

Innovation comes standard



The new IBM System x3755 (bottom), x3655 and x3455 are ideal for the demands of Business Performance Computing customers.



The IBM System x3400 and 3500 tower servers and the x3550 and x3650 rack servers.



The x3800 tower server and the rackable x3850, x3950 and the x3650 T



xSeries 100



xSeries 206m



xSeries 306m

IBM System x servers

Highlights

- ***New rack-optimized IBM System x3455, 3655 and x3755 servers powered by dual-core processors help provide the performance, enterprise-class reliability and ease of use that Business Performance Computing customers require.***
- ***The x3400 and x3500 tower servers deliver innovation and stable-life platforms for small businesses or distributed environments.***
- ***The high-performance x3950 and x3850 support dual-core processors and run 32- and 64-bit applications.***
- ***The x100, x206m and x306m entry servers provide enterprise-class capabilities for small and midsized businesses.***

New name, continued leadership

The IBM System x™ family of servers has gotten broader, more powerful and extends to address the emerging Business Performance Computing market. Three new servers powered by high-performance, AMD Dual-Core Opteron processors join the System x family of powerful, affordable Intel® processor-based servers. The System x family of products can help you:

- *Reduce costs and simplify environments to get more value out of your IT investments*
- *Purchase and maintain a platform you can count on*
- *Achieve maximum system availability, reliability and security*
- *Respond quickly as your business needs change*

Leveraging IBM Xtended Design Architecture™ (XDA), all two-socket System x tower and rack servers support the latest industry-standard technologies and deliver enhanced features that provide maximum flexibility and improved manageability.

Outfitted with new dual-core processors, these affordable servers deliver much higher performance levels than their predecessors, making them excellent virtualization/consolidation platforms.

Industry-standard platform

System x servers help you take back control and reduce complexity by simplifying systems management for industry-standard computing environments. These servers provide innovative technology features that deliver time- and cost-savings benefits. System x servers showcase the best of IBM engineering, including:

Enterprise X-Architecture

While IBM Enterprise X-Architecture™ remains the core deployment model for four-socket servers and above, leadership value is the cornerstone of XDA, a combination of industry-standard building blocks and unique client insight. New levels of innovation and integration are found in the new two-socket servers, including unprecedented memory density and power management tools.

PowerExecutive

IBM PowerExecutive™ is designed to take advantage of new processor features, allowing you to balance the performance of the system according to available power input. With PowerExecutive, you can plan and predict power consumption based on hardware configuration, reducing infrastructure requirements for redundancy and potentially lowering data center support costs.

On demand ready

System x servers are designed to support the IBM Systems Agenda—systems that are open, that can easily interoperate with others and yet are secure and available when needed.

- *Virtualization—The move to increased virtualization throughout your data center can offer an improved approach to systems design, development and delivery. This can dramatically enhance your ability to improve utilization.*
- *Openness—Building based on open and industry standards. Sharing in such a way that systems—IBM and non-IBM—can integrate better and more easily.*
- *Collaboration for innovation—Working with you and industry partners to implement IT solutions that can drive innovation and help transform businesses.*

BladeCenter solutions

Tackle your IT complexity with IBM BladeCenter®. BladeCenter helps you simplify by bringing together network and storage switching into a single enclosure and ties it together with powerful solution management tools.

The three BladeCenter chassis—the BladeCenter H, BladeCenter and BladeCenter T—support all blades,

switches and ecosystem components. BladeCenter H offers a host of new features and functionality, making it the ideal platform to run next-generation, high-performance business-critical applications. Visit ibm.com/systems/bladecenter for more information.

Clustering solution

IBM System Cluster 1350 is an integrated, factory-built and tested cluster solution that helps reduce client risk in configuring, deploying and managing Linux® clusters. The Cluster 1350 combines advanced Intel Xeon®, AMD Opteron, IBM PowerPC®, IBM OpenPower™, IBM POWER5™ and IBM POWER5+™ processor-based server nodes, IBM Cluster Systems Management (CSM) and General Parallel File System (GPFS) for Linux, IBM System Storage® solutions, and leading third-party networking components to create powerful solutions for high performance computing and commercial application environments.

Microsoft solutions

IBM System x servers provide outstanding performance and functionality running the Windows® operating system. System x supports a range of offers from select products preloaded with the Windows operating system for customers who desire one-stop

shopping to distributing the Datacenter Edition for customers demanding scalability and reliability.

Linux solutions

IBM works with the leading Linux distribution companies, Red Hat Enterprise and SUSE Linux, a Novell company, to offer tested and validated configuration for System x servers. This helps deliver outstanding performance and functionality. System x servers support a broad range of server offerings preloaded with the Linux operating system for customers who desire one-stop shopping for Linux. The range of Linux offerings available on System x servers gives you the flexibility to choose the optimum Linux implementation for your needs.

