

IBM System x3550 M4 servers include Intel Xeon multi-core processors

Table of contents

2 Overview	12 Product number
3 Key prerequisites	16 Publications
3 Planned availability date	18 Technical information
4 Description	32 Terms and conditions
11 Product positioning	46 Order now
11 Statement of general direction	47 Corrections

At a glance



IBM® System x3550 M4 servers deliver power, scalability, control, and serviceability for dynamic high-performance computing applications:

- Ultrathin, high-availability, and rack-optimized for 1U platform
- High-speed DDR-3 SDRAM Registered DIMMs standard; 24 DIMM slots that support up to 384 GB maximum memory with 16 GB optional DIMMs, or up to 768 GB of memory with LRDIMMs with support of 1866 MHz RDIMMs
- Support for up to eight hot-swap 2.5-inch SAS/SATA HDDs or SSDs or up to three hot-swap SAS/SATA 3.5-inch HDDs
- Up to two x16 PCIe 3.0 slots on two-processor servers
- 550-watt or 750-watt auto-ranging power supplies (optional redundant and hot-swap)
- Integrated systems management processor
- Integrated quad Gigabit Ethernet ports for high I/O capacity, plus two optional embedded 10 GbE ports
- One serial port (16550A-compatible)
- USB ports
 - 2.5-inch model has seven (two front, four back, and one internal)
 - 3.5-inch model has eight (three front, four back, and one internal)
- Two video ports (front and rear)

For ordering, contact your IBM representative, an IBM Business Partner, or IBM Americas Call Centers at 800-IBM-CALL (Reference: YE001).

Overview

These 1U-high, rack-optimized servers feature increased frequency, optimized performance, and improved systems management for business-critical applications and cloud deployments built on IBM X-Architecture® .

Optimized for performance

New, innovative, energy-smart design with powerful high-performance processors, a large capacity of high-performing DDR3 memory, and a no-compromise feature set ideal for business-critical applications and cloud deployments:

- Up to two 12-core powerful Intel Xeon™ E5-2600 v2 series processors
- Twenty-four DIMM (RDIMM/UDIMM/LRDIMM) slots that enable you to deploy up to 384 GB of DDR3 SDRAM Registered DIMM memory, or up to 768 GB of memory with LRDIMMs; and fast memory bandwidth with the ability to support 1866 MHz¹ RDIMMs
- Integrated slotless 6 Gbps hardware RAID-0, RAID-1, and RAID-10 or optional RAID-5, RAID-50 or RAID-6, or RAID-60 (model dependent) and up to 4 GB Flashback cache
- Support for up to eight hot-swap 2.5-inch SAS/SATA HDDs or SSDs or up to three hot-swap SAS/SATA 3.5-inch HDDs
- Highly functional chipset optimized for better application computing for general business workloads
- Integrated quad Gigabit Ethernet ports for high I/O capacity, and optional two embedded 10 GbE ports
- One PCIe 3.0 x16 slot plus one PCIe x8/x16 or optional PCI-x slot to help provide flexibility and greater performance with long-term investment protection
- Optional Broadcom 10Gbaset PCIe adapter which enables low-cost migration to 10Gb Ethernet for applications such as analytics, public and private cloud, and virtualization
- New energy-efficient design incorporating 750-watt dc power supplies, up to 12 cooling fans (six banks of counter-rotating dual fans), and energy-efficient planar components to help lower operational costs
- Compliant with 80 PLUS Platinum and ENERGY STAR (model dependent)

Manage with efficiency

High-availability, manageability, and serviceability features help diagnose problems quickly, even from remote locations:

- IBM Systems Director Active Energy Manager™ for advanced datacenter power notification and management to help achieve lower heat output and reduced cooling needs
- Snoop filters to boost processor performance
- Integrated slotless SAS controller for up to eight 2.5-inch, hot-swap HDD bays
- Memory mirroring, configurable using Unified Extensible Firmware Interface (UEFI) setup
- IMM2 systems management processor with optional Feature on Demand (FoD) remote presence
- Monitoring and control of operating status and key server components
- PFA on selected components that warns of problems before they occur
- Fast and easy servicing through innovative light path diagnostics, improved onboard diagnostics, and LED diagnostic panel

Excellent RAS and outstanding uptime for an improved business environment

- Redundant, hot-swap components designed to make it easy to replace failures without taking your system down
 - Hot-swap, redundant fans with calibrated vectored cooling to keep components cool, and simplified fan replacement
 - Hot-swap, redundant power supplies to help reduce downtime
 - Hot-swap, RAID protection disk to help secure your data and reduce downtime
- Predictive Failure Analysis, which provides advanced warning on processors, memory, disks, fans, power supplies, and VRMs
- Drop-down light path diagnostics panel, which gives information about a failing component without requiring opening of the chassis or interrupting system operation, and expedites hardware repairs to dramatically reduce service time
- IBM Director and web support
- Three-year, customer replaceable unit (CRU) and on-site labor², limited warranty³; optional warranty service upgrades available

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 You may be asked certain diagnostic questions before a technician is sent.

³ For information on IBM Statement of Limited Warranty, call 800-IBM-SERV (426-7378) or contact your IBM representative or reseller. Copies are available upon request.

Feature exchanges

None

Key prerequisites

Monitor, USB keyboard, and USB mouse.

Note : PS/2-style keyboard and mouse are not supported.

Planned availability date

October 11, 2013: All except:

- November 8, 2013: Brazil Express® models 7914EPU and 7914EQU
- November 29, 2013: Options

00Y7297 (A465) - x3550M4 2.5" HDD Assembly Kit for 12Gb RAID
00Y8597 (A4K4) - x3550M4 mini-SAS Cable Kit for 12Gb RAID
47C8656 (A3Z0) - ServerRAID M5200 Series 1GB Cache/RAID 5 Upgrade for IBM Systems
47C8660 (A3Z1) - ServerRAID M5200 Series 1GB Flash/RAID 5 Upgrade for IBM Systems
47C8664 (A3Z2) - ServerRAID M5200 Series 2GB Flash/RAID 5 Upgrade for IBM Systems
46C9110 (A3YZ) - ServerRAID M5210 SAS/SATA Controller
47C8675 (A3YY) - N2215 SAS/SATA HBA
47C8706 (A3Z5) - ServerRAID M5200 Series RAID 6 Upgrade for IBM Systems-FoD
47C8708 (A3Z6) - ServerRAID M5200 Series Zero Cache/RAID 5 Upgrade for IBM Systems-FoD
47C8710 (A3Z7) - ServerRAID M5200 Series Performance Accelerator for IBM Systems-FoD
47C8712 (A3Z8) - ServerRAID M5200 Series SSD Caching Enabler for IBM Systems-FoD
46W0761 (A47K) - 32Gb (4Gb, 4Rx4, 1.5V) PC3-14900 DDR3 1866MHz LP LR-DIMM

Description

System x3550 M4 server

The System x3550 M4 server features Intel Xeon multi-core processors that support internal processing speeds of up to 3.5 GHz¹, and processing operations to memory up to 1866 MHz.

High-performance server subsystems

The System x3550 M4 expands the new server line by adding a higher level of processor power. This high-throughput, two-way, multi-core network server offers excellent performance and scalability when you add memory and a second processor. It incorporates powerful Xeon processors with up to 30 MB L3 cache. The advanced transfer L3 cache is integrated onto the processor and runs at the same clock speed. The advanced transfer cache is a result of a 'backside bus' 256 bits wide. It features a quad-wide cache line that can transfer four 64-bit cache line segments at one time to deliver full-speed capability. The cache is eight-way set associative.

Two Intel Xeon processor connectors are standard on the system board to support installation of a second processor, up to 30 MB cache, and up to two 8.0 GT/s QuickPath Interconnects (QPIs) with new Hyper Threading and IntelTM Turbo Boost Technology 2.0. High-speed PC3 DDR3 Advanced Memory Feature DIMMs run at up to 1866 MHz DRAM clock speed and offer maximum 14900 Mbps bandwidth, processor-to-memory subsystem performance. The x3550 M4 server uses the Intel Xeon E5-2600 v2 processor with Chipkill technology to maximize throughput from processors, to memory, to the 32-bit and 64-bit PCI buses.

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

Additional features

- Up to 12-core processing achieved with a second processor of equal speed and processor type.
- System board containing 24 DIMM (UDIMM/RDIMM/LRDIMM) connectors supporting 4 GB, 8 GB, and 16 GB DDR3 PC3-14900 SDRAM ECC RDIMMs with:
 - DDR3 memory for improved performance
 - Up to 384 GB of system memory using 16 GB optional DIMMs or up to 768 GB of memory with 32 GB LRDIMMs
- Up to two PCIe 3.0 slots. Clients ordering a single-processor model can select:
 - Two PCIe 3.0 slots: one PCIe 3.0 x16 low profile and one x8 half length, full height (standard models).
 - An optional PCI-x half length, full height slot to replace one x8 half length, full height slot. With second CPU population, clients can optionally buy one x16 half length, full height PCIe 3.0 slot to replace one x8 half length, full height slot.
- On standard models, four 2.5-inch bays or three 3.5-inch bays to support optional SAS/SATA HDDs and one bay to support an optical drive for 2.5-inch models.
- Intel i350-AM4 Quad-port Gbit Ethernet on board and embedded 10 GbE Dual-port options (on a reserved connector). The embedded card supports Emulex, QLogic, and Mellanox with different protocols such as 10 Gb SFP+ or 10BASE-T or Infiniband.
- Compliant with 80 PLUS Platinum and ENERGY STAR (model dependent).

The System x3550 M4 offers solid system throughput from processor, to memory, to bus, to disk-intensive I/O. These features, combined with multi-core capability,

make the x3550 M4 server an excellent choice for a stand-alone or clustered general-business application, file, and print server.

High-availability and serviceability features

The System x3550 M4 subsystem delivers excellent reliability and serviceability features:

- Support for light path diagnostics with viewable drop-down panel, Wake on LAN, and PXE
- Up to six hot-swap dual-motor cooling fans
- Up to eight 2.5-inch HS HDDs with optional upgrade kit
- Chipkill memory that basically distributes information covered by error correction coding across separate memory chips; if any of the chips fail, the data can in many cases still be reconstructed from the remaining chips, and the system can continue running
- ECC L3 cache processors to help improve data integrity and help reduce downtime
- PFA on HDD options, memory, power supply, and fans (when Remote Supervisor Adapter is installed), to help alert the system administrator of imminent component failure
- Worldwide voltage-sensing 750-watt dc high-efficiency hot-plug power supply options
- IBM Integrated Management Module Advanced Upgrade (Feature on Demand (FoD)) to enable the remote presence and blue-screen capture features
- Integrated Management Module systems management processor that supports:
 - Automatic server restart (ASR)
 - Fan monitoring and control
 - Power supply monitoring
 - Temperature monitoring
 - Voltage monitoring
 - Power on/off, reset sequencing
 - LED controls (onboard diagnostics support with light path LED)
 - Remote power control
 - Local firmware update
 - Error logging
- Information LED panel for visual indications of system well-being
- Onboard diagnostics with an LED map to locate a failing component, helping reduce downtime and service costs
- Support for virtual floppy (with optional IBM Integrated Management Module Advanced Upgrade) which enables a user to easily direct a remote host to boot, and use standard instructions stored anywhere on the network
- Easily accessible system board, adapter cards, processor, and memory
- CPU failure recovery in some configurations, which:
 - Forces the failed processor offline
 - Reboots the server automatically
 - Generates alerts
 - Continues operations with the working processor

Expandability and growth

The System x3550 M4 includes a lot of function and storage capacity in a 1U 19-inch rack-drawer package, yet it is designed to be easy to upgrade and service. Functions such as SVGA video, SAS, and full-duplex 10 Gbs Ethernet are integrated on the system board. Features include:

- Rack-drawer models designed for 19-inch-wide by 28-inch-deep industry-standard rack enclosures, such as the NetBAY42 SR
- Up to two PCIe 3.0 adapter card slots available; one PCIe x16 plus slot, plus one PCIe x8/x16 (with second processor) or PCI-x slot (optional)
- System board optional upgrades (PCI slot not required)
 - IBM Integrated Management Module Advanced Upgrade. Remote presence function can be enabled by Feature on Demand (FoD).
- Support for up to 12 TB of internal data storage, using three 4 TB 3.5-inch SAS/SATA HDDs

Systems management

Integrated Management Module (IMM2): The System x3550 M4 includes an Integrated Management Module that provides industry-standard Intelligent Platform Management Interface (IPMI) 2.0-compliant systems management. The IMM2 comes standard, and shares one of the four onboard Ethernet ports for access. The IMM2 can be accessed using software that is compatible with IPMI 2.0 (for example, xCAT). The IMM2 is implemented using industry-leading OSA firmware and applications in conjunction with the Integrated Management Module.

