IBM System x3250 M5 server delivers advanced performance and energy efficiency for small businesses in a single-socket 1U rack form factor

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At a glance

Features of the new System x3250 M5 server include:

- 1U rack
- Choice of Intel™ processors:
  - Xeon E3-1280 v3
  - Xeon E3-1270 v3
  - Xeon E3-1240 v3
  - Xeon E3-1230 v3
  - Xeon E3-1220 v3
  - Xeon E3-1265L v3
  - Xeon E3-1230L v3
  - Xeon E3-1220L v3
  - Xeon E3-1285 v3
  - Xeon E3-1285L v3
  - Core-i3 4340
  - Core-i3 4330
  - Core-i3 4130
  - Core-i3 4330T
  - Core-i3 4130T
  - Pentium™ G3430
  - Pentium G3420
  - Pentium G3220
  - Pentium G3420T

  - Pentium G3220T
- Integrated Serial-ATA (SATA) controller
- Two PCI Express® I/O expansion slots
- Four 3.5-inch simple-swap SATA, four 3.5-inch hot-swap SAS/SATA or up to eight 2.5-inch hot-swap /simple-swap SAS/SATA (model dependent; 2.5-inch SS is CTO only)
- 300-watt fixed auto-sensing or 460-watt redundant hot-swap power supply
- System-management support
- I/O ports
  - Seven USB ports; two USB 3.0 in front, four USB 2.0 in rear, and one USB 2.0 internal
  - Integrated dual Gigabit Ethernet with RJ-45
  - One software-compatible serial port
  - One VGA port

Overview

The System x3250 M5 single-socket 1U rack server is designed for small businesses and first-time server buyers looking for a solution to improve business efficiency. The x3250 M5 delivers several innovative features in a compact 1U form factor with a competitive price. The IBM® System x3250 M5 provides next-generation performance in an innovative and compact design with flexible configuration options and built-in security and systems management capabilities.

Server-class features

- Latest Intel dual-core and quad-core Intel processors:
  - Xeon E3-1200 v3 series
  - Core i3 series
  - Pentium series
  - Optimized for EM64T to support 32-bit or 64-bit applications
- 4 GB, and 8 GB UDIMMPC3L-12800 CL11 ECC DDR3 1600 MHz LP UDIMM memory; 32 GB maximum
- Two PCI Express expansion slots:
  - One x8
  - One x8 (electrical x4) dedicated for IBM ServerRAID H1110 adapter
- Open bay models supporting 3.5-inch simple-swap SATA, 3.5-inch hot-swap SAS/SATA or 2.5-inch hot-swap SAS/SATA HDD
- Support for 80-PLUS certified 300 W fixed or 460 W redundant hot-swap power supply
- Integrated dual Gigabit Ethernet ports as standard, and two additional Gigabit Ethernet ports activated via IBM Feature on Demand (FoD)
- Integrated ServeRAID C100 for System x® that supports:
  - Integrated RAID 0 and RAID 1 standard
  - ServeRAID C100 RAID 5 upgrade via FoD

At your control

Manageability and serviceability features help diagnose problems quickly.

- Integrated Management Module II (IMM2) standard subsystems with IPMI 2.0 support, optional upgrade to web-based management and remote presence via Feature on Demand (FoD)
- IBM tools support
- Trusted Platform Module (TPM) 1.2 support

- Intelligent Platform Management Interface (IPMI) 2.0 integrated systems management processor
- Monitoring of memory, thermal, and voltage faults
- Preboot eXecution Environment (PXE) and support for Wake on LAN
- Automatic server restart (ASR) to restart server after operating system failure

At your service

Worldwide support and services with IBM systems management tools, which help improve productivity and get your server up and running quickly.

- ServerGuide[1] utilities to assist loading of many popular network operating systems
- IBM Director
- Warranty: Three-year customer replaceable unit (CRU) and on-site labor[2], limited warranty[3]; optional warranty service upgrades available

1 The Microsoft™ Windows™ Preinstallation Environment software included as part of ServerGuide software, may be used for boot, diagnostic, setup, restoration, installation, configuration, test, or disaster recovery purposes only. The Microsoft Windows Preinstallation Environment software contains a security feature that will cause an end-user customer's system to reboot without prior notification to the end-user customer after 24 hours of continuous use of the Microsoft Windows Preinstallation Environment.

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

3 For information on IBM's Statement of Limited Warranty, contact your IBM representative or reseller. Copies are available upon request.

Key prerequisites

Monitor, keyboard, and mouse.

Planned availability date

November 20, 2013:

Description

Solid-performing server subsystems

This uniprocessor entry-level 1U server delivers solid, economical performance by coupling Intel Xeon™, Core i3, or Pentium processors, high-speed PC3L-12800 CL11 ECC DDR3 1600 MHz LP UDIMM memory, and SATA storage subsystems.

The System x3250 M5 server uses high-performance chipsets to optimize throughput from the processors to memory and I/O.

Standard System x3250 M5 configurations

SEO/Part Number	Processor	Cache	Memory	HDD/INT	Power
5458A2x	Pentium G3420 3.2GHz 3MB 1600MHz 2C (65W) Dual GigE,		4 GB	O/B S/S LFF SATA IMM2, Integrated RAID 0,1,10	300W
5458B2x	Xeon E3-1220 v3 3.1GHz 8MB 1600MHz 4C (80W) Dual GigE,		4 GB	O/B S/S LFF SATA IMM2, Integrated RAID 0,1,10	300W
5458C2x	Xeon E3-1230 v3 3.3GHz 8MB 1600MHz 4C (80W) Dual GigE,		4 GB	O/B H/S LFF SAS/SATA IMM2, H/W RAID 0,1,10, 1E (H1110)	300W
5458C4x	Xeon E3-1230 v3 3.3GHz 8MB 1600MHz 4C (80W) Dual GigE,		8 GB	O/B H/S SFF SAS/SATA IMM2, H/W RAID 0,1,10, 1E (H1110)	300W
5458F2x	Xeon E3-1240 v3 3.4GHz 8MB 1600MHz 4C (80W) Dual GigE,		8 GB	O/B H/S SFF SAS/SATA IMM2, H/W RAID 0,1,10, 1E (H1110)	460W
5458G2x	Xeon E3-1270 v3 3.5GHz 8MB 1600MHz 4C (80W) Dual GigE,		8 GB	O/B H/S SFF SAS/SATA IMM2, H/W RAID 0,1,10 (M1115)	460W

Note: Models A2x, B2x, C2x, C4x, F2x and G2x can include optional two additional NIC ports via FoD

Express models

SEO	Processor	Cache	Memory	HDD/INT	Power
5458ERx	Pentium G3430 3.3GHz 3MB 1600MHz 2C (65W) Dual GigE,		4 GB	O/B S/S SFF SATA IMM2, Integrated RAID 0,1,10	300W
5458ESx	Core-i3 4340 3.6GHz 1600MHz 2C (65W) Dual GigE,	4MB	4 GB	O/B S/S SFF SATA IMM2, Integrated RAID 0,1,10	300W
5458ETx	Xeon E3-1220v3 3.1GHz 8MB 1600MHz 4C (80W) Dual GigE,		4 GB	O/B S/S SFF SATA IMM2, Integrated RAID 0,1,10	300W
5458EUx	Xeon E3-1240v3 3.4GHz 8MB 1600MHz 4C (80W) Dual GigE,		4 GB	O/B H/S SFF SATA/SAS IMM2, H/W RAID 0,1,10,1E	300W
5458EVx	Pentium G3430 3.3GHz 1600MHz 2C (65W) Dual GigE,	3MB	4 GB	O/B S/S LFF SATA IMM2, Integrated RAID 0,1,10	300W
5458EWx	Xeon E3-1220v3 3.1GHz 8MB 1600MHz 4C (80W) Dual GigE,		4 GB	O/B H/S LFF SATA/SAS IMM2, H/W RAID 0,1,10,1E	300W
5458EZx	Xeon E3-1240v3 3.4GHz 8MB 1600MHz 4C (80W) Dual GigE,		4 GB	O/B H/S LFF SATA/SAS IMM2, H/W RAID 0,1,10, 1E	300W

Expansion capacity and standard features

The System x3250 M5 1U server can economically handle expansion. This model features:

- System board with four sockets that supports high-speed 4 GB, and 8 GB PC3L-12800 CL11 ECC DDR3 1600 MHz LP UDIMM
  - 4 GB memory standard
  - Up to 32 GB addressable
- Two expansion slots that support:
  - One x8 Gen3
  - One x8 (electrical x4) Gen3 dedicated for IBM ServerRAID H1110 adapter

- Four bays (3.5-inch models), five bays (2.5-inch models), or nine bays (2.5-inch models) standard
  - One accessible bay for optional 5.25-inch, ultraslim optical drive (2.5-inch models only)
  - Four internal 3.5-inch, four 2.5-inch, or eight 2.5-inch standard
- Dual full-duplex, Gigabit Ethernet PCIe controller that speeds network communications to LAN clients
- A worldwide, auto-sensing 300-watt fixed or 460-watt redundant hot-swap power supply with automatic restart that supports maximum configurations and minimizes operator intervention after a temporary power outage
- Five speed-controlled fans that cool microprocessor and I/O, plus one variable-speed power supply fan
- Integrated video controller

Function and expansion capacity

The System x3250 M5 server with a 1U, 22-inch rack-optimized package supports installation of adapters, memory, and HDD options. Functions such as SVGA video, SATA controller, and two Gigabit (10/100/1000 Mbps) Ethernet controllers are integrated on the system board as standard.

