Hardware Announcement
August 29, 2006

IBM System x3400 servers feature fast dual-core 3.0 GHz/667 MHz, 4 MB L2, Intel Xeon 5050 processors, delivering increased performance

Overview

With hot-swap power or fixed power, hot-swap cooling fans, and greater systems management control, the System x3400 servers feature:

- 667 MHz front-side bus (FSB) support
- Three hot-swap fans standard and three additional with Redundant Power/Cooling Option in some models
- Three PCI-Express card slots (2 x 8, 1 x 4), two PCI-X 133 MHz slots, and one 32-bit/33 MHz card slot
- Integrated single Gigabit Ethernet
- Hot swap models with Standard Integrated ServeRAID™ 8k-l for RAID-0,1 10 support
- Simple Swap SATA models with native SATA controller
- AMF DDR2 ECC DIMMs, combined with an integrated ECC memory controller in core logic, that correct many soft and hard single-bit memory errors, and minimize disruption of service to LAN clients[5]
- Integrated systems management with an optional upgrade to Remote Supervisor Adapter II SlimLine

Powered and scaled for On Demand Business growth

- Powerful dual-core 3.0 GHz/667 MHz, Intel® Xeon 5050 processor with 4 MB L2 cache
- 667 MHz FSB functional speed for processor operations to memory and PCI bus
- 1 GB of high-speed, two-way interleaved, PC2-5300 —667 MHz ECC memory
- Two high-speed, wide-bandwidth, full-length PCI-X bus slots at 133 MHz, three PCI-E bus slots, one PCI 33 MHz slot
- Broadcom 5721 KFB3 Gigabit Ethernet ports, and SAS/SATA support
- Eight hot-swap drive bays or four simple swap drive bays, 2.4 TB total using 300 GB SAS HDD options, 4.0 TB total using 500 GB SATA HDD options, or 1.0 TB simple-swap using four 250 GB HDDs

High availability for around-the-clock On Demand Business

- Integrated systems management processor and support for the RSA II SlimLine option
- Wake on LAN®
- ECC memory to detect double-bit errors and correct single-bit errors
- Integrated memory mirroring and online spare options

Service and support perfected for On Demand Business

- ServerGuide™ and IBM Director
- IBM Server support and Web support[6]
- Three-year, on-site[7] parts and labor, limited warranty[8], model dependent or
- One year, on-site[7] parts and labor, limited warranty[8], model dependent

System x3650 T

The system x3650 T model 51X is a 2U rack server which comes with two 3.2 GHz/800 MHz/2 MB L2 cache Intel processors and 2 GB DDR2 400 MHz system memory. Refer to Hardware Announcement 106-296, dated April 25, 2006, for complete details on the x3650 T system.

Key prerequisites

- Monitor
- Keyboard
- Mouse

Planned availability dates

- August 15, 2006: IBM System x3650 T
- September 8, 2006: IBM System x3400

At a glance

The System x3400 servers feature:

- Powerful dual-core 3.0 GHz/667 MHz[1], Intel Xeon 5050 processors with 4 MB L2 cache
- 1 GB of 667 MHz DDR2 ECC system memory[2], 32 GB maximum
- Eight-port SAS/SATA controller or native SATA controller
- System offers one 670-watt power supply, or one hot-swap 835 W power supply; optional hot-swap redundant power and cooling for hot-swap models
- Integrated systems management processor
- Six PCI slots: Two 64-bit/133 MHz PCI-X slots, three PCI-Express slots and one PCI 33 MHz slot
- Eleven drive bays: 48x[3] CD-ROM, tape drive (option), and eight hot-swap HDDs or four simple-swap HDDs
- Up to 2.4 TB[4] hot-swap SAS or 4.0 TB hot-swap SATA disk storage or 1.0 TB simple-swap SATA storage
- Integrated Broadcom 5721 KFB3 Gigabit Ethernet controller
- 5 U tower industry-standard models, rack mount optional
- Four USB, one integrated system management, two serial, one parallel, mouse, and keyboard ports, one 10/100/1000 RJ45 ports

Refer to Hardware Announcement 106-296, dated April 25, 2006, for detailed description of System x3650 T.

For ordering, contact:
Your IBM representative, an IBM Business Partner, or the Americas Call Centers at
800-IBM-CALL Reference: YE001

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Description

Related options

Intel Xeon processor options

- Intel 5050 3.0 GHz/667 MHz — 4 MB L2 Cache Xeon Processor (25R8926) x

These processors are ideal for data-intensive applications that range from data mining to evolving Web services. Innovative technologies deliver processing speeds of 3.0 GHz, with performance headroom for unpredictable server workloads and escalating computing needs.

Intel Xeon processors with 4 MB L2 cache feature Intel NetBurst microarchitecture with Extended Memory 64 Technology (EM64T), which increases overall throughput via a faster 667 MHz system bus and enhanced level 2 cache. These enhancements add up to a faster response time.

This processor option supports SMP applications when installed in the second processor slot of all System x3400 models with similar processors.

IBM PC2-5300 CL5 DDR2 Chipkill™ Memory Option Kit

- IBM 1 GB PC2-5300 CL5 ECC DDR2 Chipkill AMF DIMM 667 MHz (39M5782)
- IBM 2 GB PC2-5300 CL5 ECC DDR2 Chipkill AMF DIMM 667 MHz (39M5785)
- IBM 4 GB PC2-5300 CL5 ECC DDR2 Chipkill AMF DIMM 667 MHz (39M5791)

Note: DDR2 ECC DIMMs, combined with an integrated ECC memory controller, correct many soft and hard single-bit memory errors and minimize disruption of service to LAN clients.

Chipkill distributes information covered by error correction coding across separate memory chips so if any of the chips fail, the data can still be reconstructed from the remaining chips and the system can continue running.

Increased processor performance, coupled with DDR memory, enables you to retrieve and process information faster and more efficiently. DDR memory executes twice the number of operations per cycle than traditional SDRAM memory, effectively doubling the data exchange rate between memory and processors.

IBM Redundant Power & Cooling Option — (39Y8487)

The redundant power supply is designed to supply power for hot-swap power systems. This option contains three rear hot-swap fans for redundant cooling.

ServeRAID 8k SAS Controller (25R8064)

- 256 MB DDR2 533 MHz
- 72 hours of battery life for 3 years at 45 degrees C

RAID features:

- RAID-0, 1, 1E, 10, 5, 6,
- Copyback
- FlashCopy®
- Stripe-unit size: 16k, 32k, 64k, 128k, 256k, 512k, and 1024k

RSA II SlimLine Adapter (39Y9566)

The optional RSA II SlimLine card enables an additional server management feature, when it is installed on a reserved connector. The adapter adds accelerated graphics and delivers advanced control and monitoring features to manage your xSeries® server at virtually any time, from any place. You can add this adapter card to the server through a connector that connects to the planar. It enables easy console redirection with text and graphics and keyboard and mouse (operating system must support USB) support over the systems management LAN connections. The RSA II SlimLine provides remote management and control of the system independent of the server status, in many cases even if the server is powered off or otherwise disabled.

With video compression now built into the adapter hardware, it enables greater screen sizes and refresh rates that are becoming standard in the marketplace. With this feature you can display server activities from power-on to full operation remotely — with remote user interaction at virtually any time.

Features and benefits:

- Adapter continuously monitors system environmentals (temperatures and voltages), operating system status, and critical system components such as processors, VRMs, memory, fans, power supplies, and power backplanes (where supported by the system).
- Video compression hardware is built in, eliminating drivers.
- Faster graphics support makes monitoring and control more efficient.
- Virtual CD enables you to configure and diagnose a server remotely without a visit from your IT staff.
- RSA II SlimLine supports Secure Sockets Layer (SSL) and Lightweight Directory Access Protocol (LDAP).
- The adapter is integrated with IBM Director and Director Agent.
- Built-in LAN and serial connectivity supports virtually any network infrastructure.
- Multiple alerting functions warn systems administrators of potential problems, through e-mail, pager support, LAN, or SNMP.
- The adapter can be installed on the system planar using a dedicated connector.

High-performance server subsystems

System x3400 servers are high-throughput, two-way, SMP-capable network servers with excellent performance scalability when you add memory and a second processor. They incorporate powerful Intel Xeon processors with 4 MB L2 cache. These flip-chip, land grid array 6 (FC-LGA6) processors feature advanced transfer L2 caches integrated onto the processor core and run at the same clock speed as the processor core. Both caches feature eight-way set associative cache.

Two processor connectors are standard on the system board to support installation of a second processor. High-speed, 667/1066/1333 MHz (nus speed runs at 166/266 MHz or 333 MHz but data is clocked on four edges, yielding a transfer rate of either 667/1066 MHz or 1333 MHz) PC2-5300 DDR2 AMF DIMMs are optimized for 667 MHz processor-to-memory subsystem performance. The System x3400 servers use the Intel Blackford chipset

to maximize throughput from processor to memory, and System i™/O buses.

Standard x3400 configurations

Model	Processor	Cache	Memory	HDD Interface	Mechanical
7973-12x	3.0 GHz/667 MHz	4 MB	1 GB	SS SATA	Tower
7974-12x	3.0 GHz/667 MHz	4 MB	1 GB	SS SATA	Tower
7975-14x	3.0 GHz/667 MHz	4 MB	1 GB	HS SAS/SATA	Tower
7975-16x	3.0 GHz/667 MHz	4 MB	1 GB	HS SAS/SATA	Tower
7976-14x	3.0 GHz/667 MHz	4 MB	1 GB	HS SAS/SATA	Tower
7976-16x	3.0 GHz/667 MHz	4 MB	1 GB	HS SAS/SATA	Tower
7980-51X*	2x3.2 GHz/800 MHz	2 MB	2 GB	HS U320 SCSI	Rack

Refer to Hardware Announcement 106-296, dated April 25, 2006, for detailed description of the x3650 T systems.

Additional features:

- Ability to upgrade to two-way SMP processing by adding a second processor of the same speed and processor type
- System board that contains eight DIMM connectors supporting 512 MB, 1 GB, 2 GB, and 4 GB (when available) AMF DDR II-667 MHz SDRAMs
  - Two-way interleaved memory for improved performance (memory must be installed in matched pairs)
  - Up to 32 GB of system memory (with 4 GB memory DIMMs installed)
- High-speed, wide-bandwidth, full-length PCI bus slots
  - Slot 1: PCI-E x8 slot, x4 links; 2 GB/s bandwidth, half-length card support
  - Slot 2: PCI-E x8 slot, x8 links; 4 GB/s bandwidth, full-length card support
  - Slot 3: PCI-E x8 slot, x8 links; 4 GB/s bandwidth, full-length card support
  - Slot 4: PCI-X 64/133 slot, not hot-plug, full-length card support
  - Slot 5: PCI-X 64/133 slot, not hot-plug, full-length card support
  - Slot 6: PCI 33 slot, half-length card support
- Eight-port SAS/SATA controller that supports high-speed internal storage solutions or native SATA controller that supports high-speed internal storage solutions
- Single full-duplex, Gigabit Ethernet controller that speed network communications to LAN clients

The x3400 subsystems are tuned to provide solid system throughput from processor, to memory, to bus, to disk-intensive I/O. These features, combined with SMP capability, make the System x3400 servers an excellent choice for a stand-alone or clustered general-business application, file, and print server.

High-availability and serviceability features

- Redundant cooling:
  - Three hot-swap fans (single replaceable unit), with one hot-swap 835 W power supply option available
- One hot-swap power supply, one optional redundant power supply to support robust high-availability applications
- Hot-swap HDD bays with SAS connectors or simple-swap HDD bays with native SATA controller
- SAS or SATA controller to support up to eight internal SAS or SATA HDD devices
- AMF DDR2 ECC DIMMs, combined with an integrated ECC memory controller in core logic, to correct many soft and hard single-bit memory errors (using memory mirroring) while minimizing disruption of services to LAN clients
- Memory hardware scrubbing to correct many soft memory errors automatically without software intervention
- L2 cache processors to improve data integrity and help reduce downtime
- PFA on processors and memory to help alert the system administrator of an imminent component failure
- Support for optional Remote Supervisor Adapter for remote systems management through a Web-based browser
- Six hot-swap redundant system cooling fans to cool the system and enable replacement without powering down the server
- Integrated systems management processor that supports:
  - Fan monitoring and control
  - Power supply monitoring
  - Temperature monitoring
  - Voltage monitoring
  - Power on/off, reset sequencing
  - LED controls (Diagnostics support)
  - IPMI capability that allows you to accept commands and send status
  - Remote firmware update
  - Numeric error logging
- Information LED panel to give visual indications of system health
- Onboard diagnostics LED map that provide error codes which are explained in the hardware maintenance manual
- Easy access to system board, adapter cards, processor, and memory
- CPU failure recovery in SMP configurations; generates alerts error logs

Expandability and growth

The System x3400 server is a 5 U tower configuration engineered to meet the compactness of a 5 U rack drawer. SVGA video, SAS, and full-duplex Gigabit Ethernet are integrated on the system board.

