



# Apple Facts

10.94

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1994*

# Apple Software

## Desktop Computer Systems

## Portable Computers

## Printers & Imaging

## Personal Interactive Electronics

## Networking & Connectivity

## QuickCharts

Welcome to **AppleFacts 10.94**—a concise guide to Apple products offered worldwide. AppleFacts is intended as a convenient, one-stop reference for basic technical information, such as key product specifications, upgrade paths, and accessories (see our ACCESSORIES listings at the end of each major product section). Since product availability, configurations, and part numbers vary worldwide, we suggest that you contact your local Apple dealer or Apple office for this information.

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**6★** Apple Software

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## **A key to symbols used in AppleFacts:**

- Indicates a peripheral product that is either available in a configuration specifically designed for Windows software-based computers, or that can be used with Windows software-based systems.
- ★       Indicates a new product.
-  32    Represents a cross-reference. For more information, simply turn to the page listed (in this case, page 32).

# Apple Software

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## System Software and Related Products

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### ★ **Macintosh System 7.5**

Macintosh System 7.5 is the latest version of the popular Macintosh operating system. It incorporates a range of technologies not only to give you the best graphical user interface available, but also to provide advanced capabilities in productivity, printing, collaboration, document layout, and multimedia. Important features include the following:

- *Enhanced Finder.* Improved Find File commands, security features such as application and System Folder locking, and Drag and Drop features are among the upgrades in this version. In addition, the new Window Shade feature reduces screen clutter by letting you collapse windows to access other windows behind them, without closing documents. And the new Stickies feature lets you create on-screen reminder messages.
- *Apple Guide.* This enhanced on-screen help feature actually leads you through tasks step by step, so you can master the processes, procedures, and capabilities of your Macintosh and the applications running on it.
- *Macintosh PC Exchange and Macintosh Easy Open.* These utilities allow you to work with DOS-formatted disks as though they were Macintosh disks. You can open and edit Macintosh, DOS, and Windows files even when you don't have the original application. (Appropriate file translators are required.)
- *QuickDraw GX.* This new printing and graphics architecture lets you create portable "print and view" documents from any application. It incorporates Apple's ColorSync technology for maintaining consistent color from scanned document to displayed image to printed result. In addition, it supports Apple TrueType

and Adobe TypeManager GX font technologies, and is optimized for enhanced performance on Power Macintosh systems.

- *PowerTalk*. PowerTalk provides a universal desktop mailbox for all electronic mail, and allows you to exchange mail with other PowerTalk users either without a server or through a PowerShare Collaboration Server (available separately). The DigiSign digital signature feature offers you and your colleagues the efficiency and security of signing off on projects electronically and complies with the RSA Public Key Cryptography System.

- *PowerBook utilities*. These features let you easily designate which files and folders to synchronize between your desktop Macintosh and your PowerBook—over a network, locally, or by using a floppy disk. They provide improved battery life by offering automatic backlight dimming, persistent RAM disks, and sleep keys, so your PowerBook battery will last longer. A Control Strip gives you convenient access to AppleTalk on/off, battery monitor, file sharing, hard disk spin-down, power management, sound volume, and more. And these utilities let you designate files to be printed the next time you connect to a printer.

- *AppleScript*. You can create custom solutions by linking functions from different applications—and from the Finder.

- *MacTCP*. This feature prepares your Macintosh for connection to other systems using the industry-standard Transmission Control Protocol/Internet Protocol (TCP/IP) networking protocols.

- *QuickTime*. This industry-standard utility enables you to edit and play back digital video. It's optimized for enhanced performance on Power Macintosh computers, and through its cross-platform file format, you can play back Macintosh QuickTime files on Windows software-based systems by using QuickTime for Windows.

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## Macintosh Application Environment

Macintosh Application Environment (MAE)—the virtual Macintosh for open systems—is an innovative software product that allows users of UNIX RISC-based workstations to run Macintosh 680x0 applications on their desktop. A complete Macintosh environment



in an X Window, MAE brings the functionality and ease of use of the Macintosh computer to Sun Microsystems SPARCstations running the SunSoft Solaris operating system, as well as to Hewlett-Packard 9000 Series 700 workstations running HP-UX.

- *Provides the Macintosh environment on UNIX RISC workstations.* MAE provides the familiar Macintosh graphical user interface and desktop in an X Window. It includes the System 7.1 Finder, bringing Macintosh file-handling and navigation functionality to the UNIX file system. It even provides the ability to cut and paste data between applications, and to use aliases and “publish and subscribe” functionality.
- *Runs Macintosh applications.* MAE lets you use the most popular off-the-shelf Macintosh software on your UNIX workstation. It provides one consistent interface for all Macintosh applications, complete with icons, menus, windows, and outline fonts. It even reads Macintosh high-density floppy disks and CD-ROMs.
- *Integrates UNIX and Macintosh environments.* MAE is fully integrated with the standard UNIX file system and allows you to copy and paste text and graphics between the UNIX and Macintosh environments. Using the Network File System (NFS), MAE takes advantage of file sharing and file services across the network. MAE organizes UNIX files and applications, and allows use of the control panels from the Macintosh desktop to configure your keyboard, mouse, and monitor settings.

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### **At Ease 2.0: The easiest way to manage a shared Macintosh computer**

With At Ease software, you can manage your shared Macintosh and make your Macintosh even easier to use. It's perfect for home use (especially if you have young children), offices, classrooms, and training centers. The simple At Ease interface is ideal for novice users, and its security features protect the contents of your hard disk. At Ease provides:

- *Custom work environments.* Lets you set up an Apple Macintosh computer so that individual users have access only to certain applications and documents; you can create a customized environment for each user.

- *Easy setup.* Streamlines the setup of user passwords, for document and application access, and makes it easy to establish Finder access, file management capabilities, and other At Ease settings for custom work environments.
- *Privacy.* Allows you to restrict access to sensitive documents, the Finder, control panels, and the Chooser.

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### **At Ease 2.0 for Workgroups: The easiest way to manage a group of shared Macintosh computers**

With At Ease 2.0 for Workgroups software, you can easily manage a group of shared Macintosh computers. As a group administrator, you can create customized work environments for up to 200 different groups of users. An activity log tracks user log-ins, providing information on both usage time and applications used, which facilitates system management and ensures security. At Ease 2.0 for Workgroups provides:

- *Custom enhanced work environments.* Lets you create customized environments for groups of users, specifying application and document access for each group, while allowing individuals to save documents in their own private folders.
- *Security.* Enables you to set up a group of computers from a single computer—quickly and easily—and then monitor user activity.
- *Application security.* Helps prevent accidents, by allowing you to restrict access to the internal hard disk with sophisticated password controls.