Features and benefits:

- Monitoring:
 - System voltages
 - Battery voltage
 - System temperatures
 - Fan speed control
 - Fan tachometer monitor
 - Good Power signal monitor
 - System ID and planar version detection
 - System power and reset control
 - NMI detection (system interrupts)
 - SMI detection and generation (system interrupts)
 - Serial port text console redirection
 - System LED control (power, HDD, activity, alerts, and heartbeat)
- An embedded web server that gives you remote control from any standard web browser. No additional software is required on the remote administrator's workstation.
- For users who are accustomed to a command-line interface (CLI), the ability of the administrator to use the CLI from a Telnet session to perform some of the functions that can be performed from the web server.
- Secure Sockets Layer (SSL) and Lightweight Directory Access Protocol (LDAP).
- Built-in LAN and serial connectivity that supports virtually any network infrastructure.
- Multiple alerting functions to warn systems administrators of potential problems through email, IPMI PETs, and SNMP.

With video compression now built into the adapter hardware, it is designed to allow the greater screen sizes and refresh rates that are becoming common in the marketplace. This feature helps enable the user to display server activities from power-on to full operation remotely with remote user interaction at virtually any time.

IBM Integrated Management Module Advanced Upgrade (FoD)

The optional IBM Integrated Management Module Advanced Upgrade delivers advanced control and monitoring features to manage your IBM System x3550 M4 server at virtually any time, from virtually any place. The key can be enabled by FoD. This key enables easy console redirection with text and graphics, and

keyboard and mouse (operating system must support USB) support over the system management LAN connections.

IBM Director

The System x3550 M4 server is supported by 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 to access and manage physically dispersed IT assets more efficiently over the Internet. It can help reduce costs through potentially:

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

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 a portfolio of integrated server tools that work with the systems management monitoring functions. Typical functions and monitoring capabilities can include:

- PFA-enabled critical hardware components
- Temperature
- Voltage
- Fan speed
- Light path diagnostics

IT administrators have comprehensive, virtual on-site control of System x® servers with the ability to remotely:

- Access the server, often regardless of its status
- Inventory and 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
- Monitor and set thresholds on server health including:
 - Operating system load
 - POST time-out
 - Voltage
 - Temperature
- Set proactive alerts for critical server events including PFA on:
 - Memory
 - HDDs
 - Power supplies
 - Fans
- Define automated actions, such as:
 - Send email or page to an administrator
 - Run a command or program
 - Send an error message to the IBM Director console
- Flash UEFI
- Monitor and graph the use of server resources, such as:
 - Memory

- Processor
- HDDs
- Identify potential performance bottlenecks and react to prevent downtime

IBM Director integrates into leading workgroup and enterprise systems management environments through upward integration modules (available from IBM and third parties). Advanced management capabilities built into System x servers are available through:

- Tivoli® Enterprise and Tivoli NetView®
- Computer Associates Unicenter TNG
- HP OpenView
- Microsoft™ SMS
- BMC Patrol
- NetIQ

IBM Active Energy Manager

IBM Active Energy Manager support offers direct monitoring of power consumption and thermal load of your server through IBM Director. You can monitor power consumption to track utilization of energy resources. IBM Active Energy Manager is a leading solution on the market providing users with the combination of intelligence and features needed to effectively monitor power consumption in the datacenter. Active Energy Manager, an extension to IBM Director systems management software, allows clients to "meter" actual power usage and trend data for any single physical system or group of systems. Developed by IBM Research, Active Energy Manager utilizes IBM-developed monitoring circuitry to help identify how much actual power is being used and the temperature of the system. The software is available across the new IBM System x servers, as well as its BladeCenter® line of systems. With Active Energy Manager, the user can understand the actual power draw.

With the addition of the optional IBM Integrated Management Module Advanced Upgrade, the IT administrator achieves comprehensive, virtual on-site control of System x servers through the ability to remotely:

- Access the server, in many cases regardless of the status
- Inventory and 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, SCSI, and RAID setup during POST
- Monitor thresholds on server health, including:
 - Operating system load
 - POST time-out
 - Voltage
 - Temperature
- Set proactive alerts for critical server events, including PFA on:
 - Memory
 - Fans
 - HDDs
 - Power supplies
- Define automated actions, such as:
 - Send an email or a page to an administrator
 - Run a command or program

- Send an error message to the director console
- Manage flash UEFI
- Monitor and graph the utilization of server resources, such as:
 - Memory
 - Processor
 - HDDs
- Identify potential performance bottlenecks and react to prevent downtime
- Monitor, manage, and configure RAID subsystems without taking them off line

Advanced Configuration and Power Interface (ACPI)

ACPI is an open industry specification that 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 Microsoft 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 x3550 M4 tools and programs can 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.

- The server purchase includes a three-year, customer replaceable unit (CRU) and on-site service, limited warranty; optional warranty service upgrades are available.
- The ServerProven® program lets you confidently configure your server with various devices and operating systems. This web-based program provides compatibility information from actual testing of the System x3550 server with various adapters and devices.
- Electronic support on the web offers additional support in an easy-to-use format.

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

Standard System x3550 M4 configurations

Model number	Processor	Memory	HDD GT/s	HDD Interface	HDD	Other
7914A3x	E5-2603 v2 (4C) 1.8 GHZ	4 GB Cache: 10 MB	6.4	SAS/SATA H1110	2.5-in	Open bay 1 x 550W
7914B3x	E5-2609 v2 (4C) 2.5 GHZ	4 GB Cache: 10 MB	6.4	SAS/SATA M1115	2.5-in	Open bay 1 x 550W
7914C3x	E5-2620 v2 (6C) 2.1 GHZ	8 GB Cache: 15 MB	7.2	SAS/SATA M1115	2.5-in	Open bay 1 x 550W
7914C5x	E5-2620 v2 (6C) 2.1 GHZ	8 GB Cache: 15 MB	7.2	SAS/SATA H1110	3.5-in	Open bay 1 x 550W
7914D3x	E5-2630 v2 (6C) 2.6 GHZ	8 GB Cache: 15 MB	7.2	SAS/SATA M5110 + 512 MB Flash	2.5-in	Open bay 1 x 550W
7914F3x	E5-2640 v2 (8C) 2.0 GHZ	8 GB Cache: 20 MB	7.2	SAS/SATA M5110 + 512 MB Flash	2.5-in	Open bay 1 x 550W

7914G3x	E5-2650 v2 (8C) 2.6 GHz 8 GB Cache: 20 MB	8.0	SAS/SATA M5110 + 1 GB Flash	2.5-in	Open bay 1 x 550W
7914H3x	E5-2660 v2 (10C) 2.2 GHz 8 GB Cache: 25 MB	8.0	SAS/SATA M5110 + 1 GB Flash	2.5-in	Open bay 1 x 550W
7914J3x	E5-2670 v2 (10C) 2.5 GHz 8 GB Cache: 25 MB	8.0	SAS/SATA M5110 + 1 GB Flash	2.5-in	Open bay 1 x 550W
7914L3x	E5-2680 v2 (10C) 2.8 GHz 8 GB Cache: 25 MB	8.0	SAS/SATA M5110 + 1 GB Flash	2.5-in	Open bay 1 x 750W
791423x	E5-2637 v2 (4C) 3.5 GHz 8 GB Cache: 15 MB	8.0	SAS/SATA M5110	2.5-in	Open bay 1 x 750W
791433x	E5-2643 v2 (6C) 3.5 GHz 8 GB Cache: 25 MB	8.0	SAS/SATA M5110	2.5-in	Open bay 1 x 750W
791443x	E5-2667 v2 (8C) 3.3 GHz 8 GB Cache: 25 MB	8.0	SAS/SATA M5110	2.5-in	Open bay 1 x 750W
7914M3x	E5-2690 v2 (10C) 3.0 GHz 8 GB Cache: 25 MB	8.0	SAS/SATA M5110	2.5-in	Open bay 1 x 750W
791453x	E5-2650L v2 (10C) 1.7 GHz 8 GB Cache: 25 MB	8.0	SAS/SATA M5110 + 1 GB Flash	2.5-in	Open bay 1 x 550W
791473x	E5-2695 v2 (12C) 2.4 GHz 8 GB Cache: 30 MB	8.0	SAS/SATA M5110 + 1 GB Flash	2.5-in	Open bay 1 x 750W
791483x	E5-2697 v2 (12C) 2.7 GHz 8 GB Cache: 30 MB	8.0	SAS/SATA M5110 + 1 GB Flash	2.5-in	Open bay 1 x 750W

Note: The model "x" designation is geography dependent and is spelled out explicitly in the [Product number](#) section.

Express models: AG

SEO Number	Processor	Memory	GT/s	HDD		Other
				Interface	HDD	
7914EGY	2.5 GHz Cache: 10 MB	8 GB	6.4	SAS/SATA M1115 Multi-burner	2.5-in hot-swap	Open bay 1 x 550W
7914EHY	2.1 GHz Cache: 15 MB	8 GB	7.2	SAS/SATA M5110 Multi-burner	2.5-in hot-swap	Open bay 1 x 550W
7914EJY	2.0 GHz Cache: 20 MB	8 GB	7.2	SAS/SATA M5110 Multi-burner	2.5-in hot-swap	Open bay 1 x 550W
7914EKY	2.2 GHz Cache: 25 MB	16 GB	8.0	SAS/SATA M5110 Multi-burner	2.5-in hot-swap	Open bay 2 x 550W

Accessibility by people with disabilities

A US Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at

Product positioning

The System x3550 M4 server is a part of the System x rack-optimized server line. This 2-socket server delivers Intel Xeon multi-core high-speed processors and excellent server function in an ultrathin, rack-optimized, 1U footprint.

Optimized for speed

The System x3550 M4 server offers new levels of fast Intel Xeon multi-core processors with up to 8.0 GT/s and lower power for business-critical applications and cloud deployments. This server is uniquely optimized for better application computing with a highly functional chipset and twenty-four DIMM slots for a maximum of 384 GB of DDR-3 SDRAM Registered DIMM memory, or up to 768 GB of memory with LRDIMM.

Innovation comes standard

- Application efficiency increases with snoop filters that free up cache and improve processor performance.
- Supercharged TOE optimizes system performance by offloading protocol processing.
- A drop-down light path diagnostics panel improves in-rack manageability and allows easy problem identification.

Optimized fault-tolerant protection

- A memory mirroring feature enables you to increase memory reliability.
- A SAS controller with RAID-0, RAID-1, RAID-10, RAID-5, and RAID-50 on hot-swap SAS models helps safeguard your data at no additional cost.

Target applications

- General purpose computing
- Database, ERP, Mail, and Web 2.0 applications
- Business-critical applications and cloud deployments
- Finance trading applications
- High-performance computing

Statement of general direction

IBM intends to update select System x servers by providing a new optional for-charge feature to enable management of self-encrypting hard drive hardware options within the IBM Security Key Lifecycle Manager product.

- Support for 12 GB RAID adapters.
- Support for 4 GB Flashback cache.

ServeRAID M5200 Series 4 GB Flash/RAID 5 Upgrade for IBM Systems

IBM System x is issuing this statement of direction regarding the ServeRAID M5200 Series 4 GB Flash/RAID 5 Upgrade for IBM Systems. The ServeRAID M5200 Series 4 GB Flash/RAID 5 Upgrade for IBM Systems is intended for general availability in first quarter, 2014.

IBM System x is issuing this statement of direction regarding the Emulex Dual Port 10GbE VFA IIIr PCIe Adapter and Embedded Adapter for those servers that include an Intel Ivy Bridge processor. The Emulex VFA IIIr products are intended for general availability in late fourth quarter, 2013, general availability.

- Support for Emulex Dual Port 10GbE adapters

Emulex Dual Port 10GbE VFA IIIr PCIe Adaptor for IBM System x Emulex Dual Port 10GbE VFA IIIr Embedded Adapter for IBM System x

Information being released in this Statement of Direction represents IBM's current intent, is subject to change or withdrawal, and represents only goals and objectives

IBM's statements regarding its plans, directions, and intent are subject to change or withdrawal without notice at IBM's sole discretion. Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision. The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. Information about potential future products may not be incorporated into any contract. The development, release, and timing of any future features or functionality described for our products remains at our sole discretion.

