



Netfinity 5500 M20

Start Here



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Note

Before using this *Netfinity Server Library* and the product it supports, be sure to read the information in the “Legal and safety Information” section of this *Server Library*.

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Start here

Thank you for purchasing an IBM Netfinity 5500 M20 server. This “Start Here” section gives you an overview of the *Server Library* for the Netfinity 5500 M20. “Start Here” also contains a list of the features and provides illustrations of some of the major components of the Netfinity 5500 M20.

The *Netfinity Server Library* that comes with your server contains software CDs and a shrink-wrapped book that provides detailed information about set up and installation, hardware, software (ServerGuide and Netfinity Manager), Advanced System Management, ServeRAID, getting help, and legal and safety information.

Organize your *Netfinity Server Library* binder with the software CDs in the front, followed by the shrink-wrapped book.

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Overview of the Netfinity Server Library

The following list describes the sections of the *Netfinity Server Library*.

Express Setup and Installation

This section is written for all users, but it is designed with the experienced user in mind. Here you will find the information you need to set up and cable your server, start and configure your server, and install your network operating system (NOS).

Hardware Information

This section contains detailed information, such as:

- Configuration Procedures
- Option Installation Instructions
- Rack Installation Instructions
- Solving Problems and Troubleshooting
- Server Records and Specifications

ServerGuide and Netfinity Manager Information

This section contains detailed information about:

ServerGuide

Software setup and installation tools specifically designed for IBM Netfinity servers.

Netfinity Manager

A group of distributed applications designed to enhance the hardware systems-management capabilities of a network.

Advanced System Management Information

This section contains detailed information about Advanced System Management, using the Netfinity Manager Advanced System Management services.

ServeRAID Information

This section contains detailed information about ServeRAID.

Getting help Information

This section contains telephone numbers and Web site addresses where you can get assistance.

Legal and safety Information

This section contains detailed legal information (warranties, electronic emission statements, and so forth) and safety information.

Safety statement



Before installing this product, read the Safety Information.

Antes de instalar este produto, leia as Informações de Segurança.

在安装本产品之前，请仔细阅读 **Safety Information** (安全信息)。

Prije instalacije ovog produkta obavezno pročitajte Sigurnosne Upute.

Před instalací tohoto produktu si přečtěte příručku bezpečnostních instrukcí.

Læs sikkerhedsforskrifterne, før du installerer dette produkt.

Ennen kuin asennat tämän tuotteen, lue turvaohjeet kohdasta Safety Information.

Avant d'installer ce produit, lisez les consignes de sécurité.

Vor der Installation dieses Produkts die Sicherheitshinweise lesen.

Πριν εγκαταστήσετε το προϊόν αυτό, διαβάστε τις πληροφορίες ασφάλειας (safety information).

A termék telepítése előtt olvassa el a Biztonsági előírásokat!

Prima di installare questo prodotto, leggere le Informazioni sulla Sicurezza

製品の設置の前に、安全情報をお読みください。

본 제품을 설치하기 전에 안전 정보를 읽으십시오.

Пред да се инсталира овој продукт, прочитајте информацијата за безбедност.

Lees voordat u dit product installeert eerst de veiligheidsvoorschriften.

Les sikkerhetsinformasjonen (Safety Information) før du installerer dette produktet.

Przed zainstalowaniem tego produktu, należy zapoznać się z książką "Informacje dotyczące bezpieczeństwa" (Safety Information).

Antes de instalar este produto, leia as Informações sobre Segurança.

Пред установкой продукта прочтите инструкции по технике безопасности.

Pred inštaláciou tohto zariadenia si pečítajte Bezpečnostné predpisy.

Pred namestitvijo tega proizvoda preberite Varnostne informacije.

Antes de instalar este producto lea la información de seguridad.

Läs säkerhetsinformationen innan du installerar den här produkten.

安裝本產品之前，請先閱讀「安全資訊」。



DANGER

Electrical current from power, telephone, and communication cables is 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.
- Connect to properly wired outlets any equipment that will be attached to this product.
- When possible, use one hand only to connect or disconnect signal cables.
- Never turn on any equipment when there is evidence of fire, water, or structural damage.
- Disconnect the attached power cords, telecommunications systems, networks, and modems before you open the device covers, unless instructed otherwise in the installation and configuration procedures.
- Connect and disconnect cables as described in the following table when installing, moving, or opening covers on this product or attached devices.