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### **Apple Personal Diagnostics**

Apple Personal Diagnostics software helps you keep your Macintosh trouble-free by performing comprehensive diagnostic tests on your logic board, hard disk, floppy disk drive, system software, and display. It also provides information about your system configuration. The Automate Diagnostics feature allows you to test your Macintosh automatically when you aren't using it. You'll be alerted to problems and given simple steps to correct them.



## *Compatibility and Communications*

### **Macintosh PC Exchange 2.0: The easiest way to work with PC files on your Macintosh**

Macintosh PC Exchange 2.0 software makes it easy for Macintosh users to work with data files stored on MS-DOS-, Microsoft Windows-, OS/2-, and ProDOS-formatted floppy disks. You can move files between a Macintosh and a PC as easily as you can between two Macintosh computers. Included as part of System 7.5, Macintosh PC Exchange 2.0 is also sold separately. It features:

- *DOS files on Macintosh.* Automatically displays the disk's icon on your Macintosh desktop when you insert an MS-DOS-formatted or Windows-formatted disk into your Apple SuperDrive.
- *Macintosh ease of use.* Displays the contents of MS-DOS disks on the screen as documents and folders—in the standard, easy-to-use Macintosh format.
- *Double-click and go.* Lets you double-click on MS-DOS files and launch a compatible Macintosh application—by creating links between MS-DOS files and Macintosh applications.
- *Multiple formats.* Works with both 3.5-inch and 5.25-inch floppy disks formatted using MS-DOS, Windows, ProDOS, or OS/2.
- *Storage devices.* Lets you work with SCSI hard disks and floptical, Bernoulli, and SyQuest removable-media devices.
- *A/UX compatibility.*

### **PowerBook/DOS Companion**

This product combines four key Macintosh-to-PC compatibility tools in a single package, to provide virtually everything you need to make your PowerBook and a PC work together:

- *MacVGA Video Adapter.* Lets you easily connect a PowerBook to a color VGA or SVGA display and see your work in 256 colors.
- *MacLink Plus/PC.* Converts PC files into Macintosh formats.
- *PowerPrint.* Allows you to expand the selection of printers that can be connected to your PowerBook.

- *Macintosh PC Exchange.* Helps your PowerBook to recognize MS-DOS, Windows, or OS/2 disks.

## ★ eWorld

eWorld, Apple's new electronic information service for Macintosh and PowerBook computers, is an innovative, informative, easy-to-use on-line service that combines a global electronic-mail system with information, entertainment, and popular subscription services—including Reuters America Inc., Tribute Media Services, ZiffNet/Mac, and Inc. Magazine Online. It features:

- *Real-world metaphor.* eWorld is modeled on the metaphor of a community—it's an electronic neighborhood of colorfully illustrated buildings, plazas, and pavilions, each representing a specified area of the on-line service—for example, a Library for research, a Newsstand for current events, a Computer Center for assistance and software, and a Community Center for chatting with other members and viewing a listing of events.
- *Advanced electronic-mail system.* eWorld users can easily communicate with one another, as well as with users of the Internet and other electronic-mail services through mail gateways that simplify addressing. eWorld also offers a range of real-time interactive communications capabilities, such as lectures, forums, and Town Meetings, which allow up to 250 users to participate simultaneously. Smaller groups can chat and collaborate electronically in both public and private forums. And in the future, the service's communications capabilities are expected to incorporate Apple's Open Collaboration Environment (AOCE) technologies, to provide integration with PowerTalk services.
- *Cross-platform support.* eWorld services will be available on a range of devices, including Windows software-based computers and Newton MessagePad communications assistants, with common features available across platforms.
- *Publishing tools.* eWorld dramatically simplifies the creation and maintenance of on-line publications. Publishing tools allow publishers to design and prototype new products, and then update them cost-effectively by moving information from their existing files to eWorld's global servers.

- *International appeal.* eWorld is designed to support multiple languages for both content and applications. It also supports network services from multiple vendors, providing local access points around the world. Native language versions in German, Japanese, and French are planned for subsequent release.

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## **NewtonMail**

NewtonMail software make it easy for Newton MessagePad users to exchange text messages with one another and with anyone who can be reached on popular on-line information services.

- *Internet access.* Provides access to on-line information systems accessible via the Internet, including CompuServe, America Online, MCI Mail, AppleLink, SprintMail, and EasyLink.
- *Newton-to-Newton information exchange.* Allows 24-hour-per-day, 7-day-per-week electronic exchange of Newton information—such as notepad messages and graphics, business cards, and calendar appointments—between NewtonMail subscribers. Users can send mail from any Newton application.
- *Ease of use.* Incorporates metaphors consistent with other built-in Newton applications, such as the InBox and OutBox functions.

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## *Publishing and Document Enhancement*

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### **QuickTime: The simplest way to incorporate sound and video into your work**

With QuickTime, you can work with video, sound, and animation as easily as you now work with text and graphics. The QuickTime Starter Kit allows you to create and edit QuickTime movies—and paste them into your documents. The QuickTime Starter Kit features:

- *MoviePlayer.* Enables you to play, pause, edit, and rewind QuickTime movies using simple VCR-like controls.
- *Movie Converter.* Allows you to create QuickTime movies from several different file types.
- *Movie Recorder.* Lets you create movies from existing video footage. (Requires a video-capture card and sound digitizer.)

- *Picture Compressor*. Reduces large files to a fraction of their original size with little or no visible loss in picture quality.
- *QuickClips CD-ROM*. Features more than 400 megabytes of clip video, animation, and color-image files.
- *A/UX compatibility*.

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### **Apple Font Pack for Macintosh: Exceptional type for impressive results**

The Apple Font Pack provides a carefully chosen selection of 43 TrueType fonts from the world's leading type foundries. The Apple Font Pack is easy to install, manage, and work with; no system reconfiguration is required.

- *Broad compatibility*. Works with all System 7-compatible applications and Macintosh-compatible output devices.
- *TrueType format*. Lets you scale fonts to any size, to produce outstanding results both on the screen and in print.
- *Carefully chosen selection*. Provides you with a wide variety of text, display, and symbol fonts—including Zeal, a unique Apple symbol font that features a variety of useful symbols—to enhance any document you're working on.

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### **PhotoFlash**

PhotoFlash software lets you quickly and easily access and enhance photos, and place them in your documents.

- *Catalog window*. Offers thumbnail sketches of available photos, making it easy to select images. Drag and Drop capability lets you easily move images into applications such as Aldus PageMaker, QuarkXPress, Microsoft Word, and Claris FileMaker Pro.
- *Editing tools*. Provides photo preparation tools to help you enhance images, remove dust and scratches, and balance exposures.
- *Scripting capabilities*. Supports AppleScript scripting, to let you automate repetitive tasks—such as creating contact sheets and performing file-format conversions—and automatically place photos into documents created with popular applications.