Leverage storage technology

Efficiently handling the growing amounts of data is one of the keys to success for an on demand business.

The IBM System Storage family of products offers a broad portfolio of scalable, open and innovative storage technology, including disk and tape storage systems, storage networking solutions, and virtualization and storage management software. Visit ibm.com/servers/storage for more information on System Storage solutions.



	Tower		
System x model	x100	x206m	x3400
Form factor	Tower	Tower, 5U	Tower, rack/5U
Processor	Intel Pentium® D up to 3.0 GHz/800 MHz, Intel Pentium 4 up to 3.4 GHz/800 MHz), or Intel Celeron® up to 2.66 GHz/533 MHz)	Intel Pentium D (dual-core) up to 3.4 GHz or Intel Pentium 4 up to 3.6 GHz	Dual-Core Intel Xeon 5130 up to 2.0 GHz and up to 1333 MHz front-side bus
Number of processors (std/max)	1/1	1/1	1/2
Cache (max)	2x2MB, 1MB or 2MB or 256KB	2x2MB or 1MB or 2MB	2x2MB L2
Memory¹ (std/max)	256MB or 512MB/8GB PC2-4200 DDR II via 4 DIMM slots	Up to 8GB PC2-4200 DDR II	1GB/32GB Fully Buffered DIMM 667 MHz via 8 DIMM slots
Expansion slots	2 PCI, 2 PCI-Express	2 PCI, 2 PCI-X (model dependent) and 2 PCI-Express	3 PCI-Express, 2 PCI-X, and 2 PCI
Disk bays (total/hot-swap)	2 fixed Serial ATA (SATA)	4 fixed simple swap or hot-swap Serial ATA hard disk drives or 4 hot-swap Serial Attached SCSI hard disk drives	4/0 or 8/8 (model dependent)
Maximum internal storage^{1,2}	80GB or 160GB/500GB SATA	Up to 1.2TB hot-swap Serial Attached SCSI (SAS) HDDs, or up to 1TB hot-swap, simple-swap or fixed Serial ATA HDDs	2.4TB hot-swap SAS, 2.0TB simple-swap SATA, 4.0TB hot-swap SATA
Network interface	Integrated Gigabit Ethernet	Integrated Gigabit Ethernet	Integrated Gigabit Ethernet
System management processor	IBM ServerGuide™	Supports optional Remote Supervisor Adapter II	Supports optional Remote Supervisor Adapter II SlimLine
Power supply (std/max)	310W 1/1	400W 1/1 or 430W hot-swap redundant 2/2 (model dependent)	670W 1/1 or 835W 1/2
Hot-swap components	Not applicable	Hard disk drives, power supplies (model dependent)	Power supply, fans, hard disk drives
Light path diagnostics	Not applicable	Limited	Limited
RAID support	Optional	Integrated IBM ServeRAID™e (RAID-0, RAID-1), optional upgrade to RAID-5 and RAID-6	Integrated RAID-0, -1, -10, optional RAID-5
System x OS compatibilities support	Red Hat Linux, SUSE Linux, Microsoft® Windows, Novell NetWare	Red Hat Linux, SUSE Linux, Microsoft Windows, Novell NetWare, OS 4690	Red Hat Linux, SUSE Linux, Microsoft Windows, Novell NetWare, VMware ESX Server, SCO UnixWare, SCO OpenServer



