provides the supported command line parameters that you can use to configure the PCI serial port mappings.

Table 2. PCI serial port mapping parameters

| Parameter | Definition |
|-----------|---|
| ALL | The specified action will occur on all PCI serial ports. |
| LEGACY | The PCI serial ports are given a legacy base I/O address and will be mapped into the BDA. |
| ADD | The PCI serial ports are mapped into the BDA. |

Table 2. PCI serial port mapping parameters (continued)

| Parameter | Definition |
|--|--|
| DELETE | Deletes the mapping from the PCI serial port to associate mapping in the BDA. |
| DOSCOMNO=xx | Specifies the COM number upon which the specified action will take place. |
| PCICOMNO=xx | Specifies the PCI COM port number upon which the specified action will occur. Note: This number is zero-based. |
| QUIET | Echoes no text on the screen. |
| Examples | |
| Map all PCI COM ports to Legacy Base I/O Addresses | ASICMAP.EXE -ALL -LEGACY |
| Map all PCI COM ports to the BDA | ASICMAP.EXE -ALL -ADD |
| Map COM3 to PCI COM port 0 | ASICMAP.EXE -ADD -PCICOMNO=0 -DOSCOMNO=3 |
| Delete all mappings | ASICMAP.EXE -ALL -DELETE |

DOS power management

Intel's Pentium® 4 desktop processors provide the highest performance and power, both thermal and electrical, that are currently available. The SurePOS 700 Models 742, 782, 723, 743, and 783 are designed to handle these new higher power requirements.

However, being a very simple operating system, DOS provides no automatic power management features. Additionally, unlike most other operating systems, DOS consumes a significant amount of processor power when idle. The idle DOS system can cause the processor to generate a significant amount of heat. This heat results in system fans running faster to remove the heat.

The SurePOS 700 is designed to support the DOS power management driver **power.exe**. When the DOS power management driver is used on the SurePOS 700, the DOS idle condition behaves much like the modern idle operating systems. The result will be a cooler and quieter running system. While the system is designed to support DOS without the **power.exe** driver, IBM recommends that you use the driver in DOS configurations.

The DOS power management tool is provided with the DOS installation package, locate the tool in the DOS directory after the operating system is installed.

To load the **power.exe** file:

1. Add this line to the CONFIG.SYS file:
device=c:\dos\power.exe
2. Add this line to the AUTOEXEC.BAT file:
c:\dos\power.exe

Note: The default location for **power.exe** is in the DOS directory after DOS is installed.

Chapter 5. Using the RAID application

Note: This section requires procedures described in these publications:

- *IBM SurePOS 700 Series - SurePOS 700-721/741/781, 722/742/782 Hardware Service Guide*
- *IBM SurePOS 700 Series - SurePOS 700-723/743/783 Hardware Service Guide*

The Redundant Array of Inexpensive Disks (RAID) application supports Models 742, 782, 723, 743, and 783 with one or two hard disk drives and the Microsoft Windows operating system. RAID provides an error message should one of the two hard disk drives experience a failure (see Figure 1).

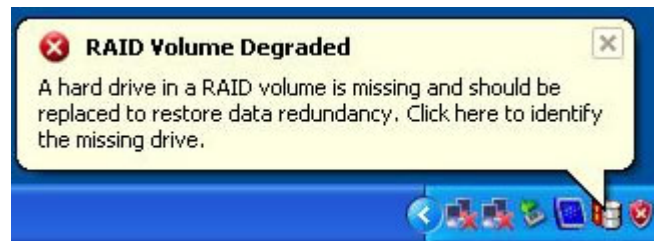


Figure 1. RAID hard drive failure dialog box

Determining a hard drive failure

When the RAID program indicates a hard drive failure, you can determine which drive has failed using one of the following two methods:

Method one: Clicking on the RAID icon

1. From the Microsoft Windows task bar, click on the RAID icon. This icon only is present during an array rebuilding or if abnormal activity occurred, such as a failed drive. The Intel Storage Utility opens.