## Japanese Language Kit

The Japanese Language Kit contains everything you need to add Japanese text to your documents. It can be used with your Apple Macintosh or PowerBook computer to run WorldScript-savvy or Japanese applications and to include Japanese text in letters, presentations, and reports. You can even work with files created using KanjiTalk, Apple's Japanese version of the Macintosh operating system.

- *Bilingual instruction.* Comes with a bilingual manual.
- *TrueType fonts.* Includes scalable HonMincho and MaruGothic TrueType fonts.

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## Chinese Language Kit

The Chinese Language Kit contains everything you need to add Chinese text to your documents. It can be used with your Apple Macintosh or PowerBook computer to run Chinese applications and to include Chinese text in letters, presentations, and reports.

- *Bilingual instruction.* Comes with bilingual manuals.
- *TrueType fonts.* Includes scalable Chinese TrueType fonts.
- *Traditional or Simplified Chinese.* Provides easy-to-install Traditional and Simplified character sets.
- *Variety of input methods.* Includes Pinyin, Zhuyin, Cangjie, and others.

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## Programming and Media Production

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### AppleScript

AppleScript is the first truly integrated scripting, or macro, language developed for a personal computer. Its convenient natural-language syntax makes it easy to learn and use and enables you to automate routine and complex tasks to increase personal productivity. Dialects are provided for English, French, and Japanese. Tasks that can be automated include creating backups, filing files, accessing mainframes, and downloading mail.

AppleScript comes with built-in commands that make it easy to develop useful solutions. There are dozens of popular third-party

applications that support and can be controlled by AppleScript. Thus, AppleScript is an ideal tool for integrating and harnessing the power of existing general-purpose applications to meet your specific needs.

AppleScript includes FaceSpan, an interface builder that lets you quickly put together custom applications with familiar Macintosh interface elements—all tied together by AppleScript commands. These commands can be entered manually or “recorded” in macros.

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## HyperCard 2.2

HyperCard lets you create your own custom software solutions and organize information through the metaphor of “stacks” of “cards” through which you can navigate and search for information. By simply clicking on a button, you can view related text, graphics, or QuickTime movies, using QuickTime tools (included), as well as listen to sounds. AppleScript support lets you launch, control, and exchange data with scriptable applications. HyperCard 2.2 comes with several enhanced features:

- *Predesigned tools.* Provides ready-made stacks of buttons, fields, templates, scripts, clip art, and tools that make it easy to design your programs.
- *Color enhancement.* Gives you the ability to import and size color PICT images and apply 24-bit color to buttons, fields, backgrounds, and cards, using color tools (included).
- *AppleScript support.* Lets you create customized HyperCard applications that automate repetitive tasks, by writing scripts using HyperTalk, AppleScript, and other scripting languages. You can attach these scripts to HyperCard buttons that launch, control, and exchange data with applications, either locally or over a network. Includes AppleScript runtime software and Script Editor.
- *Multilingual solutions.* Lets you use Apple’s WorldScript system extension to create solutions in different languages.
- *Application distribution.* Allows you to save any stack of cards as a stand-alone Macintosh application that can be distributed without royalty fees.



The Apple Media Tool is a visual, object-based authoring environment that lets creative designers integrate media elements—such as QuickTime movies, PICT files, text, and sound files—and then make them interact through a direct manipulation interface to create interactive multimedia titles, support and training modules, and other similar projects. Also available is the Apple Media Tool Programming Environment, which allows programmers to customize interactive multimedia projects in a new object-based language called the Apple Media Language. (Products are sold separately.)

- *Collaboration aid.* Frees creative team members to work simultaneously on various aspects of the same project—programmers can spend their time developing media elements or “objects,” while designers use Apple Media Tool to make these elements interact and build a project.
- *Separate storage formats.* Stores media separately from the application—which reduces application size, and lets you replace work-in-progress with finished content without losing any of the relationships set up between objects.
- *QuickTime integration.* Takes advantage of Apple’s industry-standard QuickTime technology.
- *Cross-platform development.* Lets you deliver interactive multimedia projects on both Macintosh and Windows software-based systems using the same content. The Apple Media Tool Programming Environment gives programmers access to both Macintosh and Windows toolboxes through a C language interface.
- *Runtime tool.* Includes Runtime Maker, which lets you create finished files and publish them on CD-ROM discs for Macintosh computers or for computers running Windows.

# Desktop Computer Systems

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# *The Macintosh Advantage*

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## **Macintosh is easier to use than other personal computers**


- In 1993, Apple sold more personal computers than any other vendor in the United States.<sup>1</sup> That's because Macintosh is the only computer designed from the chips up with the user in mind. It's exceptionally easy to use. It lets you concentrate on getting your work done, instead of on figuring out how to get your computer to work—you'll see that from the minute you open the box.
- Macintosh hardware and software have been designed from the start to work together, unlike in the PC world—where Microsoft develops DOS and Windows, and many different manufacturers make the hardware systems.
- System 7 software provides a built-in, intuitive user interface, while Windows tries to compensate for the underlying limitations of MS-DOS. For example, Macintosh lets you use descriptive names for files (up to thirty-one characters), but both DOS and Windows limit you to only eight characters, with a three-character extension.
- Not only are Windows users restricted by the limitations of DOS, they also have to understand the two programs that make up Windows: Program Manager and File Manager.
- Because it's easier to use, people who use Macintosh get more done—a fact supported by multiple independent studies.

<sup>1</sup> Source: Dataquest Inc., February 1994.

## **Macintosh offers you more and better applications**

- There are more than 6,000 intuitive graphics-based programs that run on Macintosh, for virtually any task you have to do—from word processing to spreadsheets, statistical analysis to three-dimensional modeling, desktop publishing to database management.
- With the introduction of the RISC-based PowerPC processor, thousands of popular applications are being updated to take advantage of the high-performance capabilities provided by this new technology on Power Macintosh computers. To date, software developers have redesigned over 200 existing applications and created new applications that run two to four times faster than their counterparts on 680x0-based Macintosh computers—and some computation-intensive applications and tasks offer much higher performance than that.
- Macintosh applications work in a single, consistent way—once you've learned the basics of one program, you can apply that knowledge to thousands more.
- Macintosh applications require less disk space. For example, WordPerfect for Windows requires a minimum of 11 megabytes of hard disk space, while WordPerfect for Macintosh requires a minimum of 2.6 megabytes. Windows users who run a variety of applications may run out of disk space and have to add a hard disk. Not only is this an added expense, it can also be very difficult and time-consuming.
- Macintosh applications are easier to install and remove than Windows applications. For example, removing applications from the Macintosh is simple—you simply drag the application and its supporting files into the trash can. In contrast, removing an application from the PC is a many-step process that usually requires the use of three different programs: File Manager, to delete the application's file and subdirectories; Program Manager, to delete the application icon and the program group; and a text editor, to delete all references to that application from the WIN.INI configuration file.



