

IBM System x3100 M4 and x3250 M4 Express servers offer high-performance with fast Intel Xeon processors

Table of contents

2	Overview	8	Publications
4	Key prerequisites	10	Technical information
4	Planned availability date	17	Terms and conditions
4	Description	20	Prices
8	Product positioning	21	Order now
8	Product number		

At a glance



IBM® System x3100 M4 and x3250 M4 Express® servers

Features of the new x3100 M4 and x3250 M4 Express servers include:

- 4U mini tower - x3100 M4
- 1U rack - x3250 M4
- Choice of Intel™ processors
 - Xeon E3-1220v2
 - Xeon E3-1230v2
- Integrated Serial-ATA (SATA) controller
- Two PCI Express I/O expansion slots (x3250 M4)
- Four available PCI Express I/O expansion slots (x3100 M4)
- Six bays: two 5.25-inch and four 3.5-inch (x3100 M4); two 3.5-inch simple-swap SATA or four 2.5-inch hot-swap/simple-swap SAS/SATA (x3250 M4)
- DVD-ROM optical drive²
- 350-watt auto-sensing power supply or 300W 80+ certified power supply (x3100 M4)
- 300-watt fixed auto-sensing or 460-watt redundant power supply (x3250 M4)
- System-management support
- I/O ports

- Seven USB ports, two in front, four in rear, and one internal
- Integrated dual Gigabit Ethernet with RJ-45
- One software-compatible serial port
- One VGA port

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

Overview

IBM x3100 M4 and x3250 M4 Express servers

The System x3100 M4 single-socket tower server and the System x3250 M4 single-socket rack server are designed for small businesses and first-time server buyers looking for a solution to improve business efficiency. The x3100 M4 and the x3250 M4 deliver several IBM innovative features and are competitively priced. The x3100 M4 has a compact mini 4U form factor; the x3250 M4 features a 1U form factor.

The IBM System x3100 M4 and System x3250 M4 provide next-generation performance in innovative and compact designs, with flexible configuration options and built-in security and systems management capabilities.

Server-class features

- Latest Intel dual-core and quad-core Intel processors¹:
 - Xeon E3-1220v2 series
 - Xeon E3-1230v2 series
 - Optimized for EM64T to support 32-bit or 64-bit applications

x3100 M4 Express models feature:

- 4 GB PC3-12800 CL11 1600 MHz DDR3 LP ECC UDIMM memory
- Four PCI Express expansion slots:
 - One x16
 - One x8
 - One x4
 - One x1
- Open bay models supporting simple-swap SATA HDD
- Support for 350-watt PSU or 80 plus certified 300 W PSU (model dependant and CTO)
- Integrated dual Gigabit Ethernet controllers
- Integrated ServeRAID C100 for System x® that supports:
 - Integrated RAID-0, RAID-1, RAID-10 standard

x3250 M4 Express models feature:

- 4 GB PC3-12800 ECC 1600 MHz LP UDIMM memory; 32 GB maximum
- Two PCI Express expansion slots:
 - One x8
 - One x4 for hardware RAID or compact dual-port NIC adapter
- Open bay models supporting 3.5-inch simple-swap SATA or 2.5-inch hot-swap SAS/SATA HDD³
- Support for 80 plus certified 300 W fixed or 460 W redundant PSU
- Integrated dual Gigabit Ethernet controllers
- Integrated ServeRAID C100 for System x that supports:

- Integrated RAID-0 and RAID-1 standard

At your control

Manageability and serviceability features help diagnose problems quickly.

- Integrated Management Module II (IMM2) subsystems with IPMI 2.0 support
- Optional upgrade to remote presence by FoD
- Trusted Platform Module (TPM) 1.2 support
- IBM tools supports
- 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.

- ServerGuide⁶ utilities to assist loading of many popular network operating systems
- IBM Director

Warranty

System x3100 M4 One-year customer replaceable unit (CRU) and on-site labor⁴, limited warranty⁵; optional warranty service upgrades available

System x3250 M4 Three-year customer replaceable unit (CRU) and on-site labor⁴, limited warranty⁵; optional warranty service upgrades available

IBM Express models

New System x configurations are being added to the IBM Express Portfolio™, designed and priced to meet the needs of midsized businesses. Reliable and easy to manage, Express models and configurations vary by country. They further enhance the ease of doing business with IBM by offering a robust portfolio of products supported by aggressive pricing and simplified incentives.