Features include:

- System memory expansion to 32 GB (with 4 GB memory DIMMs installed)
- Six adapter card slots: two 64-bit/133 MHz PCI-X, three PCI-Express, and one 32-bit/33 MHz card slot
- Eleven drive bays:
  - Eight 3.5-inch, HDD, hot-swap drive bays; three 5.25 inch, half-high device bays

- Internal support for high performance (up to 15,000 rpm) for up to eight SAS/SATA HDDs and a high-capacity tape backup device
- Up to 2.4 TB of internal data storage, using eight 300 GB SAS HDDs, or 4.0 TB using eight 500 GB SATA hot-swap HDDs

These servers can handle applications for today and expand for future growth.

Systems management: Integrated baseboard management controller (BMC):

The System x3400 servers include an integrated baseboard management controller that provides industry-standard Intelligent Platform Management Interface (IPMI) 2.0-compliant systems management. The BMC comes standard, and shares onboard Ethernet ports for access. It can be accessed via software that is compatible with IPMI 2.0 (such as xCAT). The BMC is implemented using industry-leading OSA firmware and applications.

- Features and benefits
  - Monitor of system and CMOS battery voltages
  - Monitor system temperatures
  - Fan speed control
  - Fan tachometer monitor
  - Good Power signal monitor
  - System ID and planar version detection
  - System power control
  - System reset control
  - NMI and SMI detection and generation (System Interrupts)
  - Serial port text console redirection
  - System LED control (power, HDD, error, heartbeat)

In addition, you can purchase an optional RSA II SlimLine adapter for additional systems management function.

RSA II SlimLine adds accelerated graphics and delivers advanced control and monitoring features to manage your xSeries server (select models) at virtually any time, from virtually any place. You can add this card to your server using a connector to the planar. This adapter enables easy console redirection with text and graphics, keyboard and mouse (operating system must support USB) support over the systems management LAN connections.

With video compression now built into the adapter hardware, you can have greater screen sizes and refresh rates that are standard in the marketplace. With this feature you can display server activities from power-on to full operation remotely with remote user interaction at virtually any time.

The embedded Web server provides remote control from any standard Web browser. No additional software is required on the remote administrator′s workstation. For users accustomed to a command-line interface (CLI), administrators can also use the CLI from a Telnet session to perform some of the functions that they can perform from the Web server. RSA II SlimLine delivers remote management and control of the system independent of the server status, in many cases even if the server is powered off or otherwise disabled.

The RSA II SlimLine features are similar to the RSA II except for the following features:

- Reset button is not accessible from the back of the system.
- A mini-USB cable is no longer required; the adapter uses internal USB bus. The system has a designated systems management Ethernet port, activated only when RSA II SlimLine is installed.
- An external ac adapter is not required, the adapter uses standby power from system power supplies.
- Status LEDs are not viewable externally.
- The RSA II SlimLine no longer supports the previous RSA II interconnect function.
- The RSA II SlimLine is required for use with the Integrated xSeries Adapter for iSeries™, when used.

IBM Director: x3400 servers feature IBM Director, a powerful, highly integrated systems management software solution built on industry standards and designed for ease of use. Exploit your existing enterprise or workgroup management environments and use rich security features to access and manage physically dispersed IT assets more efficiently over the Internet.

Potentially reduce costs through:

- Reduced downtime
- Increased productivity of IT personnel and end users
- Potentially reduced service and support costs

IBM Director provides integration into leading workgroup and enterprise systems management environments, via upward integration modules. The advanced management capabilities built into System x™ servers can be accessed from:

- Tivoli® Enterprise and Tivoli NetView®
- Computer Associates CA Unicenter TNG Framework
- NetIQ
- BMC Patrol
- Microsoft SMS
- Intel LANDesk™ Management Suite
- HP OpenView Network Node Manager

IT administrators can view the hardware configuration of remote systems in detail and monitor the usage and performance of critical components such as processors, HDDs, and memory.

IBM Director includes IBM Director Extensions, a portfolio of server tools that integrate into the Director framework and work with the integrated systems management processor to access environmental system information.

The processor supervises the operating system status and the following system components and alerts the IT administrator to critical errors:

- Fan monitoring and control; fan status and fan presence are monitored. Fan speed is controlled and automatically increased to maintain system cooling if temperature thresholds are exceeded. An alert is generated if:
  - Failure occurs or if failure is predicted.
  - Installation or removal occurs.
  - Power supply condition changes for the power supply.
- CPU temperature are monitored. An alert is generated if (preset) temperature warning thresholds are exceeded or restored and if critical temperature thresholds are exceeded. Soft and hard system shutdowns are automatically initiated if critical temperature thresholds are exceeded.

- CPU and power subsystem voltage thresholds are monitored. An alert is generated if over or under voltages occur.
- Diagnostics LEDs are illuminated in case of key component errors or failures to enable quick local diagnostics and servicing.
- Flash update enables updates to the integrated systems management processor firmware.

The integrated systems management processor supports upgrading to the optionally available RSA for full out-of-band remote management.

Installation of an optional RSA provides the following systems management capabilities:

- PFA-enabled critical hardware components
- Temperature
- Voltage
- Fan speed
- Diagnostics LED
- Power supply

The IT administrator has comprehensive, virtual on-site control of xSeries servers and can remotely:

- Access the server regardless of the status
- Inventory and often display detailed system and component information
- View server bootup during POST
- Browse and delete logs of events and errors
- Reset or power cycle the server
- Run diagnostics, SAS/SATA setup, and RAID setup during POST
- Monitor thresholds on server health including:
  - Operating system load
  - POST time-out
  - Voltage
  - Temperature
- Proactive alerts for critical server events including PFA on:
  - Processors
  - Memory
- Define automated actions such as:
  - Send e-mail or a page to an administrator
  - Execute a command or program
  - Pop up an error message to the Director console
- Monitor flash BIOS
- Monitor and graph the utilization of server resources such as:
  - Memory
  - Processor
  - HDDs
- Identify potential performance bottlenecks and react to prevent down time
- Monitor, manage, and configure RAID subsystems without taking them offline

Integrated xSeries Adapter for iSeries, when supported

The System x3400 server is the newest server to be attached to an IBM i5 or iSeries server. A new Integrated xSeries Adapter (1519-200) attaches an x3400 to connect to an i5 or iSeries server. You can connect the iSeries family of servers to provide virtual storage, virtual Ethernet, and tape sharing to an attached x3400 server. You can easily integrate security, backup, and operations of a Microsoft Windows and OS/400® environment.

Advanced Configuration and Power Interface (ACPI)

This open industry specification defines a flexible and extensible hardware interface for the system board. Software designers use this specification to integrate power management features throughout a computer system, including hardware, the operating system, and application software. This integration enables Windows to determine which applications are active and handle all of the power management resources for computer subsystems and peripherals.

World-class support tools and programs

The System x3400 server includes tools and programs designed to make ownership a positive experience. From the start, IBM programs help you purchase servers, get them running, and keep them running. IBM can help your company maintain ownership of technology leadership network servers.

- Support is available by calling 800-IBM SERV (426-7378) in the U.S. and Canada for problem determination or placement of service calls for warranty.
- IBM on-site, three-year limited warranty with next-business-day service (same-business-day service optionally available) protects your investment if a problem occurs. This service also includes replacement of parts identified through PFA.
- The ServerProven®,[9] program enables you to configure your server confidently with various devices and operating systems. This Web-based program provides compatibility information from actual testing of the System x3400 server with various adapters and devices.
- The ServerGuide CD includes utilities and drivers for assisted installation of popular network operating systems. Also included is a Broadcom Ethernet CD.
- Electronic support on the Web provides additional support in an easy-to-use format.

Note: The Microsoft™ Windows™ Preinstallation Environment software contains a security feature that will cause an end user customer′s system to reboot without prior notification to the end user customer after 24 hours of continuous use of the Microsoft Windows Preinstallation Environment. During routine usage of ServerGuide, which does not usually require usage of the Microsoft Windows Preinstallation Environment software for such an extended time period, this condition should not occur.

Product positioning

The System x3400 servers are positioned above the entry, two-way, x226 and below the four-way departmental tower x260. These servers contain additional fault tolerance through hot-swap redundant cooling, redundant power, PCI-X, and support for PCI-Express. They also feature enhanced systems-management control. As universal servers, they are offered in flexible tower models and can be rack-mounted using a tower-to-rack conversion kit.

With these servers, two segments will be combined into one departmental and mission-critical space. The System x3400 servers form a compact 5 U, two-socket, SMP-capable Xeon processor-based platform designed with integrated high-availability features for mainstream network server applications.

These servers are ideal for clients who require up to two-socket 3.0 GHz/667 MHz processing power, significant memory, high availability, and large data-storage scalability. High-speed memory, 64-bit and 32-bit PCI buses, eight SAS, hot-swap drive bays, or four SATA, simple-swap drive bays and a device bay for

high-capacity tape drives make these servers ideal for mainstream network computing.

System x3650 T

The 3650 T server is part of the line of new server products designed for telco applications. These NEBS-compliant models have design points to safeguard against failure in mission-critical environments found in telecommunications, wireless, and other network communication applications.

The 3650 T line for telco applications is positioned from entry to advanced-function systems.

The 3650 T server is positioned as a complementary offering to our BladeCenter® T server line.

Reference information

1 GHz and MHz denote the internal and/or external clock speed of the microprocessor only, not application performance. Many factors affect application performance.

2 PC2-5300-333 DDR2 AMF SDRAM memory. DDR2 memory stands for double data rate, which means you get 2x data in the same clock cycle. Actual data transfer is at 333 MHz.

3 Actual playback speed varies and is often less than maximum.

4 When referring to HDD or tape backup capacity, GB stands for 1,000,000,000 bytes and TB stands for 1,000,000,000,000 bytes. User capacity may vary depending on operating environments.

5 Chipkill distributes information covered by error correcting code across separate memory chips. If any chip fails, the data can still be reconstructed from the remaining chips and the system can continue running.

6 Some programs may not be available in all countries.

7 With respect to on-site service, you may be asked certain diagnostic questions before a technician is sent.

8 For information on the IBM Statement of Limited Warranty, visit

http://www.ibm.com/servers/support/machine_warranties/

This information is also available by calling 800-426-7378 or contacting your IBM representative or reseller. Copies are available upon request.

9 IBM makes no warranties, expressed or implied, regarding non-IBM products and services that are ServerProven, including but not limited to implied warranties of merchantability and fitness for a particular purpose. These products are offered and warranted solely by third parties.

Business Partner information

If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld ID and password are required (use IBM ID).

BP Attachment for Announcement Letter 106-647

https://www.ibm.com/partnerworld/mem/sla.jsp?num=106-647

Trademarks

IBM United States Announcement Supplemental Information

August 29, 2006

Publications

The following publications and CD-ROMs are shipped with the x3400 servers:

- The *System x3400 Installation Guide* contains an introduction to the computer, installation and setup, installing options, reference information, and problem determination. The installation guide has easy-to-use text and pictorials to enable you to quickly set up the System x3400.
- The ServerGuide™ CD contains drivers to support the System x3400 servers. In addition, it includes a set of easy-to-use utilities for assisted installation via CD of several popular network operating systems.
- A Publications CD and a Broadcom Ethernet Driver CD are included.
- IBM ServRAID 8k CD included.
- IBM Director systems management software is included.

Note: Software versions, features, and functions shipped with these systems may change, as new releases become available or may be discontinued at any time.

Refer to Hardware Announcement 106-296, dated April 25, 2006, for a complete list for the 3650 T system.

The *x3400 Installation Guide* and *Hardware Maintenance Manual,* in U.S. English, are available at

http://www.ibm.com/servers/eserver/serverproven/compat/us/

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IBM Integrated Technology Services

IBM services include business consulting, outsourcing, hosting services, applications, and other technology management.

These services help you learn about, plan, install, manage, or optimize your IT infrastructure to be an On Demand Business. They can help you integrate your high-speed networks, storage systems, application servers, wireless protocols, and an array of platforms, middleware, and communications software for IBM and many non-IBM offerings. IBM is your one-stop shop for IT support needs.

For details on available services, contact your IBM representative or visit

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For details on education offerings related to specific products, visit

http://www.ibm.com/services/learning/index.html

Select your country, and then select the product as the category.

xSeries & Blade Center support services

Recommended core technical support

When you buy IBM xSeries technology, include the support services you need — to help keep both your hardware and software working for you, day after day, at peak performance. It's your first step toward helping to protect your investment and sustain high levels of system availability. We offer service level and response-time options to fit your business needs. And we'll help you get started with a core support package that includes:

- **Continuous system monitoring**

  Exclusive electronic monitoring that helps speed up problem-solving with automated, early detection of potential problems and system errors.

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- **Hardware maintenance**

  World-class remote and on-site hardware problem determination and repair services.

- **Software technical support**

  Unlimited help line calls for fast, accurate answers to your questions during installation and throughout ongoing operations.