- On Macintosh, double-clicking on a document automatically opens the application that created it. You don't have to be concerned about where the application resides. With Windows, it's not that simple—sometimes clicking on a document opens the application that created it, and sometimes it doesn't.
- Macintosh applications are faster. Because Macintosh isn't a graphical shell grafted on top of a character-based system, it doesn't expend a lot of computing power trying to do something it wasn't designed for. For example, in performance benchmarks, the Macintosh Quadra 650 with a 33-megahertz 68040 processor outperformed a Windows software-based computer with an Intel 80486DX/2 processor running at 50 megahertz.<sup>2</sup> And Power Macintosh computers far exceed the speed of their competitors—computers running the Intel Pentium processor—with hundreds of applications designed to maximize their performance.  27

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### **Macintosh has lower costs of ownership**

- The cost of buying a computer is not the same as the cost of owning it. When you factor in training time and other ownership expenses, independent researchers say Macintosh is less expensive to own than a PC running Windows. For example, the Gartner Group has researched how much a personal computer costs an organization over the course of five years. These costs include the initial hardware and software costs, training and support costs, the cost for the time the user spends trying to learn new software applications, and more. Gartner determined cost figures for Macintosh, DOS, Windows, and OS/2 systems. According to Gartner, the five-year cost of the Macintosh in the United States is \$24,824, and the five-year cost of a Windows machine is \$29,453—making Macintosh computers 19 percent cheaper to own than Windows software-based systems.<sup>3</sup> And cost savings over OS/2 and DOS systems were even greater.

<sup>2</sup> Source: Ingram Laboratories Benchmark Study, October 1993.

<sup>3</sup> Source: "Desktop Technology: A Cost Benefit Analysis." A life-cycle cost study conducted by Gartner Group, Inc., January 1993.

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**Macintosh makes it easier to enhance your system**

- Macintosh is designed to grow as your needs change. There are thousands of Apple and third-party products that add capabilities to your Macintosh. And it's easy to add these capabilities, because Macintosh recognizes what types of expansion cards, printers, and other peripherals are connected.
- In contrast, adding capabilities to personal computers running Windows typically requires complex steps, such as configuring jumpers or DIP switches on a card, editing DOS and Windows files, and running installation programs.

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**Macintosh lets you connect easily to a wide variety of networks**

- Every Macintosh comes with built-in AppleTalk networking capabilities, which means you can connect a Macintosh to a network simply by plugging in an inexpensive LocalTalk cable. Then you'll be able to use the network's printers, exchange electronic mail, and share files with other Macintosh users.
- Macintosh lets you connect to a wide variety of network environments.  138 You can easily integrate a Macintosh into networks of PCs, minicomputers, and mainframes. And Macintosh not only lets you easily access information stored on those systems, it also provides a consistent, easy-to-understand interface.
- Macintosh supports AppleTalk, DEC, IBM, OSI, TCP/IP, Token Ring, and Novell networks.

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**Macintosh users are more satisfied and productive than Windows users**

- Ten years after the introduction of the Macintosh, in January 1994, Arthur D. Little—a leading international consulting firm—conducted a study that clearly demonstrates that Macintosh users are more productive than users of Windows software-based systems for a broad range of business computing tasks. Specifically,




Macintosh users completed a set of business computing tasks in 44 percent less time—with up to 50 percent greater accuracy—than users performing the same tasks on Windows software-based computers.<sup>4</sup>

- The superiority of Macintosh is not only proved by the long list of advantages it offers—it's also borne out by the millions of satisfied Macintosh customers. When Macintosh and Windows users were surveyed by The Roper Organization,<sup>5</sup> Macintosh scored highest on overall satisfaction.

- Evans Research surveyed people who use both Macintosh and Windows systems. Macintosh was preferred by nearly two out of three people.<sup>6</sup> A wide variety of people were surveyed: MIS managers, users in small and large businesses, and home users. In every category, people preferred Macintosh by a margin of almost two to one. In addition, when asked on which system they feel they accomplish more for the time and effort spent, a clear majority of people said Macintosh.

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### **What comes with every Macintosh**

- *System 7:* The popular Macintosh operating system. Imitated, but never equaled, System 7 makes Macintosh incredibly easy to learn and use. It runs on all Macintosh computers,<sup>7</sup> offering capabilities such as multitasking, virtual memory, on-screen help, and file sharing.  6 Macintosh, Power Macintosh, and most PowerBook computers come with Macintosh System 7.5.
- *An Apple SuperDrive floppy disk drive.* The Apple SuperDrive floppy disk drive<sup>8</sup> is a high-density floppy disk drive that can read from and write to Macintosh, MS-DOS, Windows, OS/2,

<sup>4</sup> Source: "A Competitive Study of Productivity: Macintosh vs. Windows." Study conducted by Arthur D. Little, Inc., January 1994.


<sup>5</sup> Source: March 1993 study conducted by The Roper Organization.

<sup>6</sup> Source: June 1992 study conducted by Evans Research Associates.

<sup>7</sup> System 7.5 requires 4MB of RAM (8MB on a Power Macintosh computer) and a hard disk.

<sup>8</sup> The PowerBook Duo computers can be used with an external 1.4MB floppy disk drive.

and ProDOS disks. You can, for example, use it to open a file that's stored on an MS-DOS disk, modify the file with a Macintosh program, and save your work back to the MS-DOS disk.<sup>9</sup>

- *Built-in networking ports.* All Macintosh computers come with a LocalTalk port, which lets you easily connect Macintosh computers together in an AppleTalk network. You can also connect a Macintosh to DECnet, TCP/IP, SNA, APPC, 3270, and X.25 networking environments.  138

- *WYSIWYG.* Macintosh offers “what you see is what you get” capabilities—things you create and view on the screen of a Macintosh will appear exactly as you would expect when you print them.

- *Easy connection to printers.* It's easy to connect your Macintosh to an Apple printer—all you need is a single cable. And if you are connected to more than one printer over a network, it's easy to select the particular printer you want to use.

- *SCSI port.* You can connect as many as seven SCSI devices to your Macintosh—hard disk drives, CD-ROM drives, scanners, and more—with no need for extra cards or connectors.

- *Apple Desktop Bus.* The Apple Desktop Bus (ADB) port is a built-in peripheral port for input devices—such as mouse controllers, keyboards, and graphics tablets. It lets you easily customize your Macintosh to work the way you do by adding input devices to suit your needs. All Macintosh computers offer an ADB port—and some models have two.<sup>10</sup>

- *Sound capabilities.* Every Macintosh can play back high-quality sound. And all Macintosh models feature sound-input capabilities, so you can add voice annotation or music to your work.

<sup>9</sup> Requires use of either Macintosh PC Exchange (included as part of Macintosh System 7.5) or Apple File Exchange.

<sup>10</sup> The PowerBook Duo Dock and Duo Dock II, PowerBook Duo MiniDock, and PowerBook Duo Floppy Adapter offer ADB ports for the PowerBook Duo systems.