Features include:

- One PCI-e x8 Gen3, one PCI-e x8 (electrical x4) dedicated for IBM ServerRAID H1110 adapter
- 300-watt or 460-watt worldwide, voltage-sensing power supply with auto-restart that supports maximum configurations and minimizes operator intervention after a temporary power outage
- Up to five speed-controlled fans plus another one in the power supply that cool:
  - Power supply
  - Drive bays
  - Microprocessor and memory
  - I/O
- Four DIMM sockets that are capable of addressing up to 32 GB 1600 MHz system memory
- One accessible 5.25-inch, ultra slim enhanced optical drive (2.5-inch models only)
- Four internal 3.5-inch bays or up to eight 2.5-inch for HDDs
- Simple-swap 3.5-inch SATA model with controller that supports standard simple-swap 500 GB, 1 TB, 2 TB, and 3 TB HDDs
- Support for up to eight HDDs (2.5-inch models)
- Hot-swap 2.5-inch SAS/SATA model with controller that supports hot-swap 146 GB, 300 GB, 500 GB, 600 GB, 900 GB, and 1 TB HDDs
- Integrated Matrox G200 video built-in IMM with 16 MB of video memory

ServeRAID C100 RAID

ServeRAID C100:

- Provides low-cost, value RAID solutions for internal storage media in addition to SATA connectivity to an organization's storage infrastructure
- Supports SATA storage redundant configurations for server storage, thereby providing investment protection to our clients

Features and functions

ServeRAID C100 for IBM System x

- RAID levels 0, 1, and 10

- SATA support
- Up to four physical disk drives
- Up to eight virtual disks
- Support for:
  - Consistency check
  - Initialization and background initialization
  - Rebuild
  - Patrol reads
  - Hot-spare
  - S.M.A.R.T.
  - RAID volumes portability
  - Online HDD FW download

Systems management and control

System x3250 M5 servers comply with the 2000 ATX Implementation Guidelines for optimal control and manageability of your network.

Supported features include:

- Integrated Management Module with IPMI 2.0, optional upgrade to Remote Presence through FoD
- Wake on LAN supported on integrated Ethernet controllers
- Automatic server restart to help reduce downtime by restarting the server in the event of system hang
- Flash EEPROM write protection
- SMBus isolation that isolates one bus section and required system components during system power-down from other buses and components to prevent current leakage into devices without power

The System x3250 M5 server also features IBM Director -- a powerful, highly integrated systems management software solution built on industry standards and designed for ease of use. Now you can take control of your IT environment and manage physically dispersed IT assets more efficiently. 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 server tools that integrates into the IBM Director interface and works with systems management monitoring functions contained in System x servers, such as PFA enablement for HDDs.

The IT administrator can achieve comprehensive, virtual on-site control of System x servers through the ability to remotely:

- Inventory and display detailed system and component information
- Reset or power cycle the server
- Monitor and set thresholds on server health, including:
  - Voltage
  - Temperature
- Set proactive alerts for critical server events, including:

  - Fans
  - Power supplies
- Define automated actions, such as:
  - Send email to an administrator
  - Execute a command or program
  - Send an error message to the IBM Director console
- Monitor and graph the usage of server resources, such as:
  - Memory
  - Processor
  - HDDs
- Identify potential performance bottlenecks and react to prevent downtime
- Monitor, manage, and configure RAID subsystems, often without taking them offline

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

- Tivoli® Enterprise and Tivoli NetView®
- Computer Associates Unicenter TNG Framework
- Microsoft SMS
- Intel LANDesk Management Suite

World-class support tools and programs

The System x3250 M5 server includes tools and programs that help you get your server running, and keep it running smoothly. IBM can help your company maintain ownership of technology leadership servers.

- The ServerProven® [4] 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 x3250 M5 server with various adapters and devices.

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

Accessibility by people with disabilities

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

http://www.ibm.com/able/product_accessibility/index.html

Product positioning

The System x3250 M5 server is positioned as a System x entry-level 1U rack server and is a confident choice for small businesses because it is built to last, easy to implement, and affordable.

The System x3250 M5 server combines server-class security and reliability, new technologies, and proven compatibility into an attractively priced, easy-to-implement entry server, supported by IBM sales and service. This server delivers solid performance to support typical general-purpose network, email, or web-serving applications in small businesses. Software-ready and with intuitive industry-standard

management capabilities, the x3250 M5 server is ideal for transitioning business applications off your PC.

Product number

The following is a newly announced feature on the specified models of the IBM xSeries 2583 machine type:

Description	MT	Model	Feature
Intel Xeon E3-1220L v2, 2.3GHz 3M cache/ 1600 DDR3 2C (17W)	2583	AC1 MC1	A2V2

The following are newly announced features on the specified models of the IBM xSeries 5458 machine type:

Description	MT	Model	Feature
5458-AC1	5458	AC1	
5458-MC1	5458	MC1	
Enhanced Package	5458	AC1 MC1	A51D
Elite Package	5458	AC1 MC1	A51E
Enhanced Package	5458	AC1 MC1	A51G
Essential Package	5458	AC1 MC1	A51C
Essential Package	5458	AC1 MC1	A51F
Elite Package	5458	AC1 MC1	A51H
QLogic 10Gb SFP+ SR Optical Transceiver	5458	AC1 MC1	0064
Brocade 10Gb SFP+ SR Optical Transceiver	5458	AC1 MC1	0069
1m LC-LC Fiber Cable	5458	AC1 MC1	3703
5m LC-LC Fiber Cable	5458	AC1 MC1	3704
25m LC-LC Fiber Cable	5458	AC1 MC1	3705
EMEA Long Leadtime Configurations	5458	AC1 MC1	1763
Hungary CHW plant 9SH	5458	AC1 MC1	1764
Guad CHW plant 9KQ	5458	AC1 MC1	1765
ISTC CHW 9K2	5458	AC1 MC1	1766
RTP CHW 9NR	5458	AC1 MC1	1767
Offload Manufacturing to Guadalajara HVEC	5458	AC1 MC1	1768
Offload Manufacturing to RTP HVEC	5458	AC1 MC1	1769
Offload Manufacturing to ISTC	5458	AC1 MC1	1770
Routing for AP Foxconn	5458	AC1 MC1	1771
Capacity Scheduling Service	5458	AC1 MC1	1772
Custom SLA Scheduling Service	5458	AC1 MC1	1796
Custom Asset Tagging - Standard	5458	AC1 MC1	2200
Custom Asset Tagging - Enhanced	5458	AC1 MC1	2201

Custom Image Load - Server	5458	AC1 MC1	2204
Custom Media Shipgroup	5458	AC1 MC1	2206
Request for Global Trade Number (UPC or EAN)	5458	AC1 MC1	2207
Custom Software/Firmware Setting - Standard	5458	AC1 MC1	2208
Custom Software/Firmware Setting - Enhanced	5458	AC1 MC1	2209
Custom RAID Configuration	5458	AC1 MC1	2212
Custom Unit Carton Label	5458	AC1 MC1	2220
Custom Palletization	5458	AC1 MC1	2221
Request for a new Vendor Logo Hardware	5458	AC1 MC1	2247
Request for a Classic RPQ	5458	AC1 MC1	2248
Request for an existing Public RPQ	5458	AC1 MC1	2249
RAID Configuration	5458	AC1 MC1	2302
Rack Installation of 1U Component	5458	AC1 MC1	2305
Optical Blank Filler	5458	AC1 MC1	2496
Enable selection of Solid State Drives for Secondary Array	5458	AC1 MC1	2498
Enable selection of Solid State Drives for Primary Array	5458	AC1 MC1	2499
PRO/1000 PF Server Adapter	5458	AC1 MC1	2975
Rack 01	5458	AC1 MC1	3101
Rack 02	5458	AC1 MC1	3102
Rack 03	5458	AC1 MC1	3103
Rack 04	5458	AC1 MC1	3104
Rack 05	5458	AC1 MC1	3105
Rack 06	5458	AC1 MC1	3106
Rack 07	5458	AC1 MC1	3107
Rack 08	5458	AC1 MC1	3108
Rack 09	5458	AC1 MC1	3109
Rack 10	5458	AC1 MC1	3110
Rack 11	5458	AC1 MC1	3111
Rack 12	5458	AC1 MC1	3112
Rack 13	5458	AC1 MC1	3113
Rack 14	5458	AC1 MC1	3114
Rack 15	5458	AC1 MC1	3115
Rack 16	5458	AC1 MC1	3116
Rack 17	5458	AC1 MC1	3117
Rack 18	5458	AC1 MC1	3118
Rack 19	5458	AC1 MC1	3119

Rack 20	5458	AC1 MC1	3120
Rack 21	5458	AC1 MC1	3121
Rack 22	5458	AC1 MC1	3122
Rack 23	5458	AC1 MC1	3123
Rack 24	5458	AC1 MC1	3124
Rack 25	5458	AC1 MC1	3125
Rack 26	5458	AC1 MC1	3126
Rack 27	5458	AC1 MC1	3127
Rack 28	5458	AC1 MC1	3128
Rack 29	5458	AC1 MC1	3129
Rack 30	5458	AC1 MC1	3130
Rack 31	5458	AC1 MC1	3131
Rack 32	5458	AC1 MC1	3132
Rack 33	5458	AC1 MC1	3133
Rack 34	5458	AC1 MC1	3134
Rack 35	5458	AC1 MC1	3135
Rack 36	5458	AC1 MC1	3136
Rack 37	5458	AC1 MC1	3137
Rack 38	5458	AC1 MC1	3138
Rack 39	5458	AC1 MC1	3139
Rack 40	5458	AC1 MC1	3140
Rack 41	5458	AC1 MC1	3141
Rack 42	5458	AC1 MC1	3142
Rack 43	5458	AC1 MC1	3143
Rack 44	5458	AC1 MC1	3144
Rack 45	5458	AC1 MC1	3145
Rack 46	5458	AC1 MC1	3146
Rack 47	5458	AC1 MC1	3147
Rack 48	5458	AC1 MC1	3148
Rack 49	5458	AC1 MC1	3149
Rack 50	5458	AC1 MC1	3150
Rack 51	5458	AC1 MC1	3151
Rack 52	5458	AC1 MC1	3152
Rack 53	5458	AC1 MC1	3153
Rack 54	5458	AC1 MC1	3154
Rack 55	5458	AC1 MC1	3155
Rack 56	5458	AC1 MC1	3156