For more information, visit

http://www.ibm.com/servers/eserver/xseries/services.html

Technical information

Specified operating environment

Physical specifications

The x3400:

	7973-12x 7974-12x	7975-14x 7976-14x	7975-16x 7976-16x
Processor	Xeon Dual Core	Xeon Dual Core	Xeon Dual Core
Internal speed	3.0 GHz	3.0 GHz	3.0 GHz
External speed	667 MHz	667 MHz	667 MHz
Number standard	1	1	1
Maximum	2	2	2
L2 cache (full-speed)	4 MB	4 MB	4 MB
Memory (PC2-5300-667)	1 GB ECC	1 GB ECC	1 GB ECC
AMF	2 x 512 MB Chipkill(TM)	2 x 512 MB Chipkill	2 x 512 MB Chipkill
DIMM sockets	8	8	8
Capacity	32 GB(10)	32 GB(10)	32(10)
Video	SVGA	SVGA	SVGA
memory	16 MB	16 MB	16 MB
Native/SATA controller	1	0	0
SAS/SATA controller	0	1	1
Channels	0	2	2
Connector internal	4	4	4
Connector external	0	0	0
HDD	Open bay	Open bay	Open bay
Total bays	7	11	11
5.25-in	3	3	3
Simple-swap	4	0	0
Hot-swap	0	4+4(11)	4+4 (11)
Internal capacity	2.0 TB(12)	2.4 TB(12) or 4.0 TB(12)	2.4 TB(12) or 4.0 TB(12)
Bays available	6	10	10
5.25 in	2	2	2
Simple-swap	4	0	0
Hot-swap	0	4+4(11)	4+4(11)
Total PCI slots	6	6	6
64-bit/133 MHz	2	2	2
PCI_E slots	3	3	3
32-bit/33 MHz	1	1	1
Slots available	6	6	6
System management	Standard(13)	Standard(13)	Standard(13)
Ethernet controllers	10/100/1000 Mb	10/100/1000	10/100/1000
CD-ROM (IDE)	48x	48x	48x
Power supply	670 W(14)	670 W(14)	835 W(14)
Number standard	1	1	1
Hot-swap	No	No	Yes
Redundant power	No	No	Option

System x3650 T

	7980-51X
Processor	Xeon
Internal speed	3.2 GHz
External speed	800 MHz
Number standard	2
Maximum	2
L2 cache (full speed)	2 MB
Memory (400 MHz SDRAM)	2 GB ECC
RDIMMs	2 x 1 GB
DIMM sockets	6

Capacity	24 GB(15)
Video	SVGA
Memory	16 MB
SCSI controller	Ultra320
Channels	2
Connector internal	1
Connector external	1
IDE controller	1
Channels	1
Connector internal	1
Connector external	0
Fixed disk	0
Total bays	3
5.25/3.5-inch slim	1
3.5-inch slim	2
Hot-swap	2
Internal capacity	600 GB
Bays available	2
5.25/3.5-inch slim	1
3.5-inch slim	1
Hot-swap	2
Total PCI slots	6
64-bit/100 MHz	3
PCI-X	3
Slots available	6
Service processor	Standard
Ethernet controller	Dual Gb
CD-RW (IDE)	24x-10x
Diskette drive	No
Power supply	600 W DC
Number standard	2
Hot-swap	Yes
Redundant power	Yes
Auto Restart	Yes

(10) System will support 32 GB of memory with the 4 GB memory DIMMs installed (when available).

(11) Optional backplane upgrade kit with SAS/SATA 4 Pac HDDs required to add additional hot-swap HDDs.

(12) Eight hot-swap drive bays or four simple swap drive bays, 2.4 TB total using 300 GB SAS HDD options, 4.0 TB total using 500 GB HS SATA HDD options, or 1.0 TB using four simple-swap 250 GB HDD options or 2.0 TB using 4 x 500 GB SS HDDs.

(13) These systems contain an integrated system management processor that provides a set of monitoring and alert features. Refer to the Description section for details. For higher levels of system management support the Remote Supervisor Adapter is optionally available.

(14) The 835-watt redundant power supply is designed to support hot-swapping and redundancy.

(15) System memory capacity is 24 GB when 4 GB DIMMs are installed in the six memory DIMM slots.

48x CD-ROM drive characteristics

- Formatted capacity: 650 MB
- Average access time including latency: Less than 85 ms
- Sustained data transfer rate: 3,000 to 7,200 KB/s
- Burst data transfer rate
  - ATA PIO mode 4: 16.6 MB/sec
  - ATA Multiword DMA Mode 2: 16.6 MB/sec
- Technology: Full constant angular velocity (CAV)

Video subsystem

- ATI ES1000 Graphics Accelerator
- Integrated on planar and connected to the PCI bus
- 16 MB of embedded DDR1 video memory
- 128-bit graphics engine with 8, 16, and 32 bpp mode acceleration
- 32 bpp (4G colors/True Color) support
- Integrated 350 MHz RAMDAC
- DDC2B monitor communications support

Supported video mode capabilities for the SVGA PCI controller

Microsoft(TM) Windows NT(TM) V4.0 and Windows(TM) 2000

Resolution	Colors	Refresh Rate (Hz)
640 x 480 x 8	256	60, 72, 75, 85
640 x 480 x 16	64K	60, 72, 75, 85
640 x 480 x 32	16 million	60, 72, 75, 85
800 x 600 x 8	256	60, 72, 75, 85
800 x 600 x 16	64K	60, 72, 75, 85
800 x 600 x 32	16 million	60, 72, 75, 85
1024 x 768 x 8	256	60, 70, 75, 85
1024 x 768 x 16	64K	60, 70, 75, 85
1024 x 768 x 32	16 million	60, 70, 75, 85

Note: NetWare and SCO drivers are contained in the respective operating system packages or bulletin boards.

Dimensions

Tower

- Width: 218.0 mm (8.6 in)
- Depth: 747.0 mm (29.4 in)
- Height: 440.0 mm (17.31 in)
- Weight:
  - 20 kg (42 lb) (minimum configuration) 38 kg (84 lb) (maximum configuration)

Rack —5U

- Width: 424.0 mm (16.7 in)
- Depth: 696.0 mm (27.4 in)
- Height: 218.0 mm (8.6 in)

Rack

- Weight:
  - 20 kg (42 lb) (minimum configuration)
  - 38 kg (84 lb) (maximum configuration)

Electrical: 7973 and 7974 MTM

- 100 to 240 V ac; 50 Hz — 60 Hz; 10 — 5 A Input kilovolt-amperes (kVA) (approximately):
  - Minimum configuration: 0.22 kVA
  - Maximum configuration: 0.59 kVA
- Btu output:
  - Ship configuration: 747 Btu/hr (219 watts)
  - Full configuration: 1959 Btu/hr (574 watts)
- Acoustical noise emission levels:
  - 5.5 bels (idling)
  - 6.0 bels (operating)

7975 and 7976 MTM

- 100 to 240 V ac; 50 Hz —60 Hz; 10 —5 A
- Input kilovolt-amperes (kVA) (approximately):
  - Minimum configuration: 0.22 kVA
  - Maximum configuration: 0.68 kVA
- Btu output:
  - Ship configuration: 747 Btu/hr (219 watts)
  - Full configuration: 2259 Btu/hr (662 watts)
- Acoustical noise emission levels:
  - 5.5 bels (idling)
  - 6.0 bels (operating)

Note: The noise emission level stated is the declared (upper limit) sound power level, in bels, for a random sample of machines. All measurements made in accordance with ISO 7779 and reported in conformance with ISO 9296.

These servers are intended for use as floor-standing servers and are tested and designed to operate in a horizontal position. These servers can also be used as a rack model with the optional rack install kit.

Standards: These systems support or comply with the following standards:

- Multiprocessor Specification (MPS) 1.4
- Peripheral Component Interconnect (PCI) specification 2.2
- Peripheral Component Interconnect (PCI-X) specification v2.0
- PCI-Express specification 1.0
- Hardware-enabled to meet the International Organization for Standardization (ISO) 9241, Part 3

Equipment Approvals and Safety

- FCC — Verified to comply with Part 15 of the FCC Rules, Class A
- Canada ICES-003, issue 4, Class A
- UL/IEC 60950-1 (13)
- CSA C22.2 No. 60950-1-03
- NOM-019[16]

[16] This server model is certified by the respective UL and NOM agencies.

Operating environment

- Temperature:
  - 10° to 35°C (50° to 95°F) at 0 to 914 m (0 to 3,000 ft)
  - 10° to 32°C (50° to 90°F) at 914 to 2,133 m (3,000 to 7,000 ft)
- Relative humidity: 8% to 80%
- Maximum altitude: 2,134 m (7,000 ft)

Hardware requirements: For attended installation of an operating system, this server requires a compatible:

- Keyboard
- Mouse
- HDD
- Display (C117, T115, T117 or equivalent)

Unattended or remote installation may be performed without requiring some or all of these components. Review your unattended software installation program information for specific hardware configuration requirements.

For service, the server requires a compatible:

- Keyboard
- Mouse
- HDD
- Display (E51, E54, E74, G78, LCD, or equivalent)

When having the unit serviced, plan to have these components attached to your server either directly or indirectly via a console switch.

Software requirements: The following network operating systems are supported in the x3400 server:

- Microsoft
  - Windows Server 2003, Standard Edition
  - Windows Server 2003, Enterprise Edition
  - Windows Server 2003
- Novell: NetWare 6.5
- Santa Cruz Operation, Inc.
  - SCO OpenServer 6.0.0
  - SCO UnixWare 7.1.4
- VMware: VMware ESX 3.0
- Linux™
  - Red Hat Enterprise Linux 4 AS for x86
  - Red Hat Enterprise Linux 4 AS for AMD64/EM64T
  - Red Hat Enterprise Linux 4 ES for x86
  - Red Hat Enterprise Linux 4 ES for AMD64/EM64T
  - Red Hat Enterprise Linux 4 WS for x86
  - Red Hat Enterprise Linux 4 WS for AMD64/EM64T
  - Red Hat Enterprise Linux 3 AS for x86
  - Red Hat Enterprise Linux 3 ES for x86
  - Red Hat Enterprise Linux 3 WS for x86
  - Red Hat Enterprise Linux 3 AS for AMD64/EM64T
  - Red Hat Enterprise Linux 3 ES for AMD64/EM64T
  - Red Hat Enterprise Linux 3 WS for AMD64/EM64T
  - SUSE Linux Enterprise Server 9 for AMD64/EM64T
  - SUSE Linux Enterprise Server 9 for x86

Note: Certification is planned for these operating systems. For additional information on support, certification, and versions on network operating systems, visit

http://www.ibm.com/pc/us/compat

Preload Option

The following network operating systems are supported as preloads in the xSeries 3400 server:

Microsoft:

- Windows Server 2003 Standard Edition (32-bit and 64-bit)
- Windows Server 2003 Enterprise Edition (32-bit)
- Windows Small Business Server 2003 Standard Edition (32-bit)

System x3650 T

Refer to Hardware Announcement 106-296, dated April 25, 2006, for a complete list for the 3650 T system.

Compatibility: The System x3400 server systems contain licensed system programs that include set configuration, set features, and test programs. System BIOS is loaded from a "flash" EEPROM into system memory. This BIOS provides instructions and interfaces designed to support the standard features of the x3400 server and to maintain compatibility with many current software programs.

To view detailed information on the Internet about IBM and non-IBM devices, adapters, software, and network operating systems supported with x3400 servers, visit

http://www.ibm.com/servers/eserver/serverproven/compat/us/

Contact your IBM representative or IBM Business Partner, or refer to the IBM Sales Manual for information on the compatibility of hardware and software for x3400 servers. The Sales Manual is updated periodically as new features and options are announced that support these servers.

Limitations

- The System x3400 servers support a maximum of 32 GB of system memory when you add a 4 GB memory DIMM in each of the eight DIMM slots. All supported system memory is addressable through direct memory access (DMA). The x3400 server supports 512 MB, 1 GB, 2 GB, and 4 GB (when available) DDR2 ECC SDRAM DIMMs, which are synchronized with processor FSB bandwidth (bus speeds run at 166 MHz but data is clocked on four edges, yielding a transfer rate of 667 MHz). DIMMs must be installed in matched pairs. Refer to the **Planning information** section for supported memory options.
- Mixing microprocessors of different speeds or cache size is not supported.
- Use the version of ServerGuide shipped with the system, or a later version, to load software and drivers. Earlier versions of ServerGuide may not be compatible with the server.

Refer to Hardware Announcement 106-296, dated April 25, 2006, for Limitations of the x3650 T system.

Refer to the **Software requirements** section for operating system limitations.

User group requirements: This announcement satisfies or partially satisfies requirements from one or more of the worldwide user group communities. Groups include COMMON, COMMON Europe, Guide Share Europe (GSE), InterAction (Australia/New Zealand), Japan Guide Share (JGS), and SHARE Inc.