	Tower		Rack-optimized
System x model	x3500	x3800	x306m
Form factor	Tower, rack/5U	Tower, rack/7U	Rack/1U
Processor	Dual-Core Intel Xeon 5160 up to 3.0 GHz and up to 1333 MHz front-side bus	Intel Xeon Processor MP up to 3.66 GHz (single-core) and 3.0 GHz (dual-core)	Intel Pentium D (dual-core) up to 3.6 GHz or single-core Intel Pentium 4 up to 3.6 GHz
Number of processors (std/max)	1/2	1/4	1/1
Cache (max)	2x2MB L2	1MB L2 per processor (single-core) and 2x2MB L2 (dual-core)	2MB or 4MB (dual-core) or 1MB or 2MB (single-core)
Memory¹ (std/max)	1GB/48GB Fully Buffered DIMM 667 MHz via 12 DIMM slots	1GB or 2GB/64GB PC2-3200 DDR II SDRAM	512MB/8GB PC4200 DDR II via 4 DIMM slots
Expansion slots	3 PCI-Express, 2 PCI-X and 1 PCI	6 Active PCI-X 2.0, all slots supporting up to 266 MHz	2 PCI-X 64-bit/100 MHz or 1 PCI-Express x8 and 1 PCI-X 64-bit/100 MHz
Disk bays (total/hot-swap)	8/8	12/12 3.5" Serial Attached SCSI	Up to 2 simple swap Serial ATA, or 2 hot-swap Serial ATA or Serial Attached SCSI hard disk drives
Maximum internal storage^{1,2}	2.4TB hot-swap SAS, 4TB hot-swap SATA	3.6TB Serial Attached SCSI	1.0TB Serial ATA or 600GB Serial Attached SCSI
Network interface	Integrated dual Gigabit Ethernet	Integrated dual Gigabit Ethernet	Dual Gigabit Ethernet
System management processor	Integrated IPMI System Management Processor (supports optional Remote Supervisor Adapter II SlimLine)	Integrated System Management Processor (supports optional Remote Supervisor Adapter II)	Supports optional Remote Supervisor Adapter II
Power supply (std/max)	835W 1/2	775W 2/3 hot-swap (N+1)	350W 1/1
Hot-swap components	Hard disk drives, power supply, fans	Power supply, fans, memory, hard disk drives, PCI-X adapters	Serial ATA and Serial Attached SCSI hard disk drives
Light path diagnostics	Yes	Yes	Not applicable
RAID support	Integrated RAID-0, -1, -5, -10	RAID-0, -1, -5 optional (ServeRAID-8i)	Integrated ServeRAID-8e, ServeRAID-7i for simple-swap Serial ATA hard disk drives
System x OS compatibilities support	Red Hat Linux, SUSE Linux, Microsoft Windows, Novell NetWare, VMware ESX Server, SCO OpenServer, SCO UnixWare	Red Hat Linux, SUSE Linux, Microsoft Windows, VMware ESX Server	Red Hat Linux, SUSE Linux, Microsoft Windows, Novell NetWare



	Rack-optimized		
System x model	x3455	x3550	x3650
Form factor	1U	Rack/1U	Rack/2U
Processor	AMD Dual-Core Opteron Model 2210, 2214, 2216, 2218, 2220	Dual-Core Intel Xeon Processor 5160 up to 3.0 GHz and up to 1333 MHz front-side bus	Dual-Core Intel Xeon Processor 5160 up to 3.0 GHz and up to 1333 MHz front-side bus
Number of processors (std/max)	1/2	1/2	1/2
Cache (max)	2MB per socket	2x2MB L2	2x2MB
Memory¹ (std/max)	2x512MB/48GB PC5300 ECC DDR II SDRAM Chipkill™ 667 MHz via 12 DIMM slots	1GB/32GB Fully Buffered DIMM 667 MHz	1GB/48GB Fully Buffered DIMM 667 MHz via 12 DIMM slots
Expansion slots	2 PCI-Express or 1 PCI-Express and 1 HTx	2 PCI-Express (x8) half-length, full-height or optional riser card for 1 PCI-X (64-bit 133 MHz)	4 PCI-Express or 2 PCI-X and 2 PCI-Express
Disk bays (total/hot-swap)	2	2/2 or 4/4	8/8
Maximum internal storage^{1,2}	1.0TB SATA II or 600GB Ultra320 SAS	293.6GB hot-swap SAS or up to 1.0TB simple-swap SATA	1.8TB hot-swap SAS
Network interface	Integrated dual Gigabit Ethernet	Integrated dual Gigabit Ethernet	Integrated dual Gigabit Ethernet
System management processor	Integrated System Management Processor (IPMI-2.0-compliant)	Integrated System Management Processor (supports optional Remote Supervisor Adapter II SlimLine)	Integrated Service Processor (supports optional Remote Supervisor Adapter II SlimLine)
Power supply (std/max)	650W capacity	670W 1/2	835W 1/2
Hot-swap components	Not applicable	Power supply, fans, hard disk drives (select models)	Power supply, fans and hard disk drives
Light path diagnostics	Yes	Yes	Yes
RAID support	Integrated RAID-0, -1 with SAS HDDs	Integrated RAID-0, -1, -10, optional RAID-5, -6	Integrated hardware-based SAS RAID-0, -1, -10, optional Advanced SAS RAID-5, -6, -1E via ServeRAID™-8k daughter card
System x OS compatibilities support	Red Hat Linux, SUSE Linux, Microsoft Windows	Red Hat Linux, SUSE Linux, Microsoft Windows, Novell NetWare, VMware ESX Server	Red Hat Linux, SUSE Linux, Microsoft Windows, Novell NetWare, VMware ESX Server