Rack 57	5458	AC1 MC1	3157
Rack 58	5458	AC1 MC1	3158
Rack 59	5458	AC1 MC1	3159
Rack 60	5458	AC1 MC1	3160
Rack 61	5458	AC1 MC1	3161
Rack 62	5458	AC1 MC1	3162
Rack 63	5458	AC1 MC1	3163
Rack 64	5458	AC1 MC1	3164
Rack location U01	5458	AC1 MC1	3201
Rack location U02	5458	AC1 MC1	3202
Rack location U03	5458	AC1 MC1	3203
Rack location U04	5458	AC1 MC1	3204
Rack location U05	5458	AC1 MC1	3205
Rack location U06	5458	AC1 MC1	3206
Rack location U07	5458	AC1 MC1	3207
Rack location U08	5458	AC1 MC1	3208
Rack location U09	5458	AC1 MC1	3209
Rack location U10	5458	AC1 MC1	3210
Rack location U11	5458	AC1 MC1	3211
Rack location U12	5458	AC1 MC1	3212
Rack location U13	5458	AC1 MC1	3213
Rack location U14	5458	AC1 MC1	3214
Rack location U15	5458	AC1 MC1	3215
Rack location U16	5458	AC1 MC1	3216
Rack location U17	5458	AC1 MC1	3217
Rack location U18	5458	AC1 MC1	3218
Rack location U19	5458	AC1 MC1	3219
Rack location U20	5458	AC1 MC1	3220
Rack location U21	5458	AC1 MC1	3221
Rack location U22	5458	AC1 MC1	3222
Rack location U23	5458	AC1 MC1	3223
Rack location U24	5458	AC1 MC1	3224
Rack location U25	5458	AC1 MC1	3225
Rack location U26	5458	AC1 MC1	3226
Rack location U27	5458	AC1 MC1	3227
Rack location U28	5458	AC1 MC1	3228
Rack location U29	5458	AC1 MC1	3229

Rack location U30	5458	AC1 MC1	3230
Rack location U31	5458	AC1 MC1	3231
Rack location U32	5458	AC1 MC1	3232
Rack location U33	5458	AC1 MC1	3233
Rack location U34	5458	AC1 MC1	3234
Rack location U35	5458	AC1 MC1	3235
Rack location U36	5458	AC1 MC1	3236
Rack location U37	5458	AC1 MC1	3237
Rack location U38	5458	AC1 MC1	3238
Rack location U39	5458	AC1 MC1	3239
Rack location U40	5458	AC1 MC1	3240
Rack location U41	5458	AC1 MC1	3241
Rack location U42	5458	AC1 MC1	3242
Rack location U43	5458	AC1 MC1	3243
Rack location U44	5458	AC1 MC1	3244
Rack location U45	5458	AC1 MC1	3245
Rack location U46	5458	AC1 MC1	3246
Rack location U47	5458	AC1 MC1	3247
QLogic 8Gb FC Single-port HBA for IBM System x	5458	AC1 MC1	3578
QLogic 8Gb FC Dual-port HBA for IBM System x	5458	AC1 MC1	3579
Emulex 8Gb FC Single-port HBA for IBM System x	5458	AC1 MC1	3580
Emulex 8Gb FC Dual-port HBA for IBM System x	5458	AC1 MC1	3581
Brocade 8Gb FC Single-port HBA for IBM System x	5458	AC1 MC1	3589
Brocade 8Gb FC Dual-port HBA for IBM System x	5458	AC1 MC1	3591
1m LC-LC Fiber Cable (networking)	5458	AC1 MC1	3700
5m LC-LC Fiber Cable (networking)	5458	AC1 MC1	3701
25m LC-LC Fiber Cable (networking)	5458	AC1 MC1	3702
IBM 3M SAS Cable	5458	AC1 MC1	3707
IBM 1M SAS Cable	5458	AC1 MC1	3708
IBM USB Conversion Option Pack	5458	AC1 MC1	3756
IBM Single Cable USB Conversion Option (UCO)	5458	AC1 MC1	3757
0.6m Yellow Cat5e Cable	5458	AC1 MC1	3791
1.5m Yellow Cat5e Cable	5458	AC1 MC1	3792
3m Yellow Cat5e Cable	5458	AC1 MC1	3793
10m Yellow Cat5e Cable	5458	AC1 MC1	3794
25m Yellow Cat5e Cable	5458	AC1 MC1	3795
0.6m Green Cat5e Cable	5458	AC1 MC1	3796

1.5m Green Cat5e Cable	5458	AC1 MC1	3797
3m Green Cat5e Cable	5458	AC1 MC1	3798
10m Green Cat5e Cable	5458	AC1 MC1	3799
25m Green Cat5e Cable	5458	AC1 MC1	3800
0.6m Blue Cat5e Cable	5458	AC1 MC1	3801
1.5m Blue Cat5e Cable	5458	AC1 MC1	3802
3m Blue Cat5e Cable	5458	AC1 MC1	3803
10m Blue Cat5e Cable	5458	AC1 MC1	3804
25m Blue Cat5e Cable	5458	AC1 MC1	3805
Power Supply Blank Filler	5458	AC1 MC1	4042
2.5" HDD Filler Bezel	5458	AC1 MC1	4069
IBM UltraSlim Enhanced SATA DVD-ROM	5458	AC1 MC1	4161
IBM UltraSlim Enhanced SATA Multi-Burner	5458	AC1 MC1	4163
IBM Serial Conversion Option (SCO)	5458	AC1 MC1	5340
IBM Virtual Media Conversion Option Gen2 (VCO2)	5458	AC1 MC1	5341
IBM 500GB 7200 6Gbps NL SAS 2.5" SFF Slim-HS HDD	5458	AC1 MC1	5409
Intel Ethernet Dual Port Server Adapter I340-T2 for IBM System x	5458	AC1 MC1	5767
Intel Ethernet Quad Port Server Adapter I340-T4 for IBM System x	5458	AC1 MC1	5768
Select Storage devices - no IBM-configured RAID required	5458	AC1 MC1	5977
Select Storage devices - IBM-configured RAID	5458	AC1 MC1	5978
SOFS Solution Code MFG Instruction	5458	AC1 MC1	6124
SAP-BWA Solution Code MFG Instruction	5458	AC1 MC1	6125
InfoSphere-BWA Solution Code MFG Instruction	5458	AC1 MC1	6126
GMAS Solution Code MFG Instruction	5458	AC1 MC1	6127
IBW-SSD Solution Code MFG Instruction	5458	AC1 MC1	6128
Cloudburst Solution Code MFG Instruction	5458	AC1 MC1	6129
SoNAS Solution Code MFG Instruction	5458	AC1 MC1	6130
1.5m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable	5458	AC1 MC1	6201
2.8m, 10A/100-250V, C13 to IEC 320-C20 Rack Power Cable	5458	AC1 MC1	6204
Line cord - 4.3M, 10A/125V, C13 to NEMA 5-15P (US)	5458	AC1 MC1	6207
Line cord - 2.8m, 220-240V, C13 to GB 2099.1 (China)	5458	AC1 MC1	6210
Line cord - 2.8m, 10A/250V, C13 to AS/NZ 3112 (Australia/NZ)	5458	AC1	6211

		MC1	
2.8m, 10A/230V, C13 to CEE7-VII (Europe)	5458	AC1 MC1	6212
Line cord - 2.8m, 10A/250V, C13 to SABS 164 (S Africa)	5458	AC1 MC1	6214
Line cord - 2.8m, 10A/250V, C13 to BS 1363/A (UK)	5458	AC1 MC1	6215
Line cord - 2.8m, 220-240V, C13 to KETI (S Korea)	5458	AC1 MC1	6219
4.3m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable	5458	AC1 MC1	6263
Line cord - 2.8M 10A/250V C13(2P+Gnd) (India)	5458	AC1 MC1	6269
2.8m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable	5458	AC1 MC1	6311
2.8m, 10A/120V, C13 to NEMA 5-15P (US) Line Cord	5458	AC1 MC1	6313
Rack power cable - 2.0m, 125-250V, C13 to IEC 320-C14 (WW)	5458	AC1 MC1	6316
2.8m, 10A/240V, C13 to CNS 10917-3 (Taiwan) Line Cord	5458	AC1 MC1	6317
Line cord - 1.8m, 10A/250V, C13 to NEMA 6-15P (US)	5458	AC1 MC1	6351
Line cord - 1.8M, 10A/125V, C13 to NEMA 5-15P (US)	5458	AC1 MC1	6369
Line cord - 2.8m, 10A/250V, C13 to NEMA 6-15P (US)	5458	AC1 MC1	6372
Line cord - 4.3M Europe 10A/250V C13 - (2P+Gnd)	5458	AC1 MC1	6374
Line cord - 2.8m, 10A/125V, C13 to CNS 10917-3 (Taiwan)	5458	AC1 MC1	6386
Line cord - 1.8m, 10A/125V, C13 to CNS 10917-3 (Taiwan)	5458	AC1 MC1	6526
Primary Array 2 HDDs	5458	AC1 MC1	7008
Primary Array 3 HDDs	5458	AC1 MC1	7009
Primary Array 4 HDDs	5458	AC1 MC1	7010
Primary Array 5 HDDs	5458	AC1 MC1	7011
Primary Array 6 HDDs	5458	AC1 MC1	7012
Primary Array 7 HDDs	5458	AC1 MC1	7013
Primary Array 8 HDDs	5458	AC1 MC1	7014

