IBM @server xSeries 306m server includes new Intel processors

Overview
The xSeries® 306m server is an attractively priced, easy-to-use, rack-optimized server for Web and network infrastructure.

Perfect for space-constrained environments, the xSeries 306m server combines resilience and performance in a package that is easy to deploy, manage and service.

Value and performance
- 800 MHz front-side bus; high-performing Intel® Pentium® D processors with EM64T:
  - Pentium D 950 and 960 dual-core processors with 2 x 2 MB advanced transfer L2 cache
- Standard 1 GB of PC2-4200 CL4 ECC DDR2 SDRAM DIMM memory (8 GB maximum)
- Two 64-bit/100 MHz PCI-X slots:
  - Full-height three-quarter-length adapter
  - Low-profile half-length adapter
  - Upgradable to one PCI Express x8 slot and one 66/100 MHz/64-bit PCI-X slot
- Integrated, dual Gigabit Ethernet controllers
- ServeRAID™ 8e, cost-effective entry-level data protection and RAID performance
- Integrated SATA and SAS controllers
- Two 3.5-inch, slim-high, standard HDD bays that support next-generation hot-swap internal high-speed disk storage up to 600 GB SAS or 500 GB SATA:
  - Open bay models
  - SAS models supporting high-speed 36, 73 or 146 GB SAS HDDs at 15,000 rpm or 73, 146 or 300 GB SAS HDD at 10,000 rpm
- SATA models supporting 80, 160 or 250 GB SATA HDD at 7200 rpm

At your control
Manageability and serviceability features can help diagnose problems quickly.
- Base Systems Management with IPMI 1.5 compliance
- Text console redirect over LAN for monitoring vital functions
- Automatic server restart to help get the server back on-line quickly
- Alert and monitoring capability for memory, thermal or voltage faults
- Preboot eXecution Environment (PXE) and Wake on LAN® for monitoring key components

At your service
Valuable services, utilities and systems management tools help improve productivity and get your server up and running quickly.
- IBM Director to manage xSeries 306m servers and other LAN assets
- ServerGuide™ utilities to assist loading of many popular network operating systems
- Support for optional Remote Supervisor Adapter II card for greater manageability
- Warranty: One- or three-year parts, customer replaceable unit (CRU) or on-site labor⁴; limited warranty⁵; optional warranty service upgrades

Note: The information in IBM announcement letters is subject to change without notice, consult the IBM Sales Manual, or your IBM marketing representative or reseller, for the most current information.

Key prerequisites
- Monitor
- Keyboard
- Mouse
- Rack

At a glance
Performance, scalability, control and serviceability you need to manage Web applications:
- Ultrathin, rack-optimized, 1 U high with 350-watt power supply
- Pentium D processors with 800 MHz front-side bus and Intel Extended Memory 64 Technology (EM64T):
  - 3.4 or 3.6 GHz dual-core with 2 x 2 MB L2 cache
- 1 GB of 533 MHz PC2-4200 CL4 ECC DDR2 SDRAM DIMM system memory; 8 GB maximum
- Serial Attached SCSI (SAS) that supports high-speed, internal disk storage solutions; or Serial-ATA (SATA) controllers
- Two 64-bit/100 MHz PCI-X slots or one PCI-E slot and 64-bit/100 MHz PCI-X slot
- Three drive bays: One 24x-10x³ slim CD-ROM, two 3.5-inch HDDs
- 350-watt voltage-sensing power supply
- Integrated, dual Gigabit Ethernet controllers; dual-channel SATA
- Four USB, two Ethernet, one serial, mouse, keyboard and video ports

Planned availability date
May 24, 2006
**Solid-performing server subsystems**

This uniprocessor, entry rack server delivers a solid range of performance by combining Pentium D dual-core processors with high-speed ECC memory, 2 MB L2 cache per core and EM64T.

The xSeries 306m server uses the Intel chipset to optimize throughput from processors to memory and to the 64-bit PCI-X bus.