Planning information

Customer responsibilities

Customer Setup: The x3400 servers are designated as customer setup. Customer setup instructions are shipped with systems and options.

Configuration Information:

Integrated RAID One Configuration

Two manufacturing instructions (MI) enable you to setup a RAID-1 configuration. These instructions enable configuration via Odyssey (IBM.com).

Bay configuration: The server contains 11 (or seven) drive bays. The eight 3.5-inch hot-swap bays are located on the lower half of xSeries 3400 tower models. These bays are ready for various supported hot-swap or simple-swap drive option installation. The three bays on the top portion of tower models are designed primarily for removable media devices. One bay contains the CD-ROM drive, while the remaining two 5.25-inch half-high bays can support tape backup or other devices.

SAS cabling considerations: Some x3400 server models contain one backplane that supports four hot-swap SAS drive bays. The backplane is connected to the integrated SAS eight port controller through one mini SAS cables.

ServeRAID™ 8k-I is a standard offering.

The 48x CD-ROM is cabled directly to the IDE port.

External SAS attachment: In the configurations where an external SAS device attachment is required, a support SAS adapter is required (25R8060).

External serial attachment: To attach an external serial cable RS-232, use the serial connector at the rear of the system.

Processor upgrades: The following processor upgrades are supported:

- Intel® 5050 3.0 GHz/667 MHz — 4 MB L2 Cache Xeon Processor (25R8926) x

Supported memory options: The following memory options are supported:

- IBM 1 GB PC2-5300 CL5 ECC DDR2 Chipkill AMFDIMM 667 MHz (39M5782)
- IBM 2 GB PC2-5300 CL5 ECC DDR2 Chipkill AMFDIMM 667 MHz (39M5785)
- IBM 4 GB PC2-5300 CL5 ECC DDR2 Chipkill AMFDIMM 667 MHz (39M5791)

Power supply requirements: These models contain either one 835-watt power supply, which is a hot-swap power supply, or one 670-W fixed power supply, model dependent. One hot-swap supply has enough power to supply a fully loaded box. If redundancy is required, you should install an additional power supply to ensure sufficient power will be available. A fault light illuminates when a power supply fails.

Optional rack installations: These models are optionally installable as rack units and are designed so they can be installed in an industry-standard 19-inch rack cabinet such as the NetBAY42 or NetBAY25. The x3400 server system requires a rack mount kit for rack installation. In addition, it can also be installed in the deeper NetBAY42 ER.

If you choose not to use an IBM rack, the cabinet must meet EIA-310-D standards for mounting flanges and hole clearances with front to rear mounting of 70 to 73 cm (27.5 to 28.5 in). The rack must provide sufficient room in front of the forward EIA flange to allow for bezel attachment. The standard for 310-D suggests 49 mm (1.9 in) clearance. It must also provide adequate room at the rear of the rack, behind the rear flange for cable management; the xSeries 236 server requires approximately 16.6 cm (6.5 in) in this space.

The rack should include perforated front and rear doors and must not prevent the flow of cool air into or out of the rack. The weight handling capacity of the rack is 22.7 kg (50 lb). Finally, the rack must provide proper stabilization so that the rack does not become unstable when servers are pulled out of service.

Cable orders: Broadcom 5721 KFB3 10/100/1000 Mbps, full-duplex Ethernet PCI-Express controllers, standard with the x3400 server, are connected directly to one independent RJ-45 connectors. The RJ-45 connectors provide a 10BaseT, 100Base-TX, or 1000Base-TX interface for connecting twisted-pair cable to the Ethernet network. Cabling is not included with the server. To connect the Ethernet controller to a repeater or switch, use a UTP cable with RJ-45 connectors at both ends. For 100/1000 Mbps operation, Category 5 cabling must be used. For 10 Mbps operation, Category 3, or better, cabling must be used.

There are no additional cabling requirements, other than for system power, keyboard, mouse, and monitor connections.

Installability: The System x3400 server requires about 30 minutes for installation. The x3650 T server also requires about 30 minutes for installation. Installation includes unpacking, setting up, and powering on the system. Additional time is required to install an operating system, additional adapters, or features.

Packaging: One box

System Unit Carton

- Contents: System Unit

Country Kit Carton

- Contents:
  - Keyboard with attached cable
  - Mouse with attached cable
  - System unit power cord
  - System x3400 Installation Guide
  - System x3400 Users Guide
  - ServerGuide and IBM Director
  - CD-ROM Packages
  - Publications CD
  - New Broadcom Ethernet Driver CD
  - ServeRAID 8k CD

The system is shipped as a single package. The country kit carton is contained inside the top portion of the system unit carton.

System x3650 T

Refer to Hardware Announcement 106-296, dated April 25, 2006, for complete packaging details.

Supplies

For end users: System x3400 and x3650 T servers can be purchased through dealers.

Security, auditability, and control

Security and auditability features include:

- Power-on and remote-control password functions provide controls of who has access to the data and server setup program on the server.
- Set unattended boot mode allows the system keyboard to be locked to all entries except the password and at the same time allows other computers on the network to access the system disk drive.
- Mechanical lock allows the user to lock the system cover to prevent unauthorized personnel access to diskette drives or removable media (tower models only, security of rack drawer models is provided by the rack enclosure).
- Selectable boot sequence prevents unauthorized installation of software or removal of data from the CD-ROM drive.

It is a customer's responsibility to ensure that the server is secure to prevent sensitive data from being removed.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communications facilities.

IBM Electronic Services

IBM Global Services has transformed its delivery of hardware and software support services to put you on the road to higher systems availability. IBM Electronic Services is a Web-enabled solution that provides you with an exclusive, no-additional-charge enhancement to the service and support available on the IBM eServer platform. These services provide the opportunity for greater system availability due to faster problem resolution and preemptive monitoring. IBM Electronic Services is comprised of two separate, but complementary, elements: IBM Electronic Services news page and IBM Electronic Service Agent™.

IBM Electronic Services news page provides you with a single Internet entry point that replaces the multiple entry points traditionally used by customers to access IBM Internet services and support. The news page enables you to gain easier access to IBM resources for assistance in resolving technical problems.

The IBM Electronic Service Agent is no-additional-charge software that resides on your IBM eServer system. It is designed to proactively monitor events and transmit system inventory information to IBM on a periodic, customer-defined timetable. The IBM Electronic Service Agent tracks system inventory, hardware error logs, and performance information. If the server is under a current IBM maintenance service agreement or within the IBM warranty period, the Service Agent automatically reports hardware problems to IBM. Early knowledge about potential problems enables IBM to provide proactive service that may result in higher system availability and performance. In addition, information collected through the Service Agent will be made available to IBM service support representatives when they are helping answer your questions or diagnosing problems.

To learn how IBM Electronic Services can work for you, visit

http://www.ibm.com/support/electronic

Terms and conditions

IBM Global Financing: Yes

To obtain copies of the IBM Statement of Limited Warranty, contact your reseller or IBM.

In the United States, call 800-IBM-SERV (426-7378), or write to:

Warranty Information
P.O. Box 12195
Research Triangle Park, NC 27709
Attn: Dept JDJA/B203

Warranty period

- System hardware
  - x3400 — 7973 Simple-swap SATA — One year parts and labor
  - x3400 — 7975 Hot-swap SAS/SATA — One year parts and labor
  - x3400 — 7974 Simple-swap SATA — Three year parts and labor
  - x3400 — 7976 Hot-swap SAS/SATA — Three year parts and labor
  - x3650 T — 7980 — Three years parts and labor

Optional IBM features initially installed in an IBM system carry the same warranty and warranty service support category as the system. If installed after the initial system installation, they carry the balance of the system warranty or the optional feature warranty, whichever greater.

Warranty service: If required, IBM provides repair or exchange service depending on the type of warranty service specified below for the machine. IBM will attempt to resolve your problem over the telephone or electronically by access to an IBM Web site. You must follow the problem determination and resolution procedures that IBM specifies. Scheduling of service will depend upon the time of your call and is subject to parts availability. Service levels are response time objectives and are not guaranteed. The specified level of warranty service may not be available in all worldwide locations. Additional charges may apply outside IBM′s normal service area. Contact your local IBM representative or your reseller for country- and location-specific information.

Customer replaceable unit (CRU) (keyboard, mouse, speaker, memory, HDD) service is offered as detailed below and there is also on-site service for other selected parts.

CRU service: IBM provides replacement CRUs to you for you to install. CRU information and replacement instructions are shipped with your machine and are available from IBM at any time on your request. CRUs are designated as being either a Tier 1 or a Tier 2 CRU. Installation of Tier 1 CRUs is your responsibility. If IBM installs a Tier 1 CRU, at your request, you will be charged for the installation. You may install a Tier 2 CRU yourself or request IBM to install it, at no additional charge under the type of warranty service specified below, on-site service.

Based upon availability, CRUs will be shipped for next business day (NBD) delivery. IBM specifies in the materials shipped with a replacement CRU whether a defective CRU must be returned to IBM. When return is required, return instructions and a container are shipped with the replacement CRU, and you may be charged for the replacement CRU if IBM does not receive the defective CRU within 30 days of your receipt of the replacement.

The following parts have been designated as Tier 1 CRUs:

- Bezel
- Fillers
- Shell
- System Service Label
- Rack Kit
- DVD-ROM Combo
- Tray, Media
- Rear Panel, Card/Cable Asm
- Management Module
- Blower
- Fan Pack
- Power Supply
- Line Cord
- Cable, Serial Port

On-site service: IBM on-site repair (IOR), 9 hours per day, Monday through Friday excluding holidays, NBD response. IBM will repair the failing machine at your location and verify its operation. You must provide suitable working area to allow disassembly and reassembly of the IBM machine. The area must be clean, well-lit, and suitable for the purpose. On-site service is not available in all countries, and some countries have kilometer or mileage limitations from an IBM service center. In those locations where on-site service is not available, the normal in-county service delivery is used.

Call IBM at 800-IBM-SERV (426-7378), to assist with problem isolation for hardware to determine if warranty service is required. Telephone support may be subject to additional charges, even during the limited warranty period.

International Warranty Service (IWS): IWS is available during the warranty period to customers who travel or relocate to countries where their computer is sold and serviced by IBM or IBM resellers authorized to perform warranty service. Eligible IBM computers are identified by their four-digit machine type.

You can obtain IWS through the method of service, such as CRU, depot, carry-in or on-site, provided in the servicing country. Service methods and procedures vary by country, and some service or parts may not be available in all countries. Service centers in certain countries may not be able to service all models of a particular machine type. In addition, some countries may have fees and restrictions that apply at the time of service.

To determine the eligibility of your computer and to view a list of countries where service is available, visit

http://www-3.ibm.com/support/site.wss/warranty/warranty.vm

For more information on IWS, Services Announcement 601-034, dated September 25, 2001.

Note: Due to the earth′s magnetic field, CRT monitors are manufactured to work in northern, southern, and equatorial regions of the earth and may not produce a satisfactory image when moved between them. Any required adjustment (if possible) is not covered under IWS and may be subject to a chargeable action. The magnetic field does not affect flat-panel LCD monitors.

Licensing: Programs included with this product are licensed under the terms and conditions of the License Agreements that are shipped with the system.

Maintenance services — ServicePac®, ServiceSuite™ and ServiceElect

ServicePac, ServiceSuite and ServiceElect provide hardware warranty service upgrades, maintenance, and selected support services in one agreement.

Warranty service upgrade: During the warranty period, warranty service upgrade provides an enhanced level of on-site service for an additional charge. A warranty service upgrade must be purchased during the warranty period and is for a fixed term (duration). It is not refundable or transferable and may not be prorated. If required, IBM will provide the warranty service upgrade enhanced level of on-site service acquired by the customer. Service levels are response time objectives and are not guaranteed.

IBM will attempt to resolve your problem over the telephone or electronically by access to an IBM Web site. You must follow the problem determination and resolution procedures that IBM specifies. Scheduling of service will depend upon the time of your call and is subject to parts availability.

CRUs will be provided as part of the machine′s standard warranty CRU service except that you may install a Tier 1 CRU yourself or request IBM installation, at no additional charge, under one of the on-site service levels specified below.

IBM will repair the failing machine at your location and verify its operation. You must provide suitable working area to allow disassembly and reassembly of the IBM machine. The area must be clean, well-lit, and suitable for the purpose.

The following warranty service upgrade options are available:

- IOR, 9 hours per day, Monday through Friday excluding holidays, 4-hour average response
- IOR, 24 hours per day, 7 days a week, 4-hour average response
- IOR, 24 hours per day, 7 days a week, 2-hour average response

Maintenance service: If required, IBM provides repair or exchange service depending on the type of maintenance service specified below for the machine. IBM will attempt to resolve your problem over the telephone or electronically by access to an IBM Web site. You must follow the problem determination and resolution procedures that IBM specifies. Scheduling of service will depend upon the time of your call and is subject to parts availability. Service levels are response time objectives and are not guaranteed.