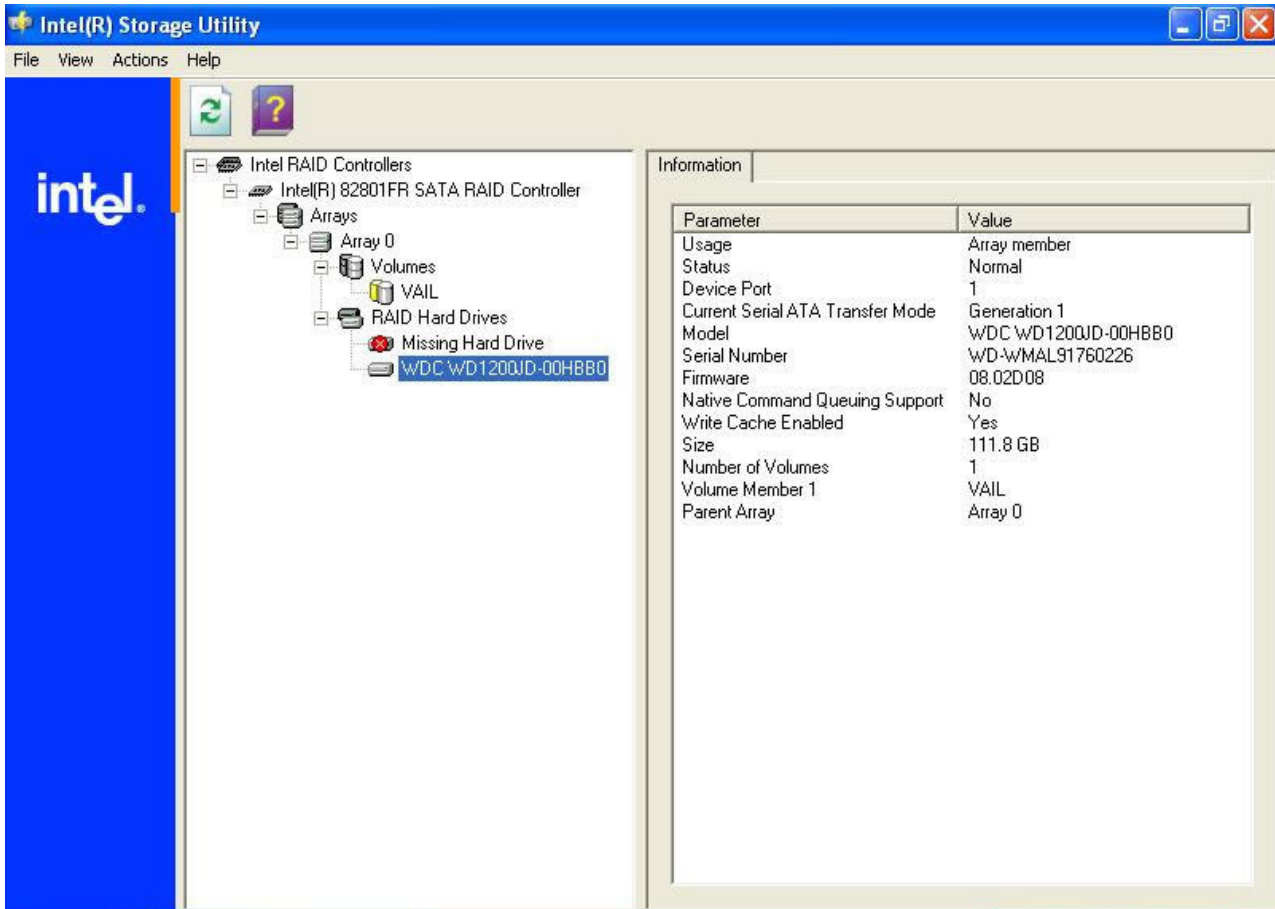


Figure 2. Disk drive failure

2. Determine which hard disk drive has failed by opening the *detected* hard drive (see Figure 2). In the example, the detected hard drive's Device Port is 1; therefore, the failed hard drive is located on Device Port 0.
3. Initiate shutdown and power off the machine (**Start > Shutdown**, press the power switch, or follow the procedure for your business).
4. Continue with the steps described in "Replacing and rebuilding a hard drive" on page 23.

Method two: Entering RAID during start-up

1. Shutdown and reboot the machine (**Start > Shutdown**, press the power switch, or follow the procedure for your business).
2. During the reboot, a screen appears that displays information on the failing disk. Note the Device Port number of the failing disk.