- *Built-in video.* All Macintosh computers come standard with built-in video support. There's no need to purchase, configure, or install video cards. The Macintosh Performa 550, Macintosh LC 575, PowerBook, and PowerBook Duo computers have displays built in. All other Macintosh computers have built-in support for a variety of Apple displays.

- *Built-in features designed to meet the needs of individuals with disabilities.* Out of the box, the Macintosh is the most accessible personal computer available:

- Every Macintosh comes with Easy Access, a system utility that allows you to use Sticky Keys, which lets you type multiple key-strokes without actually having to press the keys simultaneously; Slow Keys, which lets you type very slowly and ignores accidental keystrokes by delaying the acceptance of the next keystroke; and Mouse Keys, which lets you use the numeric keypad to imitate the way the mouse moves your cursor.

- Most Macintosh computers come with CloseView, a screen utility that allows you to magnify what you see on your Macintosh screen from two to sixteen times its normal size. It also lets you invert black-on-white text screens to white-on-black, which is helpful for people with certain visual impairments.

- Every Macintosh has the built-in capability to substitute a flashing menu bar for the sound of the system beep.

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### **Unique multimedia capabilities help Macintosh computers stand out**

All Macintosh computers are designed to ensure your immediate success with multimedia, offering such features as QuickTime software, ports for sound input and output, speakers, and, in most cases, integrated CD-ROM drives and microphones. In addition, Power Macintosh computers are available in configurations that support Apple AV Technologies, a suite of integrated telecommunications, video, and speech technologies.

The Macintosh LC 630, Macintosh Quadra 630, and Macintosh Performa 630 series are designed to accommodate affordable,

user-installable multimedia kits, so you can tailor your Macintosh to provide the specific multimedia capabilities you need. The kits are as follows:

- *Apple Video System.* This multimedia solution comes with a user-installable video card and software that lets you easily add still video images to documents and presentations. The video card allows you to connect a VCR, camcorder, laserdisc player, or other video source to your computer with a single cable. Then you can capture a still image or an entire video sequence and easily view it in a window on your Macintosh. You can even save the sequence as a QuickTime movie.
- *Apple TV/Video System.* This kit gives your computer the capabilities of the Apple Video System, and more—it also allows you to watch television programs in a window on your Macintosh and work on documents simultaneously. It support closed-caption programming (where available) and allows password protection, so you can lock out access to specific TV channels or to TV viewing in general. The Apple TV/Video System comes with a video card, TV Tuner card, remote control, and software.
- *Apple Presentation System.* This makes it easy for you to create a presentation on your Macintosh, then display it to an audience on a large television screen. You can even make changes to the presentation on your Macintosh display, and your efforts will be mirrored on the television screen in real time. Or connect your Macintosh to a VCR and record your presentation on videotape. The Apple Presentation System comes with software, cables, and video converter box.



# *The Power Macintosh Advantage*

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## **The PowerPC alliance creates a new micro-processor standard**

- In 1991, Apple, IBM, and Motorola joined forces on a number of projects designed to enhance the computing experience. Perhaps the most significant of these initiatives was the development of PowerPC, a new RISC-based microprocessor standard for personal computers.
- With the introduction of the PowerPC 601 processor in Macintosh computers, Apple has created the Power Macintosh series, the first personal computers to integrate the PowerPC processor with an industry-standard operating system.

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## **PowerPC processors are based on RISC technology**

- Apple's decision to bring RISC technology to Macintosh computers indicates our investment in the future of personal computer technology. In the mid-1980s, RISC processors were typically used only in high-performance workstations, because many of their processes require significant memory and advanced compiler technology. Now that memory is no longer as expensive as it was then, and advanced compilers are common, RISC processors make sense for personal computers.
- Most personal computers are built on CISC (complex instruction-set computing) microprocessors. But an examination of performance improvements of successive CISC processors shows that performance is leveling off, while RISC performance continues to grow. This is why Apple decided to invest in RISC-based PowerPC as the processor for future generations of computers, beginning with the Power Macintosh series.

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## **Power Macintosh computers outperform comparable personal computers with a Pentium microprocessor running Windows 3.1**

At the heart of any Power Macintosh computer is the powerful PowerPC 601 processor. The following is a summary of how specific configurations of the PowerPC 601 processor outperform Intel Pentium-based computers running Windows 3.1.<sup>1</sup>

- The Power Macintosh 6100/60, with its 60-megahertz PowerPC 601 processor, outperformed a comparable computer based on a 60-megahertz Intel Pentium processor by an average of 24 percent.
- The Power Macintosh 7100/66, with its 66-megahertz PowerPC 601 processor, and the Power Macintosh 8100/80, with its 80-megahertz PowerPC 601 processor, outperformed comparably equipped computers based on 90- and 100-megahertz Intel Pentium processors. The Power Macintosh 7100/66 was 15 percent faster overall than a computer based on the 90-megahertz Pentium processor. And the Power Macintosh 8100/80 was 21 percent faster overall than a computer based on the 100-megahertz Pentium processor.

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## **PowerPC processors enable new technologies for personal computing**

- The power of RISC increases computing performance levels, which invites exciting innovations in user-interface design, communications, and applications.
- The integration of telecommunications, video, and speech technologies in Apple AV Technologies will continue to expand as PowerPC processors power the Macintosh to perform even more complicated processes.
- Advances in user-interface design will significantly increase your productivity by improving the way you gain access to information and use it in your work. The PowerPC processor paves the way to enabling new modes of interacting with your computer.

<sup>1</sup> Source: Ingram Laboratories Benchmark Study, August 1994. Study was conducted using comparable applications software on Power Macintosh computers running Macintosh System 7.1 and DOS computers running Microsoft Windows 3.1.



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**Power Macintosh computers maintain ease of use**

- Power Macintosh computers are the first Apple computers to use the PowerPC processor. But even though Power Macintosh computers have a different processor than other Macintosh computers, they're still part of the Macintosh family. They combine Macintosh ease of use with workstation performance.
- Power Macintosh computers use System 7, taking full advantage of the industry-leading graphical user interface that has made the Macintosh so popular.
- Power Macintosh computers come with all the standard Macintosh hardware advantages, such as SCSI ports, networking capability, and built-in video support. In addition, they can take advantage of the innovations provided by Apple AV Technologies—such as advanced telecommunications, video, and speech capabilities.

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**Power Macintosh computers can run hundreds of applications at an exceptionally fast rate**

- Software developers worldwide are redesigning applications—and creating new ones—to take advantage of the performance capabilities of the PowerPC processor, resulting in the largest library of mainstream applications designed specifically for a RISC platform. These applications can run two to four times faster than the applications you use on today's fastest Macintosh computers.
- Computation-intensive applications for tasks such as three-dimensional modeling and scientific visualization offer much higher performance—sometimes up to 10 times the performance of their CISC-based counterparts.
- The high performance of the PowerPC processor also enables developers to add new features to these applications. In this way, PowerPC technology helps advance the boundaries of software capabilities and opens the doors to innovation.

