

Apple Macintosh Desktop Computers

Macintosh Quadra 630 and Macintosh Performa 636

Positioning

The Apple® Macintosh Quadra® 630 and Macintosh® Performa® 636 computers are the most advanced, flexible multimedia systems available for individuals in school or at home. They are designed so users can have a powerful, full-featured multimedia computer that's also ready to accommodate new technologies, such as PowerPC™ technology. Their built-in ports and connectors allow users to easily add a variety of expansion options, including new advanced multimedia kits for capturing video, receiving television signals, and displaying presentations to a large audience. When upgraded to take advantage of PowerPC technology, these computers enable users to benefit from the fast performance of applications designed for this platform.

Product Description

The Macintosh Quadra 630 and Macintosh Performa 636 computers are the most affordable, expandable Macintosh desktop systems designed to be customized to the individual user's multimedia needs. These computers offer standard Macintosh functionality in an improved industrial design—for example, volume controls and a headphone jack are conveniently located on the front panel. They come with a variety of expansion options and a modular logic board, which make it easy to add to the system's capabilities. In addition, they have labeled external ports for easy connection to displays and peripherals.

These computers are built around the Motorola 68LC040 and 68040 processors. And by upgrading to PowerPC technology through a processor upgrade card, users can benefit from applications designed to take advantage of this powerful new processor technology. Most configurations are equipped with a CD-ROM drive (if not, it's available as an option). A communications slot allows users to add either an Ethernet card, for access to information over networks, or a high-speed modem. And by adding RAM, users can configure their system to grow as their needs grow. These new computers meet the energy-efficiency requirements for the U.S. Environmental Protection Agency's Energy Star rating.

Key Selling Points

- **Multimedia capabilities.** A variety of built-in features give these computers advanced multimedia capabilities. Most configurations of these computers come with a built-in CD-ROM drive that supports 16-bit audio CD playback. They can display up to 32,768 colors on 12-, 13-, and 14-inch displays, as well as on the new Apple Multiple Scan 15 Display (at 640 by 480 pixels). They also support up to 256 colors on the Apple Multiple Scan 15 Display, at 800 by 600 pixels.

The most exciting multimedia enhancements to these computers are available through the new multimedia kits offered by Apple: the Apple Video System, the Apple TV/Video System, and the Apple Presentation System. Each of these affordable kits provides different capabilities to the Macintosh Quadra 630 and Macintosh Performa 636 computers, so users can choose the kit that meets their requirements.

- **Expansion capabilities.** The capabilities of these new Macintosh computers were designed to grow as users' needs change. They can be upgraded to take advantage of PowerPC technology, so users can get the most out of the hundreds of exceptionally fast applications available for this platform. Their 68030-compatible processor-direct slot can accommodate most processor-direct cards developed for the Macintosh Quadra 605 and the Macintosh LC line of computers. A video card (included in the Apple Video System and the Apple TV/Video System) can be installed in the video slot, allowing users to easily connect their computer to a VCR, camcorder, laserdisc player, or other video source with a single cable. The TV Tuner card in the Apple TV/Video System provides access to up to 181 television channels for real-time broadcast information. And through the Apple Presentation System, users can display a presentation on a large-screen TV, or record that presentation on videotape so it can be distributed easily and inexpensively. Finally, these new computers offer a new industrial design that makes it easy for users to install a multimedia kit, an Ethernet card, or a modem.

- **Macintosh ease of use.** Like all Macintosh computers, these new models are powerful systems, ready to use right out of the box. Macintosh System 7 system software is already installed, all ports are clearly labeled on the back panel, and AppleTalk® networking capability is built in.

Prospects

These new Macintosh computers are ideal for users who want a desktop system with advanced multimedia capabilities—all at an affordable price. The Macintosh Quadra 630 is a flexible, customizable system for professionals, businesses, and institutions. The Macintosh Performa 636 is a flexible multimedia system for individuals in school or at home.

Q&A

Apple just introduced the Power Macintosh™ line of computers, based on the PowerPC microprocessor. Why is Apple now introducing yet another 680x0-based system?

The Power Macintosh systems were recently introduced into our midrange and high-end computer lines. Because these systems are not yet available in the price range that is considered affordable for first-time buyers, new users, and education customers, it is important that Apple continue to offer new technologies and value-added systems at an affordable price. In addition, many customers value a full-featured multimedia system over a system designed for the highest performance. As a

result, many customers would prefer buying a Macintosh Quadra 630 or a Macintosh Performa 636 computer, fully configured with a CD-ROM drive and video capabilities, over a Power Macintosh computer.