				High-performance scalable
System x model	x3655	x3755	x3850	x3950
Form factor	2U	4U	Rack/3U	Rack/3U per chassis
Processor	AMD Dual-Core Opteron Model 2218 (2.6 GHz)	AMD Dual-Core Opteron Model 8220 (2.8 GHz)	Intel Xeon Processor MP up to 3.66 GHz (single-core) and 3.0 GHz (dual-core)/667 MHz front-side bus	Intel Xeon Processor MP up to 3.33 GHz (single-core) and up to 3.0 GHz (dual-core)/667 MHz front-side bus
Number of processors (std/max)	1/2	1/4 or 2/4	1/4	2/4 per chassis, 32 per configuration
Cache (max)	2MB per socket	1MB L2	1MB L2 per processor (single-core) and 2x2MB L2 (dual-core)	1MB L2 per processor (single-core) and 2x2MB L2 (dual-core)
Memory¹ (std/max)	64GB DDR II 667 MHz via 16 DIMM slots (maximum)	128GB DDR II 667 MHz (maximum)	2GB/64GB PC2-3200 DDR II SDRAM	2GB/64GB PC2-3200 DDR II per chassis, 512GB maximum
Expansion slots	Standard: 2 PCI-Express x8 (low-profile) and 1 PCI-Express x4 (low-profile); Optional: 1HTx (full-height/full-length) Riser, 1 PCI-X 133 MHz (full-height/full-length) or 1 PCI-Express x16 (full-height/full-length) Riser	7 total: 4 PCI-Express (1) x16; (2) x8; (1) x4 and 2 PCI-X (133 MHz/100 MHz); 1 HTx (half-length)	6 per chassis Active PCI-X 2.0 slots supporting up to 266 MHz	6/6 (per chassis) Active PCI-X 2.0, all slots supporting up to 266 MHz
Disk bays (total/hot-swap)	Eight 2.5" hot-swap SAS hard disk drives or six 3.5" hot-swap SAS/SATA HDDs	4/4	6/6 2.5" Serial Attached SCSI (SAS)	6/6 (per chassis) 2.5" Serial Attached SCSI
Maximum internal storage^{1,2}	1.8TB hot-swap SAS or 3.0TB SATA or 584GB hot-swap SAS	1.2TB (4 x 300GB)	440.4GB Serial Attached SCSI	440.4GB SAS per chassis (supports 36.4GB and 73.4GB HDDs)
Network	Integrated dual Gigabit Ethernet with TOE	Integrated dual Gigabit Ethernet	Integrated dual Gigabit Ethernet	Integrated dual Gigabit Ethernet
System management processor	Remote Supervisor Adapter II SlimLine optional	Remote Supervisor Adapter II SlimLine optional	Remote Supervisor Adapter II SlimLine optional	Remote Supervisor Adapter II SlimLine standard
Power supply (std/max)	835W 1/2	1500W 1/2	1300W 1/2 hot-swap	1300W 220V 2/2
Hot-swap components	Power supply, HDDs, cooling fans	Power supply, HDDs, cooling fans	Power supplies, fans, memory, hard disk drives and PCI-X adapters	Power supplies, fans, hard disk drives, PCI-X adapters and memory
Light path diagnostics	Yes	Yes	Yes	Yes
RAID support	Integrated RAID-0, -1, -10 standard, RAID-5, -6, -10, -50, -60 and battery backup optional	Integrated RAID-0, -1, -10 standard, RAID-5 optional	RAID-0, -1, -5 optional (ServeRAID-8i)	RAID-0, -1, -5 optional (ServeRAID-8i)
System x OS compatibilities support	Red Hat Linux, SUSE Linux, Microsoft Windows, VMware ESX Server	Red Hat Linux, SUSE Linux, Microsoft Windows, VMware ESX Server	Red Hat Linux, SUSE Linux, Microsoft Windows, VMware ESX Server	Red Hat Linux, SUSE Linux, Microsoft Windows, VMware ESX Server



For more information:

World Wide Web

U.S. ibm.com/systems/x

IBM System Cluster 1350

ibm.com/servers/eserver/clusters/

IBM Express Portfolio

Select configurations of System x servers are part of the IBM Express Portfolio™, designed and priced to meet the needs of mid-sized businesses. Reliable and easy to manage, Express models and configurations vary by country.



¹ Maximum internal hard disk and memory capacities may require the replacement of any standard hard drives and/or memory and the population of all hard disk bays and memory slots with the largest currently supported drives available.

² When referring to storage capacity, GB = 1,000,000,000 bytes and TB = 1,000,000,000,000 bytes. Accessible capacity is less.

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