The latest System x Express models consist of relevant system configurations for the System x3100 M4 and System x3250 M4 servers.

System x Express servers deliver robust capabilities while taking into account limited resources and budgets. Find the right hardware for your business needs today, while helping to protect your investments with flexible, scalable products that can grow with your business.

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

²Actual playback speed varies and is often less than maximum.

³When referring to HDD or tape backup capacity, GB stands for 1,000,000,000 bytes and TB stands for 1,000,000,000,000 bytes. User capacity may vary depending on operating environments.

⁴With respect to on-site service, you may be asked certain diagnostic questions before a technician is sent.

⁵For information on the IBM Statement of Limited Warranty, visit

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

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.

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

Feature exchange

None

Key prerequisites

- Monitor
- Keyboard
- Mouse

Planned availability date

June 15, 2012

Description



Solid-performing server subsystems

This uniprocessor entry-level server delivers solid, economical performance by coupling Intel Xeon™ processors, high-speed PC3-10600 CL9 ECC DDR3 1333 MHz or PC3-12800 CL111600 MHz DDR3 LP ECC UDIMM memory, and SATA storage subsystems.

The x3100 M4 server uses high-performance chipsets to optimize throughput from the processors to memory and I/O.

Express models

SEO	Processor	Cache	Memory	HDD/INT	Optical
2582-EHU	Xeon E3-1220v2	3.1 GHz 8 MB	4 GB	O/B SS SATA	Multiburner
2582-EJU	Xeon E3-1230v2	3.3 GHz 8 MB	4 GB	O/B SS SATA	Multiburner

Expansion capacity and standard features

The x3100 M4 server is housed in a minitower that can economically handle expansion. This model features:

- System board with four sockets that supports high-speed PC3-10600 CL9 ECC DDR3 1333 MHz or PC3-12800 CL111600 MHz DDR3 LP ECC UDIMM memory
 - 4 GB 1600 MHz memory standard
 - Up to 32 GB supported
- Four adapter card slots that support multiple adapters for network or data storage⁷:
 - Four PCIe slots (x1, x4, x8, x16)
- Six bays
 - Two accessible 5.25-inch half-high, one bay with DVD-ROM drive²
 - Four internal 3.5-inch slim high bays
- Dual full-duplex, Gigabit Ethernet PCIe controller that speeds network communications to LAN clients
- A worldwide, auto-sensing 350-watt power supply with auto restart that supports maximum configurations and minimizes operator intervention after a temporary power outage
- One variable-speed system fan that cools microprocessor and I/O, plus one variable-speed power supply fan
- Integrated video controller

²Actual playback speed varies and is often less than maximum.

⁷ IBM makes no warranties, expressed or implied, regarding non-IBM products and services that are ServerProven®, including but not limited to implied warranties of merchantability and fitness for a particular purpose. These products are offered and warranted solely by third parties.

ServeRAID C100 RAID

ServeRAID C100

- Provide 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. C100 can be easily configured and managed with MegaRAID Storage Manager (MSM) and MegaCLI (Command Line Interface) tools.

Features and functions

ServeRAID C100 for IBM System x

- RAID levels 0, 1, and 10
- SATA Support
- Up to eight physical disk drives
- Up to eight virtual disks
- Support
 - Consistency check
 - Initialization and background initialization
 - Rebuild
 - Patrol Reads
 - Hot-Spare
 - S.M.A.R.T.

- RAID Volumes Portability
- Online HDD FW download

Solid-performing server subsystems

This uniprocessor entry-level 1U server delivers solid, economical performance by coupling Intel Xeon processors, high-speed PC3-10600 CL9 ECC DDR3 1333 MHz or PC3-12800 CL111600 MHz DDR3 LP ECC UDIMM memory, and SATA storage subsystems.

The x3250 M4 servers use high-performance chipsets to optimize throughput from the processors to memory and I/O.

Express models

SEO	Processor	Cache	Memory	HDD/INT	Power
2583-ECU	Xeon E3-1220v2	3.1 GHz	8 M 4 GB	SS SATA	300W
2583-EDU	Xeon E3-1230v2	3.3 GHz	8 M 4 GB	H/S SFF SAS	460W

Note: Multiburner (DVD-ROM) standard in Express models.