To Connect:

1. Turn everything OFF.
2. First, attach all cables to devices.
3. Attach signal cables to connectors.
4. Attach power cords to outlet.
5. Turn device ON.

To Disconnect:

1. Turn everything OFF.
2. First, remove power cords from outlet.
3. Remove signal cables from connectors.
4. Remove all cables from devices.

4



≥18 kg (37 lbs)



≥32 kg (70.5 lbs)



≥55 kg (121.2 lbs)

CAUTION:

Use safe practices when lifting.

Help information

If you need help at any time during the set up, installation, or operation of your server, refer to the “Getting help Information” section of this *Server Library*. There you will find telephone numbers and Web site addresses where you can get assistance.

Inventory list

The following is a list of the items shipped with your Netfinity 5500 M20 server.

Hardware:

- **Tower Models:**

- Keyboard
- Mouse
- Media mounting kit
- NetBAY3 bezel
- System power cord
- Two server keys (attached to the server)

Note: If you lose the keys, you must order a replacement lock mechanism and keys from IBM.

- **Rack Models:**

- Lift Handles
- Media mounting kit
- Rack installation hardware
- System power cord

Software:

- IBM ServerGuide CDs
- Other software packages

Publications:

- Netfinity Server Library
- IBM Netfinity Rack Installation Template (rack models only)

If an item is missing or damaged, contact your place of purchase.

System features

Use the information and illustrations on the following pages to familiarize yourself with the various features of the Netfinity 5500 M20 server.

Features at a glance

The following table summarizes the features of the Netfinity 5500 M20. For detailed information about the features listed in the table, refer to the “Hardware Information” section of this *Server Library*.

Microprocessor

- Intel® Pentium® III Xeon™ microprocessor with MMX™ technology
- 32 KB of level-1 cache
- 512 KB of level-2 cache (min.)
- Expandable to four microprocessors

Memory

- Standard: 256 MB (min.), expandable to 4 GB
- 100 MHz registered, error correcting code (ECC), synchronous dynamic random access memory (SDRAM)
- Eight dual inline memory-module (DIMM) sockets

Diskette Drive

- Standard: One 3.5-inch, 1.44 MB

Hard Disk Drives

- Up to six hot-swappable hard disk drives supported

CD-ROM Drive

- Standard: 32X IDE

Keyboard and Auxiliary Device

(standard only on tower models)

- Keyboard
- Mouse

Predictive Failure Analysis (PFA)

Alerts

- Power supplies
- Fans
- Memory
- Hard disk drives
- Microprocessors
- Voltage regulator modules (VRMs)

Expansion Bays

- Six slim (1-inch) or three half-high (1.6-inch) hot-swap drive bays
- Three 5.25-inch removable-media bays (one used by CD-ROM drive)
- The IBM Netfinity NetBAY3 (tower model only) enables installation of options that provide extra expansion bays

Expansion Slots

- Up to six adapters can be installed.
 - Four 32-bit hot-plug PCI slots
 - One standard (non-hot-plug) 32-bit PCI slot (for short card only)
 - One 16-bit ISA slot

Upgradable Microcode

- BIOS, diagnostics, Netfinity Advanced System Management processor, and ServeRAID upgrades (when available) can update EEPROMs on the system board

Security Features

- Door and top cover lock (tower model only)
- NetBAY3 bezel lock (tower model only)
- Power-on and administrator passwords
- Selectable drive-startup
- Keyboard password
- Systems management security
 - User log-in password
 - Read-only or read/write access
 - Dial back

Integrated Functions

- Two serial ports
- Two universal serial bus (USB) ports
- One parallel port
- Mouse port
- Keyboard port
- Video port
- Management RS485 port
- SCSI port
- IBM ServeRAID controller (two channels) on system board
- 10BASE-T/100BASE-TX Ethernet port (controller on system board)
- Redundant Ethernet capability, through the use of an optional network interface card (NIC)
- Netfinity Advanced System Management processor on system board
- Dedicated Advanced System Management I/O port
- Video controller (with 1 MB video memory) compatible with:
 - Super video graphics array (SVGA)
 - Video graphics adapter (VGA)