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**Power Macintosh computers are compatible with Macintosh and Windows software-based systems**

- Power Macintosh computers are the most compatible systems on the market. In addition to running System 7, they run virtually all your existing Macintosh software with no modification whatsoever. And Power Macintosh computers are compatible with most existing Macintosh cards, cables, system software extensions, and networking hardware and software.

- Through SoftWindows software (included with certain Power Macintosh configurations and available separately), Power Macintosh computers can run DOS and Windows applications at speeds that are significantly faster than past DOS and Windows performance rates on Macintosh—in fact, for many applications, they offer performance comparable to that of a computer based on a 25-megahertz 80486SX processor.

- Apple has implemented an affordable, comprehensive upgrade path to PowerPC for existing Macintosh and PowerBook computers—so you can still buy and support Macintosh computers based on the Motorola 68000 family of microprocessors without missing out on the advantages of PowerPC technology.

# Macintosh LC 475

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## At a glance

- The Macintosh LC 475 is Apple's most affordable Macintosh that features a Motorola 68LC040 microprocessor. [Note: This Macintosh is not sold in the same channels worldwide as the Macintosh Quadra 605.] It can be upgraded to take advantage of the PowerPC processor.
- It's a powerful, flexible system that can grow as your needs change—offering color capability and a wide variety of monitor options in a slim-line design.

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## Specifications *(Note: Configurations may vary worldwide.)*

- **Processor:** 68LC040 with built-in paged memory management unit (PMMU) and 8K memory cache
- **Speed:** 25 megahertz
- **Memory:** 4MB or 8MB of RAM, expandable to 36MB—4MB on logic board and one 72-pin SIMM slot
- **Storage:**
  - Internal Apple SuperDrive floppy disk drive
  - Internal 160MB or 250MB hard disk drive
- **Expansion capabilities:** Expansion slot compatible with LC III processor-direct slot; supports seven SCSI devices
- **Ports:** Two serial ports, ADB port, video-output port, high-performance SCSI port, sound-input port (mono), sound-output port (stereo)
- **Displays:** Built-in support for all Apple displays
- **Networking ports:** Built-in LocalTalk
- **Dimensions (HWD):** 3.2 by 12.2 by 15.0 inches (8.1 by 31.0 by 38.1 cm)
- **Weight:** 8.8 lb. (4.0 kg)

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## **Key features**

- Features the Motorola 68LC040 processor, which enables it to handle even the most complex tasks with ease.
- Can be upgraded to take advantage of the PowerPC processor.
- Comes with 512K of on-board video RAM for extensive video support; the Macintosh LC 475 can be used with any Apple display, including the Apple Multiple Scan 20 Display.
- Allows you to expand video RAM to 1MB, so you can work with up to 32,768 colors on some displays.
- Comes with an expansion slot for customizing your system, for instance, to add high-speed networking capabilities or to run Apple IIe applications.
- Comes with high-performance SCSI capability.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

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## **Upgrade information**

- The Macintosh LC II and LC III can be upgraded to the Macintosh LC 475 with the purchase of the Macintosh LC 475 Logic Board Upgrade.

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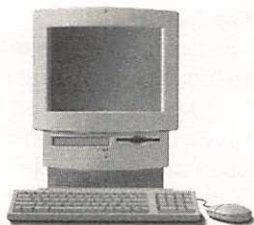
## **Other Macintosh models to consider**

- The Macintosh Quadra 630 offers a faster processor, and the flexibility to provide advanced multimedia capabilities through new integrated hardware and software technologies.
- Power Macintosh computers take full advantage of the RISC-based PowerPC processor, providing exceptional speed and productivity.



# Macintosh LC 575

32



## At a glance

- The Macintosh LC 575 provides the power of a Motorola 68040 processor in an all-in-one Macintosh design—and can be upgraded to take advantage of the PowerPC processor.
- Its built-in 14-inch Sony Trinitron color display, speakers, CD-ROM drive (optional), and microphone make it a great system for users who want full media capabilities in a fast, compact Macintosh computer.

## Specifications *(Note: Configurations may vary worldwide.)*

- **Processor:** 68LC040 with integrated paged memory management unit (PMMU) and 8K memory cache
- **Speed:** 33 megahertz
- **Memory:** 4MB of RAM, expandable to 36MB—4MB on logic board and one 72-pin SIMM slot
- **Storage:**
  - Internal Apple SuperDrive floppy disk drive
  - Internal 160MB, 250MB, or 320MB hard disk drive
  - Supports one internal CD-ROM drive (in most configurations)
- **Expansion capabilities:** Macintosh LC-compatible expansion slot; communications slot for Ethernet or modem card; supports seven SCSI devices
- **Ports:** Two serial ports, ADB port, high-performance SCSI port, sound-input port (stereo), sound-output port (stereo); built-in microphone
- **Displays:** Built-in 14-inch (diagonal) Sony Trinitron RGB display; supports 256 colors (32,000 colors with optional upgrade)
- **Networking ports:** Built-in LocalTalk; optional Ethernet (requires Ethernet card)

- *Dimensions (HWD)*: 17.9 by 13.5 by 16.5 inches (45.5 by 34.3 by 41.9 cm)
- *Weight*: 40.5 lb. (18.3 kg)—will vary based on internal devices installed
- *Other features*:
  - Push-button sound and contrast controls
  - Front headphone jack
  - Keyboard power switch

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### **Key features**

- Provides the power of a Motorola 68LC040 processor.
- Can be upgraded to take advantage of the PowerPC processor.
- Offers exceptional color and a large viewing area in an all-in-one Macintosh design.
- Lets you easily expand the capabilities of your system through the expansion slot and the communications slot.
- Comes with a variety of multimedia features built in, so you don't have to add extra accessories.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.
- Comes with a built-in CD-ROM drive (in most configurations).

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### **Upgrade information**

- The Macintosh LC 520 and LC 550 can be upgraded to the Macintosh LC 575 with the purchase of the Macintosh LC 575 Logic Board Upgrade.

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### **Other Macintosh models to consider**

- The Macintosh Quadra 630 offers the flexibility to provide advanced multimedia capabilities through new integrated hardware and software technologies.
- Power Macintosh computers take full advantage of the RISC-based PowerPC processor, providing exceptional speed and productivity.

