Score/Fold

IBM eServer xSeries 343 Hardware Reference Guide

Start Here

Thank you for buying an IBM® Server System. The following information will help you use and maintain your IBM® eServer xSeries 343.

This Guide is for technically qualified service persons. Expanded installation instructions and complete product information are available in the *IBM® eServer xSeries 343 System Documentation* located on the Resource CD.

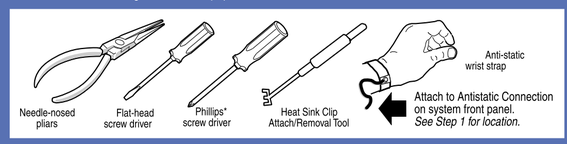
Minimum Hardware Requirements:

To avoid operating difficulties and possible component damage, your system must meet the following minimum requirements:

- **Processors:** Minimum of one 2.4 GHz Intel Xeon™ processor with 512K L2 cache, installed in a 604 INT3/FCPGA socket supporting 533MHz.
- **Memory:** Minimum of **two** 128 MB[256 MB] registered DDR266, ECC compatible, 72-bit DIMM modules.

For a list of qualified memory and chassis components, contact your IBM field representative.

You will need the following tools and equipment:



Note: Blue-colored items (such as handles, buttons and screws) represent touch points for service. Remove power from system before servicing these components.
Green-colored items (such as tabs and handles) represent touch points for hot-pluggable components.

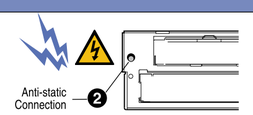
See the *IBM® eServer xSeries 343 System Documentation* for product safety and EMC regulatory compliance information.

If you are not familiar with ESD [Electro-StaticDischarge] Procedures to be used during system configuration, complete ESD Procedures are described in your *IBM® eServer xSeries 343 System Documentation.*

Go to SIDE 2

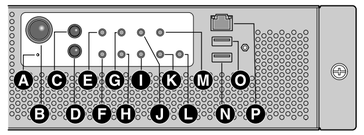
1 Ground Strap Attachment Location

1. Remove Bezel. See 4 below. You must remove the front Bezel to access the ground strap attachment point.
2. Attach ground strap to Anti-static connection point.



2 Front Panel Controls and Features

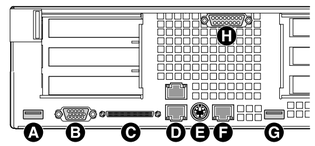
- A NMI Switch
- B Power Switch
- C Reset Switch
- D ID Switch
- E Critical Alarm LED
- F System ID LED
- G Major Alarm LED
- H NIC0/NIC1 Activity LED
- I Main Power LED
- J Minor Alarm LED
- K Disk 2 Activity LED
- L Disk 1 Activity LED
- M Power Alarm LED
- N & O USB Connectors
- P RJ-45 COM2 Port



Alarm LED	Functional Description of Alarm LED when Continuously Lit
Critical	A critical system fault is an error or event that is detected by the system with a fatal impact to the system. In this case, the system cannot continue to operate. The front panel critical alarm relay will be engaged.
Major	A major system fault is an error or event that is detected by the system that has discernable impact to system operation. In this case, the system can continue to operate, but in a "degraded" fashion (reduced performance or loss of non-fatal feature reduction). The front panel major alarm relay will be engaged.
Minor	A minor system fault is an error or event that is detected by the system but has little impact to actual system operation. The front panel minor alarm relay will be engaged.
Power	A power system fault is a power supply error or event that is detected by the system. The front panel power alarm relay will be engaged.

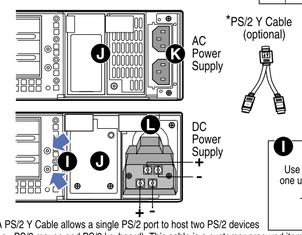
3 Back Panel Controls and Features

- A USB Port 1
- B Video
- C Ultra 320 SCSI
- D RJ-45 NIC Connectors (2)
- E PS/2* Keyboard/Mouse
- F RJ-45 Serial 2 Port
- G USB Port 2
- H Telco Alarms
- I DC chassis provides two ground lugs. *At least one must be used for proper safety ground.*
- J Hot-swap Power Supply[s]
- K AC Power Connector
- L DC Power Connector



Telco Alarms Connector Pinout

Pin	Description	Pin	Description
1	MinorReset +	9	MinorAlarm - NC
2	MinorReset -	10	MinorAlarm - COM
3	MajorReset +	11	MajorAlarm - NO
4	MajorReset -	12	MajorAlarm - NC
5	CriticalAlarm - NO	13	MajorAlarm - COM
6	CriticalAlarm - NC	14	PwrAlarm - NO
7	CriticalAlarm - COM	15	PwrAlarm - COM
8	MinorAlarm - NO		



*PS/2 Y Cable (optional)

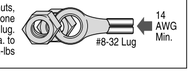
Serial 2 Connector Pinout

Pin	Description	Pin	Description
1	RTS	5	RIA
2	DTR	6	RXD
3	TXD	7	DSR/DCD†
4	GND	8	CTS

†Use jumper on server board to select.