Product number

The following are features already announced for the 3331, 7914 machine types:

Description	MT	Model	Feature
4GB (1x4GB, 1Rx4, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHz LP RDIMM	7914	AC1 MC1	A3QD
4GB (1x4GB, 1Rx4, 1.35V) PC3L-12800 CL11 ECC DDR3 1600MHz LP RDIMM	7914	AC1 MC1	A3QE
8GB (1x8GB, 1Rx4, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHz LP RDIMM	7914	AC1 MC1	A3QG
8GB (1x8GB, 1Rx4, 1.35V) PC3L-12800 CL11 ECC DDR3 1600MHz LP RDIMM	7914	AC1 MC1	A3QH
8GB (1x8GB, 2Rx8, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHz LP RDIMM	3331	HC1	A3QJ
8GB (1x8GB, 2Rx8, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHz LP RDIMM	7914	AC1 MC1	
16GB (1x16GB, 2Rx4, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHz LP RDIMM	7914	AC1 MC1	A3QL
NVIDIA Quadro K600	7914	AC1 MC1	A3WH
Intel Xeon Processor E5-2603 v2 4C 1.8GHz 10MB Cache 1333MHz 80W	7914	AC1 MC1	A3WK
Intel Xeon Processor E5-2609 v2 4C 2.5GHz 10MB Cache 1333MHz 80W	7914	AC1 MC1	A3WL
Intel Xeon Processor E5-2620 v2 6C 2.1GHz 15MB Cache 1600MHz 80W	7914	AC1 MC1	A3WM
Intel Xeon Processor E5-2630 v2 6C 2.6GHz 15MB Cache 1600MHz 80W	7914	AC1 MC1	A3WN
Intel Xeon Processor E5-2630L v2 6C 2.4GHz 15MB Cache 1600MHz 60W	7914	AC1 MC1	A3WP
Intel Xeon Processor E5-2640 v2 8C 2.0GHz 20MB Cache 1600MHz 95W	7914	AC1 MC1	A3WQ
Intel Xeon Processor E5-2650 v2 8C 2.6GHz 20MB Cache 1866MHz 95W	7914	AC1 MC1	A3WR
Intel Xeon Processor E5-2660 v2 10C 2.2GHz 25MB			

Cache 1866MHz 95W	7914	AC1 MC1	A3WS
Intel Xeon Processor E5-2670 v2 10C 2.5GHz 25MB Cache 1866MHz 115W	7914	AC1 MC1	A3WU
Intel Xeon Processor E5-2680 v2 10C 2.8GHz 25MB Cache 1866MHz 115W	7914	AC1 MC1	A3WV
Intel Xeon Processor E5-2690 v2 10C 3.0GHz 25MB Cache 1866MHz 130W	7914	AC1 MC1	A3WW
Intel Xeon Processor E5-2650L v2 10C 1.7GHz 25MB Cache1600MHz 70W	7914	AC1 MC1	A3WX
Intel Xeon Processor E5-2637 v2 4C 3.5GHz15MB Cache 1866MHz 130W	7914	AC1 MC1	A3WY
Intel Xeon Processor E5-2643 v2 6C 3.5GHz 25MB Cache 1866MHz 130W	7914	AC1 MC1	A3WZ
Intel Xeon Processor E5-2667 v2 8C 3.3GHz 25MB Cache 1866MHz 130W	7914	AC1 MC1	A3X0
Intel Xeon Processor E5-2695 v2 12C 2.4GHz 30MB Cache 1866MHz 115W	7914	AC1 MC1	A3X1
Intel Xeon Processor E5-2697 v2 12C 2.7GHz 30MB Cache 1866MHz 130W	7914	AC1 MC1	A3X2
Addl Intel Xeon Processor E5-2603 v2 4C 1.8GHz 10MB Cache 80W	3331	HC1	A3X3
Addl Intel Xeon Processor E5-2603 v2 4C 1.8GHz 10MB Cache 80W	7914	AC1 MC1	
Addl Intel Xeon Processor E5-2609 v2 4C 2.5GHz 10MB Cache 80W	3331	HC1	A3X4
Addl Intel Xeon Processor E5-2609 v2 4C 2.5GHz 10MB Cache 80W	7914	AC1 MC1	
Addl Intel Xeon Processor E5-2620 v2 6C 2.1GHz 15MB Cache 80W	3331	HC1	A3X5
Addl Intel Xeon Processor E5-2620 v2 6C 2.1GHz 15MB Cache 80W	7914	AC1 MC1	
Addl Intel Xeon Processor E5-2630 v2 6C 2.6GHz 15MB Cache 80W	3331	HC1	A3X6
Addl Intel Xeon Processor E5-2630 v2 6C 2.6GHz 15MB Cache 80W	7914	AC1 MC1	
Addl Intel Xeon Processor E5-2630L v2 6C 2.4GHz 15MB Cache 60W	3331	HC1	A3X7
Addl Intel Xeon Processor E5-2630L v2 6C 2.4GHz 15MB Cache 60W	7914	AC1 MC1	
Addl Intel Xeon Processor E5-2640 v2 8C 2.0GHz 20MB Cache 95W	3331	HC1	A3X8
Addl Intel Xeon Processor E5-2640 v2 8C 2.0GHz 20MB Cache 95W	7914	AC1 MC1	
Addl Intel Xeon Processor E5-2650 v2 8C 2.6GHz 20MB Cache 95W	3331	HC1	A3X9
Addl Intel Xeon Processor E5-2650 v2 8C 2.6GHz 20MB Cache 95W	7914	AC1 MC1	
Addl Intel Xeon Processor E5-2660 v2 10C 2.2GHz 25MB Cache 95W	3331	HC1	A3XA
Addl Intel Xeon Processor E5-2660 v2 10C 2.2GHz 25MB Cache 95W	7914	AC1 MC1	
Addl Intel Xeon Processor E5-2670 v2 10C 2.5GHz 25MB Cache 115W	3331	HC1	A3XC
Addl Intel Xeon Processor E5-2670 v2 10C 2.5GHz 25MB Cache 115W	7914	AC1 MC1	

Addl Intel Xeon Processor E5-2680 v2 10C 2.8GHz 25MB Cache 115W	3331	HC1	A3XD
Addl Intel Xeon Processor E5-2680 v2 10C 2.8GHz 25MB Cache 115W	7914	AC1 MC1	
Addl Intel Xeon Processor E5-2690 v2 10C 3.0GHz 25MB Cache 130W	3331	HC1	A3XE
Addl Intel Xeon Processor E5-2690 v2 10C 3.0GHz 25MB Cache 130W	7914	AC1 MC1	
Addl Intel Xeon Processor E5-2650L v2 10C 1.7GHz 25MB Cache 70W	3331	HC1	A3XF
Addl Intel Xeon Processor E5-2650L v2 10C 1.7GHz 25MB Cache 70W	7914	AC1 MC1	
Addl Intel Xeon Processor E5-2637 v2 4C 3.5GHz15MB Cache 130W	3331	HC1	A3XG
Addl Intel Xeon Processor E5-2637 v2 4C 3.5GHz15MB Cache 130W	7914	AC1 MC1	
Addl Intel Xeon Processor E5-2643 v2 6C 3.5GHz 25MB Cache 130W	3331	HC1	A3XH
Addl Intel Xeon Processor E5-2643 v2 6C 3.5GHz 25MB Cache 130W	7914	AC1 MC1	
Addl Intel Xeon Processor E5-2667 v2 8C 3.3GHz 25MB Cache 130W	3331	HC1	A3XJ
Addl Intel Xeon Processor E5-2667 v2 8C 3.3GHz 25MB Cache 130W	7914	AC1 MC1	
Addl Intel Xeon Processor E5-2695 v2 12C 2.4GHz 30MB Cache 115W	3331	HC1	A3XK
Addl Intel Xeon Processor E5-2695 v2 12C 2.4GHz 30MB Cache 115W	7914	AC1 MC1	
Addl Intel Xeon Processor E5-2697 v2 12C 2.7GHz 30MB Cache 130W	3331	HC1	A3XL
Addl Intel Xeon Processor E5-2697 v2 12C 2.7GHz 30MB Cache 130W	7914	AC1 MC1	
IBM System x3550 M4 Planar (Refresh)	7914	AC1 MC1	A3XM
N2215 SAS/SATA HBA for IBM System x	7914	AC1 MC1	A3YY
ServerRAID M5210 SAS/SATA Controller for IBM System x	7914	AC1 MC1	A3YZ
ServerRAID M5200 Series 1GB Cache/RAID 5 Upgrade for IBM Systems	7914	AC1 MC1	A3Z0
ServerRAID M5200 Series 1GB Flash/RAID 5 Upgrade for IBM Systems	7914	AC1 MC1	A3Z1
ServerRAID M5200 Series 2GB Flash/RAID 5 Upgrade for IBM Systems	7914	AC1 MC1	A3Z2
ServerRAID M5200 Series RAID 6 Upgrade for IBM Systems-FoD	7914	AC1 MC1	A3Z5
ServerRAID M5200 Series Zero Cache/RAID 5 Upgrade for IBM Systems-FoD	7914	AC1 MC1	A3Z6
ServerRAID M5200 Series Performance Accelerator for IBM Systems-FoD	7914	AC1 MC1	A3Z7
ServerRAID M5200 Series SSD Caching Enabler for IBM Systems-FoD	7914	AC1 MC1	A3Z8
x3550M4 4x 2.5" HS HDD Assembly Kit for 12Gb RAID	7914	AC1 MC1	A464
x3550M4 2.5" HDD Assembly Kit for 12Gb RAID	3331	HC1	A465
x3550M4 2.5" HDD Assembly Kit for 12Gb RAID	7914	AC1 MC1	
Intel Xeon Processor E5-2648L v2 10C 1.9GHz 25MB			

cache 1866MHz 70W	7914	AC1 MC1	A466
Intel Xeon Processor E5-2628L v2 8C 1.9GHz 20MB cache 1600MHz 70W	7914	AC1 MC1	A467
Addl Intel Xeon Processor E5-2648L v2 10C 1.9GHz 25MB Cache 70W	3331	HC1	A468
Addl Intel Xeon Processor E5-2648L v2 10C 1.9GHz 25MB Cache 70W	7914	AC1 MC1	
Addl Intel Xeon Processor E5-2628L v2 8C 1.9GHz 20MB Cache 70W	3331	HC1	A469
Addl Intel Xeon Processor E5-2628L v2 8C 1.9GHz 20MB Cache 70W	7914	AC1 MC1	
Super Cap Cable 925mm for ServRAID M5200 Series Flash	7914	AC1 MC1	A47F
32GB (1x32GB, 4Rx4, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHz LP LRDIMM	7914	AC1 MC1	A47K
x3550M4 mini-SAS Cable Kit for 12Gb RAID	3331	HC1	A4K4

Single Entity Offerings (SEOs)

Description	SEO Number
IBM System x3550 M4	7914A3U
	7914B3U
	7914C3U
	7914C5U
	7914D3U
	7914F3U
	7914G3U
	7914H3U
	7914J3U
	7914L3U
	791423U
	791433U
	791443U
	7914M3U
	791453U
791473U	
791483U	

Express models:

Description	SEO Number
IBM System x3550 M4 Express	7914EGU
	7914EHU
	7914EJU
	7914EKU

Options

The following are features already announced for the 3331 machine type:

Description	Type	Model	Feature	SEO	Part Number
x3550M4 2.5" HDD Assembly Kit for 12Gb RAID	3331	HC1	A465	00Y7297	00Y7297
x3550M4 mini-SAS Cable Kit for 12Gb RAID	3331	HC1	A4K4	00Y8597	00Y8597
8GB (1x8GB, 2Rx8, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHz LP RDIMM	3331	HC1	A3QJ	00D5040	00D5040
Intel Xeon Processor E5-2628L v2 8C 1.9GHz 20MB Cache 1600MHz 70W	3331	HC1	A469	00Y7257	00Y7257
Intel Xeon Processor E5-2648L	3331	HC1	A468	00Y7259	00Y7259

v2 10C 1.9GHz 25MB Cache 1866MHz 70								
Intel Xeon Processor E5-2695	3331	HC1	A3XK	46W2833	46W2833			
v2 12C 2.4GHz 30MB Cache 1866MHz 115								
Intel Xeon Processor E5-2697	3331	HC1	A3XL	46W2834	46W2834			
v2 12C 2.7GHz 30MB Cache 1866MHz 130								
Intel Xeon Processor E5-2603	3331	HC1	A3X3	46W2835	46W2835			
v2 4C 1.8GHz 10MB Cache 1333MHz 80W								
Intel Xeon Processor E5-2609	3331	HC1	A3X4	46W2836	46W2836			
v2 4C 2.5GHz 10MB Cache 1333MHz 80W								
Intel Xeon Processor E5-2620	3331	HC1	A3X5	46W2837	46W2837			
v2 6C 2.1GHz 15MB Cache 1333MHz 80W								
Intel Xeon Processor E5-2630	3331	HC1	A3X6	46W2838	46W2838			
v2 6C 2.6GHz 15MB Cache 1333MHz 80W								
Intel Xeon Processor E5-2640	3331	HC1	A3X8	46W2839	46W2839			
v2 8C 2.0GHz 20MB Cache 1333MHz 80W								
Intel Xeon Processor E5-2650	3331	HC1	A3X9	46W2840	46W2840			
v2 8C 2.6GHz 20MB Cache 1333MHz 80W								
Intel Xeon Processor E5-2660	3331	HC1	A3XA	46W2841	46W2841			
v2 10C 2.2GHz 25MB Cache 1866MHz 95W								
Intel Xeon Processor E5-2670	3331	HC1	A3XC	46W2842	46W2842			
v2 10C 2.5GHz 25MB Cache 1866MHz 115W								
Intel Xeon Processor E5-2680	3331	HC1	A3XD	46W2843	46W2843			
v2 10C 2.8GHz 25MB Cache 1866MHz 115W								
Intel Xeon Processor E5-2690	3331	HC1	A3XE	46W2844	46W2844			
v2 10C 3.0GHz 25MB Cache 1866MHz 130W								
Intel Xeon Processor E5-2637	3331	HC1	A3XG	46W2846	46W2846			
v2 4C 3.5GHz 25MB Cache 1866MHz 130W								
Intel Xeon Processor E5-2643	3331	HC1	A3XH	46W2847	46W2847			
v2 6C 3.5GHz 25MB Cache 1866MHz 130W								
Intel Xeon Processor E5-2667	3331	HC1	A3XJ	46W2848	46W2848			
v2 8C 3.3GHz 25MB Cache 1866MHz 130W								
Intel Xeon Processor E5-2630L	3331	HC1	A3X7	46W2849	46W2849			
v2 6C 2.4GHz 15MB Cache 1600MHz 60W								
Intel Xeon Processor E5-2650L	3331	HC1	A3XF	46W2850	46W2850			
v2 10C 1.7GHz 25MB Cache 1600MHz 70W								

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).