Secondary Array 2 HDDs	5458	AC1 MC1	7015
Secondary Array 3 HDDs	5458	AC1 MC1	7016
Secondary Array 4 HDDs	5458	AC1 MC1	7017
Secondary Array 5 HDDs	5458	AC1 MC1	7057
Secondary Array 6 HDDs	5458	AC1 MC1	7058
2.5" GEN II DASD SS Blank Filler	5458	AC1 MC1	7569
China Warranty	5458	AC1 MC1	7599
Grouped Product	5458	AC1 MC1	7830
Customer Solution Center Services	5458	AC1 MC1	7831
e1350 Special Bid Solution Component	5458	AC1 MC1	7929
No HDD Selected	5458	AC1 MC1	8026
Consolidate Shipment	5458	AC1 MC1	8031
e1350 Solution Component	5458	AC1 MC1	8034
Compute Node	5458	AC1 MC1	8036
Management Node	5458	AC1 MC1	8037
Storage Node	5458	AC1 MC1	8038
TAA Compliant Order	5458	AC1 MC1	8067
General Racking Solution	5458	AC1 MC1	8072
No SATA HDD Selected	5458	AC1 MC1	8080
No 2.5" SAS HDD Selected	5458	AC1 MC1	8081
No 3.5" SAS HDD Selected	5458	AC1 MC1	8082
No Publications Selected	5458	AC1 MC1	8086
Integrated SATA Single Mirroring - 2 identical SS HDDs required	5458	AC1 MC1	8947
Integrated SATA Double Mirroring - 2 pairs identical SS HDD required	5458	AC1 MC1	8948
Integrate in manufacturing	5458	AC1 MC1	8971
Ship Uninstalled (Safety)	5458	AC1 MC1	8972
Storage Subsystem ID 01	5458	AC1 MC1	9170
Storage Subsystem ID 02	5458	AC1 MC1	9171
Storage Subsystem ID 03	5458	AC1 MC1	9172
Storage Subsystem ID 04	5458	AC1 MC1	9173
Storage Subsystem ID 05	5458	AC1 MC1	9174
Storage Subsystem ID 06	5458	AC1 MC1	9175
Storage Subsystem ID 07	5458	AC1 MC1	9176
Storage Subsystem ID 08	5458	AC1 MC1	9177
Storage Subsystem ID 09	5458	AC1 MC1	9178
Storage Subsystem ID 10	5458	AC1 MC1	9179

Storage Subsystem ID 11	5458	AC1 MC1	9180
Storage Subsystem ID 12	5458	AC1 MC1	9181
Storage Subsystem ID 13	5458	AC1 MC1	9182
Storage Subsystem ID 14	5458	AC1 MC1	9183
Storage Subsystem ID 15	5458	AC1 MC1	9184
Storage Subsystem ID 16	5458	AC1 MC1	9185
Storage Subsystem ID 17	5458	AC1 MC1	9186
Storage Subsystem ID 18	5458	AC1 MC1	9187
Storage Subsystem ID 19	5458	AC1 MC1	9188
Storage Subsystem ID 20	5458	AC1 MC1	9189
Preload Specify	5458	AC1 MC1	9200
Windows Specify	5458	MC1	9201
Red Hat Specify	5458	AC1	9202
SuSE Specify	5458	AC1	9203
Drop-in-the-Box Specify	5458	AC1 MC1	9205
No Preload Specify	5458	AC1 MC1	9206
Preload by Hardware Feature Specify	5458	AC1 MC1	9220
Software Application (Not Preinstalled) Specify	5458	AC1 MC1	A0UF
Riser Asm PCI-E FH	5458	AC1 MC1	A0W0
Advanced Grouping	5458	AC1 MC1	A102
System x Cluster Upgrade	5458	AC1 MC1	A103
Integrated SATA Striping - 1-8 identical SS HDDs required	5458	AC1 MC1	A15A
Integrated SATA Double Striping - 2 pairs identical SS HDD required	5458	AC1 MC1	A15B
Integrated SATA Mirroring & Striping-2 pair identical SS HD required	5458	AC1 MC1	A15C
Integrated SATA Striping with parity - 3-8 identical SS HDD required	5458	AC1 MC1	A15D
ServeRAID C100 for System x	5458	AC1 MC1	A17T
Broadcom NetXtreme II Dual Port 10GBaseT Adapter for IBM System x	5458	AC1 MC1	A18Y
IBM 1TB 7.2K 6Gbps NL SATA 2.5" SFF HS HDD	5458	AC1 MC1	A1AV
IBM 3.5" Hot Swap Filler	5458	AC1 MC1	A1FD
IBM 3.5" Simple Swap Filler	5458	AC1 MC1	A1FE
ServeRAID M5100 Series 512MB Cache/RAID 5 Upgrade for IBM System x	5458	AC1 MC1	A1J3
ServeRAID M5100 Series 512MB Flash/RAID 5 Upgrade for IBM System x	5458	AC1 MC1	A1J4
Mellanox ConnectX-2 Dual Port 10GbE Adapter for IBM System x	5458	AC1 MC1	A1M4
IBM Integrated Management Module Advanced Upgrade	5458	AC1 MC1	A1ML
ServeRAID M1115 SAS/SATA Controller for IBM System			

x	5458	AC1 MC1	A1MZ
IBM 250GB 7.2K 6Gbps NL SATA 2.5" SFF HS HDD	5458	AC1 MC1	A1NX
IBM 250GB 7.2K 6Gbps NL SATA 2.5" SFF SS HDD	5458	AC1 MC1	A1NY
IBM 500GB 7.2K 6Gbps NL SATA 2.5" SFF HS HDD	5458	AC1 MC1	A1NZ
IBM 500GB 7.2K 6Gbps NL SATA 2.5" SFF SS HDD	5458	AC1 MC1	A1P0
IBM 1TB 7.2K 6Gbps NL SATA 2.5" SFF SS HDD	5458	AC1 MC1	A1P2
IBM 1TB 7.2K 6Gbps NL SAS 2.5" SFF HS HDD	5458	AC1 MC1	A1P3
10A/250V C13 to NEMA 6-15P 2.8m line cord	5458	AC1 MC1	A1RF
ServeRAID M5120 SAS/SATA Controller for IBM System x	5458	AC1 MC1	A1WX
ServeRAID M5100 Series 1GB Flash/RAID 5 Upgrade for IBM System x	5458	AC1 MC1	A1WY
ServeRAID M1100 Series Zero Cache/RAID 5 Upgrade for IBM System x	5458	AC1 MC1	A1X1
ServeRAID M5100 Series Zero Cache/RAID 5 Upgrade for IBM System x	5458	AC1 MC1	A1X2
ServeRAID M5100 Series RAID 6 Upgrade for IBM System x	5458	AC1 MC1	A1X3
3U bracket for low profile-internal-storage adapters	5458	AC1 MC1	A1X6
ServeRAID M5100 Series 425mm Flash Power Module Cable	5458	AC1 MC1	A1X9
ServeRAID H1110 SAS/SATA Controller for IBM System x	5458	AC1 MC1	A1XL
2U bracket for low profile-internal-storage adapters	5458	AC1 MC1	A1XM
ServeRAID M5100 Series Battery Kit for IBM System x	5458	AC1 MC1	A22E
500MM Cable for ServRAID M5100 Series Battery Kit	5458	AC1 MC1	A22F
IBM 1TB 7.2K 6Gbps NL SATA 3.5" G2HS HDD	5458	AC1 MC1	A22P
IBM 3TB 7.2K 6Gbps NL SATA 3.5" G2HS HDD	5458	AC1 MC1	A22S
IBM 2TB 7.2K 6Gbps NL SATA 3.5" G2HS HDD	5458	AC1 MC1	A22T
IBM 500GB 7.2K 6Gbps NL SATA 3.5" G2SS HDD	5458	AC1 MC1	A22U
IBM 3TB 7.2K 6Gbps NL SATA 3.5" G2SS HDD	5458	AC1 MC1	A22V
IBM 2TB 7.2K 6Gbps NL SATA 3.5" G2SS HDD	5458	AC1 MC1	A22W
IBM 1TB 7.2K 6Gbps NL SATA 3.5" G2SS HDD	5458	AC1 MC1	A22X
IBM 500GB 7.2K 6Gbps NL SATA 3.5" G2HS HDD	5458	AC1 MC1	A22Y
IBM 900GB 10K 6Gbps SAS 2.5" SFF SS HDD	5458	AC1 MC1	A24H
IBM 300GB 15K 6Gbps SAS 2.5" G2SS HDD	5458	AC1 MC1	A24J
IBM 900GB 10K 6Gbps SAS 2.5" SFF HS HDD	5458	AC1 MC1	A282

IBM 300GB 15K 6Gbps SAS 2.5" G2HS HDD	5458	AC1 MC1	A283
Label KC	5458	AC1 MC1	A2CM
IBM 460W Redundant Power Supply Unit with 80+ certified	5458	AC1 MC1	A2E8
Intel x520 Dual Port 10GbE SFP+ Adapter for IBM System x	5458	AC1 MC1	A2EC
Intel X540-T2 Dual Port 10GBaseT Adapter for IBM System x	5458	AC1 MC1	A2ED
Primary Array - RAID 0	5458	AC1 MC1	A2K6
Primary Array - RAID 1	5458	AC1 MC1	A2K7
Primary Array - RAID 1E	5458	AC1 MC1	A2K8
Primary Array - RAID 5	5458	AC1 MC1	A2K9
Primary Array - RAID 6	5458	AC1 MC1	A2KA
Primary Array - RAID 10	5458	AC1 MC1	A2KB
Secondary Array - RAID 0	5458	AC1 MC1	A2KF
Secondary Array - RAID 1	5458	AC1 MC1	A2KG
Secondary Array - RAID 1E	5458	AC1 MC1	A2KH
Secondary Array - RAID 5	5458	AC1 MC1	A2KJ
Secondary Array - RAID 6	5458	AC1 MC1	A2KK
Secondary Array - RAID 10	5458	AC1 MC1	A2KL
ServeRAID M5100 Series SSD Performance Key for IBM System x	5458	AC1 MC1	A2MC
ServeRAID M5100 Series SSD Caching Enabler for IBM System x	5458	AC1 MC1	A2MD
IBM 256GB SATA 2.5" MLC HS Enterprise Value SSD	5458	AC1 MC1	A2U3
IBM 128GB SATA 2.5" MLC HS Enterprise Value SSD	5458	AC1 MC1	A2U4
IBM 128GB SATA 2.5" MLC SS Enterprise Value SSD	5458	AC1 MC1	A2UB
IBM 256GB SATA 2.5" MLC SS Enterprise Value SSD	5458	AC1 MC1	A2UC
Broadcom NetXtreme I Dual Port GbE Adapter for IBM System x	5458	AC1 MC1	A2V4
Emulex 16Gb FC Single-port HBA for IBM System x	5458	AC1 MC1	A2W5
Emulex 16Gb FC Dual-port HBA for IBM System x	5458	AC1 MC1	A2W6
No Power Cord Validation	5458	AC1 MC1	A2X0
IBM 146GB 15K 6Gbps SAS 2.5" SFF G2HS HDD	5458	AC1 MC1	A2XB
IBM 300GB 10K 6Gbps SAS 2.5" SFF G2HS HDD	5458	AC1 MC1	A2XC
IBM 600GB 10K 6Gbps SAS 2.5" SFF G2HS HDD	5458	AC1 MC1	A2XD
IBM 500GB 7.2K 6Gbps NL SAS 2.5" SFF G2HS HDD	5458	AC1 MC1	A2XE
Brocade 16Gb FC Single-port HBA for IBM System x	5458	AC1 MC1	A2XU
Brocade 16Gb FC Dual-port HBA for IBM System x	5458	AC1 MC1	A2XV
IBM 146GB 15K 6Gbps SAS 2.5" SFF G2SS HDD	5458	AC1 MC1	A2ZG

