



Workgroup Server 9650/233

Features

Expansion and storage

- Six PCI (Peripheral Component Interconnect) slots for expansion cards
- Internal 4GB Ultra/Wide hard disk drive (optional configuration with dual 4GB Ultra/Wide drives)
- Internal 12x-speed CD-ROM drive
- Three SCSI channels: one internal Ultra/Wide SCSI-3 (40MB/s); one internal Fast SCSI-2; one external SCSI-1

Networking

- Built-in Ethernet and LocalTalk capabilities
- Support for AppleTalk and TCP/IP networking protocols
- Support for other networking topologies like Fast Ethernet, ATM, and Token Ring (with PCI card)

Processor and memory

- 233-MHz PowerPC 604e RISC processor with floating-point processor and 64K on-chip cache, mounted on a removable card for easy upgrades as faster processors become available
- 512K level 2 cache
- 64MB of RAM, expandable to 768MB

Features Built into Every Workgroup Server

Fast, easy setup

- Comes with Mac OS 7.6.1 software installed
- Is extraordinarily easy to configure—features the true plug-and-play capabilities that characterize Apple systems

Bundled software

- Apple RAID software for disk striping (RAID 0) or mirroring (RAID 1)
- Choice of three software bundle solutions, so you get the functionality you want—right out of the box

—Application Server Solution
—AppleShare Server Solution
—Apple Internet Server Solution

Service and support

- Includes hardware troubleshooting and telephone assistance for Apple-branded software for one year (7 days per week, 24 hours per day)
- Provides two-business-day response through its one-year, on-site hardware warranty
- Offers additional service and support options

The Workgroup Server 9650/233 is a powerful member of the Workgroup Server family from Apple. Based on the PowerPC processor, it delivers the file, print, Internet/intranet, and applications server capabilities that meet the needs of growing workgroups in education, business, and publishing. It's ideal for workgroups that use both Mac OS and Windows, especially those interested in setting up an intranet that's exceptionally easy to use, support, and maintain.

Apple Workgroup Servers are highly reliable systems with large storage capacity that provide organizations with faster, more efficient network services and secure centralized storage. The Workgroup Server 9650/233 not only meets these criteria, but also runs the familiar Mac OS, making all of its capabilities incredibly easy to use.

The Workgroup Server 9650/233 offers outstanding performance through its 233-megahertz PowerPC 604e processor, located on a CPU card; 512K level 2 cache; 64MB of RAM (expandable to 768MB); three SCSI channels, including one Ultra/Wide channel (40MB/s); a single or dual 4GB (7200 rpm) Ultra/Wide hard drive; 12x-speed CD-ROM drive; and on some configurations, a DDS-2 digital audio tape (DAT) drive for backup. It also provides powerful built-in networking capabilities, with both 10BASE-T and AAUI Ethernet connections.

The Workgroup Server 9650/233 features a new product design that provides easy access for upgrades and servicing. And for easy, flexible expansion, it offers six PCI slots that let you add capabilities by installing a wide variety of cards, as well as six internal drive bays (three or four open, depending

on configuration) to maximize storage capacity.

The Workgroup Server 9650/233 offers a choice of three software bundle solutions. The *Application Server Solution* provides a variety of useful software for reliability, productivity, and performance. The *AppleShare Server Solution* includes all of the Application Server software, plus AppleShare IP 5.0 and the RunShare GSA network accelerator. This new server software from Apple builds on the AppleShare tradition of ease of use to add integrated support for TCP/IP as well as AppleTalk—so you can incorporate a Workgroup Server into your intranet easily and seamlessly. It even includes several third-party Internet-related tools that allow you to integrate the network services into your environment. The *Apple Internet Server Solution* includes the software necessary to create, manage, and publish media-rich World Wide Web content—quickly and easily.

So if you need a high-performance server for a demanding workgroup, we have the solution: the powerful and expandable Workgroup Server 9650/233.





Workgroup Server 9650/233

Ordering Information

Workgroup Server 9650/233 Application Server Solution

Order No. M5646LL/A

- Workgroup Server 9650/233 with 64MB of RAM, 512K level 2 cache, dual 4GB (7200 rpm) Ultra/Wide hard drives, internal 12x-speed CD-ROM drive, 1.4MB Apple SuperDrive floppy disk drive, keyboard, and mouse
- Apple RAID 1.5
- Workgroup Server Solution CD
- Mac OS 7.6.1

AppleShare Server Solution

Order No. M5644LL/A

- Includes all of the hardware and software that comes with the Application Server, plus;
- AppleShare IP 5.0, AppleShare Client for Windows, COPSTalk, Server Manager, Vicom Gateway with DHCP, LogDoor, HomePage, and Claris Emailer
- RunShare GSA network accelerator from Run