Expansion capacity and standard features

The x3250 M4 1U rack server can economically handle expansion. This model features:

- System board with four sockets that supports high-speed 1 GB, 2 GB, 4 GB, and 8 GB PC3-10600 CL9 ECC DDR3 1333 MHz or PC3-12800 CL111600 MHz DDR3 LP ECC UDIMM memory
 - 4 GB memory standard
 - Up to 32 GB addressable
- Two expansion slots that support:
 - One PCIe x8 Gen3
 - One PCIe x4 for hardware RAID or compact dual-port NIC adapter.
- Three bays (3.5-inch models) or five bays (2.5-inch models) standard
 - One accessible 5.25-inch ultraslim, one bay for optional slim DVD drive
 - Two internal 3.25-inch or four 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 power supply with automatic restart that supports maximum configurations and minimizes operator intervention after a temporary power outage
- One variable-speed system fan that cools microprocessor and I/O, plus one variable-speed power supply fan
- Integrated video controller

Function and expansion capacity

The x3250 M4 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.

Features include:

- One PCI-e x8 Gen3, one PCI-e x4 dedicated for hardware RAID-0, RAID-1 controller or compact dual-port NIC 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 four 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 support:
 - Capable of addressing up to 32 GB 1600 MHz system memory
- One accessible 5.25-inch, ultra slim enhanced optical drive
- Two internal 3.5-inch bays or four 2.5-inch for HDDs
- Simple-swap 3.5-inch SATA model with controller that supports standard simple-swap 250 GB, 500 GB, 1 TB, 2 TB, and 3 TB HDDs
- Support for up to four HDDs (2.5-inch models)
- Hot-swap 2.5-inch SAS 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

- Provide 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
 - Consistency check
 - Initialization and background initialization
 - Rebuild
 - Patrol Reads
 - Hot-Spare
 - S.M.A.R.T.
 - RAID Volumes Portability
 - Online HDD FW download

World-class support tools and programs

The x3100 and x3250 servers include 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 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 x3100 M4 or the x3250 M4 servers with various adapters and devices.

Product positioning

The x3100 M4 server is positioned as a System x entry-level tower server and the x3250 M4 server is positioned as a System x entry-level 1U rack server. They are a confident, affordable choice for small business because they deliver high performance and are easy to implement.

These servers combine 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. These servers deliver 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 x3100 M4 server and the x3250 M4 server are ideal for transitioning business applications off your PC.

Product number

Single Entity Offerings (SEOs)

Description	SEO number
IBM System x3100 M4 Express	2582EHU 2582EJU
IBM System x3250 M4 Express	2583ECU 2583EDU

Model conversions

None

Feature conversions

None

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=112-108>

Publications

The following publications and multiburner DVDs are shipped with the x3100 M4 and x3250 M4 servers:

- The x3100 M4 and the x3250 M4 Installation and User's Guide contains an introduction to the computer, installation and setup, installing options, reference information, and problem determination. This publication has easy-to-use text and pictorials to enable you to set up the x3100 M4 and x3250 M4 servers.
- IBM Director systems management software is included.

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

The publications *x3100 M4 Installation and User's Guide* and *Problem Determination and Service Guide*, in US English and translation versions are available from

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

The publications *x3250 M4 Installation and User's Guide* and *Problem Determination and Service Guide*, in US English and translation versions are available from

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

Displayable softcopy publications

The product books are offered in displayable softcopy form. The displayable manuals are part of the basic machine-readable material at no charge. The files are shipped on the CD-ROM.

Source file publications

The product books are offered in source file form as a no-charge feature. The source files are shipped on the same media type as the basic machine-readable material.

Services

Global Technology Services

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

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

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

<http://www.ibm.com/services/>

For details on available IBM Business Continuity and Recovery Services, contact your IBM representative or visit

<http://www.ibm.com/services/continuity>

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.