I DC **Ground** and **Power** Lug Configuration

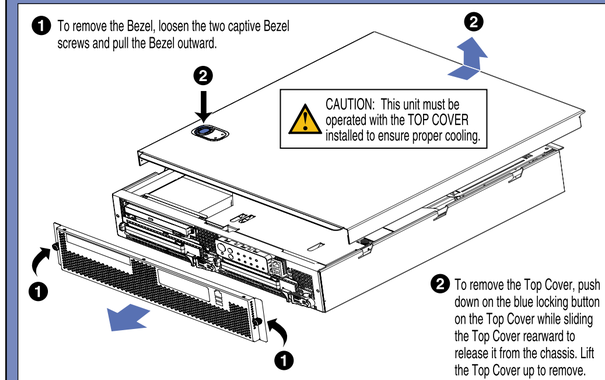
Use 2 #8-32 nuts, one under and one on top of lug. Tighten ea. to 10 in-lbs



*A PS/2 Y Cable allows a single PS/2 port to host two PS/2 devices (e.g., PS/2 mouse and PS/2 keyboard). This cable is a customer procured item.

4 Removing the Bezel/Top Cover

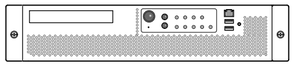
1. To remove the Bezel, loosen the two captive Bezel screws and pull the Bezel outward.



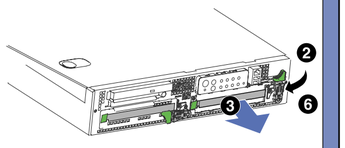
2. To remove the Top Cover, push down on the blue locking button on the Top Cover while sliding the Top Cover rearward to release it from the chassis. Lift the Top Cover up to remove.

5 Servicing the Hard Disk Drives

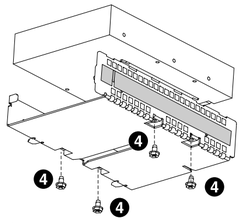
1. Remove Bezel. See 4 above.



2. Press green tab on lever to the right to release lever. Rotate lever 90 degrees clockwise to disconnect SCSI drive connection.
3. Press green latch handle to the right while removing Hard Disk Drive Carrier from chassis in direction of arrow.



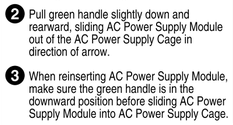
4. Remove four screws securing drive to Hard Disk Drive Carrier. Insert new drive. Tighten four screws to secure new drive to Hard Disk Drive Carrier.
5. Replace Hard Disk Drive Carrier into chassis, making sure that green latch handle secures Hard Disk Drive Carrier into place.
6. Rotate green lever 90 degrees counter-clockwise to engage the SCSI drive connection.



Hard Disk Drives are hot-swap. *See System Documentation for detailed HDD service procedures.*

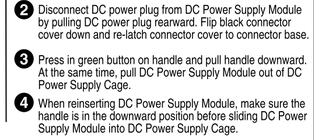
9 Replacing a Power Supply Module

Note: To maintain hot-plug capability, ensure that an active AC or DC Power Supply Module is in both Power Supply Module slots before replacing a Power Supply Module.



AC Power Supply

1. From rear of chassis, press in locking tab inside of green handle.
2. Pull green handle slightly down and rearward, sliding AC Power Supply Module out of the AC Power Supply Cage in direction of arrow.
3. When reinserting AC Power Supply Module, make sure the green handle is in the downward position before sliding AC Power Supply Module into AC Power Supply Cage.