Power Supply

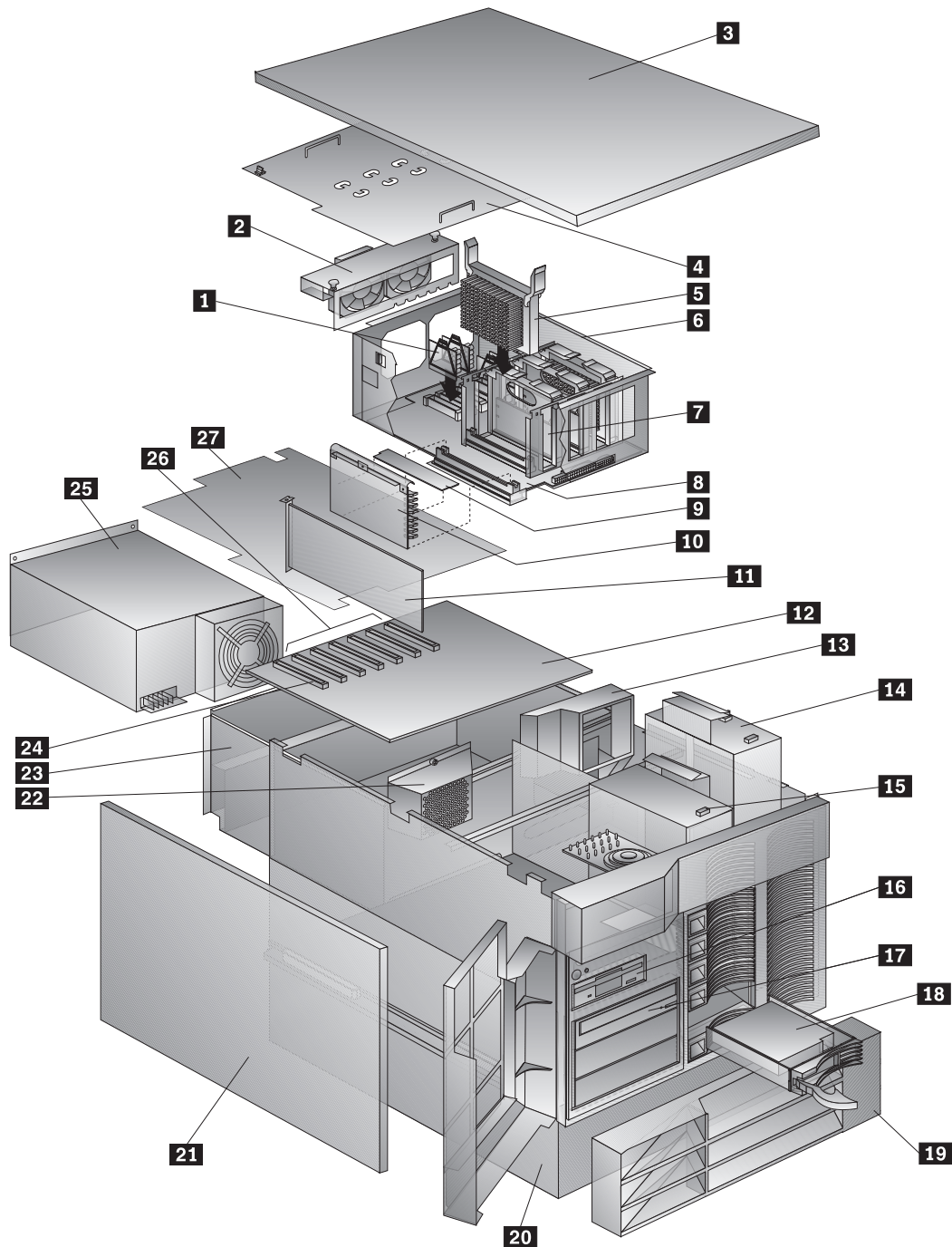
- 500 W (115–230 V ac)
- Automatic voltage range selection
- Built-in overload and surge protection
- Automatic restart after a loss of power
- For redundant power, an optional 500 W power supply is available