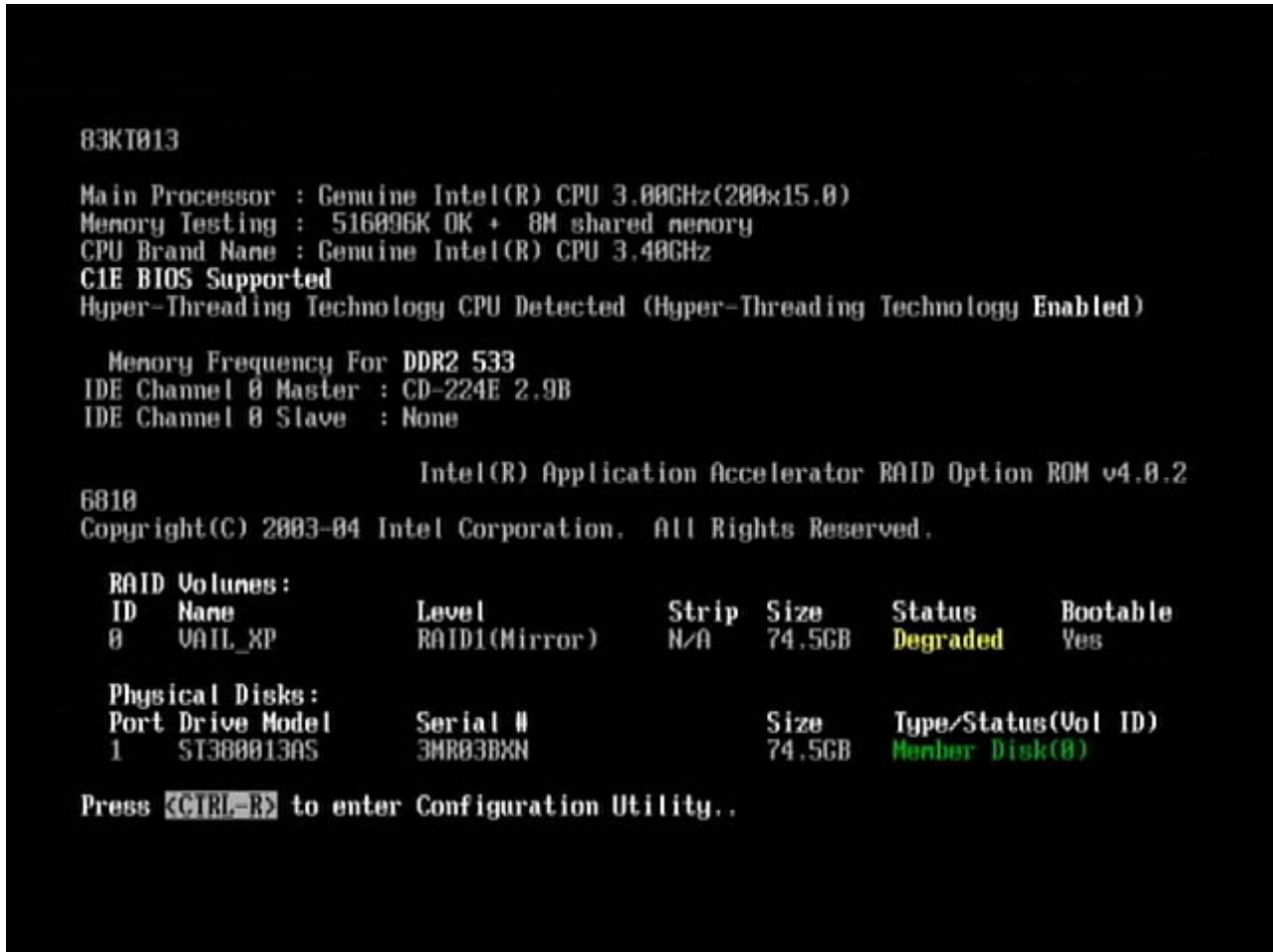


Figure 3. Boot up warning

3. Power off the machine.
4. Continue with the steps described in “Replacing and rebuilding a hard drive.”

Replacing and rebuilding a hard drive

Note: Before beginning these procedures, you should have completed one of the two methods on determining the failed hard disk drive.