Can I upgrade the Macintosh Quadra 630 or the Macintosh Performa 636 to take advantage of PowerPC technology?

Yes. A processor upgrade card, with a PowerPC 601 processor, will be offered by Apple. This card will give customers a simple and affordable upgrade path to PowerPC performance.

What are the features of this processor upgrade card?

The processor upgrade card for these new computers is a single-socket card with a PowerPC 601 microprocessor. Once the 68040 microprocessor is removed from the computer, the upgrade card fits into the 68040 socket on the main logic board. The 68040 microprocessor is then refitted into a new 68040 socket on top of the upgrade card. As a result, you can switch between 68040 mode (running at 33 megahertz) or PowerPC mode (running at 66 megahertz) by simply restarting the computer.

Will my computer lose the video and television capabilities if I upgrade it to the PowerPC microprocessor?

No. The video and television capabilities provided by the Apple Video System and the Apple TV/Video System, designed for the Macintosh Quadra 630 and Macintosh Performa 636 computers, can easily be used whether or not your system is upgraded to the PowerPC processor. The video-output capabilities provided by the Apple Presentation System can be used with any modular Macintosh computer, and with the PowerBook® systems that support video output.

When will the processor upgrade card be available?

The processor upgrade card for the Macintosh Quadra 630 and the Macintosh Performa 636 will be announced with the introduction of these new computers, and will be available in late fall 1994.

Will these new computers replace the Macintosh Performa 475?

No. The Macintosh Performa 475 will remain our most affordable system for school and home.

Can I upgrade the Macintosh LC II, LC III, LC 475, Macintosh Quadra 605, or the Macintosh Performa 460 and 470 series computers to one of these new Macintosh computers?

No. They cannot be upgraded, because the Macintosh Quadra 630 and Macintosh Performa 630 computers introduce a new industrial design to the product line.

How do these new computers compare with the Macintosh Performa 578?

The Macintosh Performa 578 has an all-in-one design with the display built into the computer. The Macintosh Quadra 630 and the Macintosh Performa 636 are modular systems with separate displays. In addition, these new computers have more built-in expandability and greater flexibility to accommodate a multimedia kit for video-input, video-output, and television capabilities.

How do the capabilities of the Macintosh TV differ from the television capabilities provided by the Apple TV/Video System?

The television capabilities provided by the Apple TV/Video System build on the features of the Macintosh TV. The primary improvements include the ability to show television within a window, so that users can simultaneously watch television while working on another document

on the computer; an improved video display, so that the television image is much crisper and clearer; and frame and video capture, so that users can capture not only a single-frame image, but also a sequence of frames.

Can I use a remote control other than the one provided in the Apple TV/Video System?

Yes. The infrared capabilities of the Macintosh Quadra 630 and Macintosh Performa 636 computers will allow you to program a universal remote control for use with these systems. The remote control that's provided operates the television tuner and the CD-ROM player.

Do the new multimedia kits require dealer installation?

No. The kits can be installed very easily by the user. Installation instructions are provided in each kit, and installation will not void the computer's warranty. Because many people are not comfortable with opening their computer and handling cards, a local Apple dealer or service provider can also install any of the kits.

Can I add the television and video capabilities later, or do I have to buy one of the multimedia kits when I purchase my computer?

The Apple Video System, the Apple TV/Video System, and the Apple Presentation System may be purchased at any time.

Can I use the Apple Video System and the Apple TV/Video System with any other Macintosh computer?

Currently, the Apple Video System and the Apple TV/Video System will work only with the Macintosh Quadra 630 and the Macintosh Performa 636. The Apple Presentation System can be used with any modular Macintosh computer, or with any PowerBook computer that has video-output capabilities.

Can I use the infrared link to connect one of these new computers with a Newton® MessagePad™ communications assistant?

The infrared capability provided with the Macintosh Quadra 630 and the Macintosh Performa 636 can be used only to control the television features and the CD-ROM drive of these computers.

Apple is offering DOS and Windows compatibility options for the Macintosh Quadra 610 and the Power Macintosh systems. What compatibility options will Apple provide for the Macintosh Quadra 630 and Macintosh Performa 636 computers?

As with most other Macintosh systems, these new computers can run SoftPC, SoftWindows™, and Macintosh PC Exchange™ software. This software allows the Macintosh to read DOS disks and run DOS and Windows applications.

