

High-performance, multi-purpose server with large internal storage capacity for remote and branch-office solutions



IBM System x3800



Whether you are deploying today or positioning for growth tomorrow, even a midsize business requires similar server performance and reliability as a large enterprise. The IBM System x3800 delivers that outstanding performance, high availability and manageability that you demand along with advanced, integrated technologies that help protect your IT investment—features that you would expect in more high-end systems but at a price that you can afford.

Highlights

- ***Combines 64-bit breakthrough, four-processor performance with up to 3.6TB of high-speed internal storage***
- ***Supports high-performance, dual-core Intel® Xeon® Processors MP and runs 32- and 64-bit applications simultaneously, providing head-room and investment protection***
- ***Helps lower downtime with three levels of memory protection and optional advanced systems management technology***
- ***Leverages years of IBM server deployment expertise and the enterprise-proven reliability of the Intel-architecture design***

The x3800 is the first System x™ tower-based system designed with IBM X3 Architecture, the third generation of mainframe-inspired IBM Enterprise X-Architecture™ technology. Driving mission-critical applications such as Enterprise Resource Planning, collaboration (IBM Lotus Notes® and Microsoft® Exchange e-mail applications), terminal serving and database applications, the x3800 excels at performing transaction-intensive, traditional back-office and branch-office functions.

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Reduced latency for more performance

The x3800 provides more computing power in a tower-based design than many competitive models, giving organizations powerful commercial application-hosting capabilities without sacrificing expansion. It delivers up to 16 times the memory addressing and three times the CPU bus bandwidth of previous server designs.

Using the IBM XA-64e™ third-generation chipset, this X3 Architecture system benefits from reduced processor front-side bus traffic via an industry-exclusive integrated snoop filter for more intelligent caching. The XA-64e speeds communications between the processors, main memory and I/O, helping the x3800 power commercial IT applications, particularly those suited for hotel, retail and insurance industries.

Optimized for midsize businesses

Delivering availability without compromising performance, the x3800 is an ideal solution for remotely managed locations.

Combining high-availability technologies that have become the hallmark of Enterprise X-Architecture servers with

newly integrated security features, the system helps enable exceptional uptime and protection of your business-critical data. Advancements include:

- *IBM Predictive Failure Analysis® helping to monitor critical components and triggering alerts before problems arise.*
- *IBM Chipkill™ memory, allowing correction of multiple, single-bit errors using off-the-shelf DIMMs*
- *IBM Memory ProteXion™, keeping the server running by rerouting data in the event of an on-DIMM chip failure to enhance the effectiveness of Chipkill technology*
- *Memory Mirroring, protecting data by writing simultaneously to independent redundant memory cards*
- *Hot-swap and hot-add memory as supported by Microsoft Windows® Server 2003*

Breakthrough all-in-one design

The x3800 establishes a new standard for industry-leading x64 performance in a tower-based design system. A main-frame-inspired cache directory, XceL4v™, is integrated in the processor/memory controller which improves overall performance by minimizing bus congestion and reduces latency compared to competing x64 designs.

On demand ready

IBM System x servers are guided by the IBM Systems agenda that outlines an IT environment based on simplification and optimization. The IBM Systems agenda is based on these fundamental principles:

- *Virtualization-By automating, optimizing and simplifying complex infrastructures, businesses can build more resilient, manageable and cost-effective systems.*
- *Openness-By supporting and advancing open standards, enterprises can protect their IT investments both now and in the future.*
- *Collaboration for innovation-By enabling information on demand, companies can more easily collaborate with business partners, independent solution vendors and clients, helping them drive industry collaboration and provide better service.*

The overall result: a more secure and resilient IT environment.

The x3800 supports up to 64GB of total memory to load entire databases into main memory for extremely fast transaction processing. For persistent storage, the x3800 offers more than 3TB of data with Serial Attached SCSI (SAS) hard disk drives (HDDs) and back up that data with an optional internal tape drive—for an all-in-one solution.

Integrated management for greater value

Advanced, integrated features in the x3800 also help streamline and simplify systems management—a must for midsize businesses—while helping reduce its associated costs. Systems manageability features include:

- *IPMI-compliant basic hardware monitoring and alerting with an optional upgrade to the advanced Remote Supervisor Adapter (RSA) II SlimLine. Improves server availability through system monitoring and delivers true remote management capabilities, saving administrators time and providing them greater flexibility to focus on tasks that more directly benefit the bottom line.*

- *IBM Director software. Offers extensive hardware management within a convenient user interface. It supports multiple operating systems and a framework that can be extended with plug-ins for more advanced management. For example, Virtual Machine Manager is a freely available module allowing administrators to simultaneously manage physical and VMware-based logical servers using the same console. IBM Director gives administrators faster application deployment and adaptability for remote monitoring with customizable alerts.*
- *A Trusted Platform Module (TPM). Simplifies yet enhances security management with integrated, hardware-based functionality that authenticates users and protects against viruses and system threats.*

Investment protection that you demand

Many of the integrated features and innovations offered in the x3800 also help deliver investment protection by making midsize organizations ready for the next evolution in server technologies—the migration to 64-bit applications on industry-standard x64 hardware. The x3800 also helps protect your software investment with an architecture that supports new 64-bit applications along with 32-bit legacy applications and system tools. And the x3800 features Active™ PCI-X 2.0 with up to 266 MHz bandwidth per slot, the new standard for high performance server I/O that also preserves compatibility with the existing install base of PCI and PCI-X 1.0 adapters.

Select configurations of the x3800 are part of the IBM Express Portfolio, designed, developed and priced to meet the specific needs of mid-sized businesses. Express models and configurations vary by country.



DEMAND™ EXPRESS PORTFOLIO™
BUILT FOR MID-SIZED BUSINESS.



x3800 at a glance

Form factor	Tower or 7U rack
Processor	Intel Xeon Processor MP up to 3.66 GHz (single-core) and 3.0 GHz (dual-core)/667 MHz front-side bus, both support Intel Extended Memory 64 Technology
Number of processors (std/max)	1/4
Cache (max)	1MB L2 per processor (single-core) and 2x2MB L2 (dual-core)
Memory¹ (max)	1GB or 2GB/64GB PC2-3200 DDR II SDRAM
Disk bays (total/hot-swap)	12/12 3.5" Serial Attached SCSI (SAS)
Maximum internal storage^{1,2}	3.6TB SAS (supports 300GB SAS HDDs)
I/O slots (total/hot-swap)	6/6 Active PCI-X 2.0, all slots supporting up to 266 MHz
Network interface	Integrated dual Gigabit Ethernet
Power supply (std/max)	775W 2/3 hot-swap (N+1)
Hot-swap components	Power supplies, fans, memory, hard disk drives and PCI-X adapters
RAID support	RAID-0, -1, -5 optional (ServeRAID™-8i)
Systems management	Alert on LAN™ 2, Automatic Server Restart, IBM Director, IBM ServerGuide™, Remote Supervisor Adapter II SlimLine optional, light path diagnostics (independently powered), Predictive Failure Analysis on processors, VRMs, fans, power supplies and memory, Wake on LAN®
Operating systems supported	Microsoft Windows Server 2003 (Standard and Enterprise editions 32-bit and x64), 32- and 64-bit Red Hat Enterprise Linux® and SUSE Enterprise Linux, VMware ESX Server
Limited warranty³	3-year onsite limited warranty

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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. When referring to variable speed CD-ROMs, CD-Rs, CD-RWs and DVDs, actual playback speed will vary and is often less than the maximum possible.

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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