### Standard xSeries 306m configurations

<table>
<thead>
<tr>
<th>Model</th>
<th>Processor Cache</th>
<th>Memory Interface</th>
<th>HDD</th>
</tr>
</thead>
<tbody>
<tr>
<td>8849-K2x</td>
<td>3.4 GHz PD 950 4 MB</td>
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</tbody>
</table>

**Note:** All models include a CD-ROM and 350-watt power supplies.

Additional features include:

- System board that supports 512 MB, 1 GB and 2 GB 533 MHz PC2-4200 CL4 ECC DDR2 SDRAM DIMM memory
- 64-bit/100 MHz PCI-X bus that streams data between processor, or memory and the I/O subsystems
- Two HDD bays supporting SATA simple-swap and SAS/SATA hot-swap drives
- Dual full-duplex, Gigabit Ethernet PCI controllers that speed network communications to LAN clients

### Function and expansion capacity

The xSeries 306m server with a 1 U, 19-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:

- Rack-optimized design for 19-inch wide, industry-standard rack cabinets
- Two 64-bit/100 MHz, PCI-X adapter card slots; one full-height; one low-profile
- 350-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 two in the power supply that cool:
  - Power supply
  - Drive bays
  - Microprocessor and memory
  - I/O
- 2 x 512 MB of 533 MHz PC2-4200 CL4 ECC DDR2 SDRAM DIMM memory standard
- Four DIMM sockets that support:
  - Up to 8 GB system memory
  - Mixing memory sizes

### Systems management and control

xSeries 306m servers comply with the 2000 ATX Implementation Guidelines for optimal control and manageable of your network.

Supported features include:

- Base Systems Management with IPMI 1.5
- 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 xSeries 306m 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 potentially reduce costs through:

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

IT administrators 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 xSeries servers, such as PFA enablement for HDDs.

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

- Inventory and display detailed system and component information
- Reset or power cycle the server
- Monitor and set threshold on server health including:
  - Operating system load
  - Voltage
  - Temperature
- Set proactive alerts for critical server events including:
  - Fans
Power supplies
- Define automated actions such as:
  - Send e-mail or page to an administrator
  - Execute a command or program
  - Pop up 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, via upward integration modules. Advanced management capabilities built into xSeries servers to be accessed from:
- Tivoli® Enterprise and Tivoli NetView®
- Computer Associates CA Unicentre TNG Framework
- Microsoft® SMS
- Intel LANDesk™ Management Suite

World-class support tools and programs

The xSeries 306m server comes with a number of tools and programs that make ownership a positive experience. From the start, IBM can help you purchase a server, get it running and keep it running over the long haul. IBM can help your company maintain ownership of technology leadership servers.

- One-year warranty on parts and labour with limited warranty and next-business day (NBD) service (same-business day service optionally available) protects your investment if a problem occurs.
- The ServerProven® program lets you configure your server confidently with various devices and operating systems. This Web-based program provides compatibility information from actual testing of the xSeries 306m server with various adapters and devices.
- The ServerGuide CD library includes on-line publications, utilities and drivers that assist you in loading of popular network operating systems.

Product positioning

xSeries 306m servers are positioned as the entry 1U servers of the xSeries rack-optimized product line.

The xSeries 306m offerings are positioned beneath the xSeries 336 server. The xSeries 336 server is also contained in a 1U high form factor, but includes SMP capability, scalability, and systems-management functions that may not be required in all applications. The xSeries 306m server is a cost-effective solution for these applications.

These uniprocessor servers with Pentium 4 single-core and Pentium D dual-core processors with Intel EM64T are designed for installation of features to handle future expansion. At the same time they can handle emerging applications that require high-performance, uniprocessor computing power, and excellent function in the least amount of rack space. These applications include:
- Web caching
- Front-end Web serving
- Server farms
- Telecommunications
- Active Directory services

These powerful servers meet traditional enterprise network server requirements, with the added benefit of requiring less space.

Reference information

1 GHz measures only microprocessor internal clock speed, not computing capacity.
2 When referring to HDD or tape backup capacity, GB stands for one billion bytes. Total user capacity may vary depending on operating environments, application performance. Many factors affect application performance.
3 Actual playback speed will vary and is often less than the maximum possible.
4 For information on the IBM Statement of Limited Warranty, call 800-IBM-SERV (426-7378) or contact your IBM representative or reseller. Copies are available upon request.
5 You may be asked certain diagnostic questions before a technician is sent.
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