

IBM® Type-model	Qty x Processor	L3 cache	Memory	Disks	SCSI controller	Mechanical	Slots x bays	RXE Exp Ports	Hot-swap pwr supplies	Mgmt adapter	Available date
8686-4RX	1 x Xeon™ MP 1.4GHz	512KB	1GB Chipkill™	None	Ultra160	3U <sup>4</sup> rack	6x5	One	One (not redund)	PCI	Aug 2002
8686-5RX	2 x Xeon MP 1.5GHz	512KB	2GB Chipkill	None	Ultra160	3U rack	6x5	One	Two redundant	PCI	Aug 2002
8686-6RX	2 x Xeon MP 1.6GHz	1MB	2GB Chipkill	None	Ultra160	3U rack	6x5	One	Two redundant	PCI	Aug 2002

**Positioning** *Space efficient 4-way, 3U, rack-dense server with ground breaking Enterprise X-Architecture™ technology*  
**Processors** **1 or 2 x Intel® Xeon™ Processor MP 1.4, 1.5, or 1.6GHz<sup>1</sup>** with 400MHz frontside bus / Hyper-Threading technology  
**L2 cache** **256KB** / on die of processor / at processor speed  
**L3 cache** **512KB or 1MB** / on die of processor / at processor speed  
**Processor upgrade Implementation** **4-way SMP** / up to four Xeon Processors MP (same speed/cache size)  
 Systemboard contains four Intel 603-pin micro-PGA ZIF sockets, one memory board slot, six Active™ PCI-X slots, and integrated SCSI, ethernet, graphics

**Memory** **1GB or 2GB** std / 8GB max<sup>13</sup> / two (1GB model) or four (2GB models) 512MB DIMMs installed / 1.7-inch tall / one memory board standard with 8 DIMM gold-connector slots / DIMMs must be installed in matched pairs / 128-bit simultaneous transfer from two DIMMs / PC1600 200MHz registered 184-pin DDR-SDRAM RDIMMs / **Error Checking and Correcting (ECC)** via **16-bit Checksum Chipkill™** (corrects 1, 2, 3, or 4-bit errors on same chip and detects 2- through 8-bit errors contained in two chips)

**SCSI disk controller** Adaptec® AIC-7892 / Wide Ultra160 SCSI (LVD 160MB/sec) / single channel / 64-bit 33MHz PCI / integrated on planar  
**SCSI connectors** Controller hard-wired to SCSI backplane (no cable) / no external SCSI connector  
**SCSI cabling** One standard 16-bit LVD cable included for attaching an optional ServeRAID adapter to the three-bay backplane; SCSI RAID adapter 68-pin connector on systemboard for this cable to get signals to three-bay backplane  
**IDE controller / cabling** Enhanced IDE ATA-33 controller in OSB4 South Bridge / one one-drop IDE cable from IDE controller to CD-ROM  
**Disk - capacity** None standard / supports up to 15,000 rpm disks  
**Disk - bays** Three hot-swap bays / converged tray / 80-pin SCA-2 connectors

**Mechanical** **EIA 19" rack models (3U<sup>4</sup>)** x 28" deep / supported in NetBAY™ Racks (such as NetBAY42 SR, NetBAY42 ER)

**Chipset** **IBM XA-32™ chipset** / IBM Memory I/O Controller (improved performance from earlier models) with two remote I/O ports (one to IBM PCI-X Host Bridge; one to RXE Expansion Port) / IBM PCI-X Host Bridge provides three peer PCI buses (two PCI-X 1.0, one PCI 2.2) / PCI 2.2 Bus 0 supports SCSI, graphics, ethernet, adapter slot with Remote Supervisor Adapter, and ServerWorks® OSB4 South Bridge (IDE, USB, ISA bus for Super I/O NS PC97317VUL [diskette, keyboard, mouse])  
**Slots (Active™ PCI-X)** Six hot-swap PCI-X 1.0 slots<sup>10</sup> available with power and attention indicator lights (optical sensors control power to slot) / **hot replace, hot upgrade, hot expansion** / separated by insulative plastic dividers  
**RXE Expansion Port** **One port to support up to 12 additional PCI-X slots via an optional IBM RXE-100 Remote Expansion Enclosure**

**CD-ROM / diskette** 24X-10X<sup>6</sup> CD-ROM / 3.5" 1.44MB diskette drive  
**Ethernet** Intel 82559 10/100 ethernet controller / on systemboard / full duplex / 32-bit PCI / Wake on LAN® / Alert on LAN™ 2  
**Graphics controller** SVGA / S3® Savage4 LT / on systemboard / 8MB SDRAM std/max / up to 1280x1024 at 64K colors at 85Hz  
**Ports** *Rear:* RXE-100 Expansion Port (to connect optional RXE-100), RXE Management Port (to manage optional RXE-100), two USB (Ver 1.1), keyboard, mouse, analog DB-15 graphics, ethernet / no serial or parallel ports / *Front:* one USB (Ver 1.1)

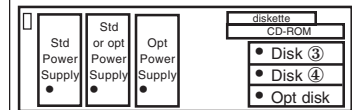
**Security** Power-on and administrator passwords / unattended boot / selectable boot