<https://www.ibm.com/partnerworld/mem/sla.jsp?num=113-153>

Publications

The following publications and CD-ROMs are shipped with the System x3550 M4.

- *System x3550 M4 Installation and Service 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 illustrations to enable you to quickly set up your System x3550 M4.
- *Documentation/Installation and Service Guide CD* contains translated versions of the product Installation and Service guide.
- *ServerGuide* contains online publications and drivers to support the System x3550 M4. In addition, it includes a set of easy-to-use utilities to help you install the system using CDs of several popular network operating systems.

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

The publication *System x3550 M4 Installation and Service Guide*, in US English and translation versions, is available from

<http://www.ibm.com/systems/support/>

Displayable softcopy publications

The product books are offered in displayable softcopy form. The displayable manuals are part of the basic machine-readable material. The files are shipped on CD-ROM. Terms and conditions for use of the machine-readable files are shipped with the files.

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Technical information

Specified operating environment

Physical specifications

System x3550 M4:

	7914A3x	7914B3x
Processor	Xeon E5-2603 v2 (80W)	Xeon E5-2609 v2 (80W)
Internal speed	1.8 GHz	2.5 GHz
External speed	6.4 GTS	6.4 GTS
Number cores	4	4
Number standard	1	1
Maximum	2	2
Cache (full-speed)	10 MB	10 MB
Memory	4 GB ECC 1600 MHz RDIMM	4 GB ECC 1600 MHz RDIMM
RDIMMs	1 x 4 GB (1Rx4, 1.35V)	1 x 4 GB (1Rx4, 1.35V)
DIMM sockets	24	24
Capacity ⁴	768 GB	768 GB
Video	SVGA	SVGA
Memory	16 MB	16 MB
HDD controller	SAS/SATA	SAS/SATA
Channels	4	8
Connector internal	1	2
RAID controller	H1110	M1115
HDD ⁵		
Total bays	9 (with upgrade)	9 (with upgrade)
5.25 slim	1	1
3.5-in tape	0	0
Hot-swap (3.5-in)	0	0
Hot-swap (2.5-in)	8 (with upgrade)	8 (with upgrade)
Internal capacity	12.8 TB (with upgrade)	12.8 TB (with upgrade)
Bays available	5 standard	5 standard
5.25 slim	1	1
3.5-in tape	0	0
Hot-swap (3.5-in)	0	0
Hot-swap (2.5-in)	4	4
Total PCI slots	2	2
PCI-E Gen3 x16 LP	1	1
PCI-E Gen3 x8 FH/HL	1 ⁶	1 ⁶
Slots available	2	2
PCI-E Gen3 x16 LP	1	1
PCI-E Gen3 x8 FH/HL	1	1
System management	Standard	Standard
Ethernet controller	Four 1 Gb	Four 1 Gb
Optical drive (SATA)	Optional	Optional
Power supply	550 W	550 W
Number standard	1	1
Maximum	2	2
Hot-swap	Yes	Yes
Redundant power	Optional	Optional
Auto restart	Yes	Yes
	7914C3x	7914C5x
Processor	Xeon E5-2620 v2 (80W)	Xeon E5-2620 v2 (80W)
Internal speed	2.1 GHz	2.1 GHz
External speed	7.2 GTS	7.2 GTS
Number cores	6	6
Number standard	1	1
Maximum	2	2
Cache (full-speed)	15 MB	15 MB
Memory	8 GB ECC 1600 MHz RDIMM	8 GB ECC 1600 MHz RDIMM
RDIMMs	1 x 8 GB	1 x 8 GB

	(1Rx4,1.35V)	(1Rx4,1.35V)
DIMM sockets	24	24
Capacity ⁴	768 GB	768 GB
Video	SVGA	SVGA
Memory	16 MB	16 MB
HDD controller	SAS/SATA	SAS/SATA
Channels	8	4
Connector internal	2	1
RAID controller	M1115	H1110
HDD ⁵		
Total bays	9 (with upgrade)	3
5.25 slim	1	0
3.5-in tape	0	0
Hot-swap (3.5-in)	0	3
Hot-swap (2.5-in)	8 (with upgrade)	0
Internal capacity	12.8 TB (with upgrade)	12 TB
Bays available	5 standard	3 standard
5.25 slim	1	0
3.5-in tape	0	0
Hot-swap (3.5-in)	0	3
Hot-swap (2.5-in)	4	0
Total PCI slots	2	2
PCI-E Gen3 x16 LP	1	1
PCI-E Gen3 x8 FH/HL	1 ⁶	1 ⁶
Slots available	2	2
PCI-E Gen3 x16 LP	1	1
PCI-E Gen3 x8 FH/HL	1	1
System management	Standard	Standard
Ethernet controller	Four 1 Gb	Four 1 Gb
Optical drive (SATA)	Optional	N/A
Power supply	550 w	550 w
Number standard	1	1
Maximum	2	2
Hot-swap	Yes	Yes
Redundant power	Optional	Optional
Auto restart	Yes	Yes

	7914D3x	7914F3x
Processor	Xeon E5-2630 v2 (80w)	Xeon E5-2640 v2 (95w)
Internal speed	2.6 GHz	2.0 GHz
External speed	7.2 GTS	7.2 GTS
Number cores	6	8
Number standard	1	1
Maximum	2	2
Cache (full-speed)	15 MB	20 MB
Memory	8 GB ECC 1600 MHz RDIMM	8 GB ECC 1600 MHz RDIMM
RDIMMs	1 x 8 GB (1Rx4,1.35V)	1 x 8 GB (1Rx4,1.35V)
DIMM sockets	24	24
Capacity ⁴	768 GB	768 GB
Video	SVGA	SVGA
Memory	16 MB	16 MB
HDD controller	SAS/SATA	SAS/SATA
Channels	8	8
Connector internal	2	2
RAID controller	M5110 + 512 MB Flash	M5110 + 512 MB Flash
HDD ⁵		
Total bays	9 (with upgrade)	9 (with upgrade)
5.25 slim	1	1
3.5-in tape	0	0
Hot-swap (3.5-in)	0	0
Hot-swap (2.5-in)	8 (with upgrade)	8 (with upgrade)
Internal capacity	12.8 TB (with upgrade)	12.8 TB (with upgrade)
Bays available	5 standard	5 standard
5.25 slim	1	1
3.5-in tape	0	0
Hot-swap (3.5-in)	0	0
Hot-swap (2.5-in)	4	4
Total PCI slots	2	2
PCI-E Gen3 x16 LP	1	1
PCI-E Gen3 x8 FH/HL	1 ⁶	1 ⁶

Slots available	2	2
PCI-E Gen3 x16 LP	1	1
PCI-E Gen3 x8 FH/HL	1	1
System management	Standard	Standard
Ethernet controller	Four 1 Gb	Four 1 Gb
Optical drive (SATA)	Optional	Optional
Power supply	550 w	550 w
Number standard	1	1
Maximum	2	2
Hot-swap	Yes	Yes
Redundant power	Optional	Optional
Auto restart	Yes	Yes
	7914G3x	7914H3x
Processor	Xeon E5-2650 v2 (95w)	Xeon E5-2660 v2 (95w)
Internal speed	2.6 GHz	2.2 GHz
External speed	8.0 GTS	8.0 GTS
Number cores	8	10
Number standard	1	1
Maximum	2	2
Cache (full-speed)	20 MB	25 MB
Memory	8 GB ECC 1866 MHz RDIMM	8 GB ECC 1866 MHz RDIMM
RDIMMs	1 x 8 GB (1Rx4,1.5V)	1 x 8 GB (1Rx4,1.5V)
DIMM sockets	24	24
Capacity ⁴	768 GB	768 GB
Video	SVGA	SVGA
Memory	16 MB	16 MB
HDD controller	SAS/SATA	SAS/SATA
Channels	8	8
Connector internal	2	2
RAID controller	M5110 + 1 GB Flash	M5110 + 1 GB Flash
HDD ⁵		
Total bays	9 (with upgrade)	9 (with upgrade)
5.25 slim	1	1
3.5-in tape	0	0
Hot-swap (3.5-in)	0	0
Hot-swap (2.5-in)	8 (with upgrade)	8 (with upgrade)
Internal capacity	12.8 TB (with upgrade)	12.8 TB (with upgrade)
Bays available	5 standard	5 standard
5.25 slim	1	1
3.5-in tape	0	0
Hot-swap (3.5-in)	0	0
Hot-swap (2.5-in)	4	4
Total PCI slots	2	2
PCI-E Gen3 x16 LP	1	1
PCI-E Gen3 x8 FH/HL	1 ⁶	1 ⁶
Slots available	2	2
PCI-E Gen3 x16 LP	1	1
PCI-E Gen3 x8 FH/HL	1	1
System management	Standard	Standard
Ethernet controller	Four 1 Gb	Four 1 Gb
Optical drive (SATA)	Optional	Optional
Power supply	550 w	550 w
Number standard	1	1
Maximum	2	2
Hot-swap	Yes	Yes
Redundant power	Optional	Optional
Auto restart	Yes	Yes
	7914J3x	7914L3x
Processor	Xeon E5-2670 v2 (115w)	Xeon E5-2680 v2 (115w)
Internal speed	2.5 GHz	2.8 GHz
External speed	8.0 GTS	8.0 GTS
Number cores	10	10
Number standard	1	1
Maximum	2	2
Cache (full-speed)	25 MB	25 MB
Memory	8 GB ECC 1866 MHz RDIMM	8 GB ECC 1866 MHz RDIMM

RDIMMs	1 x 8 GB (1Rx4,1.5V)	1 x 8 GB (1Rx4,1.5V)
DIMM sockets	24	24
Capacity ⁴	768 GB	768 GB
Video	SVGA	SVGA
Memory	16 MB	16 MB
HDD controller	SAS/SATA	SAS/SATA
Channels	8	8
Connector internal	2	2
RAID controller	M5110 + 1 GB Flash	M5110 + 1 GB Flash
HDD ⁵		
Total bays	9 (with upgrade)	9 (with upgrade)
5.25 slim	1	1
3.5-in tape	0	0
Hot-swap (3.5-in)	0	0
Hot-swap (2.5-in)	8 (with upgrade)	8 (with upgrade)
Internal capacity	12.8 TB (with upgrade)	12.8 TB (with upgrade)
Bays available	5 standard	5 standard
5.25 slim	1	1
3.5-in tape	0	0
Hot-swap (3.5-in)	0	0
Hot-swap (2.5-in)	4	4
Total PCI slots	2	2
PCI-E Gen3 x16 LP	1	1
PCI-E Gen3 x8 FH/HL	1 ⁶	1 ⁶
Slots available	2	2
PCI-E Gen3 x16 LP	1	1
PCI-E Gen3 x8 FH/HL	1	1
System management	Standard	Standard
Ethernet controller	Four 1 Gb	Four 1 Gb
Optical drive (SATA)	Optional	Optional
Power supply	550 w	750 w
Number standard	1	1
Maximum	2	2
Hot-swap	Yes	Yes
Redundant power	Optional	Optional
Auto restart	Yes	Yes

791423x

791433x

Processor	Xeon E5-2637 v2 (130w)	Xeon E5-2643 v2 (130w)
Internal speed	3.5 GHz	3.5 GHz
External speed	8.0 GTS	8.0 GTS
Number cores	4	6
Number standard	1	1
Maximum	2	2
Cache (full-speed)	15 MB	25 MB
Memory	8 GB ECC 1866 MHz RDIMM	8 GB ECC 1866 MHz RDIMM
RDIMMs	1 x 8 GB (1Rx4,1.5V)	1 x 8 GB (1Rx4,1.5V)
DIMM sockets	24	24
Capacity ⁴	768 GB	768 GB
Video	SVGA	SVGA
Memory	16 MB	16 MB
HDD controller	SAS/SATA	SAS/SATA
Channels	8	8
Connector internal	2	2
RAID controller	M5110 (no cache/flash)	M5110 (no cache/flash)
HDD ⁵		
Total bays	9 (with upgrade)	9 (with upgrade)
5.25 slim	1	1
3.5-in tape	0	0
Hot-swap (3.5-in)	0	0
Hot-swap (2.5-in)	8 (with upgrade)	8 (with upgrade)
Internal capacity	12.8 TB (with upgrade)	12.8 TB (with upgrade)
Bays available	5 standard	5 standard
5.25 slim	1	1
3.5-in tape	0	0
Hot-swap (3.5-in)	0	0
Hot-swap (2.5-in)	4	4
Total PCI slots	2	2
PCI-E Gen3 x16 LP	1	1