Redundant Cooling

- Four hot-swap fans

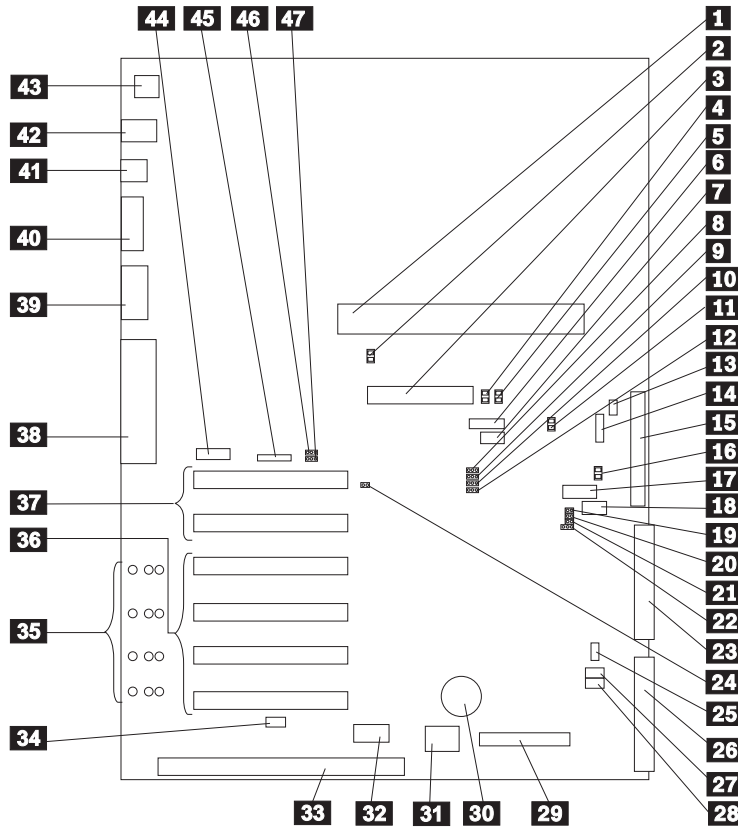
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Exploded view of the Netfinity 5500 M20 server



- | | | | | | |
|----------|-------------------------------|-----------|----------------------------------|-----------|-----------------------------------|
| 1 | Voltage regulator module | 10 | Memory board | 19 | Bezel, NetBAY3 (tower model only) |
| 2 | Hot-swap fan 4 | 11 | Plastic divider (or PCI adapter) | 20 | NetBAY3 (tower model only) |
| 3 | Top cover | 12 | System board | 21 | Side cover (tower model only) |
| 4 | Cover, microprocessor housing | 13 | Air diffuser, fan 3 | 22 | Hot-swap fan 1 |
| 5 | Microprocessor | 14 | Hot-swap fan 3 | 23 | Shuttle |
| 6 | Housing, microprocessor | 15 | Hot-swap fan 2 | 24 | ISA adapter slot |
| 7 | Terminator, microprocessor | 16 | Diskette drive | 25 | Hot-swap power supply |
| 8 | Processor board | 17 | CD-ROM drive | 26 | PCI adapter slots |
| 9 | DIMM (memory) | 18 | Hot-swap hard disk drive | 27 | Shield, system board |