CRU service: If your problem can be resolved with a CRU (keyboard, mouse, speaker, memory, HDD), IBM will ship the CRU to you for you to install. CRU information and replacement instructions are shipped with your machine and are available from IBM at any time on your request.

IBM specifies in the materials shipped with a replacement CRU whether a defective CRU must be returned to IBM. When return is required, return instructions and a container are shipped with the replacement CRU, and you may be charged for the replacement CRU if IBM does not receive the defective CRU within 30 days of your receipt of the replacement.

On-site service: IOR, IBM will repair the failing machine at your location and verify its operation. You must provide suitable working area to allow disassembly and reassembly of the IBM machine. The area must be clean, well-lit, and suitable for the purpose.

The following on-site service options are available:

- IOR, 9 hours per day, Monday through Friday excluding holidays, NBD response
- IOR, 9 hours per day, Monday through Friday excluding holidays, 4-hour average response
- IOR, 24 hours per day, 7 days a week, 4-hour average response
- IOR, 24 hours per day, 7 days a week, 2-hour average response

Maintenance service (ICA)

Maintenance services are available for ICA legacy contracts. The preferred go-to-market offerings are ServiceElect. However, ICA legacy contracts will still be available for current customers until they are withdrawn.

Alternative service (warranty service upgrades): During the warranty period, warranty service upgrade provides an enhanced level of on-site service for an additional charge. A warranty service upgrade must be purchased during the warranty period and is for a fixed term (duration). It is not refundable or transferable and may not be prorated. If required, IBM will provide the warranty service upgrade enhanced level of on-site service acquired by the customer. Service levels are response time objectives and are not guaranteed.

IBM will attempt to resolve your problem over the telephone or electronically by access to an IBM Web site. You must follow the problem determination and resolution procedures that IBM specifies. Scheduling of service will depend upon the time of your call and is subject to parts availability.

CRUs will be provided as part of the machine's standard warranty CRU Service except that you may install a Tier 1 CRU yourself or request IBM to install it, at no additional charge under the type of warranty service specified below, on-site service.

IBM will repair the failing machine at your location and verify its operation. You must provide suitable working area to allow disassembly and reassembly of the IBM machine. The area must be clean, well-lit, and suitable for the purpose.

The following warranty service upgrade option is available.

- IOR, 24 hours per day, 7 days a week, 4-hour average response

Maintenance service: If required, IBM provides repair or exchange service depending on the type of maintenance service specified below for the machine. IBM will attempt to resolve your problem over the telephone or electronically by access to an IBM Web site. You must follow the problem determination and resolution procedures that IBM specifies. Scheduling of service will depend upon the time of your call and is subject to parts availability. Service levels are response time objectives and are not guaranteed.

CRU service: If your problem can be resolved with a CRU (keyboard, mouse, speaker, memory, HDD), IBM will ship the CRU to you for you to install. CRU information and replacement instructions are shipped with your machine and are available from IBM at any time on your request.

IBM specifies in the materials shipped with a replacement CRU whether a defective CRU must be returned to IBM. When return is required, return instructions and a container are shipped with the replacement CRU, and you may be charged for the replacement CRU if IBM does not receive the defective CRU within 30 days of your receipt of the replacement.

On-site service: IOR, IBM will repair the failing machine at your location and verify its operation. You must provide suitable working area to allow disassembly and reassembly of the IBM machine. The area must be clean, well-lit, and suitable for the purpose.

The following in-site service options are available:

- IOR, 9 hours per day, Monday through Friday excluding holidays, NBD response
- IOR, 24 hours per day, 7 days a week, 4-hour average response

Non-IBM parts support

Warranty service: IBM is now shipping machines with selected non-IBM parts that contain an IBM field replaceable unit (FRU) part number label. These parts are to be serviced during the IBM machine warranty period. IBM is covering the service on these selected non-IBM parts as an accommodation to their customers, and normal warranty service procedures for the IBM machine apply.

Warranty service upgrades and maintenance services: Under certain conditions, IBM Integrated Technology Services repairs selected non-IBM parts at no additional charge for machines that are covered under warranty service upgrades or maintenance services.

IBM Service provides hardware problem determination on non-IBM parts (adapter cards, PCMCIA cards, disk drives, memory, and so forth) installed within IBM systems covered under warranty service upgrades or maintenance services and provides the labor to replace the failing parts at no additional charge.

If IBM has a Technical Service Agreement with the manufacturer of the failing part, or if the failing part is an accommodations part (a part with an IBM FRU label), IBM may also source and replace the failing part at no additional charge. For all other non-IBM parts, customers are responsible for sourcing the parts. Installation labor is provided at no additional charge, if the machine is covered under a warranty service upgrade or a maintenance service.

IBM hourly service rate classification: One

Field-installable features: Yes

Model conversions: No

Machine installation: Customer setup. Customers are responsible for installation according to the instructions IBM provides with the machine.

Graduated program license charges apply: No These products do not contain licensed internal code or licensed machine code.

Educational allowance: None

Prices

The following are newly announced features on the specified models of the IBM xSeries 7974 machine type:

Description	Model number	Feature number	IBM list price*	Initial/ MES/ Both/ Support
IBM System x3400	AC1		$ 0	
	MC1		0	
1GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz	AC1	0542	249	Initial
	MC1			Initial
2GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz	AC1	0544	599	Initial
	MC1			Initial

512MB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz	AC1	0546	169	Initial
	MC1			Initial
System Packaging -- U.S.	AC1	0762	NC	Initial
	MC1			Initial
	AC1	0769	NC	Initial
	MC1			Initial
5.25 to 3.5 Conversion Kit, no Bezel	AC1	0895	NC	Initial
	MC1			Initial
Universal Adapter Bracket 3.5† to 5.25† -- Black	AC1	0918	NC	Initial
	MC1			Initial
Dummy Heatsink	AC1	0963	NC	Initial
	MC1			Initial
SATA HostRAID Driver Support	AC1	0993	NC	Initial
	MC1			Initial
Planar Base	AC1	1115	NC	Initial
	MC1			Initial
x3400 Non-Redundant Power Base	AC1	1171	275	Initial
	MC1			Initial
Intel Xeon Processor 5110 1.60GHz 1066MHz FSB 2x2MB L2 Cache Dual Core Xeon Processor	AC1	1296	389	Initial
	MC1			Initial
Intel Xeon Processor 5120 1.87GHz 1066MHz FSB 2x2MB L2 Cache Dual Core Xeon Processor	AC1	1297	479	Initial
	MC1			Initial
Intel Xeon Processor 5130 2.0GHz 1333MHz FSB 2x2MB L2 Cache Dual Core Xeon Processor	AC1	1298	529	Initial
	MC1			Initial
Additional Intel Xeon Processor 5110 1.60GHz 1066MHz FSB 2x2MB L2 Cache Dual Core Xeon Processor	AC1	1380	429	Initial
	MC1			Initial
Processor 5120 1.87GHz 1066MHz FSB 2x2MB L2 Cache Dual Core Xeon Processor	AC1	1381	519	Initial
	MC1			Initial
Processor 5130 2.0GHz 1333MHz FSB 2X2MB L2 Cache Dual Core Xeon Processor	AC1	1382	629	Initial
	MC1			Initial
NetXtreme 1000 T + Ethernet Adapter	AC1	1478	139	Initial
	MC1			Initial
IBM iSCSI Server SX Adapter	AC1	1481	959	Initial
	MC1			Initial
IBM iSCSI Server TX Adapter	AC1	1483	649	Initial
	MC1			Initial
NetXtreme 1000 Express G Ethernet Adapter	AC1	1486	169	Initial
	MC1			Initial
S + Ethernet Adapter	AC1	1487	579	Initial
	MC1			Initial
T + Dual Port Ethernet Adapter	AC1	1489	249	Initial
	MC1			Initial
PRO/1000 GT Dual Port Server Adapter by Intel	AC1	1579	249	Initial
	MC1			Initial
Remote Supervisor Adapter II Slimline Refresh 1	AC1	1605	385	Initial
	MC1			Initial
Remote Supervisor Adapter II (U.S.)	AC1	1609	439	Initial
	MC1			Initial
ServeRAID-8k SAS Controller	AC1	1670	359	Initial
	MC1			Initial
ServeRAID 8k-l SAS Controller	AC1	1671	29	Initial
	MC1			Initial
Ultra320 SCSI Controller 2	AC1	1680	219	Initial
	MC1			Initial
Capacity Scheduling Service	AC1	1772	NC	Initial
	MC1			Initial
Custom SLA Scheduling Service	AC1	1796	NC	Initial
	MC1			Initial
No Optical Device	AC1	2077	NC	Initial
	MC1			Initial
Custom Asset Tagging -- Standard	AC1	2200	10	Initial
	MC1			Initial
	AC1	2201	20	Initial
	MC1			Initial
Server Custom Image	AC1	2204	35	Initial
	MC1			Initial
Standard Customization & Personalization	AC1	2208	10	Initial
	MC1			Initial
Enhance Customization & Personalization	AC1	2209	20	Initial
	MC1			Initial
Custom RAID Configuration	AC1	2212	250	Initial
	MC1			Initial
Custom Labeling	AC1	2220	5	Initial
	MC1			Initial
Custom Palletization	AC1	2221	5	Initial
	MC1			Initial
Vendor Logo Hardware	AC1	2247	NC	Initial
	MC1			Initial
Option Approved for Other MT	AC1	2248	NC	Initial
	MC1			Initial
Custom Option Request	AC1	2249	NC	Initial
	MC1			Initial
RAID Configuration	AC1	2302	150	Initial
	MC1			Initial
Rack Installation >1U Component	AC1	2306	150	Initial
	MC1			Initial
Department of Defense UID Label	AC1	2320	10	Initial
	MC1			Initial
Install in Rack 01	AC1	3101	NC	Initial
	MC1			Initial
Install in Rack 02	AC1	3102	NC	Initial
	MC1			Initial
Install in Rack 03	AC1	3103	NC	Initial
	MC1			Initial
Install in Rack 04	AC1	3104	NC	Initial
	MC1			Initial
Install in Rack 05	AC1	3105	NC	Initial
	MC1			Initial
Install in Rack 06	AC1	3106	NC	Initial
	MC1			Initial
Install in Rack 07	AC1	3107	NC	Initial
	MC1			Initial
Install in Rack 08	AC1	3108	NC	Initial
	MC1			Initial
Install in Rack 09	AC1	3109	NC	Initial
	MC1			Initial
Install in Rack 10	AC1	3110	NC	Initial
	MC1			Initial
Install in Rack 11	AC1	3111	NC	Initial
	MC1			Initial
Install in Rack 12	AC1	3112	NC	Initial
	MC1			Initial
Install in Rack 13	AC1	3113	NC	Initial
	MC1			Initial
Install in Rack 14	AC1	3114	NC	Initial
	MC1			Initial
Install in Rack 15	AC1	3115	NC	Initial
	MC1			Initial
Install in Rack 16	AC1	3116	NC	Initial
	MC1			Initial
Install in Rack 17	AC1	3117	NC	Initial
	MC1			Initial
Install in Rack 18	AC1	3118	NC	Initial
	MC1			Initial
Install in Rack 19	AC1	3119	NC	Initial
	MC1			Initial
Install in Rack 20	AC1	3120	NC	Initial
	MC1			Initial
Install in Rack 21	AC1	3121	NC	Initial
	MC1			Initial
Install in Rack 22	AC1	3122	NC	Initial
	MC1			Initial
Install in Rack 23	AC1	3123	NC	Initial
	MC1			Initial
Install in Rack 24	AC1	3124	NC	Initial