PCI-E Gen3 x8 FH/HL	1 ⁶	1 ⁶
Slots available	2	2
PCI-E Gen3 x16 LP	1	1
PCI-E Gen3 x8 FH/HL	1	1
System management	Standard	Standard
Ethernet controller	Four 1 Gb	Four 1 Gb
Optical drive (SATA)	Optional	Optional
Power supply	750 W	750 W
Number standard	1	1
Maximum	2	2
Hot-swap	Yes	Yes
Redundant power	Optional	Optional
Auto restart	Yes	Yes

791443x

7914M3x

Processor	Xeon E5-2667 v2 (130W)	Xeon E5-2690 v2 (130W)
Internal speed	3.3 GHz	3.0 GHz
External speed	8.0 GTS	8.0 GTS
Number cores	8	10
Number standard	1	1
Maximum	2	2
Cache (full-speed)	25 MB	25 MB
Memory	8 GB ECC 1866 MHz RDIMM	8 GB ECC 1866 MHz RDIMM
RDIMMs	1 x 8 GB (1Rx4,1.5V)	1 x 8 GB (1Rx4,1.5V)
DIMM sockets	24	24
Capacity ⁴	768 GB	768 GB
Video	SVGA	SVGA
Memory	16 MB	16 MB
HDD controller	SAS/SATA	SAS/SATA
Channels	8	8
Connector internal	2	2
RAID controller	M5110 (no cache/flash)	M5110 (no cache/flash)
HDD ⁵		
Total bays	9 (with upgrade)	9 (with upgrade)
5.25 slim	1	1
3.5-in tape	0	0
Hot-swap (3.5-in)	0	0
Hot-swap (2.5-in)	8 (with upgrade)	8 (with upgrade)
Internal capacity	12.8 TB (with upgrade)	12.8 TB (with upgrade)
Bays available	5 standard	5 standard
5.25 slim	1	1
3.5-in tape	0	0
Hot-swap (3.5-in)	0	0
Hot-swap (2.5-in)	4	4
Total PCI slots	2	2
PCI-E Gen3 x16 LP	1	1
PCI-E Gen3 x8 FH/HL	1 ⁶	1 ⁶
Slots available	2	2
PCI-E Gen3 x16 LP	1	1
PCI-E Gen3 x8 FH/HL	1	1
System management	Standard	Standard
Ethernet controller	Four 1 Gb	Four 1 Gb
Optical drive (SATA)	Optional	Optional
Power supply	750 W	750 W
Number standard	1	1
Maximum	2	2
Hot-swap	Yes	Yes
Redundant power	Optional	Optional
Auto restart	Yes	Yes

791453x

791473x

Processor	Xeon E5-2650L v2 (70W)	Xeon E5-2695 v2 (115W)
Internal speed	1.7 GHz	2.4 GHz
External speed	8.0 GTS	8.0 GTS
Number cores	10	12
Number standard	1	1
Maximum	2	2
Cache (full-speed)	25 MB	30 MB

Memory	8 GB ECC 1600 MHz RDIMM	8 GB ECC 1866 MHz RDIMM
RDIMMs	1 x 8 GB (1Rx4,1.35V)	1 x 8 GB (1Rx4,1.5V)
DIMM sockets	24	24
Capacity ⁴	768 GB	768 GB
Video	SVGA	SVGA
Memory	16 MB	16 MB
HDD controller	SAS/SATA	SAS/SATA
Channels	8	8
Connector internal	2	2
RAID controller	M5110 + 1 GB Flash	M5110 + 1 GB Flash
HDD ⁵		
Total bays	9 (with upgrade)	9 (with upgrade)
5.25 slim	1	1
3.5-in tape	0	0
Hot-swap (3.5-in)	0	0
Hot-swap (2.5-in)	8 (with upgrade)	8 (with upgrade)
Internal capacity	12.8 TB (with upgrade)	12.8 TB (with upgrade)
Bays available	5 standard	5 standard
5.25 slim	1	1
3.5-in tape	0	0
Hot-swap (3.5-in)	0	0
Hot-swap (2.5-in)	4	4
Total PCI slots	2	2
PCI-E Gen3 x16 LP	1	1
PCI-E Gen3 x8 FH/HL	1 ⁶	1 ⁶
Slots available	2	2
PCI-E Gen3 x16 LP	1	1
PCI-E Gen3 x8 FH/HL	1	1
System management	Standard	Standard
Ethernet controller	Four 1 Gb	Four 1 Gb
Optical drive (SATA)	Optional	Optional
Power supply	550 w	750 w
Number standard	1	1
Maximum	2	2
Hot-swap	Yes	Yes
Redundant power	Optional	Optional
Auto restart	Yes	Yes

791483x

Processor	Xeon E5-2697 v2 (130w)
Internal speed	2.7 GHz
External speed	8.0 GTS
Number cores	12
Number standard	1
Maximum	2
Cache (full-speed)	30 MB
Memory	8 GB ECC 1866 MHz RDIMM
RDIMMs	1 x 8 GB (1Rx4,1.5V)
DIMM sockets	24
Capacity ⁴	768 GB
Video	SVGA
Memory	16 MB
HDD controller	SAS/SATA
Channels	8
Connector internal	2
RAID controller	M5110 + 1 GB Flash
HDD ⁵	
Total bays	9 (with upgrade)
5.25 slim	1
3.5-in tape	0
Hot-swap (3.5-in)	0
Hot-swap (2.5-in)	8 (with upgrade)
Internal capacity	12.8 TB (with upgrade)
Bays available	5 standard
5.25 slim	1
3.5-in tape	0
Hot-swap (3.5-in)	0
Hot-swap (2.5-in)	4
Total PCI slots	2

PCI-E Gen3 x16 LP	1
PCI-E Gen3 x8 FH/HL	1 ⁶
Slots available	2
PCI-E Gen3 x16 LP	1
PCI-E Gen3 x8 FH/HL	1
System management	Standard
Ethernet controller	Four 1 Gb
Optical drive (SATA)	Optional
Power supply	750 w
Number standard	1
Maximum	2
Hot-swap	Yes
Redundant power	Optional
Auto restart	Yes

4 Maximum of 384 GB by using twenty-four 16 GB optional DIMMs, or up to 768 GB of memory with LRDIMMs.

5 The standard system can hold four 2.5-inch HS HDDs. Capacity can be doubled with 4x 2.5-inch HDD expansion option fitted. Maximum capacities are based on installation of eight 2.5-inch 1.6 TB SAS MLC HS Enterprise SSD HDDs with 4x 2.5-inch HDD expansion option fitted, or by three 4 TB 3.5-inch SAS/SATA HDDs.

Note: For the latest information on supported HDD options, refer to the *Sales Manual* or visit

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

6 PCI_E is the standard feature for PCI or you may replace it with the PCI Riser Card PCI-X Option for PCI/PCI-X 133 MHz/100 MHz 64-bit, or 66 MHz/33 MHz 32-bit slots. When the second processor is fitted, the x8 slot can be converted to x16 via optical riser card.

Video subsystem

- SVGA compatible video controller (Matrox G200eR2).
- Integrated on Integrated Management Module (IMM2).
- Integrated on planar and connected to the PCI bus.
- DDR3 528 or 504 MHz SDRAM video memory controller.
- Video memory is not expandable.
- One DVI (Digital Video Interface) is not used.
- Avocent Digital Video Compression (with IBM Integrated Management Module Advanced Upgrade)

Supported video modes

width	Height	Refresh	Bpp
640	400	60, 72, 75, 85	8, 16, 32
800	600	56, 60, 72, 75, 85	8, 16, 32
1,024	768	60, 70, 75, 85	8, 16, 32
1,152	864	60	8, 16, 32
1,280	1,024	60	8, 16, 32
1,280	1,024	75, 85	8, 16
1,440	900	60	8, 16, 32
1,440	900	75, 85	8, 16
1,600	1,200	60, 65, 70, 75, 85	8, 16
1,680	1,050	60, 75, 85	8, 16

The maximum resolution of the video controller is 1600 x 1200 at 75.

The maximum screen resolution is not supported for all Bits per Pixel (color depth) and refresh rates. The maximum Bits per Pixel (color depth) is not supported for all resolutions and refresh rates.

Dimensions

1U Rack Drawer

- Width: 429 mm (16.9 in.)

- Depth: 734 mm (28.9 in.)
- Height: 43 mm (1.7 in.)

Rack

- Weight: (minimum configuration) 12.7 kg (28 lb.)
- Weight: (maximum configuration) 15.9 kg (35 lb.)

Electrical

Models with 550 W power supplies:

- 100 - 127 (nominal) V ac; 50 Hz or 60 Hz; 6.5 A
- 200 - 240 (nominal) V ac; 50 Hz or 60 Hz; 3.3 A
- Input kilovolt-amperes (kVA) (approximately):
 - Minimum configuration: 0.14 kVA
 - Maximum configuration: 0.731 kVA

Models with 750 W power supplies:

- 100 - 127 (nominal) V ac; 50 Hz or 60 Hz; 8.9 A
- 200 - 240 (nominal) V ac; 50 Hz or 60 Hz; 4.5 A
 - Minimum configuration: 0.14 kVA
 - Maximum configuration: 0.993 kVA
- Btu output:
 - Minimum configuration: 460.62 Btu/hr (ac 135 watts)
 - Maximum configuration: 3378 Btu/hr (ac 990 watts)
- Noise level: 6.6 bels (operating)
- Noise level: 6.4 bels (idle)

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

Standards

These systems support or comply with the following standards:

- Multiprocessor Specification (MPS) 1.4
- Peripheral Component Interconnect (PCI) specification 2.3
- Hardware-enabled to meet the International Organization for Standardization (ISO) 9241, Part 3

Equipment agency approvals and safety

- FCC - Verified to comply with Part 15 of the FCC Rules, Class A
- Canada ICES-003, issue 5, Class A
- UL/IEC 60950-1
- CSA C22.2 No. 60950-1
- NOM-019
- Argentina IEC60950-1

Operating environment

Air temperature: voltage

- Server on: 5°C to 40°C (41.0°F to 104°F); altitude: 0 to 915 m (3,000 ft) for 60W to 95W processors models.
- Server on: 10°C to 35°C (50.0°F to 95°F); altitude: 0 to 915 m (3,000 ft) for 115W to 135W processors models.
- Server off: 5°C to 45°C (41.0°F to 113°F)
- Shipment: -40°C to +60°C (-40°F to 140°F)

Humidity:

For 115W to 130W processors/135W processors models

- Server on: 20% to 80%, maximum dew point 21°C, maximum rate of change 5°C/hr
- Server off: 8% to 80%, maximum dew point 27°C

For 60W to 95W processors models

- Server on: 8% to 85%, maximum dew point 24°C, maximum rate of change 5°C/hr
- Server off: 8% to 80%, maximum dew point 27°C

Design to ASHRAE Class A3, ambient of 40°C, with relaxed support

- Support cloud-like workload with no performance degradation acceptable (Turbo-Off)
- Under no circumstance, can any combination of worst case workload and configuration result in system shutdown or design exposure at 40°C

Homologation

This product is certified only in specific countries for connection to interfaces of public telecommunications networks. In other countries, further certification may be required by law prior to making any such connection. Contact an IBM representative or reseller for any questions. In some countries, the availability of the product may depend on the availability of the relevant national regulatory certificates.

This product is not certified for direct connection by any means whatsoever to interfaces of public telecommunications networks. Certification may be required by law prior to making any such connection. Contact an IBM representative or reseller for any questions.

Hardware requirements

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

- Keyboard
- Mouse
- HDD
- Display

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

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 software products have been tested by IBM and software publishers in the latest available versions, and where appropriate, are or will soon be certified by the publisher to be compatible with the System x3550 M4 server.

Operating systems

- Microsoft
 - Microsoft Windows Server 2008 R2
 - Microsoft Windows Server 2008, Datacenter x64 Edition
 - Microsoft Windows Server 2008, Enterprise x64 Edition
 - Microsoft Windows Server 2008, Standard x64 Edition
 - Microsoft Windows Server 2008, Web x64 Edition
 - Windows HPC Server 2008
- Linux™
 - SUSE Linux Enterprise Server 11 for AMD64/EM64T
 - Red Hat Enterprise Linux 5 Server x64 Edition

Note: For information on additional support, certification, version information, or network operating systems, visit

<http://www-03.ibm.com/servers/eserver/serverproven/compat/us/>

IBM makes no representation or warranty regarding third-party products, including those designated as ServerProven .