IBM 300GB 10K 6Gbps SAS 2.5" SFF G2SS HDD	5458	AC1 MC1	A2ZH
IBM 600GB 10K 6Gbps SAS 2.5" SFF G2SS HDD	5458	AC1 MC1	A2ZJ
ServeRAID M5110 SAS/SATA Controller for IBM System x	5458	AC1 MC1	A347
IBM 64GB SATA 2.5" MLC HS Enterprise Value SSD	5458	AC1 MC1	A3AS
IBM 64GB SATA 2.5" MLC SS Enterprise Value SSD	5458	AC1 MC1	A3AT
IBM 300GB 15K 6Gbps SAS 3.5" G2HS HDD	5458	AC1 MC1	A3DV
IBM 450GB 15K 6Gbps SAS 3.5" G2HS HDD	5458	AC1 MC1	A3DW
IBM 600GB 15K 6Gbps SAS 3.5" G2HS HDD	5458	AC1 MC1	A3DX
IBM 600GB 10K 6Gbps SAS 2.5" SFF G2HS SED	5458	AC1 MC1	A3EF
IBM 900GB 10K 6Gbps SAS 2.5" SFF G2HS SED	5458	AC1 MC1	A3EG
QLogic 16Gb FC Single-port HBA for IBM System x	5458	AC1 MC1	A3KW
QLogic 16Gb FC Dual-port HBA for IBM System x	5458	AC1 MC1	A3KX
Qlogic 8200 Dual Port 10GbE SFP+ VFA for IBM System x	5458	AC1 MC1	A3MR
Qlogic 8200 VFA FCoE/iSCSI License for IBM System x (FoD)	5458	AC1 MC1	A3MT
N2125 SAS/SATA HBA for IBM System x	5458	AC1 MC1	A3MV
N2115 SAS/SATA HBA for IBM System x	5458	AC1 MC1	A3MW
System Documentation and Software-US English	5458	AC1 MC1	A3P8
System Documentation and Software-Korean	5458	AC1 MC1	A3PG
System Documentation and Software-Traditional Chinese (Taiwan)	5458	AC1 MC1	A3PH
System Documentation and Software-Simplified Chinese (China)	5458	AC1 MC1	A3PJ
System Documentation and Software-Korea (English)	5458	AC1 MC1	A3PK
System Documentation and Software-Traditional Chinese (Hong Kong)	5458	AC1 MC1	A3PL
Mellanox ConnectX-3 10 GbE Adapter for IBM System x	5458	AC1 MC1	A3PM
4GB (1x4GB, 2Rx8, 1.35V) PC3L-12800 CL11 ECC DDR3 1600MHz LP UDIMM	5458	AC1 MC1	A3QB
8GB (1x8GB, 2Rx8, 1.35V) PC3L-12800 CL11 ECC DDR3 1600MHz LP UDIMM	5458	AC1 MC1	A3QC
Base SFF Hardware with 80Plus certified RDN® Power Supply (460W)	5458	AC1 MC1	A3U4
Base SFF Hardware with 80 Plus cetified Fixed PSU (300W)	5458	AC1 MC1	A3U5
Base LFF Hardware with 80 Plus certified Fixed PSU (300W)	5458	AC1 MC1	A3U6
Intel Xeon E3-1280 v3 3.6GHz 8MB cache 1600MHz 4C (82W)	5458	AC1	A3U7

		MC1	
Intel Xeon E3-1270 v3 3.5GHz 8MB cache 1600MHz 4C (80W)	5458	AC1 MC1	A3U8
Intel Xeon E3-1240 v3 3.4GHz 8MB cache 1600MHz 4C (80W)	5458	AC1 MC1	A3U9
Intel Xeon E3-1230 v3 3.3 GHz 8MB cache 1600MHz 4C (80W)	5458	AC1 MC1	A3UA
Intel Xeon E3-1220 v3 3.1GHz 8MB cache 1600MHz 4C (80W)	5458	AC1 MC1	A3UB
Intel Xeon E3-1285 v3 3.6GHz 8MB cache 1600MHz 4C (84W)	5458	AC1 MC1	A3UC
Intel Xeon E3-1285L v3 3.1GHz 8MB cache 1600MHz 4C (65W)	5458	AC1 MC1	A3UD
x3250 M5 SS LFF SATA DRIVE KIT	5458	AC1 MC1	A3UE
x3250 M5 SS LFF SAS/SATA RAID KIT	5458	AC1 MC1	A3UF
x3250 M5 HS LFF SAS/SATA RAID KIT	5458	AC1 MC1	A3UG
x3250 M5 SS SFF SATA DROVE KIT	5458	AC1 MC1	A3UH
x3250 M5 SS SFF SAS/SATA RAID KIT L-type	5458	AC1 MC1	A3UJ
x3250 M5 SS SFF SAS/SATA RAID KIT Vertical for 0-3 HDD	5458	AC1 MC1	A3UK
x3250 M5 SS SFF SAS/SATA RAID KIT Vertical for 4-7 HDD	5458	AC1 MC1	A3UL
x3250 M5 SS LFF SAS/SATA RAID KIT Vertical type for 4 HDD	5458	AC1 MC1	A3UM
x3250 M5 HS LFF SAS/SATA RAID KIT Vertical type for 4 HDD	5458	AC1 MC1	A3UN
x3250 M5 HS SFF SAS/SATA RAID KIT for 4-7HDD except for H1110 series	5458	AC1 MC1	A3UP
x3250 M5 HS SFF SAS/SATA RAID KIT for H1110	5458	AC1 MC1	A3UQ
RACK MOUNT KIT	5458	AC1 MC1	A3UR
x3250 M5 System Labels GBM	5458	AC1 MC1	A3US
x3250 M5 LFF HS Bezel	5458	AC1 MC1	A3UU
x3250 M5 LFF SS Bezel	5458	AC1 MC1	A3UV
x3250 M5 SFF HS Bezel with 8HDD	5458	AC1 MC1	A3UW
x3250 M5 SFF SS Bezel with 8 HDD	5458	AC1 MC1	A3UX
x3250 M5 SFF HS Bezel with 4 HDD	5458	AC1 MC1	A3UY
x3250 M5 SFF SS Bezel with 4 HDD	5458	AC1 MC1	A3UZ
x3250 M5 BKpn conf cable - 4 HDD SKU	5458	AC1 MC1	A3V0
x3250 M5 Bkpn conf cable - 8 HDD	5458	AC1 MC1	A3V1
Power cable -fixed PSU or HS RDN PSU for 4xHot Swap HDD	5458	AC1 MC1	A3V2
x3250 M5 PKG	5458	AC1 MC1	A3V3
x3250 M5 Planar	5458	AC1 MC1	A3V4
3U Bracket for Mellanox ConnectX-3 10 GbE Adapter	5458	AC1	A3WG

		MC1	
x3250M5 HS SFF SAS/SATA RAID KIT for 0-3 HDD except for H1110 series	5458	AC1 MC1	A46M
Intel Xeon E3-1265L v3 2.5GHz 8MB cache 1600MHz 4C (45W)	5458	AC1 MC1	A4GK
Intel Xeon E3-1230L v3 1.8GHz 8MB cache 1600MHz 4C (25W)	5458	AC1 MC1	A4GL
Intel Xeon E3-1220L v3 1.1GHz 4MB cache 1600MHz 2C (13W)	5458	AC1 MC1	A4K6
Intel Pentium G3420 3.2GHz 3MB 1600MHz 2C (54W)	5458	AC1 MC1	A4K7
IMM2 Standard	5458	AC1 MC1	A4K8
Intel Pentium G3430 3.3 GHz 3MB 1600MHz 2C (54W)	5458	AC1 MC1	A4QN
Intel Pentium G3220 3.0 GHz 3MB 1333MHz 2C (54W)	5458	AC1 MC1	A4QP
Intel Pentium G3420T 2.7GHz 3MB 1600MHz 2C (35W)	5458	AC1 MC1	A4QQ
Intel Pentium G3220T 2.6GHz 3MB 1333MHz 2C (35W)	5458	AC1 MC1	A4QR
Intel Core-i3 4340 3.6GHz 4MB 1600MHz 2C (54W)	5458	AC1 MC1	A4QS
Intel Core-i3 4330 3.5GHz 4MB 1600MHz 2C (54W)	5458	AC1 MC1	A4QT
Intel Core-i3 4130 3.4GHz 3MB 1600MHz 2C (54W)	5458	AC1 MC1	A4QU
Intel Core-i3 4330T 3.0GHz 4MB 1600MHz 2C (35W)	5458	AC1 MC1	A4QV
Intel Core-i3 4130T 2.9GHz 3MB 1600MH 2C (35W)	5458	AC1 MC1	A4QW

The following are features already announced for the 5458 machine type:

Description	MT	Model	Feature
5458-AC1	5458	AC1	
5458-MC1	5458	MC1	
ServeRAID C100 Series RAID 5 Upgrade for IBM System x-FoD	5458	AC1 MC1	A17U
Operating Temperature Enhancement Kit	5458	AC1 MC1	A3SD
Broadcom Ethernet Adapter 5719 - 4 port upgrade	5458	AC1 MC1	A4K5

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

Description	MT	Model	Feature
ServeRAID C100 Series RAID 5 Upgrade for IBM System x-FoD	3331	HC1	A17U
Operating Temperature Enhancement Kit	3331	HC1	A3SD
2.5" Simple Swap HDD Hardware RAID upgrade kit	3331	HC1	A4GV
3.5" Simple Swap HDD Hardware RAID upgrade kit	3331	HC1	A4GW
Broadcom Ethernet Adapter 5719 - 4 port upgrade	3331	HC1	A4K5
x3250 M5 HS 2.5" HDD 4 to 8 Upgrade Kit	3331	HC1	A4VN

The following feature numbers are automatically added to the 5372-SWX HIPO order whenever one of the hardware system units are configured in an order.