System x and BladeCenter support services

Recommended core technical support

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

- **Continuous system monitoring**

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

- **Hardware maintenance**

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

- **Software technical support**

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

For more information, visit

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

Technical information

Specified operating environment

Physical specifications

	2582-EHU	2582-EJU
Processor	Xeon E3-1220v2 4C (69w)	Xeon E3-1230v2 4C (69w)
Internal speed	3.1 GHZ	3.3 GHZ
External speed	1600 MHZ	1600 MHZ
Number standard	1	1
Maximum	1	1
Cache	8 MB	8 MB
Memory	4 GB (1600 MHZ)	4 GB (1600 MHZ)
DIMMS	1 x 4 GB	1 x 4 GB
Sockets UDIMM	4	4
Capacity UDIMM [†]	32 GB ⁸	32 ⁸
Video controller	Integrated in BMC	Integrated in BMC
Memory	16 MB (shared)	16 MB (shared)
HDD	Simple-swap	Simple-swap
HDD controllers	SATA	SATA
Channels	1	1
Connector int.	6	6
Connector ext.	0	0
RAID	On-board	On board
Fixed disk standard	0	0
Tape backup	0	0
Total bays ²	6	6
5.25/3.5-in half-high	2	2
3.5-in slim	4	4
2.5-in slim	0	0
Hot-swap	0	0
Internal capacity ⁷	12 TB	12 TB
Standard	00	
Bays available	5 ⁹	5 ⁹
5.25/3.5-in half-high	1	1
3.5-in slim	4	4
2.5-in slim	0	0
Hot-swap	0	0
Total slots	4	4
PCI 2.2 (32/33 MHZ)	0	0
PCI-E (x16/x8/x4,x1)	4	4
Slots available	4	4
Management proc.	IMM2 ¹⁰	IMM2 ¹⁰
Ethernet controller	Dual Gb	Dual Gb
Optical drive (SATA)	Multiburner DVD	Multiburner DVD
Diskette drive	0	0
Power supply	350 w ¹¹	350 w ¹¹
Number standard	1	1
Hot-swap	No	No

Redundant power Auto restart	No Yes	No Yes
	2583-ECU	2583-EDU
Processor (4C)	Xeon E3-1220v2 4C (69w)	Xeon E3-1230v2 4C (69w)
Internal speed	3.1 GHz	3.3 GHz
External speed	1600 MHz	1600 MHz
Number standard	1	1
Maximum	1	1
Cache	8 MB	8 MB
Memory	4 GB (1600 MHz)	4 GB (1600 MHz)
DIMMs	1 x 4 GB	1 x 4 GB
Sockets UDIMM	4	4
Capacity UDIMM ⁵	32 GB ⁸	32 GB ⁸
Video controller	Integrated in BMC	Integrated in BMC
Memory	16 MB (shared)	16 MB (shared)
HDD	Simple-swap	Hot-swap
HDD controllers	SATA	SAS/SATA
Channels	1	1
Connector int.	6	6
Connector ext.	0	0
RAID	On-board	ServerRAID H1110 SAS/SATA Controller
Fixed disk standard	0	0
Tape backup	0	0
Total bays	3	5 ⁹
5.25 ultraslim	1	1
3.5-in slim	2	0
2.5-in slim	0	4
Simple-swap	0	0
Internal capacity ⁷	6 TB	4 TB
Standard	0	0
Bays available	3	5 ⁹
5.25/3.5-in ultraslim	1	1
3.5-in slim	2	0
2.5-in slim	0	4
Simple-swap	3	4
Total slots	2	2
PCI 2.2 (32/33 MHz)	0	0
PCI-E (x8/x4)	2	2
Slots available	2	2
Management proc.	IMM2 ¹⁰	IMM2 ¹⁰
Ethernet controller	Dual Gb	Dual Gb
Optical drive (SATA)	Optional	Optional
Diskette drive	0	0
Power supply	300 W	460 W
Number standard	1	1
Hot-swap	No	Yes
Redundant power	No	Optional
Auto restart	Yes	Yes

⁴With respect to on-site service, you may be asked certain diagnostic questions before a technician is sent.

⁵For information on the IBM Statement of Limited Warranty, visit

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

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

⁷ IBM makes no warranties, expressed or implied, regarding non-IBM products and services that are ServerProven, including but not limited to implied warranties of merchantability and fitness for a particular purpose. These products are offered and warranted solely by third parties.

⁸Four DIMM slots enable you to deploy up to 32 GB of DDR3 SDRAM Registered DIMM memory, 4 GB memory standard, or 16 GB DIMMs optional for 64 GB.