Compatibility

The System x3550 M4 systems contain licensed system programs that include set configuration, set features, and test programs. System UEFI is loaded from a "flash" EEPROM into system memory. This UEFI provides instructions and interfaces designed to support the standard features of the x3550 M4 and to maintain compatibility with many current software programs.

For detailed information about IBM and non-IBM devices, adapters, software, and network operating systems supported with xSeries servers, visit

<http://www-03.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 System x servers. The *Sales Manual* is updated periodically as new features and options are announced that support these servers.

Limitations

- The System x3550 M4 server contains a single, configurable serial port. It can be configured to be operating-system-controlled, service-processor-controlled, or shared between the two. You can set the configuration by UEFI configuration. The default configuration from the factory is in the shared position. In the shared position, the service processor controls the port until the operating system is running, then the operating system takes control. The service processor can regain control of the port for user-configured dial-out situations or if the operating system is not available, but operating system control cannot be reestablished without resetting the server.
- System x3550 M4 servers can address a maximum of 768 GB of system memory. All supported system memory is addressable through direct memory access.

The System x3550 M4 server supports 2 GB, 4 GB, 8 GB, and optional 16 GB DDR-3 SDRAM Registered DIMMs or 32 GB LRDIMMs. Different types of DIMMs can not coexist in the same system. Refer to the Planning information section for supported memory options.

- To ensure proper air flow for cooling, the System x3550 M4 server requires a rack with a perforated door, such as the NetBAY42 SR or NetBAY25 SR. An alternative is to remove the front door of rack cabinets where the door panel is of solid construction.
- Microprocessor upgrades must be of the same type and clock speed. Mixing microprocessors of different speeds or cache size is not supported.
- Solid-state memory cells have an intrinsic, finite number of write cycles that each cell can incur. As a result, each solid-state device has a maximum amount of write cycles to which it can be subjected, documented as Total Bytes Written (TBW). IBM is not responsible for replacement of hardware that has reached the maximum guaranteed number of write cycles. This limit may be revealed as the device failing to respond to system-generated commands or becoming incapable of being written to. Additional information is available at

<http://www-03.ibm.com/systems/x/options/storage/solidstate/index.html>

Refer to the [Software requirements](#) section for operating system limitations.

Planning information

Customer responsibilities

The System x3550 M4 server is designated as customer setup. Customer setup instructions are shipped with each system.

Configuration information

Integrated RAID-1 configuration

There are two manufacturing instructions (MI) available to allow the user to set up a RAID-1 configuration.

The two instructions are:

- Integrated Mirroring - Two HDDs required using Instruction 01R1356
- Integrated Mirroring with HotSpare - Three HDDs required using Instruction 01R1357

Cabling

Simple-swap non-RAID configuration contains cables supporting up to three 3.5-inch simple-swap non-RAID SATA drives. It does not contain any backplane.

Rack installations

System x3550 M4 server 1U rack-drawer models should be installed in a 19-inch rack cabinet designed for 28-inch deep devices, such as the NetBAY42U ER and NetBAY42U SR. Installation into some of the older Netfinity® racks (9306900, 9306910, and 9306200) requires a rack extension kit.

If a System x3550 M4 is mounted in a non-IBM rack, the rack must satisfy the following specifications:

- The rack must meet EIA-310-D standards for mounting flanges and hole locations.
- The front to rear distance of the mounting flanges must be 698.5 - 762 mm (27.5 - 30 in.).
- The thickness of the mounting flanges must be 1.9 - 3.3 mm.
- The mounting flanges must have either 7.1 mm (.28 in.) diameter holes or 9.6 mm (.38 in.) square holes on the standard EIA hole spacing.

- The rack must have a minimum depth of 70 mm (2.76 in.) between the front mounting flange and inside of the front door for appropriate cooling.
- The rack must have a minimum depth of 157 mm (6.2 in.) between the rear mounting flange and inside of the rear door to install the server and make space for cable management.
- The minimum side-to-side clearance in the rack between the front and rear mounting flanges must be 467 mm (18.2 in.) to accommodate the width of the server and the slide mounting brackets.
- The minimum side-to-side clearance in the rack between each door and the mounting flanges must be 484 mm (19.1 in.) to accommodate the slide mounting brackets.
- The rack must 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 must be able to support the maximum rack configuration, including all servers, external cables, and PDUs.
- The rack must provide proper stabilization so that the rack does not become unstable when servers are pulled out for service.

Supported memory options

The following memory options are supported:

- 00D5020 - 4GB (1x4GB, 1Rx4, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHz LP RDIMM
- 00D5024 - 4GB (1x4GB, 1Rx4, 1.35V) PC3L-12800 CL11 ECC DDR3 1600MHz LP RDIMM
- 00D5032 - 8GB (1x8GB, 1Rx4, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHz LP RDIMM
- 00D5036 - 8GB (1x8GB, 1Rx4, 1.35V) PC3L-12800 CL11 ECC DDR3 1600MHz LP RDIMM
- 00D5040 - 8GB (1x8GB, 2Rx8, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHz LP RDIMM
- 00D5048 - 16GB (1x16GB, 2Rx4, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHz LP RDIMM

Power considerations

The System x3550 M4 server includes a standard 550-watt ac or 750-watt ac hot-swap power supply.

Note: For information on additional support, certification, version information, compatibility, or network operating systems, visit

<http://www-03.ibm.com/servers/eserver/serverproven/compat/us/>

IBM makes no representation or warranty regarding third-party products, including those designated as ServerProven .

Cable orders

Four 10/100/1000 Mbps, full-duplex Ethernet PCI controllers, standard with the System x3550 M4 server, are connected directly to an independent RJ-45 connector. The RJ-45 connector provides a 10BASE-T, 100BASE-TX, and 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 an unshielded twisted pair (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 x3550 M4 requires about 20 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

Product	Package description	Boxes
System x3550 M4	System unit carton	1
	Contents:	
	System unit Rack kit	
System x3550 M4	System ship group	1
	Contents:	
	Important Notices Flyer Rack Installation Instructions CD - Documentation (installation and Service Guides)	

The System x3550 M4 system is shipped as a single package. Other items are in zipped bags or boxes.

Security, auditability, and control

Security and auditability features include:

- Power-on and privileged access password functions control 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.
- Selectable boot sequence can be used to prevent unauthorized installation of software or removal of data from the diskette drive.

The servers are intended to be installed in a rack and secured in a rack. 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

Electronic Service Agent™ and the IBM Electronic Support web portal are dedicated to providing fast, exceptional support to IBM Systems customers. The IBM Electronic Service Agent tool is a no-additional-charge tool that proactively monitors and reports hardware events, such as system errors, performance issues, and inventory. The Electronic Service Agent tool can help you stay focused on your company's strategic business initiatives, save time, and spend less effort managing day-to-day IT maintenance issues. Servers enabled with this tool can be monitored remotely around the clock by IBM Support all at no additional cost to you.

Now integrated into the base operating system of AIX® 5.3, AIX 6.1, and AIX 7.1, Electronic Service Agent is designed to automatically and electronically report system failures and utilization issues to IBM, which can result in faster problem

resolution and increased availability. System configuration and inventory information collected by the Electronic Service Agent tool also can be viewed on the secure Electronic Support web portal, and used to improve problem determination and resolution by you and the IBM support team. To access the tool main menu, simply type "smitty esa_main", and select "Configure Electronic Service Agent ." In addition, ESA now includes a powerful web user interface, giving the administrator easy access to status, tool settings, problem information, and filters. For more information and documentation on how to configure and use Electronic Service Agent , refer to

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

The IBM Electronic Support portal is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. This portal enables you to gain easier access to IBM resources for assistance in resolving technical problems. The My Systems and Premium Search functions make it even easier for Electronic Service Agent tool-enabled customers to track system inventory and find pertinent fixes.

Benefits

Increased uptime: The Electronic Service Agent tool is designed to enhance the Warranty or Maintenance Agreement by providing faster hardware error reporting and uploading system information to IBM Support. This can translate to less wasted time monitoring the "symptoms," diagnosing the error, and manually calling IBM Support to open a problem record. Its 24 x 7 monitoring and reporting mean no more dependence on human intervention or off-hours customer personnel when errors are encountered in the middle of the night.

Security: The Electronic Service Agent tool is designed to be secure in monitoring, reporting, and storing the data at IBM . The Electronic Service Agent tool securely transmits either via the Internet (HTTPS or VPN) or modem, and can be configured to communicate securely through gateways to provide customers a single point of exit from their site. Communication is one way. Activating Electronic Service Agent does not enable IBM to call into a customer's system. System inventory information is stored in a secure database, which is protected behind IBM firewalls. It is viewable only by the customer and IBM . The customer's business applications or business data is never transmitted to IBM .

More accurate reporting: Since system information and error logs are automatically uploaded to the IBM Support center in conjunction with the service request, customers are not required to find and send system information, decreasing the risk of misreported or misdiagnosed errors. Once inside IBM , problem error data is run through a data knowledge management system and knowledge articles are appended to the problem record.

Customized support: Using the IBM ID entered during activation, customers can view system and support information in the "My Systems" and "Premium Search" sections of the Electronic Support website at

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

My Systems provides valuable reports of installed hardware and software using information collected from the systems by Electronic Service Agent . Reports are available for any system associated with the customer's IBM ID. Premium Search combines the function of search and the value of Electronic Service Agent information, providing advanced search of the technical support knowledgebase. Using Premium Search and the Electronic Service Agent information that has been collected from your system, customers are able to see search results that apply specifically to their systems.

For more information on how to utilize the power of IBM Electronic Services, contact your IBM Systems Services Representative, or 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 - Three years
- Optional features - One year
- ServeRAID M5100 Battery - One year

Note: The ServeRAID M5100 Battery has a one year warranty period effective on its date of installation. All other product warranty terms for the machine remain unchanged.

An IBM part or feature installed during the initial installation of an IBM machine is subject to a full warranty effective on the date of installation of the machine. An IBM part or feature which replaces a previously installed part or feature assumes the remainder of the warranty period for the replaced part or feature. An IBM part or feature added to a machine without replacing a previously installed part or feature is subject to a full warranty effective on its date of installation. Unless specified otherwise, the warranty period, type of warranty service, and service level of a part or feature is the same as the machine it is installed.

The following have been designated as consumables, supply items, or structural parts and therefore not covered by this warranty:

- Tape filler
- EMC blank filler
- EIA sET kit
- HDD 4 slot HS kit
- 3.5-inch top cover
- 3.5-inch mechanical chassis
- Safety cover
- 2.5-inch top cover
- 16DR M4 tape bezel
- Airflow baffle
- Gen-III slide kit
- Gen-III 1U CMA kit
- 2.5-inch mechanical chassis
- DVD blank filler
- Blank fan filler
- MISC part kit
- Battery holder
- PSU filler
- CMA assembly kit

- CMA, 2U/4U kit
- Remote battery tray
- Gen-III 2U CMA kit
- Slide kit
- RAID batteries

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 website. Certain machines contain remote support capabilities for direct problem reporting, remote problem determination, and resolution with IBM . You must follow the problem determination and resolution procedures that IBM specifies. Following problem determination, if IBM determines On-site Service is required, scheduling of service will depend upon the time of your call, machine technology and redundancy, and availability of parts. 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 normal IBM service area. Contact your local IBM representative or your reseller for country- and location-specific information.

The type of service is Customer Replaceable Unit (for example, keyboard, mouse, speaker, memory, or hard disk drive) Service and On-site Service.

Customer Replaceable Unit (CRU) Service

IBM provides a replacement 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. A CRU is designated as being either a Tier 1 (mandatory) or a Tier 2 (optional) CRU. Installation of Tier 1 CRUs, as specified in this announcement, 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 designated for your Machine.

Based upon availability, a CRU 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 15 days of your receipt of the replacement.

The following parts or features have been designated as Tier 1 CRUs:

- CMOS batteries
- Hard disk drives
- Hot-swap fan
- Hot-swap AC power supply
- Memory DIMM
- Optical drive
- PCI adapter
- Power cord
- Service label
- System label
- Hyper visor USB key
- PCI riser
- RAID card without battery
- Tape drive

- Ethernet daughter card
- Backplanes

On-site Service

At the discretion of IBM, you will receive CRU service or IBM or your reseller will repair the failing machine at your location and verify its operation. If required, On-site Repair is provided, nine hours per day, Monday through Friday excluding holidays, NBD response. You must provide a 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-country service delivery is used.

Call IBM at 1-800-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.

Calls must be received by 5:00 p.m. local time in order to qualify for NBD service.

International Warranty Service (IWS)

IWS is available in selected countries or regions.

The warranty service type and the service level provided in the servicing country may be different from that provided in the country in which the machine was purchased.

Under IWS, warranty service will be provided with the prevailing warranty service type and service level available for the IWS-eligible machine type in the servicing country, and the warranty period observed will be that of the country in which the machine was purchased.