HIPO feature

number	Description
A859	5458-AC1 Routing Code
A860	5458-MC1 Routing Code

Starting Point models

Description	Part number
System x3250 M5 Starting Point	5458-FT1 5458-FT2 5458-FT3

Note: All models are GAV except for C models.

Description	MT	Mod	Part number
System x3250 M5			
	5458	A2V	5458A2V
	5458	A2B	5458A2B
	5458	A2A	5458A2A
	5458	A2M	5458A2M
	5458	A2K	5458A2K
	5458	A2C	5458A2C
	5458	B2V	5458B2V
	5458	B2B	5458B2B
	5458	B2A	5458B2A
	5458	B2M	5458B2M
	5458	B2K	5458B2K
	5458	B2C	5458B2C
	5458	C2V	5458C2V
	5458	C2B	5458C2B
	5458	C2A	5458C2A
	5458	C2M	5458C2M
	5458	C2K	5458C2K
	5458	C2C	5458C2C
	5458	C4V	5458C4V
	5458	C4B	5458C4B
	5458	C4A	5458C4A
	5458	C4M	5458C4M
	5458	C4K	5458C4K
	5458	C4C	5458C4C
	5458	F2V	5458F2V
	5458	F2B	5458F2B
	5458	F2A	5458F2A
	5458	F2M	5458F2M
	5458	F2K	5458F2K
	5458	F2C	5458F2C
	5458	G2V	5458G2V
	5458	G2B	5458G2B
	5458	G2A	5458G2A
	5458	G2M	5458G2M
	5458	G2K	5458G2K
	5458	G2C	5458G2C

Express models - China

Description	MT	Mod	Part number
IBM System x3250 M5	5458	ERC	5458ERC
	5458	ESC	5458ESC
	5458	ETC	5458ETC

5458	EUC	5458EUC
5458	EVC	5458EVC
5458	EWC	5458EWC
5458	EZC	5458EZC

Note:
 xxK = Korea (Korea)
 xxC = PRC (Simple Chinese)
 xxV = Taiwan
 xxB = Hong Kong
 xxA = Hong Kong, Singapore, Brunei, Malaysia, Myanmar, Burma.
       India, Nepal, Sri Lanka
 xxM = Australia, New Zealand

Options

Description	Type	Model	Feature Code	SEO	Part Number
Broadcom Ethernet Adapter 5719 - 4 port upgrade	3331	HC1	A4K5	00AM013	00AM013
ServeRAID C100 Series RAID 5 Upgrade for IBM System x-FoD	3331	HC1	A17U	81Y4406	81Y4406
2.5" Simple Swap HDD Hardware RAID upgrade kit	3331	HC1	A4GV	46W6577	46W6577
3.5" Simple Swap HDD Hardware RAID upgrade kit	3331	HC1	A4GW	46W6576	46W6576
x3250 M5 HS 2.5" HDD 4 to 8 Upgrade Kit	3331	HC1	A4VN	00AL348	00AL348
Operating Temperature Enhancement Kit	3331	HC1	A3SD	00J6351	00J6351

Pseudo parts

Note: The following Pseudo part numbers cannot be ordered as stand-alone parts and can only be ordered as part of a configuration created in x-config.

Pseudo part numbers	Description
00AK839	Intel Pentium G3430 3.3 GHz 3MB 1600MHz 2C (54W)
00AK840	Intel Pentium G3220 3.0 GHz 3MB 1333MHz 2C (54W)
00AK841	Intel Pentium G3420T 2.7GHz 3MB 1600MHz 2C (35W)
00AK842	Intel Pentium G3220T 2.6GHz 3MB 1333MHz 2C (35W)
00AK843	Intel Core-i3 4340 3.6GHz 4MB 1600MHz 2C (54W)
00AK844	Intel Core-i3 4330 3.5GHz 4MB 1600MHz 2C (54W)
00AK845	Intel Core-i3 4130 3.4GHz 3MB 1600MHz 2C (54W)
00AK846	Intel Core-i3 4330T 3.0GHz 4MB 1600MHz 2C (35W)
00AK847	Intel Core-i3 4130T 2.9GHz 3MB 1600MH 2C (35W)
00AM059	Intel Xeon E3-1220L v3 1.1GHz 4MB cache 1600MHz 2C (13W)
00AM060	Intel Pentium G3420 3.2GHz 3MB 1600MHz 2C (54W)
00AL208	x3250 M5 System Labels GBM
00AL235	x3250 M5 SS LFF SATA DRIVE KIT
00AL236	x3250 M5 SS LFF SAS/SATA RAID KIT
00AL237	x3250 M5 HS LFF SAS/SATA RAID KIT
00AL238	x3250 M5 SS SFF SATA DRIVE KIT
00AL239	x3250 M5 SS SFF SAS/SATA RAID KIT L-type
00AL240	x3250 M5 HS SFF SAS/SATA RAID KIT for 4-7HDD except for H1110 series
00AL241	RACK MOUNT KIT
00AL234	x3250 M5 Planar
00AL221	System Documentation and Software-US English
00AL229	System Documentation and Software-Korean
00AL230	System Documentation and Software-Traditional Chinese

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         (Taiwan)
00AL231 System Documentation and Software-Simplified Chinese
         (China)
00AL232 System Documentation and Software-Korea (English)
00AL233 System Documentation and Software-Traditional Chinese
         (Hong Kong)

00AL210 x3250 M5 LFF HS Bezel
00AL211 x3250 M5 LFF SS Bezel
00AL212 x3250 M5 SFF HS Bezel with 8HDD
00AL213 x3250 M5 SFF SS Bezel with 8 HDD
00AL214 x3250 M5 SFF HS Bezel with 4 HDD
00AL215 x3250 M5 SFF SS Bezel with 4 HDD
00AL242 x3250 M5 SS SFF SAS/SATA RAID KIT Vertical for 0-3 HDD
00AL243 x3250 M5 HS SFF SAS/SATA RAID KIT for H1110
00AL244 x3250 M5 SS SFF SAS/SATA RAID KIT Vertical for 4-7 HDD
00AL216 x3250 M5 BKpn conf cable - 4 HDD SKU
00AL217 x3250 M5 BKpn conf cable - 8 HDD SKU
00AL218 Power cable -fixed PSU or HS RDN PSU for 4xHot Swap HDD
00AL245 x3250M5 HS SFF SAS/SATA RAID KIT for 0-3 HDD
         except for H1110 series
00Y7583 Intel Xeon E3-1265L v3 2.5GHz 8MB cache 1600MHz 4C (45W)
00Y7584 Intel Xeon E3-1230L v3 1.8GHz 8MB cache 1600MHz 4C (25W)
00AL219  IMM2 Standard
00AL246 x3250 M5 SS LFF SAS/SATA RAID KIT Vertical type for 4 HDD
00AL247 x3250 M5 HS LFF SAS/SATA RAID KIT Vertical type for 4 HDD
46W6615 Intel Xeon E3-1280 v3 3.6GHz 8MB cache 1600MHz 4C (82W)
46W6616 Intel Xeon E3-1270 v3 3.5GHz 8MB cache 1600MHz 4C (80W)
46W6617 Intel Xeon E3-1240 v3 3.4GHz 8MB cache 1600MHz 4C (80W)
46W6618 Intel Xeon E3-1230 v3 3.3 GHz 8MB cache 1600MHz 4C (80W)
46W6619 Intel Xeon E3-1220 v3 3.1GHz 8MB cache 1600MHz 4C (80W)
46W6620 Intel Xeon E3-1285 v3 3.6GHz 8MB cache 1600MHz 4C (84W)
46W6621 Intel Xeon E3-1285L v3 3.1GHz 8MB cache 1600MHz 4C (65W)
00AM689 x3250 M5 PKG
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Publications

The following CD-ROM is shipped with the x3250 M5 server:

- The *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 pictorials to enable you to quickly set up the System x3250 M5 servers.