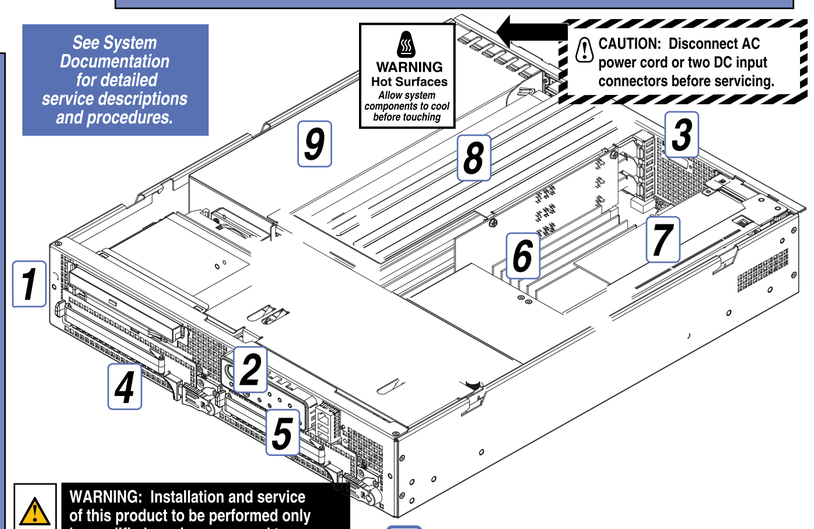


DC Power Supply

1. Using a small flat-head screwdriver, unlatch the black connector cover from the connector base and flip connector cover up.
2. Disconnect DC power plug from DC Power Supply Module by pulling DC power plug rearward. Flip black connector cover down and re-latch connector cover to connector base.
3. Press in green button on handle and pull handle downward. At the same time, pull DC Power Supply Module out of DC Power Supply Cage.
4. When reinserting DC Power Supply Module, make sure the handle is in the downward position before sliding DC Power Supply Module into DC Power Supply Cage.

If only one module is used, a **Power Supply Blank** must be inserted into the opening to ensure proper system cooling.

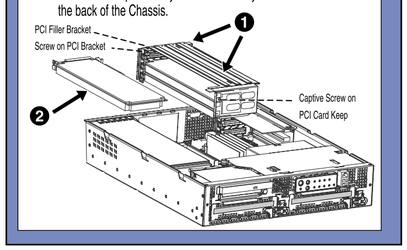
See System Documentation for detailed service descriptions and procedures.



WARNING: Installation and service of this product to be performed only by qualified service personnel to avoid risk of injury from electrical shock or energy hazard.

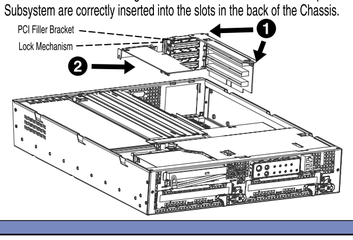
8 Replacing PCI Add-in Card in Full-Length PCI Adapter Subsystem

1. If connected, remove the 5V auxiliary cable from the 5V riser board. With two hands, grab the Full-Length PCI Adapter Subsystem by the top edges of the bracket at either end. Pull Full-Length PCI Adapter Subsystem carefully upward out of Chassis.
2. For full-length PCI add-in cards, loosen captive screw on PCI Card Keep. Remove PCI filler bracket from the slot in which the PCI add-in card is to be inserted by popping out the filler bracket from the inside of the PCI cage. Remove screw on PCI bracket. Insert or remove PCI add-in cards. Tighten screw on PCI bracket. If necessary, tighten captive screw on PCI Card Keep.
3. Reinsert the Full-Length PCI Adapter Subsystem into the Chassis, taking care to make sure that the interlocking metal tabs on the back of the PCI Adapter Subsystem are correctly inserted into the slots in the back of the Chassis.



7 Replacing PCI Add-in Card in Low-Profile Half-Length PCI Adapter Subsystem

1. With one hand, grab the Low-Profile PCI Adapter Subsystem by the top edge at the rear of the bracket. With the other hand, grab the front end of the Low-Profile PCI Adapter Subsystem. Pull Low-Profile PCI Adapter Subsystem carefully upward out of Chassis.
2. Remove PCI filler bracket from the slot in which the PCI add-in card is to be inserted by popping out the filler bracket from the inside of the PCI cage. Open lock mechanism on PCI bracket. Insert or remove PCI add-in cards. Close lock mechanism on PCI bracket.
3. Reinsert the Low-Profile PCI Adapter Subsystem into the Chassis, taking care to ensure that the interlocking metal tabs on the back of the PCI Adapter Subsystem are correctly inserted into the slots in the back of the Chassis.

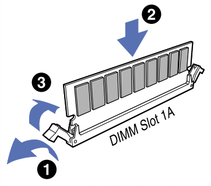


6 Installing Memory

DIMM Memory Modules

DIMM Slots 1A and 1B MUST contain DIMMs.

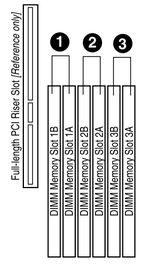
1. Open socket lever on each end of DIMM slot.
2. Insert DIMM making sure the connector edge of the DIMM aligns correctly with the slot.
3. Check that socket levers are securely latched.



Avoid touching gold contacts when handling or installing DIMMs.

Note: *See "Minimum Hardware Requirements" in the Start Here box (above left) for correct DIMM specifications.*

DIMM Memory Modules must be inserted in banks of ***two*** in the following order:



CAUTION!
Observe normal ESD precautions when installing DIMMs.

Part Number: 24R9086 C78131-001

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