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

<http://www-947.ibm.com/support/entry/portal/docdisplay?Indocid=GCOR-3FBJK2>

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

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® , ServiceElect, and ServiceElite

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

Warranty service upgrade

During the warranty period, a 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 website. Certain machines contain remote support capabilities

for direct problem reporting, remote problem determination, and resolution with IBM . You must follow the problem determination and resolution procedures that IBM specifies. Following problem determination, if IBM determines On-site Service is required, scheduling of service will depend upon the time of your call, machine technology and redundancy, and availability of parts.

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 a suitable working area to allow disassembly and reassembly of the IBM machine. The area must be clean, well lit, and suitable for the purpose.

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 website. Certain machines contain remote support capabilities for direct problem reporting, remote problem determination, and resolution with IBM . You must follow the problem determination and resolution procedures that IBM specifies. Following problem determination, if IBM determines On-site Service is required, scheduling of service will depend upon the time of your call, machine technology and redundancy, and availability of parts. Service levels are response-time objectives and are not guaranteed.

CRU Service

If your problem can be resolved with a CRU (for example, keyboard, mouse, speaker, memory, or hard disk drive), 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 15 days of your receipt of the replacement.

On-site Service

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

Maintenance service (ICA)

Maintenance services are available for ICA legacy contracts.

Alternative service (warranty service upgrades)

During the warranty period, a 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 website. Certain machines contain remote support capabilities for direct problem reporting, remote problem determination, and resolution with IBM . You must follow the problem determination and resolution procedures that IBM specifies. Following problem determination, if IBM determines On-site Service

is required, scheduling of service will depend upon the time of your call, machine technology and redundancy, and availability of parts.

A CRU 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 designated for your machine.

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

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 website. Certain machines contain remote support capabilities for direct problem reporting, remote problem determination, and resolution with IBM . You must follow the problem determination and resolution procedures that IBM specifies. Following problem determination, if IBM determines On-site Service is required, scheduling of service will depend upon the time of your call, machine technology and redundancy, and availability of parts. Service levels are response-time objectives and are not guaranteed.

CRU Service

If your problem can be resolved with a CRU (for example, keyboard, mouse, speaker, memory, or hard disk drive), 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 15 days of your receipt of the replacement.

On-site Service

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

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 its 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 (for example, adapter cards, PCMCIA cards, disk drives, or memory) installed within IBM machines 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

Licensed Machine Code

IBM Machine Code is licensed for use by a customer on the IBM machine for which it was provided by IBM under the terms and conditions of the IBM License Agreement for Machine Code, to enable the machine to function in accordance with its specifications, and only for the capacity authorized by IBM and acquired by the customer. You can obtain the agreement by contacting your IBM representative or visiting

http://www-304.ibm.com/systems/support/machine_warranties/machine_code.html

IBM may release changes to the Machine Code. IBM plans to make the Machine Code changes available for download from the IBM System x technical support website:

<http://www.ibm.com/systems/support/>

If the machine does not function as warranted and your problem can be resolved through your application of downloadable Machine Code, you are responsible for downloading and installing these designated Machine Code changes as IBM specifies. If you would prefer, you may request IBM to install downloadable Machine Code changes; however, you may be charged for that service.

Machine Code License Acceptance Requirement

Acceptance-By-Use Machine: Yes, acceptance of the Machine Code license terms is conveyed through the user's initial use of the Machine.

Acceptance-By-Use Machine: No, the Machine Code license requires signed acceptance by the machine's end user directly with IBM, applicable to orders for a new machine, machine type conversion MES, and to machines transferred to another user.

Acceptance-By-Use Machine: No, the LIC license requires signed acceptance by the machine's end user directly with IBM, applicable to orders for a new machine, machine type conversion MES, and to machines transferred to another user.

Educational allowance

None

Prices

For current prices, contact IBM at 888-Shop-IBM (746-7426) or visit

<http://www-03.ibm.com/systems/x/>

To locate the web price, search on the feature number in the Search field.

The following are features already announced for the 3331 machine type:

Description	Model Number	Feature Number	Initial/MES/Both/Support
Addl Intel Xeon Processor E5-2658 8C 2.1GHz 20MB 95W w/Fan	HC1	A39C	MES
Addl Intel Xeon Processor E5-2648L 8C 1.8GHz 20MB 70W w/Fan	HC1	A39D	MES
IBM System x 750W High Efficiency -48 V DC Power Supply	HC1	A39N	MES

The following are features already announced for the 7914 machine type:

Description	Model Number	Feature Number	Initial/MES/Both/Support
2U Bracket for Emulex 10GbE Virtual Fabric Adapter for IBM System x	AC1 MC1	9297	Initial Initial
Qlogic Dual Port 10GbE SFP+ Embedded VFA for IBM System x	AC1 MC1	A22H	Initial Initial
Mellanox ConnectX-2 Dual-port QSFP QDR IB Adapter for IBM System x	AC1 MC1	A2MY	Initial Initial
Qlogic Embedded VFA FCoE/iSCSI License for IBM System x (FoD)	AC1 MC1	A2TF	Initial Initial
Emulex Dual Port 10GbE SFP+ VFA III for IBM System x	AC1 MC1	A2U1	Initial Initial
Emulex VFA III FCoE/iSCSI License for IBM System x (FoD)	AC1 MC1	A2U2	Initial Initial
IBM 128GB SATA 2.5" MLC SS Enterprise Value SSD	AC1 MC1	A2UB	Initial Initial
IBM 256GB SATA 2.5" MLC SS Enterprise Value SSD	AC1 MC1	A2UC	Initial Initial
IBM USB Memory Key for VMware ESXi 5.0 Update1	AC1 MC1	A383	Initial Initial

Intel Xeon Processor E5-2658 8C 2.1GHz 20MB Cache 1600MHz 95W	AC1 MC1	A399	Initial Initial
Intel Xeon Processor E5-2648L 8C 1.8GHz 20MB Cache 1600MHz 70W	AC1 MC1	A39A	Initial Initial
Addl Intel Xeon Processor E5-2658 8C 2.1GHz 20MB 95W w/Fan	AC1 MC1	A39C	Initial Initial
Addl Intel Xeon Processor E5-2648L 8C 1.8GHz 20MB 70W w/Fan	AC1 MC1	A39D	Initial Initial
IBM System x 750W High Efficiency -48 V DC Power Supply	AC1 MC1	A39N	Initial Initial
x3550 M4 2.5" one Simple Swap Kit	AC1 MC1	A39P	Initial Initial
IBM System x3550 M4 2.5" Simple Swap Base Without Power Supply	AC1 MC1	A3EQ	Initial Initial

Option SEO
Description

SEO
Number

x3550M4 2.5" HDD Assembly Kit for 12Gb RAID	00Y7297
x3550M4 mini-SAS Cable Kit for 12Gb RAID	00Y8597
8GB (1x8GB, 2Rx8, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHz LP RDIMM	00D5040
Intel Xeon Processor E5-2628L v2 8C 1.9GHz 20MB Cache 1600MHz 70W	00Y7257
Intel Xeon Processor E5-2648L v2 10C 1.9GHz 25MB Cache 1866MHz 70W	00Y7259
Intel Xeon Processor E5-2695 v2 12C 2.4GHz 30MB Cache 1866MHz 115W	46W2833
Intel Xeon Processor E5-2697 v2 12C 2.7GHz 30MB Cache 1866MHz 130W	46W2834
Intel Xeon Processor E5-2603 v2 4C 1.8GHz 10MB Cache 1333MHz 80W	46W2835
Intel Xeon Processor E5-2609 v2 4C 2.5GHz 10MB Cache 1333MHz 80W	46W2836
Intel Xeon Processor E5-2620 v2 6C 2.1GHz 15MB Cache 1600MHz 80W	46W2837
Intel Xeon Processor E5-2630 v2 6C 2.6GHz 15MB Cache 1600MHz 80W	46W2838
Intel Xeon Processor E5-2640 v2 8C 2.0GHz 20MB Cache 1600MHz 95W	46W2839
Intel Xeon Processor E5-2650 v2 8C 2.6GHz 20MB Cache 1866MHz 95W	46W2840
Intel Xeon Processor E5-2660 v2 10C 2.2GHz 25MB Cache 1866MHz 95W	46W2841
Intel Xeon Processor E5-2670 v2 10C 2.5GHz 25MB Cache 1866MHz 115W	46W2842
Intel Xeon Processor E5-2680 v2 10C 2.8GHz 25MB Cache 1866MHz 115W	46W2843
Intel Xeon Processor E5-2690 v2 10C 3.0GHz 25MB Cache 1866MHz 130W	46W2844
Intel Xeon Processor E5-2637 v2 4C 3.5GHz 15MB Cache 1866MHz 130W	46W2846
Intel Xeon Processor E5-2643 v2 6C 3.5GHz 25MB Cache 1866MHz 130W	46W2847
Intel Xeon Processor E5-2667 v2 8C 3.3GHz 25MB Cache 1866MHz 130W	46W2848

Intel Xeon Processor E5-2630L v2 6C 2.4GHz 15MB Cache 1600MHz 60W
46W2849
Intel Xeon Processor E5-2650L v2 10C 1.7GHz 25MB Cache 1600MHz 70W
46W2850

Description	SEO Number	Initial/ MES/ Both/ Support	CSU
IBM x3550 M4 server	7914EGU	Both	Yes
IBM x3550 M4 server	7914EHU	Both	Yes
IBM x3550 M4 server	7914EJU	Both	Yes
IBM x3550 M4 server	7914EKU	Both	Yes
IBM x3550 M4 server	7914A3U	Both	Yes
IBM x3550 M4 server	7914B3U	Both	Yes
IBM x3550 M4 server	7914C3U	Both	Yes
IBM x3550 M4 server	7914C5U	Both	Yes
IBM x3550 M4 server	7914D3U	Both	Yes
IBM x3550 M4 server	7914F3U	Both	Yes
IBM x3550 M4 server	7914G3U	Both	Yes
IBM x3550 M4 server	7914H3U	Both	Yes
IBM x3550 M4 server	7914J3U	Both	Yes
IBM x3550 M4 server	7914L3U	Both	Yes
IBM x3550 M4 server	7914M3U	Both	Yes
IBM x3550 M4 server	791423U	Both	Yes
IBM x3550 M4 server	791433U	Both	Yes
IBM x3550 M4 server	791443U	Both	Yes
IBM x3550 M4 server	791453U	Both	Yes
IBM x3550 M4 server	791473U	Both	Yes
IBM x3550 M4 server	791483U	Both	Yes

The following are features already announced for the 3331 machine type:

Description	Model Number	Feature Number	Initial/ MES/ Both/ Support
8GB (1x8GB, 2Rx8, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHz LP RDIMM	HC1	A3QJ	MES
Intel Xeon Processor E5-2603 v2 4C 1.8GHz 10MB Cache 80W	HC1	A3X3	MES
Intel Xeon Processor E5-2609 v2 4C 2.5GHz 10MB Cache 80W	HC1	A3X4	MES
Intel Xeon Processor E5-2620 v2 6C 2.1GHz 15MB Cache 80W	HC1	A3X5	MES
Intel Xeon Processor E5-2630 v2 6C 2.6GHz 15MB Cache 80W	HC1	A3X6	MES
Intel Xeon Processor E5-2630L v2 6C 2.4GHz 15MB Cache 60W	HC1	A3X7	MES
Intel Xeon Processor E5-2640 v2 8C 2.0GHz 20MB Cache 95W	HC1	A3X8	MES
Intel Xeon Processor E5-2650 v2 8C 2.6GHz 20MB Cache 95W	HC1	A3X9	MES
Intel Xeon Processor E5-2660 v2 10C 2.2GHz 25MB Cache 95W	HC1	A3XA	MES
Intel Xeon Processor E5-2670 v2 10C 2.5GHz 25MB Cache 115W	HC1	A3XC	MES

Intel Xeon Processor E5-2680 v2 10C 2.8GHz 25MB Cache 115W	HC1	A3XD	MES
Intel Xeon Processor E5-2690 v2 10C 3.0GHz 25MB Cache 130W	HC1	A3XE	MES
Intel Xeon Processor E5-2650L v2 10C 1.7GHz 25MB Cache 70W	HC1	A3XF	MES
Intel Xeon Processor E5-2637 v2 4C 3.5GHz 15MB Cache 130W	HC1	A3XG	MES
Intel Xeon Processor E5-2643 v2 6C 3.5GHz 25MB Cache 130W	HC1	A3XH	MES
Intel Xeon Processor E5-2667 v2 8C 3.3GHz 25MB Cache 130W	HC1	A3XJ	MES
Intel Xeon Processor E5-2695 v2 12C 2.4GHz 30MB Cache 115W	HC1	A3XK	MES
Intel Xeon Processor E5-2697 v2 12C 2.7GHz 30MB Cache 130W	HC1	A3XL	MES
x3550M4 2.5" HDD Assembly Kit for 12Gb RAID	HC1	A465	MES
Intel Xeon Processor E5-2648L v2 10C 1.9GHz 25MB Cache 70W	HC1	A468	MES
Intel Xeon Processor E5-2628L v2 8C 1.9GHz 20MB Cache 70W	HC1	A469	MES
x3550M4 mini-SAS Cable Kit for 12Gb RAID	HC1	A4K4	MES