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

The publication *Installation and Service Guide* in US English and translation versions is available from

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

Services

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For details on education offerings related to specific products, visit

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

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

Technical information

Specified operating environment

Physical specifications

5458-A2x

Processor	Pentium G3420 2C 65W
Internal speed	3.2 GHz
External speed	1600 MHz
Number standard	1
Maximum	1
Cache	3 MB
Memory	4 GB (1600 MHz)
DIMMs	1 x 4 GB (PC3L-12800 CL11 ECC DDR3 1600MHz LP UDIMM)
Sockets UDIMM	4
Capacity UDIMM[5]	32 GB
Video controller	Integrated in BMC
Memory	16 MB (shared)
HDD	Simple swap
HDD controllers	O/B S/S LFF SATA
Channels	1
Connector int.	4
Connector ext.	0
RAID	On-board
Fixed disk standard	0
Tape backup	0
Total bays	4
5.25 ultraslim	0
3.5-in slim	4
2.5-in slim	0
Simple-swap	4
Internal capacity[6]	12 TB
Standard	0
Bays available	4
5.25/3.5-in ultraslim	0
3.5-in slim	4
2.5-in slim	0
Simple-swap	0
Total slots	2
PCI 2.2 (32/33 MHz)	0
PCI-E (x8/x4)	2
Slots available	2
Management proc.	IMM2
Ethernet controller	Dual Gb
Optical drive (SATA)	No
Diskette drive	0
Power supply	300 W
Number standard	1
Hot-swap	No
Redundant power	No
Auto restart	Yes

5458-B2x

Processor	Xeon E3-1220 v3 4C 80W

Internal speed	3.1 GHz
External speed	1600 MHz
Number standard	1
Maximum	1
Cache	8 MB
Memory	4 GB (1600 MHz)
DIMMs	1 x 4 GB (PC3L-12800 CL11 ECC DDR3 1600MHz LP UDIMM)
Sockets UDIMM	4
Capacity UDIMM[5]	32 GB
Video controller	Integrated in BMC
Memory	16 MB (shared)
HDD	Simple swap
HDD controllers	O/B S/S LFF SATA
Channels	1
Connector int.	4
Connector ext.	0
RAID	On-board
Fixed disk standard	0
Tape backup	0
Total bays	4
5.25 ultraslim	0
3.5-in slim	4
2.5-in slim	0
Simple-swap	0
Internal capacity[6]	12 TB
Standard	0
Bays available	4
5.25/3.5-in ultraslim	0
3.5-in slim	4
2.5-in slim	0
Simple-swap	0
Total slots	2
PCI 2.2 (32/33 MHz)	0
PCI-E 3.0 (x8/x4)	2
Slots available	2
Management proc.	IMM2
Ethernet controller	Dual Gb
Optical drive (SATA)	No
Diskette drive	0
Power supply	300 W
Number standard	1
Hot-swap	No
Redundant power	No
Auto restart	Yes

5458-C2x

Processor	Xeon E3-1230 v3 4C 80W
Internal speed	3.3 GHz
External speed	1600 MHz
Number standard	1
Maximum	1
Cache	8 MB
Memory	4 GB (1600 MHz)
DIMMs	1 x 4 GB (PC3L-12800 CL11 ECC DDR3 1600MHz LP UDIMM)
Sockets UDIMM	4
Capacity UDIMM[5]	32 GB
Video controller	Integrated in BMC
Memory	16 MB (shared)
HDD	Hot swap
HDD controllers	O/B H/S LFF SATA/SAS
Channels	1
Connector int.	4
Connector ext.	0
RAID	Server RAID H1110 SAS/SATA Controller
Fixed disk standard	0
Tape backup	0
Total bays	4
5.25 ultraslim	0
3.5-in slim	4

2.5-in slim	0
Simple-swap	0
Internal capacity[6]	12 TB
Standard	0
Bays available	4
5.25/3.5-in ultraslim	0
3.5-in slim	4
2.5-in slim	0
Simple-swap	0
Total slots	2
PCI 2.2 (32/33 MHz)	0
PCI-E 3.0 (x8/x4)	2
Slots available	1
Management proc.	IMM2
Ethernet controller	Dual Gb
Optical drive (SATA)	No
Diskette drive	0
Power supply	300 W
Number standard	1
Hot-swap	No
Redundant power	No
Auto restart	Yes

5458-C4x

Processor	Xeon E3-1230 v3 4C 80W
Internal speed	3.3 GHz
External speed	1600 MHz
Number standard	1
Maximum	1
Cache	8 MB
Memory	8 GB (1600 MHz)
DIMMs	1 x 8 GB (PC3L-12800 CL11 ECC DDR3 1600MHz LP UDIMM)
Sockets UDIMM	4
Capacity UDIMM[5]	32 GB
Video controller	Integrated in BMC
Memory	16 MB (shared)
HDD	Hot swap
HDD controllers	O/B H/S SFF SATA/SAS
Channels	1
Connector int.	4
Connector ext.	0
RAID	Server RAID H1110 SAS/SATA Controller
Fixed disk standard	0
Tape backup	0
Total bays	5
5.25 ultraslim	1
3.5-in slim	0
2.5-in slim	4
Simple-swap	0
Internal capacity[6]	4 TB
Standard	0
Bays available	5
5.25/3.5-in ultraslim	1
3.5-in slim	0
2.5-in slim	4
Simple-swap	0
Total slots	2
PCI 2.2 (32/33 MHz)	0
PCI-E 3.0 (x8/x4)	2
Slots available	1
Management proc.	IMM2
Ethernet controller	Dual Gb
Optical drive (SATA)	Optional
Diskette drive	0
Power supply	300 W
Number standard	1
Hot-swap	No
Redundant power	No
Auto restart	Yes

5458-F2x

Processor	Xeon E3-1240 v3 4C 80W
Internal speed	3.4 GHz
External speed	1600 MHz
Number standard	1
Maximum	1
Cache	8 MB8
Memory	8 GB (1600 MHz)
DIMMs	1 x 8 GB (PC3L-12800 CL11 ECC DDR3 1600MHz LP UDIMM)
Sockets UDIMM	4
Capacity UDIMM[5]	32 GB
Video controller	Integrated in BMC
Memory	16 MB (shared)
HDD	Hot swap
HDD controllers	O/B H/S SFF SATA/SAS
Channels	1
Connector int.	4
Connector ext.	0
RAID	Server RAID H1110 SAS/SATA Controller
Fixed disk standard	0
Tape backup	0
Total bays	5
5.25 ultraslim	1
3.5-in slim	0
2.5-in slim	4
Simple-swap	0
Internal capacity[6]	4 TB
Standard	0
Bays available	5
5.25/3.5-in ultraslim	1
3.5-in slim	0
2.5-in slim	4
Simple-swap	0
Total slots	2
PCI 2.2 (32/33 MHz)	0
PCI-E 3.0 (x8/x4)	2
Slots available	1
Management proc.	IMM2
Ethernet controller	Dual Gb
Optical drive (SATA)	Optional
Diskette drive	0
Power supply	460 W
Number standard	1
Hot-swap	Yes
Redundant power	Optional
Auto restart	Yes

5458-G2x

Processor	Xeon E3-1270 v3 4C 80W
Internal speed	3.5 GHz
External speed	1600 MHz
Number standard	1
Maximum	1
Cache	8 MB
Memory	8 GB (1600 MHz)
DIMMs	1 x 8 GB (PC3L-12800 CL11 ECC DDR3 1600MHz LP UDIMM)
Sockets UDIMM	4
Capacity UDIMM[5]	32 GB
Video controller	Integrated in BMC
Memory	16 MB (shared)
HDD	Hot swap
HDD controllers	O/B H/S SFF SATA/SAS
Channels	1
Connector int.	4
Connector ext.	0
RAID	Server RAID M1115 SAS/SATA Controller
Fixed disk standard	0

Tape backup	0
Total bays	9
5.25 sltraslim	1
3.5-in slim	0
2.5-in slim	8
Simple-swap	0
Internal capacity[6]	8 TB
Standard	0
Bays available	9
5.25/3.5-in ultraslim	1
3.5-in slim	0
2.5-in slim	8
Simple-swap	0
Total slots	2
PCI 2.2 (32/33 MHz)	0
PCI-E 3.0 (x8/x4)	2
Slots available	1
Management proc.	IMM2
Ethernet controller	Dual Gb
Optical drive (SATA)	Optional
Diskette drive	0
Power supply	460 W
Number standard	1
Hot-swap	Yes
Redundant power	Optional
Auto restart	Yes

5 Maximum memory is based on using four 8 GB 1600 MHz UDIMMs.

6 Capacities are based on the installation of 1 TB 7.2K hot-swap HL SATA/SAS HDDs (2.5 in.) or four 3 TB simple-swap SATA HDDs (3.5 in.). For the most up-to-date information on supported HDD options, visit

http://www-03.ibm.com/systems/info/x86servers/serverproven/compat/us/

Video subsystem

- Matrox G200 Video Core
- Integrated on planar and connected to the PCI bus
- Support for DDR2 SDRAM external memory
- 64-bit graphics engine with 8 bpp, 16 bpp, and 24 bpp mode acceleration
- 32 bpp (4G colors/True Color) support
- Integrated 350 MHz RAMDAC
- DDC2B monitor communications support

Supported video mode capabilities for the SVGA PCI controller with a 200 MHz memory clock:

Resolution	Maximum Refresh Rate Supported	Bpp
640 x 400	60, 72, 75, 85	8, 16, 24
800 x 600	60, 72, 75, 85	8, 16, 24
1024 x 768	60, 72, 75, 85	8, 16, 24
1280 x 1024	60, 75	8, 16, 24
1440 x 900	60, 60 RB	8, 16, 24
1600 x 1200	60, 75	8, 16, 24
1680 x 1050	60, 60 RB	8, 16, 24

Notes:

- 24 Bpp (16.7 million colors) aligned on a 32-bit boundary for performance.
- Each resolution supports both CRT and Flat Panel monitors. For CRT monitors, each resolution complies with CRT ISO 9241.3:
  - 1440 x 900 and 1680 x 1050 are typically wide screen flat panel (non-CRT) settings so they are only available at 60 Hz.

  - 1440 x 900 and 1680 x 1050 are available at 60 Hz with support for 60 Hz Reduced Blanking Mode.
  - For the resolutions supported by different operating systems, refer the operating system documentation.

Dimensions (1U rack drawer)

- Width: 434.6 mm (17.1 in.) (without EIA bracket)
- Width: 482 mm (18.98 in.) (with EIA bracket)
- Depth: 576 mm (22.68 in.)
- Height: 43 mm (1.69 in.)
- Maximum weight: 12.3 kg (27.12 lb.)