⁹Drive bays provide following capacities: SS-4x3.5-inch HDD, 12 TB total using 3 TB drives HS-4x2.5-inch HDD, maximum 4 TB using 1 TB HDDs

¹⁰These systems contain an integrated system management processor that provides a set of monitoring and alert features. Refer to the [Description](#) section for details.

¹¹The 350-watt power supply is designed to support systems when fully configured.

Electrical - x3100 M4 - 2582

350 watt power supply:

- 100 - 127 (nominal) V ac; 50 - 60 Hz; 7.0 A (maximum)
- 200 - 240 (nominal) V ac; 50 - 60 Hz; 3.5 A (maximum)

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)
 - Input kilovolt-amperes (kVA) (approximately)
 - Minimum configuration: 0.035 kVA
 - Maximum configuration: 0.350 kVA
- Btu output:
 - Ship configuration: 119 Btu/hr (35 watts)
 - Full configuration: 1194 Btu/hr (350 watts)
- Acoustical noise emission level: Sound power levels
 - 4.5 bels (idling)
 - 4.8 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.

The x3100 M4 server is shipped as a floor-standing server.

Electrical - x3250 M4 - 2583

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 460-watt power supplies:

- 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.

x3250 M4 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:

- Multiprocessor Specification (MPS) 1.4
- Peripheral Component Interconnect (PCI) specification 2.2
- Peripheral Component Interconnect (PCI-X) specification v2.0
- PCI-Express specification 1.0
- SAS - SCSI
- 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)
- China CCC (GB4943-2001), GB9254-2008 Class A, GB17625.1-2003
- Taiwan BSMI CNS13438, Class A; CNS14336
- Russia/GOST ME01, IEC-60950-1, GOST R 51318.22-99, GOST R 51318.24-99, GOST R 51317.3.2-2006, GOST R 51317.3.3-99,
- IEC 60950-1 (CB Certificate and CB Test Report)
- CE Mark (EN55022 Class A, EN60950-1, EN55024, EN61000-3-2, EN61000-3-3)
- CISPR 22, Class A
- TUV-GS (EN60950-1 /IEC60950-1, EK1-ITB2000)

Operating environment

To assure installability and serviceability in non-IBM industry-standard racks, review the installation planning information for any product-specific installation requirements.

- Environment temperature:
 - Server on: 10°C to 35°C (50°F to 95°F); altitude: 0 to 915 m (3,000 ft)
 - Server on: 10°C to 32°C (50°F to 90°F); altitude: 915 m (3,000 ft) to 2,134 m (7,000 ft)
 - Server on: 10°C to 28°C (50°F to 83°F); altitude: 2,134 m (7,000 ft) to 3,050 m (10,000 ft)
 - Server off: 5°C to 45°C (41.0°F to 113°F)
 - Shipping: -40°C to 60°C (-40°F to 140°F)
- Humidity:
 - 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

Hardware requirements

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

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

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

For service, the server requires a compatible:

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

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

Software requirements

Programming requirements

The following network operating systems are supported in the x3100 M4 server and the x3250 M4 server:

- Microsoft :
 - Microsoft Windows Server 2008, Enterprise x86 Edition
 - Microsoft Windows Server 2008, Standard x86 Edition
 - Microsoft Windows Server 2008, Web x86 Edition
 - Windows Small Business Server 2008 Standard Edition
 - Windows Small Business Server 2008 Premium Edition
 - Microsoft Windows Server 2008, R2 Edition
 - Microsoft Windows Server 2008, Enterprise x64 Edition
 - Microsoft Windows Server 2008, Standard x64 Edition
 - Microsoft Windows Server 2008, Web x64 Edition
- Linux™ :
 - Red Hat Enterprise Linux 5.7 Server Edition
 - Red Hat Enterprise Linux 5.7 Server x64 Edition
 - Red Hat Enterprise Linux 5.7 Server with Xen x64 Edition
 - Red Hat Enterprise Linux 6.2 Server x64 Edition includes KVM
 - Red Hat Enterprise Linux 6.2 Server 32 bit Edition
- SUSE:
 - SUSE Linux Enterprise Server 11 SP1 for x86
 - SUSE Linux Enterprise Server 11 SP1 for AMD64/EM64T
 - SUSE Linux Enterprise Server 11 SP1 with Xen for AMD64/EM64T
 - SUSE Linux Enterprise Server 10 SP4 for x86
 - SUSE Linux Enterprise Server 10 SP4 for AMD64/EM64T
 - SUSE Linux Enterprise Server 10 SP4 with Xen for AMD64/EM64T
- VMware:

- VMware ESX 4.1 Update 2
- VMware ESXi 4.1 Update 2 (3250 M4)
- VMware vSphere 5 (3250 M4)

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

<http://www.ibm.com/us/compat>

Compatibility

Both the System x3100 M4 Express and System x3250 M4 Express server systems contain licensed system programs that include set configuration, set features, and test programs. System BIOS is loaded from a "flash" EEPROM into system memory. This BIOS provides instructions and interfaces designed to support the standard features of the x3400 server and to maintain compatibility with many current software programs.

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

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

Contact your IBM representative or IBM Business Partner, or refer to the *IBM Sales Manual* for information on the compatibility of hardware and software for x3100 M4 Express and the x3250 M4 Express servers. The *Sales Manual* is updated periodically as new features and options are announced that support these servers.

Limitations

- The open 5.25-inch bay supports removable media devices, such as tape backup devices. It does not support HDD options.
- 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 x3100 M4 Express and System x3250 M4 Express servers are designated as customer setup. Customer setup instructions are shipped with systems.

Standard SATA configurations

The System x3100 M4 and System x3250 M4 servers use the SATA interface for the multiburner DVD drive.

Six single-drop SATA cables are used to attach up to four SATA HDDs and two SATA optical disk drives (ODDs).

Supported memory options for x3100 M4 Express and x3250 M4

Express :

- 44T1568 1 GB (1Rx8 1Gb) PC3-10600 DDR3-1333 LP UDIMM
- 44T1570 2 GB (1Rx8 2Gb) PC3-10600 DDR3-1333 LP UDIMM
- 44T1571 4 GB (2Rx8 2Gb) PC3-10600 DDR3-1333 LP UDIMM
- 49Y1403 2GB (2Gb,1Rx8,1.35V) DDR3-1333 LP UDIMM
- 49Y1404 4GB (2Gb, 2Rx8, 1.35V) PC3L-10600E LP UDIMM
- 90Y3165 8 GB (4Gb, 2Rx8, 1.5V) PC3-10600 DDR3-1333 LP UDIMM
- 00D4955 4GB (2Gb, 2RX8,1.5V) PC3-12800 DDR3-1600 LP UDIMM
- 00D4959 8GB (4Gb, 2RX8 1.5V) PC3-12800 DDR3-1600 LP UDIMM

Rack installations

The x3100 M4 Express server can be converted to a rack-mounted unit by installing a Tower-to-Rack Kit. The 1U x3250 M4 Express server can be installed in a 19-inch industry-standard rack such as:

- IBM 25U Standard Rack
- IBM 42U Standard Rack Extension
- IBM 42U Standard Rack

If using a non-IBM rack, the cabinet must meet the EIA-310-D standards with a depth of at least 71 cm (28 in). Also, adequate space (approximately 5 cm (2 in) for the front bezel and 2.5 cm (1 in) for air flow) must be maintained from the slide assembly to the front door of the rack cabinet to allow sufficient space for the door to close and provide adequate air flow.

Cable orders

The dual Gigabit full duplex, Ethernet controller, standard with the server, is connected directly to a 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 x3100 M4 Express or the System x3250 M4 Express servers require 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 x3100 M4 system is shipped as a single package.

The x3250 M4 system is shipped as a single package.

The country kit is contained inside the top portion of the system unit carton.

Supplies

None

Security, auditability, and control

This product uses the security and auditability features of host hardware, host software, and application software.

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

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

IBM Electronic Services

IBM has transformed its delivery of hardware and software support services to help you achieve higher system availability. Electronic Services is a web-enabled solution that offers an exclusive, no-additional-charge enhancement to the service and support available for IBM servers. These services are designed to provide the opportunity for greater system availability with faster problem resolution and preemptive monitoring. Electronic Services comprises two separate, but complementary, elements: Electronic Services news page and Electronic Services Agent.

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

The Electronic Service Agent™ is no-additional-charge software that resides on your server. It monitors events and transmits system inventory information to IBM on a periodic, client-defined timetable. The Electronic Service Agent automatically reports hardware problems to IBM. Early knowledge about potential problems enables IBM to deliver proactive service that may result in higher system availability and performance. In addition, information collected through the Service Agent is made available to IBM service support representatives when they help answer your questions or diagnose problems. Installation and use of IBM Electronic Service Agent for problem reporting enables IBM to provide better support and service for your IBM server.