AppleShare Server Solution with DAT drive

Order No. M5647LL/A

- Workgroup Server 9650/233 with 64MB of RAM, 512K level 2 cache, 4GB (7200 rpm) Ultra/Wide hard disk drive, DDS-2 DAT drive, internal 12x-speed CD-ROM drive, 1.4MB Apple SuperDrive floppy disk drive, keyboard, and mouse
- Workgroup Server Solution CD
- AppleShare IP 5.0, AppleShare Client for Windows, COPSTalk, Server Manager, Vicom Internet Gateway with DHCP, LogDoor, HomePage, and Claris Emailer
- RunShare GSA network accelerator
- Retrospect Remote
- Mac OS 7.6.1

Apple Internet Server Solution

Order No. M5645LL/A

- Workgroup Server 9650/233 with 64MB of RAM, 512K level 2 cache, 4GB (7200 rpm) Ultra/Wide hard disk drive, keyboard, internal 12x-speed CD-ROM drive, 1.4MB Apple SuperDrive floppy disk drive, and mouse
- Apple RAID 1.5
- Mac OS 7.6.1
- Includes WebStar/SSL, Tango Enterprise, Acrobat Reader, BBedit, HomePage, LogDoor, MacDNS, NetCloak, Netscape Navigator, and PageSentry, along with other useful applications and web information

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Technical Specifications

Microprocessor

- 233-MHz PowerPC 604e RISC processor
- Integrated floating-point unit and 64K on-chip cache
- Processor mounted on a removable card for easy upgrades as faster processors become available

Memory

- 64MB of RAM, expandable to 768MB
- 512K level 2 cache

Storage

- Internal 4GB (7200 rpm) Ultra/Wide hard drive (optional configuration with dual 4GB Ultra/Wide drives)
- 12x-speed CD-ROM drive
- 1.4MB Apple SuperDrive floppy disk drive that reads, writes, and formats Mac OS, Windows, MS-DOS, and OS/2 disks
- DDS-2 DAT drive (4GB uncompressed to 14GB compressed) in some configurations

Networking

- Built-in Ethernet with 10BASE-T and AAUI
- Two serial ports for LocalTalk
- Support of TCP/IP networking software with Apple Open Transport

Interfaces

- Six PCI expansion slots (one used by Ultra/Wide SCSI card and one used by video card)
- One Apple Desktop Bus (ADB) port for a keyboard, mouse, and other devices
- On-board Ethernet using either AAUI-15 or RJ-45
- Two DMA serial (RS-232/RS-422) ports compatible with LocalTalk
- Three SCSI channels: one internal Ultra/Wide SCSI-3 (40MB/s) on PCI card; one internal Fast SCSI-2 (10MB/s); one external standard SCSI-1 (5MB/s)
- 16-bit stereo sound input and output ports
- DB-15 graphics port for display support on PCI card

Video support

- 4MB of VRAM on the included PCI video card
- Support of most third-party displays as well as VGA and SVGA monitors

Clock/calendar

- Custom integrated circuit with long-life lithium battery

Disability access

- System software includes CloseView and Easy Access, and provides the ability to substitute visual cue for beep. These built-in solutions and third-party options provide alternative input and output solutions for people with disabilities.

Keyboard and mouse

- ADB keyboard included
- ADB Mouse II included

Electrical requirements

- Line voltage: 100 to 125/200 V AC, RMS single phase
- Frequency: 50 to 60 Hz, single phase
- Power: 390 W maximum, not including display

ADB power requirements

- Maximum current draw for all ADB devices: 500 mA (a maximum of three ADB devices is recommended)
- Mouse draws 10 mA
- Keyboard draws 25 to 80 mA (varies with keyboard model used)

Environmental requirements

- Operating temperature: 50° to 95° F (10° to 35° C)
- Storage temperature: -40° to 116.6° F (-40° to 47° C)
- Relative humidity: 5% to 95% noncondensing
- Maximum altitude: 0 to 10,000 ft. (0 to 3,048 m)

Size and weight

- Height: 17.3 in. (43.9 cm)
- Width: 9.7 in. (24.6 cm)
- Depth: 17.3 in. (44.0 cm)
- Weight: 35.0 lb. (15.9 kg)—varies based on internal devices installed

Regulatory approval

- FCC Class A

Workgroup Server Solution CD/Bundled software

Reliability software

- Apple RAID Software—data mirroring to protect against data loss from drive failures (RAID 1)
- Retrospect Remote—automated backup software for the server as well as client workstations, including Mac OS, Windows 95, and Windows NT clients (DAT configurations only)
- Virex—automated virus screening software

Performance software

- Apple RAID Software—optimizes performance of multiple hard disks through disk striping (RAID 0)
- Skyline/Satellite—enables monitoring of the network and server traffic

Productivity software

- 4-Sight FAX—lets you send and receive faxes from your desktop
- Now Contact & Up-to-Date—provides contact management tools and handles group scheduling
- Viper Instant-Access—offers a cross-platform information retrieval system

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

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