Xserve G5

Designed from the ground up for high-density compute power, exceptional flexibility, and industry-leading ease of use.

Key Features

64-bit processing power. Xserve comes with single or dual PowerPC G5 processors, each with a dedicated frontside bus running at half the processor speed—maximizing performance with data transfer rates of up to 9.2GB/s.

Ultrafast ECC memory. A 128-bit memory controller speeds data in and out of main memory at up to 6.4GB/s. The Xserve G5 supports up to 8GB of DDR RAM with Error Correction Code (ECC) protection.

Server-optimized I/O. Two open 64-bit PCI-X slots provide throughput of up to 1GB/s for PCI devices. Dual Gigabit Ethernet and FireWire 800 interfaces offer high-performance connectivity.

Scalable storage. Three drive bays hold up to 1.2TB of internal storage[1] on independent Serial ATA channels for fast data access.[2] Optional cards connect to external storage and backup devices, including Apple's Xserve RAID.

UNIX-based operating system. An unlimited-client license for Mac OS X Server is included at no additional cost.[2] Built on open standards, Mac OS X Server integrates seamlessly into enterprise infrastructures.

Built-in management tools. Easy-to-use software enables you to monitor multiple Xserve systems and manage services over a secure, remote connection.

Comprehensive service and support. To ensure rapid issue resolution for your server and storage deployments, choose from a full range of AppleCare products designed to provide integrated expert support.

Specification Sheet
Xserve G5

Apple's Xserve G5 packs phenomenal power and industry-leading capabilities into an ultradense 1U rackmount server that fits easily into any network environment. It comes with Mac OS X Server, Apple's UNIX-based server operating system, providing a complete suite of standards-based network services with no per-client fees. Integrated remote management and monitoring tools make Xserve G5 a breeze to set up and manage—reducing the complexity of system administration and minimizing maintenance costs. Whether in small or large business, higher education or K–12 schools, creative departments, or science and technology research centers, the affordable Xserve G5 is the perfect server for today's new breed of open standards–based network solutions.

Xserve G5 Configurations

	Server configurations		**Cluster node**
Order number	**M9743LL/A**	**M9745LL/A**	**M9742LL/A**
Processor	2GHz PowerPC G5	Dual 2.3GHz PowerPC G5	Dual 2.3GHz PowerPC G5
Frontside bus	1GHz	1.15GHz per processor	1.15GHz per processor
ECC memory	1GB PC3200 DDR (400MHz)	1GB PC3200 DDR (400MHz)	512MB PC3200 DDR (400MHz)
Maximum memory	8GB	8GB	8GB
Hot-plug storage (Serial ATA)	Three drive bays supporting up to 1.2TB using 80GB, 250GB, and/or 400GB Apple Drive Modules; one 80GB drive preinstalled[1]		One drive bay with 80GB drive preinstalled[1]
Optical drive	Combo drive (DVD-ROM/CD-RW) or optional SuperDrive (DVD-R/CD-RW)		—
Networking	Two onboard Gigabit Ethernet interfaces (10/100/1000BASE-T)		
PCI expansion	Two open 64-bit PCI-X slots supporting one card at up to 133MHz or two cards at up to 100MHz		
Ports	Two FireWire 800, two USB 2.0, one DB-9 (back panel); one FireWire 400 (front panel)		
Mac OS X Server software	Unlimited-client edition	Unlimited-client edition	10-client edition
Also included	Mounting screws with M5 and 1/32-inch threads; caged nuts; cable management arm for four-post racks; agency-approved 12-foot power cable		
Service and support	90 days of telephone support and one-year limited warranty; optional extended service and support products		

Xserve G5 cluster node
With the compute performance of two superscalar 2.3GHz PowerPC G5 processors, the Xserve G5 cluster node configuration is ideal for High Performance Computing (HPC) in scientific and technical environments, as well as for workgroup clusters and render farms.[2] For more information about Apple solutions for computational clusters, see www.apple.com/xserve/cluster.

Xserve RAID
Connect Xserve to Apple's affordable Xserve RAID storage solution for enormous capacity—up to 5.6TB[1]—and advanced data protection in a high-availability 3U enclosure.