To learn how Electronic Services can work for you, visit

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

Terms and conditions

IBM Global Financing

Yes

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

Warranty period

- System x3100 M4 2582 - One year
- System x3250 M4 2583 - Three years

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 in.

Extended warranty service

This product is provided with one year of standard warranty and additional years of extended warranty services to make these offerings. Consult with your advisors about the appropriate financial treatment for this offering.

The following has been designated as a consumable or supply item and is, therefore, not covered by this warranty:

- RAID battery

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- 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 specified below, On-site Service.

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 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

On-site Service

This provides On-site Repair, 9 hours per day, Monday through Friday excluding holidays, NBD response. IBM or your reseller 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. 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?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.

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

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

Single Entity Offerings (SEOs)

Description	SEO Number
System x3100 M4 - 3.1 GHz/8 MB, 1600 MHz 4C 1 x 4 GB, Multiburner DVD, S/S SATA	2582EHU
3.3 GHz/8 MB, 1600 MHz 4C 1 x 4 GB, Multiburner DVD, S/S SATA	2582EJU
System x3250 M4 - 3.10 GHz/8 MB, 1600 MHz 4C 1 x 4 GB, Multiburner DVD, S/S SATA	2583ECU
3.3 GHz/8 MB, 1600 MHz 4C 1 x 4 GB, Multiburner DVD, H/S SAS/SATA	2583EDU

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).

IBM Global Financing

IBM Global Financing offers competitive financing to credit-qualified customers to assist them in acquiring IT solutions. Offerings include financing for IT acquisition, including hardware, software, and services, from both IBM and other manufacturers or vendors. Offerings (for all customer segments: small, medium, and large enterprise), rates, terms, and availability can vary by country. Contact your local IBM Global Financing organization or visit

<http://www.ibm.com/financing>

IBM Global Financing offerings are provided through IBM Credit LLC in the United States, and other IBM subsidiaries and divisions worldwide to qualified commercial and government customers. Rates are based on a customer's credit rating, financing terms, offering type, equipment type, and options, and may vary by country. Other restrictions may apply. Rates and offerings are subject to change, extension, or withdrawal without notice.

Financing solutions from IBM Global Financing can help you stretch your budget and affordably acquire the new product. But beyond the initial acquisition, our end-to-end approach to IT management can also help keep your technologies current, reduce costs, minimize risk, and preserve your ability to make flexible equipment decisions throughout the entire technology life cycle.

Order now

To order, contact the Americas Call Centers or your local IBM representative, or your IBM Business Partner. To identify your local IBM representative or IBM Business Partner, call 800-IBM-4YOU (426-4968).

Phone: 800-IBM-CALL (426-2255)
Fax: 800-2IBM-FAX (242-6329)
Internet: callserv@ca.ibm.com
Mail: IBM Teleweb Customer Support
ibm.com® Sales Execution Center, Americas North
3500 Steeles Ave. East, Tower 3/4
Markham, Ontario
Canada
L3R 2Z1

Reference: YE001

The Americas Call Centers, our national direct marketing organization, can add your name to the mailing list for catalogs of IBM products.

Note: Shipments will begin after the planned availability date.

Trademarks

Express Portfolio and Electronic Service Agent are trademarks of IBM Corporation in the United States, other countries, or both.

IBM, Express, System x, ServerProven, PartnerWorld and ibm.com are registered trademarks of IBM Corporation in the United States, other countries, or both.

Intel and Intel Xeon are trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Microsoft and Windows are trademarks of Microsoft Corporation in the United States, other countries, or both.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Other company, product, and service names may be trademarks or service marks of others.

Terms of use

IBM products and services which are announced and available in your country can be ordered under the applicable standard agreements, terms, conditions, and prices in effect at the time. IBM reserves the right to modify or withdraw this announcement at any time without notice. This announcement is provided for your information only. Additional terms of use are located at

<http://www.ibm.com/legal/us/en/>

For the most current information regarding IBM products, consult your IBM representative or reseller, or visit the IBM worldwide contacts page

<http://www.ibm.com/planetwide/us/>