# Macintosh LC 630

★34



## At a glance

- The Macintosh LC 630 is an affordable Macintosh desktop system designed to handle the user's multimedia needs. [Note: This Macintosh is not sold in the same channels worldwide as the Macintosh Quadra 630 or Macintosh Performa 630 series.]
- Its unique industrial design—including a modular logic board and special internal connectors—allows users to tailor the system to their needs by adding a PowerPC upgrade, a CD-ROM drive, or one of a range of new multimedia kits.  25


## Specifications *(Note: Configurations may vary worldwide.)*

- **Processor:** 68LC040 with built-in paged memory management unit (PMMU) and 8K memory cache
- **Speed:** 33 megahertz
- **Memory:** 4MB or 8MB of RAM, expandable to 36MB  
—4MB on logic board and one 72-pin SIMM slot
- **Storage:**
  - Internal Apple SuperDrive floppy disk drive
  - Internal 250MB hard disk drive
  - Supports one internal half-height 5.25-inch peripheral, such as a hard disk drive, a CD-ROM drive, or a magneto-optical drive
- **Expansion capabilities:** Macintosh LC-compatible expansion slot; communications slot for Ethernet or modem card; video slot for NTSC, PAL, S-VIDEO, or SECAM video-input card, or MPEG decompression; supports seven SCSI devices
- **Ports:** Two serial ports, ADB port, video-output port, SCSI port, sound-input/output ports

- *Displays:* Built-in support for the Apple Color Plus 14" Display, Macintosh Color Display, Apple AudioVision 14 Display, and Apple Multiple Scan 15 Display; supports several third-party VGA and SVGA monitors
- *Networking ports:* Built-in LocalTalk; optional Ethernet (requires Ethernet card)
- *Dimensions (HWD):* 4.3 by 12.6 by 16.5 inches (10.9 by 32.0 by 41.9 cm)
- *Weight:* 19.0 lb. (8.6 kg)—will vary based on internal devices installed
- *Other features:*
  - Energy Star compliant
  - Keyboard power switch
  - Headphone jack and push-button sound controls located on front

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### Key features

- Provides the power of a Motorola 68LC040 processor.
- Can be upgraded to take advantage of the PowerPC processor.
- Lets you easily expand the multimedia capabilities of your system, by connecting one of a variety of multimedia kits, via an internal video slot.  59
- Lets you add either an Ethernet card or a high-speed modem, through its communications slot.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

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### Other Macintosh models to consider

If your tasks might require even greater performance and flexibility, you should consider the Power Macintosh 6100/60, which offers:

- A faster processor architecture (66-megahertz PowerPC 601 processor).
- A NuBus slot.
- More memory expansion capability—up to 72MB.
- Built-in Ethernet capability.
- A configuration that takes advantage of Apple AV Technologies.



# Macintosh Performa 475 and 476

36



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## At a glance

- The Macintosh Performa 475 and 476 come with a Motorola 68LC040 processor, and can be upgraded to take advantage of the PowerPC processor.

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## Specifications *(Note: Macintosh Performa model numbers and configurations vary worldwide and by distribution channel.)*

- *Processor:* 68LC040
- *Speed:* 50/25 megahertz
- *Memory:* 4MB of RAM, expandable to 36MB  
—4MB on logic board and one 72-pin SIMM slot
- *Storage:*  
—Internal Apple SuperDrive floppy disk drive  
—Internal 160MB or 230MB hard disk drive
- *Expansion capabilities:* Expansion slot compatible with LC III processor-direct slot; communications slot for Ethernet or modem card; supports seven SCSI devices
- *Ports:* Two serial ports, ADB port, video-output port, SCSI port, sound-input/output ports
- *Displays:* Comes with the Apple Performa Plus 14" Display
- *Networking ports:* Built-in LocalTalk; optional Ethernet (requires Ethernet card)
- *Dimensions (HWD):* 4.3 by 12.6 by 16.5 inches (10.9 by 32.0 by 41.9 cm)
- *Weight:* 19.0 lb. (8.6 kg)

- *Other features:*

- Comes with an Apple display, keyboard, fax modem, and mouse
- Comes with a variety of Macintosh system software extensions and up to 15 third-party applications

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### **Key features**


- Provides the power of a Motorola 68LC040 processor.
- Can be upgraded to take advantage of the PowerPC processor.
- Comes with 512K of VRAM, expandable to 1MB, for up to 32,768 colors on the Apple Performa Plus 14" Display.
- Lets you add either an Ethernet card or a high-speed modem, through its communications slot.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

**37**

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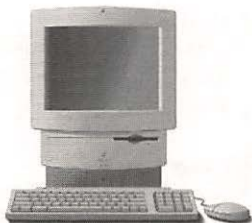
### **Other Macintosh models to consider**

If your tasks might require even greater performance and flexibility, you should consider the Macintosh Performa 630 series computers, which offer:

- A faster processor architecture (33 megahertz as opposed to 25 megahertz).
- An internal video card slot and an internal connector, for connecting components of a variety of multimedia kits.  59
- An internal 5.25-inch expansion bay.

# Macintosh Performa 550

38



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## At a glance

- The Macintosh Performa 550 has an all-in-one design, and can be upgraded to take advantage of the PowerPC processor.

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**Specifications** *(Note: Macintosh Performa model numbers and configurations vary worldwide and by distribution channel.)*

- **Processor:** 68030
- **Speed:** 66/33 megahertz
- **Memory:** 5MB of RAM, expandable to 36MB  
—5MB on logic board and one 72-pin SIMM slot
- **Storage:**
  - Internal Apple SuperDrive floppy disk drive
  - Internal 160MB hard disk drive
  - Internal AppleCD 300i Plus CD-ROM drive
- **Expansion capabilities:** Macintosh LC-compatible expansion slot ; supports seven SCSI devices
- **Ports:** Two serial ports, two ADB ports, SCSI port, sound-input/output ports
- **Displays:** Comes with a built-in, 14-inch Sony Trinitron color display
- **Networking ports:** Built-in LocalTalk
- **Dimensions (HWD):** 4.3 by 12.6 by 16.5 inches (10.9 by 32.0 by 41.9 cm)
- **Weight:** 19.0 lb. (8.6 kg)
- **Other features:**
  - Comes with a fax modem, keyboard, and mouse
  - Comes with a variety of Macintosh system software extensions and up to 15 third-party applications

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## Key features


- Offers exceptional color and a large viewing area in an all-in-one Macintosh design.
- Supports up to 32,768 colors on its built-in 14" color display.
- Can be upgraded to take advantage of the PowerPC processor.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.
- Comes with a built-in AppleCD 300i Plus CD-ROM drive.

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## Other Macintosh models to consider

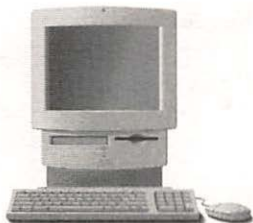
If your tasks might require even greater performance and flexibility, you should consider the Macintosh Performa 630 series computers, which offer:

- A higher-performance processor (Motorola 68LC040 as opposed to 68030).
- An internal video card slot and an internal connector, for connecting components of a variety of multimedia kits.  59
- Optional Ethernet capability.