Technical Specifications

Processor
- Single 2GHz or dual 2.3GHz PowerPC G5 processors
  - PowerPC processor architecture with 64-bit data paths and registers
  - Native support for 32-bit application code
  - 512K on-chip L2 cache running at processor speed
  - Dual-pipeline Velocity Engine for 128-bit single-instruction, multiple-data (SIMD) processing
  - Two independent double-precision floating-point units and two integer units
  - Advanced three-stage branch prediction logic
- 64-bit, 1GHz or 1.15GHz frontside bus per processor, supporting up to 18.4GB/s data throughput
- Point-to-point system controller with support for ECC memory

Memory
- 128-bit data paths for up to 6.4GB/s memory throughput
- Data protection using Error Correction Code (ECC) logic
- Eight slots supporting up to 8GB of DDR SDRAM using the following DIMMs (in pairs):
  - 256MB DIMMs (PC3200, 400MHz ECC)
  - 512MB DIMMs (PC3200, 400MHz ECC)
  - 1GB DIMMs (PC3200, 400MHz ECC)

I/O connections
- Two open 12-inch, 64-bit PCI-X slots, running at up to 133MHz with one card installed or up to 100MHz with two cards installed; support for 32-bit or 64-bit 3.3V Universal PCI cards running at 33MHz or 66MHz[3]
- PCI and PCI-X cards available as build-to-order options for Xserve G5 include the following:
  - Apple Fibre Channel PCI-X Card
  - Hardware RAID PCI card
  - Apple PCI-X Gigabit Ethernet Card
  - Dual-channel Ultra320 SCSI PCI-X card
  - PCI VGA video card
- Two independent 10/100/1000BASE-T (Gigabit) RJ-45 Ethernet interfaces on main logic board
- Two FireWire 800 ports on back panel and one FireWire 400 port on front panel; 15W total power
- Two USB 2.0 ports (480Mb/s each)
- One DB-9 serial port (RS-232)

Storage
- Three internal drive bays on independent 150MB/s Serial ATA channels (server configurations; empty drive bays contain blank modules); or one internal drive bay on 150MB/s Serial ATA channel (cluster node configuration)
- Up to 1.2TB of internal storage[1] using hot-plug Apple Drive Modules (server configurations), available in the following capacities:
  - 80GB 7200-rpm SATA with 8MB disk cache
  - 250GB 7200-rpm SATA with 8MB disk cache
  - 400GB 7200-rpm SATA with 8MB disk cache
- Support for reading SMART data from Apple Drive Modules for prefailure notification
- Slot-loading Combo drive (DVD-ROM/CD-RW) or optional SuperDrive (DVD-R/CD-RW)[2]

Rack support
- Fits EIA-310-D–compliant, industry-standard 19-inch-wide racks, including:
  - Four-post racks: 24 inches, 26 inches, and from 29 to 36 inches deep
  - Two-post telco racks (center-mount brackets included)
- Cable management arm for four-post rack
- Front-to-back cooling for rack enclosure

Electrical requirements
- Line voltage: universal input (90V to 264V AC), power factor corrected
- Maximum input current: 4A (90V to 132V) or 2A (180V to 264V)
- Frequency: 47Hz to 63Hz, single phase
- Output power: 400W

Environmental requirements and approvals
- Operating temperature: 50° to 95° F (10° to 35° C)
- Storage temperature: –40° to 116° F (–40° to 47° C)
- Relative humidity: 5% to 95% noncondensing
- Maximum altitude: 10,000 feet
- FCC Class A approved

Size and weight
- Height: 1.73 inches (4.4 cm)
- Width: 17.6 inches (44.7 cm) for mounting in standard 19-inch rack
- Depth: 28 inches (71.1 cm)
- Weight: 33.3 pounds (15.11 kg); 36.6 pounds (16.62 kg) with three Apple Drive Modules[4]

For More Information

For more information about Xserve G5, Xserve RAID, Xsan, and other Apple server solutions, visit www.apple.com/server.

For more information on AppleCare service and support products, visit www.apple.com/support/products.

[1]For hard drive capacity measurements, 1GB = 1 billion bytes and 1TB = 1 trillion bytes; actual formatted capacity less [2]Server configurations only; the cluster node configuration has one drive bay and no optical drive and includes a 10-client license for Mac OS X Server. [3]Check with manufacturer for compatibility. [4]Weight varies by configuration and manufacturing process.

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