1. To open the machine, follow Steps 1 through 3 in the "Removing the hard disk drive" section in the *IBM SurePOS 700 Series - SurePOS 700-721/741/781, 722/742/782 Hardware Service Guide* or in the *IBM SurePOS 700 Series - SurePOS 700-723/743/783 Hardware Service Guide*.
2. Trace the serial ATA (SATA) cables from the hard disk drives to the system board.

Note: Drive 0 connects to SATA connector 0 and Drive 1 connects to SATA connector 1.

3. Continue with the instructions in "Removing the hard disk drive" to remove and replace the failing hard disk drive.
4. Reassemble the machine and power on.

After the operating system has loaded, the RAID application will automatically begin rebuilding the hard disk drive. During this process, you can use the machine normally. Rebuilding time will vary depending upon the size of the partition, amount of data and system activity during the rebuild.

Accessing the RAID setup menu

After enabling the RAID function from the BIOS setup menu, you can enter the setup menu before the Windows OS starts by pressing **CTRL+R** on the keyboard. Figure 4 is an example of the menu.



Figure 4. Example of the RAID setup menu

Appendix A. Safety information



Danger:

Before you begin to install this product, read the safety information in *IBM Safety Information — Read This First*, GA27-4004. This booklet describes safe procedures for cabling and plugging in electrical equipment.



Gevaar:

Voordat u begint met de installatie van dit product, moet u eerst de veiligheidsinstructies lezen in de brochure *Veiligheidsinstructies—Lees dit eerst*, GA27-4004. Hierin wordt beschreven hoe u elektrische apparatuur op een veilige manier moet bekabelen en aansluiten.



Perigo:

Antes de começar a instalar este produto, leia as informações de segurança contidas em *Informações Sobre Segurança—Leia Isto Primeiro*, GA27-4004. Esse folheto descreve procedimentos de segurança para a instalação de cabos e conexões em equipamentos elétricos.



Fare!

Før du installerer dette produkt, skal du læse sikkerhedsforskrifterne i *Sikkerhedsforskrifter—Læs dette først* GA27-4004. Vejledningen beskriver den fremgangsmåde, du skal bruge ved tilslutning af kabler og udstyr.

**Gevaar**

Voordat u begint met het installeren van dit produkt, dient u eerst de veiligheidsrichtlijnen te lezen die zijn vermeld in de publikatie *IBM Safety Information — Read This First*, GA27-4004. In dit boekje vindt u veilige procedures voor het aansluiten van elektrische apparatuur.

**VAARA**

Ennen kuin aloitat tämän tuotteen asennuksen, lue julkaisussa *Turvaohjeet—Luetämä ensin*, GA27-4004, olevat turvaohjeet. Tässä kirjasessa on ohjeet siitä, miten sähkölaitteet kaapeloidaan ja kytketään turvallisesti.

**Danger**

Avant d'installer le présent produit, consultez le livret *Informations pour la sécurité—Lisez-moi d'abord*, GA27-4004, qui décrit les procédures à respecter pour effectuer les opérations de câblage et brancher les équipements électriques en toute sécurité.

**Vorsicht**

Bevor mit der Installation des Produktes begonnen wird, die Sicherheitshinweise in *Sicherheitsinformationen—Bitte zuerst lesen*, IBM Form GA27-4004. Diese Veröffentlichung beschreibt die Sicherheitsvorkehrungen für das Verkabeln und Anschließen elektrischer Geräte.



Vigyázat

Mielőtt megkezdi a berendezés üzembe helyezését, olvassa el a *IBM Safety Information — Read This First*, GA27-4004 könyvecskében leírt biztonsági információkat. Ez a könyv leírja, milyen biztonsági intézkedéseket kell megtenni az elektromos berendezés huzalozásakor illetve csatlakoztatásakor.



Pericolo

prima di iniziare l'installazione di questo prodotto, leggere le informazioni relative alla sicurezza riportate nell'opuscolo *Informazioni di sicurezza—Prime informazioni da leggere* in cui sono descritte le procedure per il cablaggio ed il collegamento di apparecchiature elettriche.



Fare

Før du begynner å installere dette produktet, må du lese sikkerhetsinformasjonen i *Sikkerhetsinformasjon—Les dette først*, GA27-4004 som beskriver sikkerhetsrutinene for kabling og tilkobling av elektrisk utstyr.