	MC1			Initial		MC1			Initial
Install in Rack 25	AC1	3125	NC	Initial	Rack location U06	AC1	3206	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 26	AC1	3126	NC	Initial	Rack location U07	AC1	3207	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 27	AC1	3127	NC	Initial	Rack location U08	AC1	3208	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 28	AC1	3128	NC	Initial	Rack location U09	AC1	3209	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 29	AC1	3129	NC	Initial	Rack location U10	AC1	3210	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 30	AC1	3130	NC	Initial	Rack location U11	AC1	3211	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 31	AC1	3131	NC	Initial	Rack location U12	AC1	3212	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 32	AC1	3132	NC	Initial	Rack location U13	AC1	3213	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 33	AC1	3133	NC	Initial	Rack location U14	AC1	3214	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 34	AC1	3134	NC	Initial	Rack location U15	AC1	3215	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 35	AC1	3135	NC	Initial	Rack location U16	AC1	3216	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 36	AC1	3136	NC	Initial	Rack location U17	AC1	3217	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 37	AC1	3137	NC	Initial	Rack location U18	AC1	3218	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 38	AC1	3138	NC	Initial	Rack location U19	AC1	3219	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 39	AC1	3139	NC	Initial	Rack location U20	AC1	3220	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 40	AC1	3140	NC	Initial	Rack location U21	AC1	3221	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 41	AC1	3141	NC	Initial	Rack location U22	AC1	3222	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 42	AC1	3142	NC	Initial	Rack location U23	AC1	3223	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 43	AC1	3143	NC	Initial	Rack location U24	AC1	3224	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 44	AC1	3144	NC	Initial	Rack location U25	AC1	3225	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 45	AC1	3145	NC	Initial	Rack location U26	AC1	3226	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 46	AC1	3146	NC	Initial	Rack location U27	AC1	3227	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 47	AC1	3147	NC	Initial	Rack location U28	AC1	3228	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 48	AC1	3148	NC	Initial	Rack location U29	AC1	3229	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 49	AC1	3149	NC	Initial	Rack location U30	AC1	3230	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 50	AC1	3150	NC	Initial	Rack location U31	AC1	3231	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 51	AC1	3151	NC	Initial	Rack location U32	AC1	3232	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 52	AC1	3152	NC	Initial	Rack location U33	AC1	3233	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 53	AC1	3153	NC	Initial	Rack location U34	AC1	3234	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 54	AC1	3154	NC	Initial	Rack location U35	AC1	3235	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 55	AC1	3155	NC	Initial	Rack location U36	AC1	3236	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 56	AC1	3156	NC	Initial	Rack location U37	AC1	3237	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 57	AC1	3157	NC	Initial	Rack location U38	AC1	3238	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 58	AC1	3158	NC	Initial	Rack location U39	AC1	3239	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 59	AC1	3159	NC	Initial	Rack location U40	AC1	3240	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 60	AC1	3160	NC	Initial	Rack location U41	AC1	3241	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 61	AC1	3161	NC	Initial	Rack location U42	AC1	3242	NC	Initial
	MC1			Initial		MC1			Initial
Install in Rack 62	AC1	3162	NC	Initial					
	MC1			Initial	IBM 48X-20X CD-ROM Black	AC1	4137	29	Initial
Install in Rack 63	AC1	3163	NC	Initial	Internal IDE Drive	MC1			Initial
	MC1			Initial					
Install in Rack 64	AC1	3164	NC	Initial	IBM 48X/32X/48X/16X Max	AC1	4139	99	Initial
	MC1			Initial	CD-RW/DVD Combination Drive	MC1			Initial
Rack location U01	AC1	3201	NC	Initial	IBM DVD Multi-Burner Plus	AC1	4140	169	Initial
	MC1			Initial	Drive	MC1			Initial
Rack location U02	AC1	3202	NC	Initial					
	MC1			Initial	IBM 16X RAM-Read DVD-ROM IDE	AC1	4149	69	Initial
Rack location U03	AC1	3203	NC	Initial	Drive	MC1			Initial
	MC1			Initial					
Rack location U04	AC1	3204	NC	Initial	Ultra160 LVD SCSI 1-drop	AC1	4204	30	Initial
	MC1			Initial	Cable	MC1			Initial
Rack location U05	AC1	3205	NC	Initial					

HS DASD EMC Filler	AC1	4308	0	Initial
	MC1			Initial
Key Lock Asm	AC1	4343	0	Initial
	MC1			Initial
SATA Simple Swap Drive Kit	AC1	4344	0	Initial
	MC1			Initial
Customer Provided and Installed -- SCO UnixWare 7.1.4	AC1	4712	NC	Initial
Installed -- Red Hat Enterprise Linux 4 ES for AMD64/EM64T	AC1	4714	NC	Initial
Installed -- Microsoft Windows 2000 Server	AC1	4716	NC	Initial
Installed -- Microsoft Windows 2000 Advanced Server	AC1	4729	NC	Initial
Installed -- SCO OpenServer 6.0.0	AC1	4731	NC	Initial
Installed -- Red Hat Enterprise Linux 4 WS for x86	AC1	4732	NC	Initial
Installed -- Microsoft Windows Server 2003, Enterprise Edition	AC1	4734	NC	Initial
Standard Edition	AC1	4735	NC	Initial
Web Edition	AC1	4736	NC	Initial
Enterprise x64 Edition	AC1	4737	NC	Initial
Installed -- Red Hat Enterprise Linux 3 WS for x86	AC1	4741	NC	Initial
Enterprise Linux 4 WS for AMD64/EM64T	AC1	4742	NC	Initial
Enterprise Linux 4 AS for AMD64/EM64T	AC1	4743	NC	Initial
Installed -- SUSE Linux Enterprise Server 9 for x86	AC1	4744	NC	Initial
Installed -- Red Hat Enterprise Linux 4 ES for x86	AC1	4745	NC	Initial
AS for x86	AC1	4746	NC	Initial
Installed -- SUSE Linux Enterprise Server 9 for AMD64/EM64T	AC1	4747	NC	Initial
Installed -- Microsoft Windows Server 2003, Standard x64 Edition	AC1	4748	NC	Initial
Installed -- NetWare 6.5	AC1	4749	NC	Initial
Installed -- Microsoft Windows Small Business Server 2003	AC1	4758	NC	Initial
Installed -- Red Hat Enterprise Linux 3 AS for x86	AC1	4759	NC	Initial
ES for AMD64/EM64T	AC1	4761	NC	Initial
AS for AMD64/EM64T	AC1	4762	NC	Initial
ES for x86	AC1	4763	NC	Initial
Installed -- VMware ESX Server 3.0	AC1	4764	NC	Initial
Installed -- Red Hat Enterprise Linux 3 WS for AMD64/EM64T	AC1	4765	NC	Initial
500GB 7200 rpm 3.5† Simple-Swap SATA HDD	AC1	5288	699	Initial
	MC1			Initial
160GB 7200 rpm 3.5† Simple-Swap SATA HDD	AC1	5291	149	Initial
	MC1			Initial
250GB 7200 rpm 3.5† Simple-Swap SATA HDD	AC1	5292	259	Initial
	MC1			Initial
VXA 3 Half High Internal Back-up	AC1	5362	1,199	Initial
	MC1			Initial
Line cord -- 2.8m, 100-120V, C13 to NEMA 5-15P (U.S.)	AC1	6313	0	Initial
	MC1			Initial
No HDD Selected	AC1	8026	NC	Initial
	MC1			Initial
Consolidated Delivery	AC1	8031	NC	Initial
	MC1			Initial
e1350 Solution Component	AC1	8034	NC	Initial
	MC1			Initial
Compute Node	AC1	8036	NC	Initial
	MC1			Initial
Management Node	AC1	8037	NC	Initial
	MC1			Initial
Storage Node	AC1	8038	NC	Initial
	MC1			Initial
General Racking Solution	AC1	8072	NC	Initial
	MC1			Initial
No SATA HDD Selected	AC1	8080	NC	Initial
	MC1			Initial
No Publications Selected	AC1	8086	NC	Initial
	MC1			Initial
System Documentation and Software -- U.S. English	AC1	8516	NC	Initial
	MC1			Initial
IBM Preferred Pro Keyboard -- U.S.B -- U.S. English	AC1	8750	29	Initial
	MC1			Initial
IBM 2 Button Optical Wheel Mouse -- Black -- U.S.B	AC1	8912	19	Initial
	MC1			Initial
IBM 3 Button Optical Mouse -- Black -- U.S.B	AC1	8913	19	Initial
	MC1			Initial
Integrate in manufacturing	AC1	8971	NC	Initial
	MC1			Initial
Ship Uninstalled (Safety)	AC1	8972	NC	Initial
	MC1			Initial
Internal RAID -- Cabled and Setup	AC1	9010	NC	Initial
	MC1			Initial
Cabled only, Setup by Customer	AC1	9011	NC	Initial
	MC1			Initial
No Internal RAID	AC1	9012	NC	Initial
	MC1			Initial
Hot Spare	AC1	9013	NC	Initial
	MC1			Initial
RAID 0 -- SATA Primary Array -- minimum of 2 HDD required	AC1	9019	NC	Initial
	MC1			Initial
RAID 1 -- SATA Primary Array -- 2 HDDs required	AC1	9020	NC	Initial
	MC1			Initial
RAID 5 -- SATA Primary Array -- minimum of 3 HDDs required	AC1	9021	NC	Initial
	MC1			Initial
RAID 0 -- SATA Secondary Array -- minimum of 2 HDD required	AC1	9105	NC	Initial
	MC1			Initial
RAID 1 -- SATA Secondary Array -- 2 HDDs required	AC1	9106	NC	Initial
	MC1			Initial
Integrated SATA RAID 1 -- 2 HDDs required	AC1	9110	NC	Initial
	MC1			Initial
Integrated SATA RAID 0 -- 2 HDDs required	AC1	9111	NC	Initial
	MC1			Initial
Storage Subsystem ID 01	AC1	9170	NC	Initial
	MC1			Initial
Storage Subsystem ID 02	AC1	9171	NC	Initial
	MC1			Initial
Storage Subsystem ID 03	AC1	9172	NC	Initial
	MC1			Initial
Storage Subsystem ID 04	AC1	9173	NC	Initial
	MC1			Initial
Storage Subsystem ID 05	AC1	9174	NC	Initial
	MC1			Initial
Storage Subsystem ID 06	AC1	9175	NC	Initial
	MC1			Initial
Storage Subsystem ID 07	AC1	9176	NC	Initial
	MC1			Initial
Storage Subsystem ID 08	AC1	9177	NC	Initial
	MC1			Initial
Storage Subsystem ID 09	AC1	9178	NC	Initial
	MC1			Initial
Storage Subsystem ID 10	AC1	9179	NC	Initial

	MC1			Initial
Storage Subsystem ID 11	AC1	9180	NC	Initial
	MC1			Initial
Storage Subsystem ID 12	AC1	9181	NC	Initial
	MC1			Initial
Storage Subsystem ID 13	AC1	9182	NC	Initial
	MC1			Initial
Storage Subsystem ID 14	AC1	9183	NC	Initial
	MC1			Initial
Storage Subsystem ID 15	AC1	9184	NC	Initial
	MC1			Initial
Storage Subsystem ID 16	AC1	9185	NC	Initial
	MC1			Initial
Storage Subsystem ID 17	AC1	9186	NC	Initial
	MC1			Initial
Storage Subsystem ID 18	AC1	9187	NC	Initial
	MC1			Initial
Storage Subsystem ID 19	AC1	9188	NC	Initial
	MC1			Initial
Storage Subsystem ID 20	AC1	9189	NC	Initial
	MC1			Initial
Preload Specify	AC1	9200	NC	Initial
	MC1			Initial
Windows Specify	MC1	9201	NC	Initial
Red Hat Specify	AC1	9202	NC	Initial
SUSE Specify	AC1	9203	NC	Initial
Drop-in-the-Box Specify	AC1	9205	NC	Initial
	MC1			Initial
No Preload Specify	AC1	9206	NC	Initial
System Documentation and Software -- U.S. English	AC1	9328	NC	Initial
	MC1			Initial

The following are newly announced features on the specified models of the IBM xSeries 7976 machine type:

Description	Model number	Feature number	IBM list price	Initial/ MES/ Both/ Support
IBM System x3400	AC1		$ 0	
	MC1		0	
1GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz	AC1	0542	249	Initial
	MC1			Initial
2GB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz	AC1	0544	599	Initial
	MC1			Initial
512MB PC2-5300 CL5 ECC DDR2 Chipkill FBDIMM 667MHz	AC1	0546	169	Initial
	MC1			Initial
System Packaging -- U.S.	AC1	0769	NC	Initial
	MC1			Initial
5.25 to 3.5 Conversion Kit, no Bezel	AC1	0895	NC	Initial
	MC1			Initial
Universal Adapter Bracket 3.5† to 5.25† -- Black	AC1	0918	NC	Initial
	MC1			Initial
x3400/x3500 Redundant Power and Cooling Option	AC1	0942	NC	Initial
	MC1			Initial
Dummy Heatsink	AC1	0963	NC	Initial
	MC1			Initial
Planar Base	AC1	1115	NC	Initial
	MC1			Initial
x3400 Non-Redundant Power Base	AC1	1171	325	Initial
	MC1			Initial
x3400 Redundant Power Base	AC1	1172	405	Initial
	MC1			Initial
Intel Xeon Processor 5110 1.60GHz 1066MHz FSB 2x2MB L2 Cache Dual Core Xeon Processor	AC1	1296	379	Initial
	MC1			Initial
5120 1.87GHz 1066MHz FSB 2x2MB L2 Cache Dual Core Xeon Processor	AC1	1297	469	Initial
	MC1			Initial
5130 2.0GHz 1333MHz FSB 2x2MB L2 Cache Dual Core Xeon Processor	AC1	1298	529	Initial
	MC1			Initial
Additional Intel Xeon Processor 5110 1.60GHz 1066MHz FSB 2x2MB L2 Cache Dual Core Xeon Processor	AC1	1380	429	Initial
	MC1			Initial
Processor 5120 1.87GHz 1066MHz FSB 2x2MB L2 Cache Dual Core Xeon Processor	AC1	1381	519	Initial
	MC1			Initial
Processor 5130 2.0GHz 1333MHz FSB 2X2MB L2 Cache Dual Core Xeon Processor	AC1	1382	629	Initial
	MC1			Initial
NetXtreme 1000 T + Ethernet Adapter	AC1	1478	139	Initial
	MC1			Initial
IBM iSCSI Server SX Adapter	AC1	1481	959	Initial
	MC1			Initial
IBM iSCSI Server TX Adapter	AC1	1483	649	Initial
	MC1			Initial
NetXtreme 1000 Express G Ethernet Adapter	AC1	1486	169	Initial
	MC1			Initial
S + Ethernet Adapter	AC1	1487	579	Initial
	MC1			Initial
T + Dual Port Ethernet Adapter	AC1	1489	249	Initial
	MC1			Initial
PRO/1000 GT Dual Port Server Adapter by Intel	AC1	1579	249	Initial
	MC1			Initial
Remote Supervisor Adapter II Slimline Refresh 1	AC1	1605	385	Initial
	MC1			Initial
Remote Supervisor Adapter II (U.S.)	AC1	1609	439	Initial
	MC1			Initial
ServeRAID-8k SAS Controller	AC1	1670	359	Initial
	MC1			Initial
ServeRAID 8k-l SAS Controller	AC1	1671	29	Initial
	MC1			Initial
Ultra320 SCSI Controller 2	AC1	1680	219	Initial
	MC1			Initial
Capacity Scheduling Service	AC1	1772	NC	Initial
	MC1			Initial
Custom SLA Scheduling Service	AC1	1796	NC	Initial
	MC1			Initial
No Optical Device	AC1	2077	NC	Initial
	MC1			Initial
Custom Asset Tagging -- Standard	AC1	2200	10	Initial
	MC1			Initial
	AC1	2201	20	Initial
	MC1			Initial
Server Custom Image	AC1	2204	35	Initial
	MC1			Initial
Standard Customization & Personalization	AC1	2208	10	Initial
	MC1			Initial
Enhance Customization & Personalization	AC1	2209	20	Initial
	MC1			Initial
Custom RAID Configuration	AC1	2212	250	Initial
	MC1			Initial
Custom Labeling	AC1	2220	5	Initial
	MC1			Initial
Custom Palletization	AC1	2221	5	Initial
	MC1			Initial
Vendor Logo Hardware	AC1	2247	NC	Initial
	MC1			Initial
Option Approved for Other MT	AC1	2248	NC	Initial
	MC1			Initial
Custom Option Request	AC1	2249	NC	Initial
	MC1			Initial

RAID Configuration	AC1	2302	150	Initial
	MC1			Initial
Rack Installation >1U Component	AC1	2306	150	Initial
	MC1			Initial
Department of Defense UID Label	AC1	2320	10	Initial
	MC1			Initial
Install in Rack 01	AC1	3101	NC	Initial
	MC1			Initial
Install in Rack 02	AC1	3102	NC	Initial
	MC1			Initial
Install in Rack 03	AC1	3103	NC	Initial
	MC1			Initial
Install in Rack 04	AC1	3104	NC	Initial
	MC1			Initial
Install in Rack 05	AC1	3105	NC	Initial
	MC1			Initial
Install in Rack 06	AC1	3106	NC	Initial
	MC1			Initial
Install in Rack 07	AC1	3107	NC	Initial
	MC1			Initial
Install in Rack 08	AC1	3108	NC	Initial
	MC1			Initial
Install in Rack 09	AC1	3109	NC	Initial
	MC1			Initial
Install in Rack 10	AC1	3110	NC	Initial
	MC1			Initial
Install in Rack 11	AC1	3111	NC	Initial
	MC1			Initial
Install in Rack 12	AC1	3112	NC	Initial
	MC1			Initial
Install in Rack 13	AC1	3113	NC	Initial
	MC1			Initial
Install in Rack 14	AC1	3114	NC	Initial
	MC1			Initial
Install in Rack 15	AC1	3115	NC	Initial
	MC1			Initial
Install in Rack 16	AC1	3116	NC	Initial
	MC1			Initial
Install in Rack 17	AC1	3117	NC	Initial
	MC1			Initial
Install in Rack 18	AC1	3118	NC	Initial
	MC1			Initial
Install in Rack 19	AC1	3119	NC	Initial
	MC1			Initial
Install in Rack 20	AC1	3120	NC	Initial
	MC1			Initial
Install in Rack 21	AC1	3121	NC	Initial
	MC1			Initial
Install in Rack 22	AC1	3122	NC	Initial
	MC1			Initial
Install in Rack 23	AC1	3123	NC	Initial
	MC1			Initial
Install in Rack 24	AC1	3124	NC	Initial
	MC1			Initial
Install in Rack 25	AC1	3125	NC	Initial
	MC1			Initial
Install in Rack 26	AC1	3126	NC	Initial
	MC1			Initial
Install in Rack 27	AC1	3127	NC	Initial
	MC1			Initial
Install in Rack 28	AC1	3128	NC	Initial
	MC1			Initial
Install in Rack 29	AC1	3129	NC	Initial
	MC1			Initial
Install in Rack 30	AC1	3130	NC	Initial
	MC1			Initial
Install in Rack 31	AC1	3131	NC	Initial
	MC1			Initial
Install in Rack 32	AC1	3132	NC	Initial
	MC1			Initial
Install in Rack 33	AC1	3133	NC	Initial
	MC1			Initial
Install in Rack 34	AC1	3134	NC	Initial
	MC1			Initial
Install in Rack 35	AC1	3135	NC	Initial
	MC1			Initial
Install in Rack 36	AC1	3136	NC	Initial
	MC1			Initial
Install in Rack 37	AC1	3137	NC	Initial
	MC1			Initial
Install in Rack 38	AC1	3138	NC	Initial
	MC1			Initial
Install in Rack 39	AC1	3139	NC	Initial
	MC1			Initial
Install in Rack 40	AC1	3140	NC	Initial
	MC1			Initial
Install in Rack 41	AC1	3141	NC	Initial
	MC1			Initial
Install in Rack 42	AC1	3142	NC	Initial
	MC1			Initial
Install in Rack 43	AC1	3143	NC	Initial
	MC1			Initial
Install in Rack 44	AC1	3144	NC	Initial
	MC1			Initial
Install in Rack 45	AC1	3145	NC	Initial
	MC1			Initial
Install in Rack 46	AC1	3146	NC	Initial
	MC1			Initial
Install in Rack 47	AC1	3147	NC	Initial
	MC1			Initial
Install in Rack 48	AC1	3148	NC	Initial
	MC1			Initial
Install in Rack 49	AC1	3149	NC	Initial
	MC1			Initial
Install in Rack 50	AC1	3150	NC	Initial
	MC1			Initial
Install in Rack 51	AC1	3151	NC	Initial
	MC1			Initial
Install in Rack 52	AC1	3152	NC	Initial
	MC1			Initial
Install in Rack 53	AC1	3153	NC	Initial
	MC1			Initial
Install in Rack 54	AC1	3154	NC	Initial
	MC1			Initial
Install in Rack 55	AC1	3155	NC	Initial
	MC1			Initial
Install in Rack 56	AC1	3156	NC	Initial
	MC1			Initial
Install in Rack 57	AC1	3157	NC	Initial
	MC1			Initial
Install in Rack 58	AC1	3158	NC	Initial
	MC1			Initial
Install in Rack 59	AC1	3159	NC	Initial
	MC1			Initial
Install in Rack 60	AC1	3160	NC	Initial
	MC1			Initial
Install in Rack 61	AC1	3161	NC	Initial
	MC1			Initial
Install in Rack 62	AC1	3162	NC	Initial
	MC1			Initial
Install in Rack 63	AC1	3163	NC	Initial
	MC1			Initial
Install in Rack 64	AC1	3164	NC	Initial
	MC1			Initial
Rack location U01	AC1	3201	NC	Initial
	MC1			Initial
Rack location U02	AC1	3202	NC	Initial
	MC1			Initial
Rack location U03	AC1	3203	NC	Initial
	MC1			Initial
Rack location U04	AC1	3204	NC	Initial
	MC1			Initial
Rack location U05	AC1	3205	NC	Initial
	MC1			Initial
Rack location U06	AC1	3206	NC	Initial
	MC1			Initial
Rack location U07	AC1	3207	NC	Initial
	MC1			Initial
Rack location U08	AC1	3208	NC	Initial
	MC1			Initial
Rack location U09	AC1	3209	NC	Initial
	MC1			Initial
Rack location U10	AC1	3210	NC	Initial
	MC1			Initial
Rack location U11	AC1	3211	NC	Initial
	MC1			Initial
Rack location U12	AC1	3212	NC	Initial
	MC1			Initial
Rack location U13	AC1	3213	NC	Initial
	MC1			Initial
Rack location U14	AC1	3214	NC	Initial
	MC1			Initial
Rack location U15	AC1	3215	NC	Initial
	MC1			Initial
Rack location U16	AC1	3216	NC	Initial
	MC1			Initial
Rack location U17	AC1	3217	NC	Initial
	MC1			Initial
Rack location U18	AC1	3218	NC	Initial
	MC1			Initial
Rack location U19	AC1	3219	NC	Initial
	MC1			Initial
Rack location U20	AC1	3220	NC	Initial
	MC1			Initial
Rack location U21	AC1	3221	NC	Initial
	MC1			Initial
Rack location U22	AC1	3222	NC	Initial

	MC1			Initial
Rack location U23	AC1	3223	NC	Initial
	MC1			Initial
Rack location U24	AC1	3224	NC	Initial
	MC1			Initial
Rack location U25	AC1	3225	NC	Initial
	MC1			Initial
Rack location U26	AC1	3226	NC	Initial
	MC1			Initial
Rack location U27	AC1	3227	NC	Initial
	MC1			Initial
Rack location U28	AC1	3228	NC	Initial
	MC1			Initial
Rack location U29	AC1	3229	NC	Initial
	MC1			Initial
Rack location U30	AC1	3230	NC	Initial
	MC1			Initial
Rack location U31	AC1	3231	NC	Initial
	MC1			Initial
Rack location U32	AC1	3232	NC	Initial
	MC1			Initial
Rack location U33	AC1	3233	NC	Initial
	MC1			Initial
Rack location U34	AC1	3234	NC	Initial
	MC1			Initial
Rack location U35	AC1	3235	NC	Initial
	MC1			Initial
Rack location U36	AC1	3236	NC	Initial
	MC1			Initial
Rack location U37	AC1	3237	NC	Initial
	MC1			Initial
Rack location U38	AC1	3238	NC	Initial
	MC1			Initial
Rack location U39	AC1	3239	NC	Initial
	MC1			Initial
Rack location U40	AC1	3240	NC	Initial
	MC1			Initial
Rack location U41	AC1	3241	NC	Initial
	MC1			Initial
Rack location U42	AC1	3242	NC	Initial
	MC1			Initial
IBM 48X-20X CD-ROM Black Internal IDE Drive	AC1	4137	29	Initial
	MC1			Initial
IBM 48X/32X/48X/16X Max CD-RW/DVD Combination Drive	AC1	4139	99	Initial
	MC1			Initial
IBM DVD Multi-Burner Plus Drive	AC1	4140	169	Initial
	MC1			Initial
IBM 16X RAM-Read DVD-ROM IDE Drive	AC1	4149	69	Initial
	MC1			Initial
Ultra160 LVD SCSI 1-drop Cable	AC1	4204	30	Initial
	MC1			Initial
Hot-swap SAS/SATA 4-Pac HDD Option Upgrade Kit	AC1	4307	159	Initial
	MC1			Initial
HS DASD EMC Filler	AC1	4308	0	Initial
	MC1			Initial
Key Lock Asm	AC1	4343	0	Initial
	MC1			Initial
Customer Provided and Installed -- SCO UnixWare 7.1.4	AC1	4712	NC	Initial
Installed -- Red Hat Enterprise Linux 4 ES for AMD64/EM64T	AC1	4714	NC	Initial
Installed -- Microsoft Windows 2000 Server	AC1	4716	NC	Initial
Installed -- Microsoft Windows 2000 Advanced Server	AC1	4729	NC	Initial
Installed -- SCO OpenServer 6.0.0	AC1	4731	NC	Initial
Installed -- Red Hat Enterprise Linux 4 WS for x86	AC1	4732	NC	Initial
Installed -- Microsoft Windows Server 2003, Enterprise Edition	AC1	4734	NC	Initial
Standard Edition	AC1	4735	NC	Initial
Web Edition	AC1	4736	NC	Initial
Enterprise x64 Edition	AC1	4737	NC	Initial
Installed -- Red Hat Enterprise Linux 3 WS for x86	AC1	4741	NC	Initial
Enterprise Linux 4 WS for AMD64/EM64T	AC1	4742	NC	Initial
Enterprise Linux 4 AS for AMD64/EM64T	AC1	4743	NC	Initial
Installed -- SUSE Linux Enterprise Server 9 for x86	AC1	4744	NC	Initial
Installed -- Red Hat Enterprise Linux 4 ES for x86	AC1	4745	NC	Initial
AS for x86	AC1	4746	NC	Initial
Installed -- SUSE Linux Enterprise Server 9 for AMD64/EM64T	AC1	4747	NC	Initial
Installed -- Microsoft Windows Server 2003, Standard x64 Edition	AC1	4748	NC	Initial
Installed -- NetWare 6.5	AC1	4749	NC	Initial
Installed -- Microsoft Windows Small Business Server 2003	AC1	4758	NC	Initial
Installed -- Red Hat Enterprise Linux 3 AS for x86	AC1	4759	NC	Initial
ES for AMD64/EM64T	AC1	4761	NC	Initial
AS for AMD64/EM64T	AC1	4762	NC	Initial
ES for x86	AC1	4763	NC	Initial
Installed -- VMware ESX Server 3.0	AC1	4764	NC	Initial
Installed -- Red Hat Enterprise Linux 3 WS for AMD64/EM64T	AC1	4765	NC	Initial
160GB 7200 rpm Hot-Swap SATA HDD	AC1	5150	149	Initial
	MC1			Initial
250GB 7200 rpm Hot-Swap SATA HDD	AC1	5151	239	Initial
	MC1			Initial
300GB 10K 3.5† Hot-Swap SAS HDD	AC1	5156	989	Initial
	MC1			Initial
36GB 15K 3.5† Hot-Swap SAS HDD	AC1	5160	349	Initial
	MC1			Initial
73GB 15K 3.5† Hot-Swap SAS HDD	AC1	5161	549	Initial
	MC1			Initial
146GB 15K 3.5† Hot-Swap SAS HDD	AC1	5162	679	Initial
	MC1			Initial
73GB 10K 3.5† Hot-Swap SAS HDD	AC1	5163	299	Initial
	MC1			Initial
146GB 10K 3.5† Hot-Swap SAS HDD	AC1	5164	419	Initial
	MC1			Initial
500GB 7200 rpm 3.5† Hot-Swap SATA HDD	AC1	5196	699	Initial
	MC1			Initial
VXA 3 Half High Internal Back-up	AC1	5362	1,199	Initial
	MC1			Initial
Line cord -- 2.8m, 100-120V, C13 to NEMA 5-15P (U.S.)	AC1	6313	0	Initial
	MC1			Initial
No HDD Selected	AC1	8026	NC	Initial
Consolidated Delivery	AC1	8031	NC	Initial
	MC1			Initial
e1350 Solution Component	AC1	8034	NC	Initial
Compute Node	AC1	8036	NC	Initial
	MC1			Initial
Management Node	AC1	8037	NC	Initial
	MC1			Initial
Storage Node	AC1	8038	NC	Initial
	MC1			Initial
TAA Compliant Order	AC1	8067	NC	Initial
	MC1			Initial
General Racking Solution	AC1	8072	NC	Initial
	MC1			Initial