Electrical

300-watt power supply

- 100 - 127 (nominal) V ac; 50 - 60 Hz; 6.0 A (maximum)
- 200 - 240 (nominal) V ac; 50 - 60 Hz; 3.0 A (maximum)

Redundant hot-swap 460-watt power supply

- 100 - 127 (nominal) V ac; 50 - 60 Hz; 5.3 A (maximum)
- 200 - 240 (nominal) V ac; 50 - 60 Hz; 2.6 A (maximum)
- Input kilovolt-amperes (kVA) (approximately)
  - Minimum configuration: 0.038 kVA
  - Maximum configuration: 0.504 kVA
- Btu output
  - Ship configuration: 130 Btu/hr (38 watts)
  - Full configuration: 1720 Btu/hr (504 watts)
- Acoustical noise emission level: Sound power levels
  - 6.5 bels (idling)
  - 6.5 bels (operating)

Note: The noise emission level stated is the declared (upper limit) A-weighted sound power level, in bels, for a random sample of machines, typically configured and operating in idle mode (powered on, but no DASD read/write or other I/O activity). All measurements have been made in accordance with ANSI S12.10 and reported in conformance with ISO 9296.

System x3250 M5 servers are intended for use as rack-drawer servers and are tested and designed to operate in a horizontal position.

Standards

These systems support or comply with the following standards:

- Hardware-enabled to meet the International Organization for Standardization (ISO) 9241, Part 3

Equipment approvals and safety

- Japan VCCI, Class A
- Australia/New Zealand AS/NZS CISPR 22:2006, Class A
- IEC-60950-1 (CB Certificate and CB Test Report)
- Taiwan BSMI CNS 13438, Class A); CNS 14336
- China CCC (China GB 4943-2001, GB 9254-2008 Class A, GB 17625.1:2003)

- Korea KN22, Class A; KN24

Operating environment

- Air temperature:

  Server on

  – 10.0°C to 35.0°C (50°F to 95°F); altitude: 0 to 914.4 m (3,000 ft)
  – 10.0°C to 32.0°C (50°F to 89.6°F); altitude: 914.4 m (3,000 ft) to 2,133.6 m (7,000 ft)

  Server off

  – 10.0°C to 43.0°C (50°F to 109.4°F); maximum altitude: 2,133.6 m (7,000 ft)

  Shipping

  – -40°C to 60°C (-14°F to 140°F)
- Relative humidity: 8% to 80%
- Maximum altitude: 2,133.6 m (7,000 ft)

Homologation

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:

- USB keyboard
- USB 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 using the console switch.

Software requirements

The following network operating systems are supported in the System x3250 M5 server:

- Microsoft :
  – Microsoft Windows Server 2008 R2, SP1
  – Microsoft Windows Server 2012 R2,
  – Microsoft Windows Server 2012, RTM

- Linux™ :
  - Red Hat Enterprise Linux 5 Server Edition, U9
  - Red Hat Enterprise Linux 5 Server x64 Edition, U9
  - Red Hat Enterprise Linux 5 Server with Xen x64 Edition, U9
  - Red Hat Enterprise Linux 6 Server x64 Edition, U4
  - Red Hat Enterprise Linux 6 Server Edition, U4
- SUSE:
  - SUSE Linux Enterprise Server 11 for x86, SP3
  - SUSE Linux Enterprise Server 11 for AMD64/EM64T, SP3
  - SUSE Linux Enterprise Server 11 with Xen for AMD64/EM64T, SP3
- VMware
  - VMware vSphere 5.5 (ESXi)
  - VMware vSphere 5.1 (ESXi), U1

For additional support, certification, and version information on network operating systems, visit

http://www-03.ibm.com/systems/info/x86servers/serverproven/compat/us/

Compatibility

The System x3250 M5 systems contain licensed system programs that include set configuration, set features, and test programs. System BIOS (flash BIOS modified to IBM specifications) is loaded from a "flash" EEPROM into system memory. This BIOS provides instructions and interfaces designed to support the standard features of the server and to maintain compatibility with many current software programs.

To view detailed information about IBM and non-IBM devices, adapters, software, and network operating systems supported with System x servers, visit

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

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

Limitations

- The 3.5-inch HDD can only be supported with fixed PSU base since space limitation.
- The eight 2.5-inch HDD can only be supported with redundant PSU base since power rating limitation.
- The ultraslim ODD can only be supported with 2.5-inch HDD model since space limitation.
- Power supplies (Fixed 300W and RDN 460W) do not have power monitoring and capping features (AEM features).
- Only 2.5-inch HDD base supports hardware RAID card remote battery with holder.
- VMware can only support Intel Xeon Processors.

Solid-state drive warranty limitations

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 communicate to system generated commands or becoming incapable of being written to.

- Wake on LAN is not supported if systems are improperly shut down.

Refer to the Software requirements section for operating system limitations.

Planning information

Customer responsibilities

Customer setup

The System x3250 M5 server is designated as customer setup. Customer setup instructions are shipped with systems.

Standard SATA configurations

The System x3250 M5 server uses the SATA interface for the optical drive.

Supported memory options

- 4GB (1x4GB, 2Rx8, 1.35V) PC3L-12800 CL11 ECC DDR3 1600MHz LP UDIMM - 00D5012
- 8GB (1x8GB, 2Rx8, 1.35V) PC3L-12800 CL11 ECC DDR3 1600MHz LP UDIMM -00D5016

Rack installations

The System x3250 M5 1U rack-drawer models are designed to be installed in a 19-inch rack cabinet designed for 576 mm (22.68-inch) deep devices.

- 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 609.6 - 762 mm (24 - 30 in.)
- The thickness of the mounting flanges must be 2.0 - 4.0 mm (0.08 and 0.16 in.).
- The mounting flanges must have either 7.1 mm (0.28 in.) diameter holes or 9.6 mm (0.38 in) square holes on the standard EIA hole spacing.
- The rack must have a minimum depth of 50 mm (1.97 in.) between the front mounting flange and inside of the front door for appropriate cooling.
- The rack must have a minimum depth of 910 mm (35.83 in.) between the front mounting flange and inside of the rear door to install the server and provide cable management space.
- The minimum side-to-side clearance in the rack between the front and rear mounting flanges must be 478 mm (18.82 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 (19.06 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, power distribution units, and so on.

- The rack must provide proper stabilization so that the rack does not become unstable when servers are pulled out for service.

Cable orders

The dual Gigabit full duplex, Ethernet controller, standard with the server, is connected directly to an RJ-45 connector. The RJ-45 connector provides a 10/100/1000Base-T interface for connecting twisted-pair cable to the Ethernet network. Cabling is not included with the server. To connect the Ethernet controller to a repeater or switch, use a UTP cable with RJ-45 connectors at both ends. For 100/1000 Mbps operation, Category 5, 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 x3250 M5 server requires about 30 minutes for installation. Installation includes unpacking, setting up, and powering on the system. Additional time is required to install an operating system, additional adapters, or features.

Packaging

One box

- System unit carton: system unit
- System unit power cord
- Country kit:
  - Publications/CD bag:
    -- Important Notices Flyer
    -- Warranty Flyer
    -- Documentation CD

The System x3250 M5 system is shipped as a single package. The country kit is contained inside the top portion of the system unit carton.

Security, auditability, and control

Security and auditability features include:

- A power-on password (secured boot).
- A mechanical lock allows you to lock the system cover to prevent unauthorized personnel access to internal components of the server.
- Tie-down capability is available by using a common U bolt attached to the back frame.
- Operation without a keyboard and display is supported after the server is configured with the appropriate network operating system. This minimizes the risk of unauthorized people tampering with the system software and configuration.

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

Terms and conditions

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

Warranty period

- Three years
- Optional features: One year

  Note: For configurations that support the RAID battery, the RAID battery will be warranted for 1 year 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:

- x3250 LabelGBM
- Chassis Label
- Misc Kit
- x3250 Chassis
- Top Cover Asm
- Airduct
- PCI Riser Cage
- 3.5-inch HDD Bezel
- 2.5-inch HDD Bezel
- Rack Mount Kit
- Blank EMC
- Blank Filler
- Battery Holder

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 IBM's normal service area. Contact your local IBM representative or your reseller for country-specific 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:

- Backplane
- PCI adapter
- Front IO Module
- Optical drive
- Cable
- Hard disk drive
- Memory DIMM
- Fixed power supply
- Hot-swap power supply
- Power Cable
- Thermal Sensor kit
- CMOS battery
- System Fan
- RAID batteries
- RISER Card

The following parts or features have been designated as Tier 2 CRUs:

- System board
- Power Paddle Card
- Service processor
- Heat sink
- Safety 240 VA cover

On-site Service

At IBM's discretion 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, 9 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.

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?lndocid=GCOR-3FBJK2

For more information on IWS, refer to Services Announcement AA01-3100, dated September 28, 2001.

Licensing

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

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/servers/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-304.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.

Educational allowance

None

Prices

For all local charges, contact your IBM representative.

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AP distribution

Country/Region	Announce	Announce Date
AP IOT		
ASEAN*	Yes	October 8, 2013
India/South Asia**	Yes	October 8, 2013
Australia	Yes	October 8, 2013
People's Republic of China	Yes	October 8, 2013
Hong Kong S.A.R of the PRC	Yes	October 8, 2013
Macao S.A.R of the PRC	Yes	October 8, 2013
Taiwan	Yes	October 8, 2013
Korea	Yes	October 8, 2013
New Zealand	Yes	October 8, 2013
Japan IOT		
Japan	Yes	October 8, 2013

* Brunei Darussalam, Indonesia, Cambodia, Lao People's Democratic Republic, Malaysia, Philippines, Singapore, Thailand, and Vietnam

** Bangladesh, Bhutan, India, Sri Lanka, Maldives, Nepal, and Afghanistan

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http://www.ibm.com/planetwide/

Corrections

(Corrected on October 15, 2013)
Processor descriptions were revised.