Perigo

Antes de iniciar a instalação deste produto, leia as informações de segurança *Informações de Segurança—Leia Primeiro*, GA27-4004. Este documento descreve como efectuar, de um modo seguro, as ligações eléctricas dos equipamentos.



Peligro

Antes de empezar a instalar este producto, lea la información de seguridad en *Información de Seguridad—Lea Esto Primero, GA27-4004*. Este documento describe los procedimientos de seguridad para cablear y enchufar equipos eléctricos.



Varning—livsfara

Innan du börjar installera den här produkten bör du läsa säkerhetsinformationen i dokumentet *Säkerhetsföreskrifter—Läs detta först, GA27-4004*. Där beskrivs hur du på ett säkert sätt ansluter elektrisk utrustning.

DRAFT

危險：安裝本產品之前，請先閱讀
"IBM Safety Information--Read
This First" GA27-4004 手冊中所提
供的安全注意事項。這本手冊將會說明
使用電器設備的纜線及電源的安全程序。

Opasnost: Prije nego sto počnete sa instalacijom produkta,
pročitajte naputak o pravilima o sigurnom rukovanju u
Upozorenje: Pravila o sigurnom rukovanju - Prvo pročitaj ovo,
GA27-4004. Ovaj privitak opisuje sigurnosne postupke za
priključivanje kabela i priključivanje na električno napajanje.

Upozornění: než zahájíte instalaci tohoto produktu, přečtěte si
nejprve bezpečnostní informace v pokynech „Bezpečnostní
informace“ č. GA27-4004. Tato brožurka popisuje bezpečnostní
opatření pro kabeláž a zapojení elektrického zařízení.

Κίνδυνος: Πριν ξεκινήσετε την εγκατάσταση αυτού του προϊόντος,
διαβάστε τις πληροφορίες ασφάλειας στο φυλλάδιο *IBM Safety
Information-Read this first*, GA27-4004. Στο φυλλάδιο αυτό
περιγράφονται οι ασφαλείς διαδικασίες για την καλωδίωση των
ηλεκτρικών συσκευών και τη σύνδεσή τους στην πρίζα.

危險：導入作業を開始する前に、安全に関する
小冊子 GA27-4004 の「最初にお読みください」
(Read This First) の項をお読みください。
この小冊子は、電気機器の安全な配線と接続の
手順について説明しています。

위험: 이 제품을 설치하기 전에 반드시
"주의: 안전 정보-시작하기 전에"
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الحمية الموجودة في التحذير: معلومات الحماية - Read This First
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注意：

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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.

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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.

European Union EMC Directive conformance 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.

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Attention: 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.

European Community contact:

IBM Technical Regulations
Pascalstr. 100, Stuttgart, Germany 70569
Telephone: 0049 (0)711 785 1176
Fax: 0049 785 1283
E-mail: tjahn@de.ibm.com

Industry Canada Class A Emission Compliance statement

This Class A digital apparatus complies with Canadian ICES-003.

Avis de conformité aux normes d'Industrie Canada

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Germany

Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) vom 30. August 1995 (bzw. der EMC EG Richtlinie 89/336).

Dieses Gerät ist berechtigt in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen.

Verantwortlich für die Konformitätserklärung nach Paragraph 5 des EMVG ist die IBM Deutschland Informationssysteme GmbH, 70548 Stuttgart

Informationen in Hinsicht EMVG Paragraph 3 Abs. (2) 2:

| |
|--|
| Das Gerät erfüllt die Schutzanforderungen nach EN 50082-1 und EN 55022 Klasse A. |
|--|

EN 55022 Klasse A Geräte müssen mit folgendem Warnhinweis versehen werden:

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"Wird dieses Gerät in einer industriellen Umgebung betrieben (wie in EN 50082-2 festgelegt), dann kann es dabei eventuell gestört werden. In solch einem Fall ist der Abstand bzw. die Abschirmung zu der industriellen Störquelle zu vergrößern."

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Um die Einhaltung des EMVG sicherzustellen sind die Geräte, wie in den IBM Handbüchern angegeben, zu installieren und zu betreiben.

Australia and New Zealand

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Attention: 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.