No 3.5† SAS HDD Selected	AC1	8082	NC	Initial
	MC1			Initial
No Pointing Device Selected	AC1	8084	NC	Initial
	MC1			Initial
No Keyboard Selected	AC1	8085	NC	Initial
	MC1			Initial
No Publications Selected	AC1	8086	NC	Initial
	MC1			Initial
System Documentation and Software -- U.S. English	AC1	8516	NC	Initial
	MC1			Initial
IBM Preferred Pro Keyboard -- U.S.B -- U.S. English	AC1	8750	29	Initial
	MC1			Initial
IBM 2 Button Optical Wheel Mouse -- Black -- U.S.B	AC1	8912	19	Initial
	MC1			Initial
IBM 3 Button Optical Mouse -- Black -- U.S.B	AC1	8913	19	Initial
	MC1			Initial
Integrate in manufacturing	AC1	8971	NC	Initial
	MC1			Initial
Ship Uninstalled (Safety)	AC1	8972	NC	Initial
	MC1			Initial
Internal RAID -- Cabled and Setup	AC1	9010	NC	Initial
	MC1			Initial
Cabled only, Setup by Customer	AC1	9011	NC	Initial
	MC1			Initial
Hot Spare	AC1	9013	NC	Initial
	MC1			Initial
RAID 0 -- SATA Primary Array -- minimum of 2 HDD required	AC1	9019	NC	Initial
	MC1			Initial
RAID 1 -- SATA Primary Array -- 2 HDDs required	AC1	9020	NC	Initial
	MC1			Initial
RAID 5 -- SATA Primary Array -- minimum of 3 HDDs required	AC1	9021	NC	Initial
	MC1			Initial
Internal RAID -- Setup	AC1	9066	NC	Initial
	MC1			Initial
Internal RAID -- Setup by Customer	AC1	9067	NC	Initial
	MC1			Initial
RAID 0 -- SAS Primary Array -- minimum of 2 HDD required	AC1	9068	NC	Initial
	MC1			Initial
RAID 1 -- SAS Primary Array -- 2 HDDs required	AC1	9069	NC	Initial
	MC1			Initial
RAID 5 -- SAS Primary Array -- minimum of 3 HDDs required	AC1	9071	NC	Initial
	MC1			Initial
RAID 0 -- SAS Secondary Array -- minimum of 2 HDD required	AC1	9073	NC	Initial
	MC1			Initial
RAID 1 -- SAS Secondary Array -- 2 HDDs required	AC1	9074	NC	Initial
	MC1			Initial
RAID 5 -- SAS Secondary Array -- minimum of 3 HDDs required	AC1	9076	NC	Initial
	MC1			Initial
RAID 0 -- SATA Secondary Array -- minimum of 2 HDD required	AC1	9105	NC	Initial
	MC1			Initial
RAID 1 -- SATA Secondary Array -- 2 HDDs required	AC1	9106	NC	Initial
	MC1			Initial
RAID 5 -- SATA Secondary Array -- minimum of 3 HDDs required	AC1	9107	NC	Initial
	MC1			Initial
Storage Subsystem ID 01	AC1	9170	NC	Initial
	MC1			Initial
Storage Subsystem ID 02	AC1	9171	NC	Initial
	MC1			Initial
Storage Subsystem ID 03	AC1	9172	NC	Initial
	MC1			Initial
Storage Subsystem ID 04	AC1	9173	NC	Initial
	MC1			Initial
Storage Subsystem ID 05	AC1	9174	NC	Initial
	MC1			Initial
Storage Subsystem ID 06	AC1	9175	NC	Initial
	MC1			Initial
Storage Subsystem ID 07	AC1	9176	NC	Initial
	MC1			Initial
Storage Subsystem ID 08	AC1	9177	NC	Initial
	MC1			Initial
Storage Subsystem ID 09	AC1	9178	NC	Initial
	MC1			Initial
Storage Subsystem ID 10	AC1	9179	NC	Initial
	MC1			Initial
Storage Subsystem ID 11	AC1	9180	NC	Initial
	MC1			Initial
Storage Subsystem ID 12	AC1	9181	NC	Initial
	MC1			Initial
Storage Subsystem ID 13	AC1	9182	NC	Initial
	MC1			Initial
Storage Subsystem ID 14	AC1	9183	NC	Initial
	MC1			Initial
Storage Subsystem ID 15	AC1	9184	NC	Initial
	MC1			Initial
Storage Subsystem ID 16	AC1	9185	NC	Initial
	MC1			Initial
Storage Subsystem ID 17	AC1	9186	NC	Initial
	MC1			Initial
Storage Subsystem ID 18	AC1	9187	NC	Initial
	MC1			Initial
Storage Subsystem ID 19	AC1	9188	NC	Initial
	MC1			Initial
Storage Subsystem ID 20	AC1	9189	NC	Initial
	MC1			Initial
Preload Specify	AC1	9200	NC	Initial
	MC1			Initial
Windows Specify	MC1	9201	NC	Initial
Red Hat Specify	AC1	9202	NC	Initial
SUSE Specify	AC1	9203	NC	Initial
Drop-in-the-Box Specify	AC1	9205	NC	Initial
	MC1			Initial
No Preload Specify	AC1	9206	NC	Initial
System Documentation and Software -- U.S. English	AC1	9328	NC	Initial
	MC1			Initial

Description	Machine type/ model	Part number	IBM list price
System x3400 -- Tower 3.0 GHz/667 MHz, 4MB, 1 GB	7973-12U	797312U	$ 989
	7974-12U	797412U	1,139
	7975-14U	797514U	1,189
	7975-16U	797516U	1,289
	7976-14U	797614U	1,339
	7976-16U	797616U	1,439
System x3650 T -- Rack 2 x 3.2 GHz/800 MHz, 2 MB, 2 GB, 2 x 600 W Power Supply	7980-51X	798051X	7,995

* List price does not include tax or shipping and is subject to change without notice. Reseller prices may vary.

To order direct, call IBM at 877-999-7115 and select option 4.

For of the name of the nearest IBM representative or Business Partner, call 800-IBM-4YOU (426-4968).

ServicePac for warranty and maintenance

Machine Type	Description	ServicePac part number	ServicePacTMF part number

7973	Electronic -- 1yr IOR 9x5	69P9402	
7974	+ NBD response	69P9402	6756D42
7975		69P9406	
7976		69P9406	6756D46
7973	Electronic -- 1yr IOR 9x5	69P9403	
7974	+ 4-hour average response	69P9403	6756D43
7975		69P9407	
7976		69P9407	6756F90
7973	Electronic -- 1yr IOR 7x24	69P9404	
7974	+ 4-hour average response	69P9404	6756D44
7975		69P9408	
7976		69P9408	6756D47
7973	Electronic -- 1yr IOR 7x24	69P9405	
7974	+ 2-hour average response	69P9405	6576D45
7975		69P9409	
7976		69P9409	6756D48
7973	Electronic -- 2yr 9x5 IOR	96P2121	
7974	+ NBD response	96P2121	6756D64
7975		96P2125	
7976		96P2125	6756D68
7973	Electronic -- 2yr 9x5x4 IOR	96P2122	
7974	+ 4-hour average response	96P2122	6756D65
7975		96P2126	
7976		96P2126	6756D69
7973	Electronic -- 2yr 24x7x4 IOR	96P2123	
7974	+ 4-hour average response	96P2123	6756D66
7975		96P2127	
7976		96P2127	6756D70
7973	Electronic -- 2yr 24x7x2 IOR	96P2124	
7974	+ 2-hour average response	96P2124	6756D67
7975		96P2128	
7976		96P2128	6756D71
7973	Electronic -- 3yr IOR 9x5	21P2017	
7974	+ NBD response	21P2077	
7975		69P9407	
7976		21P2083	
7973	Electronic -- 3yr IOR 9x5	41L2737	
7974	+ 4-hour average response	21P2077	6756024
7975		96P2687	
7976		21P2083	6756026
7973	Electronic -- 3yr IOR 7x24	30L9186	
7974	+ 4-hour average response	21P2078	6756025
7975		96P1984	
7976		21P2084	6756027
7973	Electronic -- 3yr IOR 7x24	31L2722	
7974	+ 2-hour average response	21P2093	6756029
7975		96P2689	
7976		21P2085	6756028
7973	Electronic -- 4yr IOR 9x5	69P9210	
7974	+ NBD response	69P9258	6756115
7975		69P9266	
7976		69P9266	6756123
7973	Electronic -- 4yr IOR 9x5	69P9211	
7974	+ 4-hour average response	69P9259	6756116
7975		69P9267	
7976		69P9267	6756124
7973	Electronic -- 4yr IOR 7x24	69P9212	
7974	+ 4-hour average response	69P9260	6756117
7975		69P9268	
7976		69P9268	6756125
7973	Electronic -- 4yr IOR 7x24	69P9213	
7974	+ 2-hour average response	69P9261	6756118
7975		69P9269	
7976		69P9269	6756126
7973	Electronic -- 5yr IOR 9x5	69P9214	
7974	+ NBD response	69P9262	6756119
7975		69P9270	
7976		69P9270	6756127
7973	Electronic -- 5yr IOR 9x5	69P9215	
7974	+ 4-hour average response	69P9263	6756120
7975		69P9271	
7976		69P9271	6756128
7973	Electronic -- 5yr IOR 7x24	69P9216	
7974	+ 4-hour average response	69P9264	6756121
7975		69P9272	
7976		69P9272	6756129
7973	Electronic -- 5yr IOR 7x24	69P9217	
7974	+ 2-hour average response	69P9265	6756122
7975		69P9273	
7976		69P9273	6756130

These ServicePac offerings are valid for models announced in the United States.

Refer to Hardware Announcement 106-296, dated April 25, 2006, for complete details on the 3650 T system Service Pacs.

Maintenance service charges (ICA)

Alternative service (Warranty service upgrades)

Description	Machine type	IOR 24 x 7
System x3400	7974	$600
	7976	689

Annual maintenance service

Description	Machine type	IOR 9 x 5	IOR 24 x 7
System x3400	7974	$ 700	$1,050
	7976	1,300	1,950

For ServiceElect (ESA) maintenance service charges, contact IBM Global Services at 888-IBM-4343 (426-4343).

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Note: Shipments will begin after the planned availability date.

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