Do these new computers meet the EPA's Energy Star requirements?

Yes. The U.S. Environmental Protection Agency's Energy Star program requires that a desktop computer be capable of reducing its energy consumption to 30 watts or less when it is not being used. The Macintosh Quadra 630 and Macintosh Performa 636 computers meet this requirement through software, which automatically puts the system into sleep mode after it has been idle for a prespecified period of time.

Apple Multimedia Kits

Positioning

The new Macintosh Quadra 630 and Macintosh Performa 636 computers are not just excellent desktop systems—they're also designed to handle interactive multimedia projects. By adding an affordable, easy-to-install multimedia kit to one of these Macintosh computers, users can easily begin to create multimedia elements for their projects. These new kits allow users to view and capture video, watch television programs, display presentations, and more.

Apple Video System

This multimedia kit includes all the hardware and software users need to easily capture video images and add them to documents and presentations created on a Macintosh Quadra 630 or a Macintosh Performa 636. The Apple Video System allows users to easily connect a VCR, camcorder, laserdisc player, or other video source to their computer with a single cable. With this kit, users can:

- **Capture still video images.** To add a video frame to a document on the Macintosh, users must first install the video card and the Apple Video Player software included in this kit. Then users can connect a VCR, camcorder, laserdisc player, or other video source with a single cable, capture a video frame from one of these sources, and view it on the Macintosh using simple, one-button controls. They can easily cut and paste the video image into presentations, newsletters, and reports.
- **Capture video clips.** To add a video sequence, complete with stereo sound, to a presentation, users follow the same procedure as above and save the sequence as a QuickTime® movie.

Apple TV/Video System

In addition to providing the same functionality as the Apple Video System, this multimedia kit lets users watch television on the Macintosh, for real-time access to broadcast information. The kit comes with a remote control, which operates both the television features and the CD-ROM player. With the Apple TV/Video System, users can:

- **View television in a window.** Users can adjust the viewing area of the television program, making it small or as large as the entire screen. The television window can also be moved to a different part of the screen. In this way, users can continue to work on their Macintosh while monitoring programs in the background.

- **Program or secure channels.** Users can program their system to alert them when favorite television shows are about to begin. And password protection allows users to control access to programs, a feature that's especially helpful in homes and schools. The Apple TV/Video System also supports closed-caption programming, where it is available.

Apple Presentation System

With the Apple Presentation System, users can present ideas to a large audience for training or other educational purposes. Any presentation created on the Macintosh can be shown on a large television screen exactly as it appears on the Macintosh display. Users can even make changes to the presentation on the Macintosh display, and these changes will be mirrored on the television screen in real time. This kit also allows users to record their presentations on videotape, for easy and inexpensive distribution.

Additional Information

For additional information about Macintosh desktop computers, please refer to the following materials:

Brochures

An Overview of Apple Products	L0548LL/B
Multimedia Kits Flyer	L00730A

Data Sheets

Macintosh Performa 475	L0626LL/A
Macintosh Performa 578	L00714A
Macintosh Performa 636 and 636CD	L00736A
Macintosh Quadra 630	L00727A
Macintosh Quadra 950	L0253LL/A
Power Macintosh 6100/60	L0600LL/A
Power Macintosh 7100/66	L0601LL/A
Power Macintosh 8100/80	L0602LL/A

Reference Guide

AppleFacts 5.94	L0327LL/D
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Apple Macintosh Desktop Computers

Macintosh Performa Computers

Powerful, easy-to-use computers for school or home.



Macintosh Performa 475



Macintosh Performa 578



Macintosh Performa 636 and 636CD

Macintosh Quadra Computers

Powerful desktop systems to handle your productivity needs.



Macintosh Quadra 630



Macintosh Quadra 950

Power Macintosh Computers

The foundation for the future of personal computing.