中华人民共和国“A类”警告声明

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。

Japanese power line harmonics compliance statement

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Japanese Voluntary Control Council for Interference (VCCI) statement

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Korean communications statement

Please note that this device has been approved for business purposes with regard to electromagnetic interference. If you find this is not suitable for your use, you may exchange it for a non-business purpose one.

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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

IBM Taiwan Product Service Contact Info:
IBM Taiwan Corporation
3F, No 7, Song Ren Road, Taipei Taiwan
Telephone: 0800-016-888

Cable ferrite requirement

All cable ferrites are required to suppress radiated EMI emissions and must not be removed.

Electrostatic Discharge (ESD)

Attention: ESD damage can occur when there is a difference in charge between the part, the product, and the service person. No damage will occur if the service person and the part being installed are at the same charge level.

ESD Damage Prevention

Anytime a service action involves physical contact with logic cards, modules, back-panel pins, or other ESD sensitive (ESDS) parts, the service person must be connected to an ESD common ground point on the product through the ESD wrist strap and cord.

The ESD ground clip can be attached to any frame ground, ground braid, green wire ground, or the round ground prong on the AC power plug. Coax or connector outside shells can also be used.

Handling Removed Cards

Logic cards removed from a product should be placed in ESD protective containers. No other object should be allowed inside the ESD container with the logic card. Attach tags or reports that must accompany the card to the outside of the container.

Product Recycling and disposal

This unit must be recycled or discarded according to applicable local and national regulations. IBM encourages owners of information technology (IT) equipment to responsibly recycle their equipment when it is no longer needed. IBM offers a variety of product return programs and services in several countries to assist equipment owners in recycling their IT products. Information on IBM product recycling offerings can be found on IBM's Internet site at <http://www.ibm.com/ibm/environment/products/prp.shtml>.

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In accordance with the European WEEE Directive, electrical and electronic equipment (EEE) is to be collected separately and to be reused, recycled, or recovered at end of life. Users of EEE with the WEEE marking per Annex IV of the

WEEE Directive, as shown above, must not dispose of end of life EEE as unsorted municipal waste, but use the collection framework available to customers for the return, recycling, and recovery of WEEE. Customer participation is important to minimize any potential effects of EEE on the environment and human health due to the potential presence of hazardous substances in EEE. For proper collection and treatment, contact your local IBM representative.

Disposal of IT products should be in accordance with local ordinances and regulations.

Battery return program

This product may contain sealed lead acid, nickel cadmium, nickel metal hydride, lithium, or lithium ion battery. Consult your user manual or service manual for specific battery information. The battery must be recycled or disposed of properly. Recycling facilities may not be available in your area. For information on disposal of batteries outside the United States, go to <http://www.ibm.com/ibm/environment/products/batteryrecycle.shtml> or contact your local waste disposal facility.

In the United States, IBM has established a return process for reuse, recycling, or proper disposal of used IBM sealed lead acid, nickel cadmium, nickel metal hydride, and other battery packs from IBM equipment. For information on proper disposal of these batteries, contact IBM at 1-800-426-4333. Please have the IBM part number listed on the battery available prior to your call.

For Taiwan:



Please recycle batteries.

For the European Union:



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For California:

Perchlorate material – special handling may apply

Refer to <http://www.dtsc.ca.gov/hazardouswaste/perchlorate>.

The foregoing notice is provided in accordance with *California Code of Regulations Title 22, Division 4.5, Chapter 33: Best Management Practices for Perchlorate Materials*. This product/part includes a lithium manganese dioxide battery which contains a perchlorate substance.

Flat panel displays

The fluorescent lamp in the liquid crystal display contains mercury. Dispose of it as required by local ordinances and regulations.

Monitors

Connecticut - Please see the web site of the Department of Environmental Protection at <http://www.ct.gov/dep> for information about recycling covered electronic devices in the State of Connecticut, or telephone the Connecticut Department of Environmental Protection at 1-860-424-3000.

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SurePOS 700 Series
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Operating System Installation Guide

Publication No. GA27-4357-01

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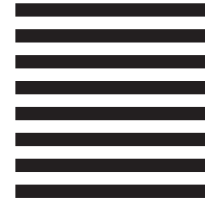
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