**Systems management** **Remote Supervisor Adapter** / PCI adapter / includes 10/100 ethernet, RJ-11, and serial connectors / provides remote console and mgmt / power on/off system / monitors power status, op system, temperature, disks, fans, power supplies

**Diagnostics** **Light Path Diagnostics™** / primary indicator on information panel with LEDs associated with failing components / IBM Real Time Diagnostics (operated through IBM Director) available even while server running

Software	ServerGuide™ (CD-ROM installation and configuration utilities), IBM Director, and others	
Keyboard / mouse	None standard (because rack-based)	
Power supplies	Std: one or two 370 watt hot-swap; Max: three hot-swap / redundant with two power supplies (some configurations) / worldwide / voltage-sensing / auto-restart / fans in each power supply / PFA	RXE-100 Remote Expansion Enclosure 86841RX 256MB PC1600 ECC DDR SDRAM RDIMM 33L3281 512MB PC1600 ECC DDR SDRAM RDIMM 33L3283 1GB PC1600 ECC DDR SDRAM RDIMM 33L3285 Xeon MP 1.4GHz/512KB L3 Cache Proc Upg 19K4638 Xeon MP 1.5GHz/512KB L3 Cache Proc Upg 19K4639 Xeon MP 1.6GHz/1MB L3 Cache Proc Upg 19K4647 370 watt Hot-Swap Redundant Power Supply 31P6108 IBM ServeRAID™-4Mx Ultra160 SCSI Adapter 06P5736 IBM 73.4GB 10K Ultra 160 SCSI Hot-Swap SL 06P5756 IBM NetBAY42 Standard Rack (SR) 9306420 IBM Integrated xSeries Adapter for iSeries 1519100 IBM T541 15" Flat Panel Color Monitor (black) 9512AB1 Other options at <a href="http://ibm.com/pc/us/accessories">ibm.com/pc/us/accessories</a>
Cooling fans	Six hot-swap, redundant, multi-speed fans / one additional fan in each power supply / PFA / fan failure signals Diagnostic LED and mgmt processor	

- Six available 3.3 volt Active PCI-X slots:
- Bus 2 (B) with two slots supports (slots 1, 2):
    - one fullsize, 64-bit, 133MHz PCI-X, hot-swap
    - or two fullsize, 64-bit, 100MHz PCI-X, hot-swap
    - or two fullsize, 64-bit, 66MHz PCI-X, hot-swap
    - or two fullsize, 64-bit, 66MHz PCI, hot-swap
    - or two fullsize, 64-bit, 33MHz PCI, hot-swap
  - Bus 1 (A) with four slots supports (slots 3, 4, 5, 6):
    - four fullsize, 64-bit, 66MHz PCI-X, hot-swap
    - or two fullsize, 64-bit, 66MHz PCI, hot-swap
    - or four fullsize, 64-bit, 33MHz PCI, hot-swap
  - Bus 0 with one slot supports:
    - only for standard Remote Supervisor Adapter halfsize, 64-bit, 33MHz PCI, not hot-swap



- Bay ① 3.5", 0.5", access, diskette
- Bay ② 3.5", 0.5", access, CD-ROM
- Bay ③ 3.5", SL 1", access, hot-swap
- Bay ④ 3.5", SL 1", access, hot-swap
- Bay ⑤ 3.5", SL 1", access, hot-swap

- ◇ Dimensions: H5.25" x W17.4" x D27.6"
- ◇ Dimensions: H133.4mm x W442.0mm x D701mm
- ◇ Weight: 58.4 to 70lbs; 24.9 to 31.8kg
- ◇ Stealth black color
- ◇ Tool-free serviceability
- ◇ Access adapters, processors, memory, and systemboard from top
- ◇ Access power supplies and disks from front
- ◇ Setup Program by pressing F1 at startup
- ◇ Diagnostics (PC-Doctor) by pressing F2 at startup
- ◇ SCSISelect by pressing Ctrl+A at startup
- ◇ Top cover Light Path Diagnostics (level 2 diagnostic panel) for outside view of potential problem without removing cover
- ◇ Information LED panel, diagnostic LED panel, and component LEDs give visual indications of system well-being
- ◇ Predictive Failure Analysis® alerts on disks, power supplies, memory, processors, VRMs, and fans with IBM Director

**All models:** Maximum internal disk capacity: 220.2GB with three 73.4GB<sup>2</sup> hot-swap SCSI disks

**LIMITED WARRANTY<sup>3</sup>**

- ⇨ 3 year parts and labor
- ⇨ International Warranty Service<sup>3</sup>
- ⇨ On site, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time<sup>7</sup>
- ⇨ 3 year on site warranty service upgrade options (in eligible locations):<sup>7</sup>
  - Mon-Fri coverage, 4 hour response time (ServicePac® part number 96P2252)
  - 24 hr x 7 day coverage, 4 hour response time (ServicePac part number 96P2253)
  - 24 hr x 7 day coverage, 2 hour response time (ServicePac part number 96P2254)
- ⇨ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>3</sup>

See footnotes for important warranty information  
 • = Hot-swap