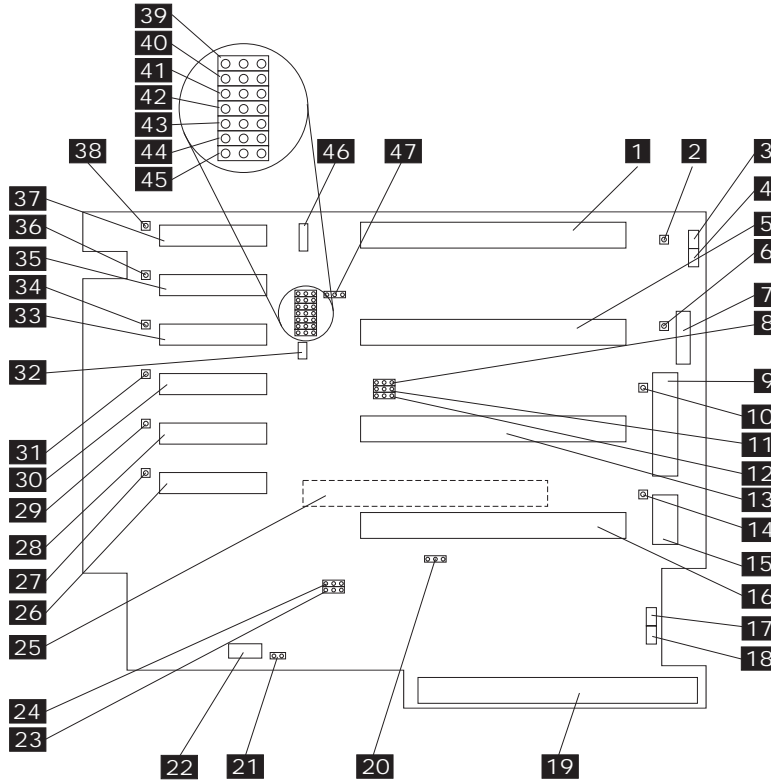
System board component locations



- 1** Processor board connector (J19)
- 2** Advanced System Management error LED (CR24)
- 3** RAID channel 1 connector (J7)
- 4** RAID channel 1 error LED (CR30)
- 5** RAID channel 2 error LED (CR31)
- 6** Reserved (J54)
- 7** Reserved (J64)
- 8** Disable RAID controller jumper block (J11)
- 9** Reserved (J45)
- 10** Power-on control jumper block (J32)
- 11** Flash RAID controller jumper block (J15)
- 12** Reserved (J25)
- 13** Reserved (J9)
- 14** Power backplane cable connector (J8)
- 15** RAID channel 2 connector (to backplane) (J3)
- 16** RAID system error LED (CR32)
- 17** RS485 connector (J27)
- 18** Reserved (J35)

- 19** SCSI activity LED connector (J52)
- 20** Reserved (J34)
- 21** RS485 mode jumper block (J29)
- 22** RS485 termination jumper block (J26)
- 23** IDE connector (J33)
- 24** Disable Advanced System Management jumper block (J51)
- 25** Fan connector (J36)
- 26** Diskette drive connector (J22)
- 27** Power-on password override jumper block (J24)
- 28** Flash ROM page swap jumper block (J30)
- 29** Control panel connector (J20)
- 30** Battery
- 31** Reserved (J46)
- 32** Hot-plug PCI controller programmer interface connector (J53)
- 33** ISA expansion slot
- 34** Hot-plug switch connector (J16)
- 35** PCI slot LEDs (four are on the side of the board)
- 36** PCI (hot-plug) slots 1 through 4 (on primary PCI bus 1)
- 37** PCI slots 5 and 6 (on primary PCI bus 0)
 - Note:** Because of the processor housing, PCI slot 6 is not available and PCI slot 5 supports only a short adapter.
- 38** Parallel port connector (J56)
 - Note:** Serial port A and B connectors are below the parallel port connector.
- 39** Video port connector (J2)
- 40** Management port C connector (J42)
- 41** USB 1 and USB 2 port connectors (J31)
 - Note:** The USB 2 connector is below the USB 1 connector.
- 42** Mouse and keyboard connectors (J1)
 - Note:** The keyboard connector is below the mouse connector.
- 43** Ethernet port connector (J4)
- 44** Reserved (J17)
- 45** Reserved (J18)
- 46** Disable Ethernet controller jumper block (J5)
- 47** Disable video controller jumper block (J14)