The following are features already announced for the 7914 machine type:

Description	Model Number	Feature Number	Initial/ MES/ Both/ Support
4GB (1x4GB, 1Rx4, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHZ LP RDIMM	AC1 MC1	A3QD	Initial Initial
4GB (1x4GB, 1Rx4, 1.35V) PC3L-12800 CL11 ECC DDR3 1600MHZ LP RDIMM	AC1 MC1	A3QE	Initial Initial
8GB (1x8GB, 1Rx4, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHZ LP RDIMM	AC1 MC1	A3QG	Initial Initial
8GB (1x8GB, 1Rx4, 1.35V) PC3L-12800 CL11 ECC DDR3 1600MHZ LP RDIMM	AC1 MC1	A3QH	Initial Initial
8GB (1x8GB, 2Rx8, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHZ LP RDIMM	AC1 MC1	A3QJ	Initial Initial
16GB (1x16GB, 2Rx4, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHZ LP RDIMM	AC1 MC1	A3QL	Initial Initial
NVIDIA Quadro K600	AC1 MC1	A3WH	Initial Initial
Intel Xeon Processor E5-2603 v2 4C 1.8GHz 10MB Cache 1333MHZ 80W	AC1	A3WK	Initial

		MC1		Initial
Intel Xeon Processor E5-2609	v2 4C 2.5GHz 10MB			
Cache 1333MHz 80W		AC1	A3WL	Initial
		MC1		Initial
Intel Xeon Processor E5-2620	v2 6C 2.1GHz 15MB			
Cache 1600MHz 80W		AC1	A3WM	Initial
		MC1		Initial
Intel Xeon Processor E5-2630	v2 6C 2.6GHz 15MB			
Cache 1600MHz 80W		AC1	A3WN	Initial
		MC1		Initial
Intel Xeon Processor E5-2630L	v2 6C 2.4GHz 15MB			
Cache 1600MHz 60W		AC1	A3WP	Initial
		MC1		Initial
Intel Xeon Processor E5-2640	v2 8C 2.0GHz 20MB			
Cache 1600MHz 95W		AC1	A3WQ	Initial
		MC1		Initial
Intel Xeon Processor E5-2650	v2 8C 2.6GHz 20MB			
Cache 1866MHz 95W		AC1	A3WR	Initial
		MC1		Initial
Intel Xeon Processor E5-2660	v2 10C 2.2GHz 25MB			
Cache 1866MHz 95W		AC1	A3WS	Initial
		MC1		Initial
Intel Xeon Processor E5-2670	v2 10C 2.5GHz 25MB			
Cache 1866MHz 115W		AC1	A3WU	Initial
		MC1		Initial
Intel Xeon Processor E5-2680	v2 10C 2.8GHz 25MB			
Cache 1866MHz 115W		AC1	A3WV	Initial
		MC1		Initial
Intel Xeon Processor E5-2690	v2 10C 3.0GHz 25MB			
Cache 1866MHz 130W		AC1	A3WW	Initial
		MC1		Initial
Intel Xeon Processor E5-2650L	v2 10C 1.7GHz 25MB			
Cache 1600MHz 70W		AC1	A3WX	Initial
		MC1		Initial
Intel Xeon Processor E5-2637	v2 4C 3.5GHz 15MB			
Cache 1866MHz 130W		AC1	A3WY	Initial
		MC1		Initial
Intel Xeon Processor E5-2643	v2 6C 3.5GHz 25MB			
Cache 1866MHz 130W		AC1	A3WZ	Initial
		MC1		Initial
Intel Xeon Processor E5-2667	v2 8C 3.3GHz 25MB			
Cache 1866MHz 130W		AC1	A3X0	Initial
		MC1		Initial
Intel Xeon Processor E5-2695	v2 12C 2.4GHz 30MB			
Cache 1866MHz 115W		AC1	A3X1	Initial
		MC1		Initial
Intel Xeon Processor E5-2697	v2 12C 2.7GHz 30MB			
Cache 1866MHz 130W		AC1	A3X2	Initial
		MC1		Initial
Addl Intel Xeon Processor E5-2603	v2 4C 1.8GHz 10MB			
Cache 80W		AC1	A3X3	Initial
		MC1		Initial
Addl Intel Xeon Processor E5-2609	v2 4C 2.5GHz 10MB			
Cache 80W		AC1	A3X4	Initial
		MC1		Initial
Addl Intel Xeon Processor E5-2620	v2 6C 2.1GHz 15MB			

Cache 80W	AC1	A3X5	Initial
	MC1		Initial
Addl Intel Xeon Processor E5-2630 v2 6C 2.6GHz 15MB Cache 80W	AC1	A3X6	Initial
	MC1		Initial
Addl Intel Xeon Processor E5-2630L v2 6C 2.4GHz 15MB Cache 60W	AC1	A3X7	Initial
	MC1		Initial
Addl Intel Xeon Processor E5-2640 v2 8C 2.0GHz 20MB Cache 95W	AC1	A3X8	Initial
	MC1		Initial
Addl Intel Xeon Processor E5-2650 v2 8C 2.6GHz 20MB Cache 95W	AC1	A3X9	Initial
	MC1		Initial
Addl Intel Xeon Processor E5-2660 v2 10C 2.2GHz 25MB Cache 95W	AC1	A3XA	Initial
	MC1		Initial
Addl Intel Xeon Processor E5-2670 v2 10C 2.5GHz 25MB Cache 115W	AC1	A3XC	Initial
	MC1		Initial
Addl Intel Xeon Processor E5-2680 v2 10C 2.8GHz 25MB Cache 115W	AC1	A3XD	Initial
	MC1		Initial
Addl Intel Xeon Processor E5-2690 v2 10C 3.0GHz 25MB Cache 130W	AC1	A3XE	Initial
	MC1		Initial
Addl Intel Xeon Processor E5-2650L v2 10C 1.7GHz 25MB Cache 70W	AC1	A3XF	Initial
	MC1		Initial
Addl Intel Xeon Processor E5-2637 v2 4C 3.5GHz 15MB Cache 130W	AC1	A3XG	Initial
	MC1		Initial
Addl Intel Xeon Processor E5-2643 v2 6C 3.5GHz 25MB Cache 130W	AC1	A3XH	Initial
	MC1		Initial
Addl Intel Xeon Processor E5-2667 v2 8C 3.3GHz 25MB Cache 130W	AC1	A3XJ	Initial
	MC1		Initial
Addl Intel Xeon Processor E5-2695 v2 12C 2.4GHz 30MB Cache 115W	AC1	A3XK	Initial
	MC1		Initial
Addl Intel Xeon Processor E5-2697 v2 12C 2.7GHz 30MB Cache 130W	AC1	A3XL	Initial
	MC1		Initial
IBM System x3550 M4 Planar (Refresh)	AC1	A3XM	Initial
	MC1		Initial
N2215 SAS/SATA HBA for IBM System x	AC1	A3YY	Initial
	MC1		Initial
ServerRAID M5210 SAS/SATA Controller for IBM System x	AC1	A3YZ	Initial
	MC1		Initial
ServerRAID M5200 Series 1GB Cache/RAID 5 Upgrade for IBM Systems	AC1	A3Z0	Initial
	MC1		Initial
ServerRAID M5200 Series 1GB Flash/RAID 5 Upgrade for			

IBM Systems	AC1	A3Z1	Initial
	MC1		Initial
ServerRAID M5200 Series 2GB Flash/RAID 5 Upgrade for IBM Systems	AC1	A3Z2	Initial
	MC1		Initial
ServerRAID M5200 Series RAID 6 Upgrade for IBM Systems-FoD	AC1	A3Z5	Initial
	MC1		Initial
ServerRAID M5200 Series Zero Cache/RAID 5 Upgrade for IBM Systems-FoD	AC1	A3Z6	Initial
	MC1		Initial
ServerRAID M5200 Series Performance Accelerator for IBM Systems-FoD	AC1	A3Z7	Initial
	MC1		Initial
ServerRAID M5200 Series SSD Caching Enabler for IBM Systems-FoD	AC1	A3Z8	Initial
	MC1		Initial
x3550M4 4x 2.5" HS HDD Assembly Kit for 12Gb RAID	AC1	A464	Initial
	MC1		Initial
x3550M4 2.5" HDD Assembly Kit for 12Gb RAID	AC1	A465	Initial
	MC1		Initial
Intel Xeon Processor E5-2648L v2 10C 1.9GHz 25MB cache 1866MHz 70W	AC1	A466	Initial
	MC1		Initial
Intel Xeon Processor E5-2628L v2 8C 1.9GHz 20MB cache 1600MHz 70W	AC1	A467	Initial
	MC1		Initial
Addl Intel Xeon Processor E5-2648L v2 10C 1.9GHz 25MB Cache 70W	AC1	A468	Initial
	MC1		Initial
Addl Intel Xeon Processor E5-2628L v2 8C 1.9GHz 20MB Cache 70W	AC1	A469	Initial
	MC1		Initial
Super Cap Cable 925mm for ServRAID M5200 Series Flash	AC1	A47F	Initial
	MC1		Initial
32GB (1x32GB, 4Rx4, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHz LP LRDIMM	AC1	A47K	Initial
	MC1		Initial

ServicePac information

ServicePac for Warranty and Maintenance

Machine Type	Service Description	ServicePac	
		SEO	MTM
7914	3 Year Onsite Repair 9x5 4 Hour Response	00A4435	67567X6
7914	3 Year Onsite Repair 24x7 4 Hour Response	00A4436	67567X7
7914	3 Year Onsite Repair 24x7 2 Hour Response	00A4437	67567X8
7914	4 Year Onsite Repair 9x5 Next Business Day	00A4438	67567X9
7914	4 Year Onsite Repair 9x5 4 Hour Response	00A4439	67567XA
7914	4 Year Onsite Repair 24x7 4 Hour Response	00A4440	67567XB
7914	4 Year Onsite Repair 24x7 2 Hour Response	00A4441	67567XC
7914	5 Year Onsite Repair 9x5 Next Business Day	00A4442	67567XD
7914	5 Year Onsite Repair 9x5 4 Hour Response	00A4443	67567XF
7914	5 Year Onsite Repair 24x7 4 Hour Response	00A4444	67567XG
7914	5 Year Onsite Repair 24x7 2 Hour Response	00A4445	67567XH
7914	3 Year Onsite Repair 24x7 4 Hour Response with HDDR	00A4446	67567XJ

7914	4 Year Onsite Repair 24x7 4 Hour Response with HDDR	00A4447	67567XK
7914	4 Year Onsite Repair 9x5 Next Business Day Response with HDDR	00A4448	67567XM
7914	5 Year Onsite Repair 24x7 4 Hour Response with HDDR	00A4449	67567XN
7914	5 Year Onsite Repair 9x5 Next Business Day Response with HDDR	00A4450	67567XP

ServicePac for Maintenance Agreement

Machine Type	Service Description	ServicePac	
		SEO	MTM
7914	1 Year Onsite Repair 9x5 Next Business Day	00A4451	6756MVS
7914	1 Year Onsite Repair 9x5 4 Hour Response	00A4452	6756MVT
7914	1 Year Onsite Repair 24x7 4 Hour Response	00A4453	6756MVU
7914	1 Year Onsite Repair 24x7 2 Hour Response	00A4454	6756MVV
7914	2 Year Onsite Repair 9x5 Next Business Day	00A4455	6756MVW
7914	2 Year Onsite Repair 9x5 4 Hour Response	00A4456	6756MVX
7914	2 Year Onsite Repair 24x7 4 Hour Response	00A4457	6756MVY
7914	2 Year Onsite Repair 24x7 2 Hour Response	00A4458	6756MVZ
7914	1 Year Onsite Repair 24x7 4 Hour Response with HDDR	00A4459	6756MW0
7914	2 Year Onsite Repair 24x7 4 Hour Response with HDDR	00A4460	6756MW1
7914	1 Year Onsite Repair 9x5 Next Business Day Response with HDDR	00A4461	6756MW2
7914	2 Year Onsite Repair 9x5 Next Business Day with HDDR	00A4462	6756MW3

ServicePac for Essential Support

Warranty and Maintenance Option plus Remote Technical Support

Machine Type	Service Description	ServicePac	
		SEO	MTM
7914	3 Year Essential Support 24x7 4 Hour Response	00A4463	N/A

Maintenance plus Remote Technical Support

Machine Type	Service Description	ServicePac	
		SEO	MTM
7914	1 Year Essential Support 24x7 4 Hour Response	00A4464	N/A
7914	1 Year Essential Support 9x5 Next Business Day Response	00A4465	N/A

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

Visit the following web link for ServicePac information at

http://www-935.ibm.com/services/us/its/html/servicepac_americas.html

Maintenance charges

For additional information on maintenance and pricing, please contact your IBM Sales Representative or your IBM Business Partner, or call 1-800-IBM-CALL (1-800-426-2255).

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

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Corrections

(Corrected on September 25, 2013)

Revised Product number section.