Power Macintosh 6100/60



Power Macintosh 7100/66



Power Macintosh 8100/80

	Macintosh Performa 475	Macintosh Performa 578	Macintosh Performa 636 and 636CD	Macintosh Quadra 630	Macintosh Quadra 950	Power Macintosh 6100/60	Power Macintosh 7100/66	Power Macintosh 8100/80
CPU	68LC040 at 25 MHz	68LC040 at 33 MHz	68LC040 at 33 MHz	68040 at 33 MHz	68040 at 33 MHz	PowerPC 601 RISC at 60 MHz	PowerPC 601 RISC at 66 MHz	PowerPC 601 RISC at 80 MHz; 256K memory cache
FPU	None	None	None	Built in	Built in	Built in	Built in	Built in
RAM expansion	4MB, expandable to 36MB (72 pin)	8MB, expandable to 36MB (72 pin)	4MB, 5MB, or 8MB, expandable to 36MB (72 pin)	4MB, expandable to 36MB (72 pin)	8MB, expandable to 256MB (30 pin)	8MB, expandable to 72MB (72 pin)	8MB, expandable to 136MB (72 pin)	8MB, expandable to 264MB (72 pin)
Video RAM expansion	512K, expandable to 1MB	1MB	DRAM video support*	DRAM video support*	1MB, expandable to 2MB	DRAM video support** (2MB of VRAM with Apple AV Technologies configuration)	1MB, expandable to 2MB (2MB with Apple AV Technologies configuration)	2MB, expandable to 4MB (2MB with Apple AV Technologies configuration)
Expansion slots	One; compatible with LC processor-direct slot (PDS)	One slot compatible with LC PDS, one communications slot for Ethernet or modem card	One slot compatible with LC PDS, one communications slot for Ethernet or modem card, one slot for a video card, one connector for internal TV tuner card	One slot compatible with LC PDS, one communications slot for Ethernet or modem card, one slot for a video card, one connector for internal TV tuner card	Five NuBus™, one in-line 040 PDS	One slot for a 7-inch NuBus or PDS card (requires adapter)	Three NuBus slots	Three NuBus slots
Expansion bays	None	One 5.25-inch bay for CD-ROM drive	One 5.25-inch bay for CD-ROM drive	One 5.25-inch bay for CD-ROM drive	Three 5.25-inch bays	One 5.25-inch bay	One 5.25-inch bay	One 5.25-inch bay, two 3.5-inch bays
Hard disk drives	160MB	320MB	250MB	250MB	250MB, 500MB, 1GB	160MB, 250MB	250MB, 500MB	250MB, 500MB, 1GB
Networking ports	Built-in LocalTalk®	Built-in LocalTalk	Built-in LocalTalk	Built-in LocalTalk	Built-in LocalTalk and Ethernet	Built-in LocalTalk and Ethernet	Built-in LocalTalk and Ethernet	Built-in LocalTalk and Ethernet
SCSI support	High-performance SCSI	High-performance SCSI	High-performance SCSI	High-performance SCSI	Dual-channel, high-performance SCSI	High-performance SCSI	High-performance SCSI	Dual-channel, high-performance SCSI
Ports	Two serial ports, SCSI port, Apple Desktop Bus (ADB) port, monitor port, mono sound-input port that accepts standard stereo input, stereo sound-output port	Two serial ports, SCSI port, ADB port, stereo sound-input/output ports	Two serial ports, SCSI port, ADB port, monitor port, mono sound-input port that accepts standard stereo input, stereo sound-output port	Two serial ports, SCSI port, ADB port, monitor port, mono sound-input port that accepts standard stereo input, stereo sound-output port	Two serial ports, SCSI port, ADB port, monitor port, mono sound-input port, stereo sound-output port	Two serial ports (both GeoPort™ compatible), SCSI port, ADB port, monitor port that can support an Apple AudioVision™ Display or other display, 16-bit stereo sound-input/output ports	Two serial ports (both GeoPort compatible), SCSI port, ADB port, monitor port that can support an Apple AudioVision Display or other display, standard monitor port, 16-bit stereo sound-input/output ports	Two serial ports (both GeoPort compatible), SCSI port, ADB port, monitor port that can support an Apple AudioVision Display or other display, standard monitor port, 16-bit stereo sound-input/output ports
Optional configurations/upgrades	PowerPC processor upgrade	PowerPC processor upgrade	PowerPC processor upgrade	PowerPC processor upgrade	PowerPC processor upgrade	Optional Apple AV Technologies configuration available; SoftWindows software optional	Optional Apple AV Technologies configuration available; SoftWindows software optional	Optional Apple AV Technologies configuration available; SoftWindows software optional

Video RAM and Color Support for Apple Displays

	512K	1MB	2MB	4MB
14- and 15-inch displays	256 colors	32,768 colors	16.7 million colors	16.7 million colors
17-inch display	256 colors	32,768 colors	16.7 million colors	16.7 million colors
20-inch display	16 colors	256 colors	32,768 colors	16.7 million colors

*Supports up to 32,768 colors on 14- and 15-inch displays.

**Supports 32,768 colors on 14- and 15-inch displays and 256 colors on 17-inch displays.