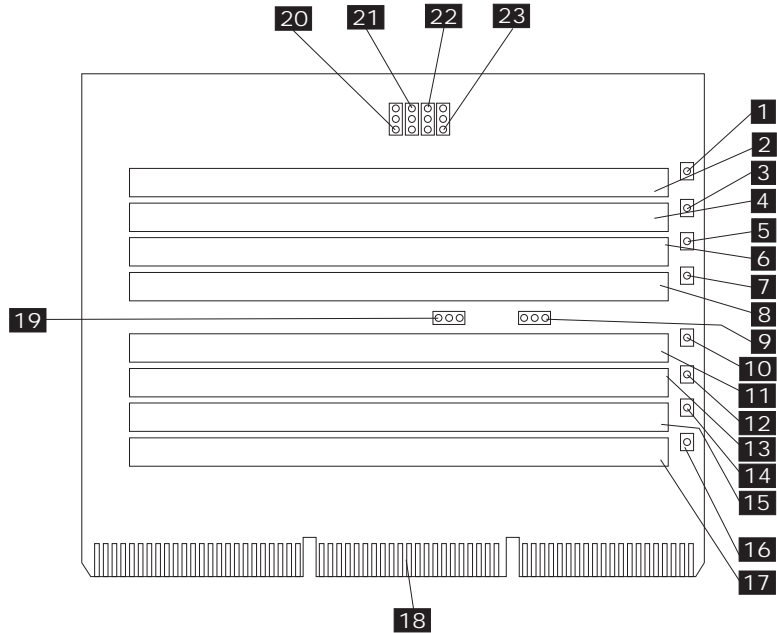
Processor board component locations



- 1** Microprocessor 1 connector (J1)
- 2** Microprocessor 1 error LED (CR16)
- 3** Microprocessor 1 fan power connector (J7)
- 4** Microprocessor 2 fan power connector (J8)
- 5** Microprocessor 2 connector (J2)
- 6** Microprocessor 2 error LED (CR15)
- 7** Power control connector (to power backplane) (J33)
- 8** Reserved (might not be present) (J15)
- 9** Power connector (to power backplane) (J32)
- 10** Microprocessor 3 error LED (CR18)
- 11** Reserved (might not be present) (J22)
- 12** Reserved (might not be present) (J23)
- 13** Microprocessor 3 connector (J3)
- 14** Microprocessor 4 error LED (CR21)
- 15** Power connector (J35)
- 16** Microprocessor 4 connector (J4)
- 17** Microprocessor 3 fan power connector (J9)
- 18** Microprocessor 4 fan power connector (J10)

- 19** Memory board connector
- 20** Reserved (J24)
- 21** Reserved (J37)
- 22** Fan 4 connector (J36)
- 23** Reserved (might not be present) (J21)
- 24** Reserved (J20)
- 25** System board connector (on reverse side of processor board)
- 26** VRM 6 connector (J18)
- 27** VRM 6 error LED (CR4)
- 28** VRM 5 connector (J17)
- 29** VRM 5 error LED (CR7)
- 30** VRM 4 connector (J16)
- 31** VRM 4 error LED (CR2)
- 32** Reserved (J11)
- 33** VRM 3 connector (J14)
- 34** VRM 3 error LED (CR3)
- 35** VRM 2 connector (J13)
- 36** VRM 2 error LED (CR6)
- 37** VRM 1 connector (J12)
- 38** VRM 1 error LED (CR5)
- 39** Microprocessor core-frequency-selection jumper block (J31)
- 40** Microprocessor core-frequency-selection jumper block (J30)
- 41** Microprocessor core-frequency-selection jumper block (J29)
- 42** Microprocessor core-frequency-selection jumper block (J28)
- 43** Reserved (J27)
- 44** Reserved (J25)
- 45** Reserved (J26)
- 46** Reserved (J19)
- 47** Reset system jumper block (J34)

Memory board component locations



- | | |
|----------------------------------|---|
| 1 DIMM 1 error LED (CR5) | 14 DIMM 7 error LED (CR1) |
| 2 DIMM connector 1 (J1) | 15 DIMM connector 7 (J7) |
| 3 DIMM 2 error LED (CR6) | 16 DIMM 8 error LED (CR8) |
| 4 DIMM connector 2 (J2) | 17 DIMM connector 8 (J8) |
| 5 DIMM 3 error LED (CR3) | 18 Memory board connector to processor board |
| 6 DIMM connector 3 (J3) | 19 Reserved (J15)
(might not be present) |
| 7 DIMM 4 error LED (CR2) | 20 Reserved (J12) |
| 8 DIMM connector 4 (J4) | 21 Reserved (J14)
(might not be present) |
| 9 Reserved (J13) | 22 Reserved (J9) |
| 10 DIMM 5 error LED (CR7) | 23 Reserved (J11) |
| 11 DIMM connector 5 (J5) | |
| 12 DIMM 6 error LED (CR4) | |
| 13 DIMM connector 6 (J6) | |



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