# Macintosh Performa 570 Series

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## At a glance

- The Macintosh Performa 570 series computers feature the Motorola 68LC040 processor, and can be upgraded to take advantage of the PowerPC processor.

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**Specifications** *(Note: Macintosh Performa model numbers and configurations vary worldwide and by distribution channel.)*

- *Processor:* 68LC040
- *Speed:* 66/33 megahertz
- *Memory:* 5MB or 8MB of RAM, expandable to 36MB
  - 5MB on logic board and one 72-pin SIMM slot
- *Storage:*
  - Internal Apple SuperDrive floppy disk drive
  - Internal 250MB or 320MB hard disk drive
  - Supports one internal CD-ROM drive
- *Expansion capabilities:* Expansion slot compatible with LC III processor-direct slot; communications slot for Ethernet or modem card; supports seven SCSI devices
- *Ports:* Two serial ports, ADB port, video-output port, SCSI port, sound-input/output ports
- *Displays:* Comes with a built-in, 14-inch Sony Trinitron color display
- *Networking ports:* Built-in LocalTalk; optional Ethernet (requires Ethernet card)
- *Dimensions (HWD):* 4.3 by 12.6 by 16.5 inches (10.9 by 32.0 by 41.9 cm)

- *Weight:* 19.0 lb. (8.6 kg)—will vary based on internal devices installed

- *Other features:*

- Comes with a keyboard and mouse

- Comes with a variety of Macintosh system software extensions and 16 third-party applications


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### **Key features**

- Provides the power of a Motorola 68LC040 processor.
- Can be upgraded to take advantage of the PowerPC processor.
- Comes with 1MB of VRAM, for up to 32,768 colors on the built-in, 14-inch display.
- Lets you add either an Ethernet card or a high-speed modem, through its communications slot.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

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### **Other Macintosh models to consider**

- If your tasks might require even greater performance and flexibility, you should consider the Macintosh Performa 630 series computers, which offer an internal video card slot and an internal connector, for connecting components of a variety of multimedia kits.  59
- If you wish to take advantage of the hundreds of native applications developed for the PowerPC processor, you should consider the Macintosh Performa 6100 series computers, which have a built-in PowerPC 601 RISC processor.


# Macintosh Performa 630 Series

★42



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## At a glance

- The Macintosh Performa 630 series computers are affordable Macintosh desktop systems designed to handle the user's multimedia needs. [Note: These Macintosh computers are not sold in the same channels worldwide as the Macintosh LC 630 and Macintosh Quadra 630.]
- Their unique industrial design—including a modular logic board and special internal connectors—allows users to tailor the system to their needs by adding a PowerPC upgrade, a CD-ROM drive, or one of a range of new multimedia kits.  24

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**Specifications** (*Note: Macintosh Performa model numbers and configurations vary worldwide and by distribution channel.*)

- **Processor:** 68LC040
- **Speed:** 66/33 megahertz
- **Memory:** 5MB or 8MB of RAM, expandable to 36MB—4MB on logic board and one 72-pin SIMM slot
- **Storage:**
  - Internal Apple SuperDrive floppy disk drive
  - Internal 250MB or 350MB hard disk drive
  - Supports one internal half-height 5.25-inch peripheral, such as a hard disk drive, a CD-ROM drive, or a magneto-optical drive
- **Expansion capabilities:** Macintosh LC-compatible expansion slot; communications slot for Ethernet or modem card; video slot for NTSC, PAL, S-VIDEO, or SECAM video-input card, or MPEG decompression; supports seven SCSI devices

- *Ports:* Two serial ports, ADB port, video-output port, SCSI port, sound-input/output ports
- *Displays:* Comes with the Apple Performa Plus 14" Display or Apple Multiple Scan 15 Display
- *Networking ports:* Built-in LocalTalk; optional Ethernet (requires Ethernet card)
- *Dimensions (HWD):* 4.3 by 12.6 by 16.5 inches (10.9 by 32.0 by 41.9 cm)
- *Weight:* 19.0 lb. (8.6 kg)—will vary based on internal devices installed
- *Other features:*
  - Headphone jack and sound controls located on front
  - Comes with an Apple display, keyboard, and mouse
  - Comes with a variety of Macintosh system software extensions and up to 21 third-party applications

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### Key features

- Provides the power of a Motorola 68LC040 processor.
- Can be upgraded to take advantage of the PowerPC processor.
- Lets you easily expand the multimedia capabilities of your system, by connecting one of a variety of multimedia kits, via an internal video slot.  59
- Lets you add either an Ethernet card or a high-speed modem, through its communications slot.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

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### Other Macintosh models to consider

If your tasks might require even greater performance and flexibility, you should consider the Power Macintosh 6100/60, which offers:

- A faster processor architecture (66-megahertz PowerPC 601 processor).
- A NuBus slot.
- More memory expansion capability—up to 72MB.
- Built-in Ethernet capability.
- A configuration that takes advantage of Apple AV Technologies.



# Macintosh Performa 6100 Series

★44



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## At a glance

- The Macintosh Performa 6100 series computers have a RISC-based PowerPC 601 microprocessor, which makes them ideal for handling all of your tasks with exceptional speed.

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**Specifications** *(Note: Macintosh Performa model numbers and configurations vary worldwide and by distribution channel.)*

- **Processor:** PowerPC 601 RISC with integrated math coprocessor and 32K on-chip cache
- **Speed:** 60 megahertz
- **Memory:** 8MB of RAM, expandable to 72MB—8MB on logic board and one 72-pin SIMM slot
- **Storage:**
  - Internal Apple SuperDrive floppy disk drive
  - Internal 250MB, 350MB, or 500MB hard disk drive
  - Supports one internal AppleCD 300i Plus CD-ROM drive
- **Expansion capabilities:** Internal expansion slot for one processor-direct card or one 7-inch NuBus expansion card (requires adapter); supports seven SCSI devices
- **Ports:** Two serial ports (both can be used with Apple's GeoPort Telecom Adapter), ADB port, monitor port that can support an Apple AudioVision Display or another display, SCSI port, sound-input port (stereo), sound-output port (stereo)
- **Displays:** Includes a 15-inch color display with built-in speakers
- **Networking ports:** Built-in LocalTalk and Ethernet

- *Dimensions (HWD)*: 4.3 by 12.6 by 16.5 inches (10.9 by 32.0 by 41.9 cm)
- *Weight*: 19.0 lb. (8.6 kg)—will vary based on internal devices installed
- *Other features*:
  - Comes with a 14.4-bps fax modem, keyboard, and mouse
  - Comes with a variety of Macintosh system software extensions and up to 15 third-party applications, depending on the configuration

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### **Key features**

- Features the RISC-based PowerPC 601 processor, which provides unprecedented power for your Power Macintosh computer.
- Has built-in Ethernet, for faster data transfer over a network.
- Comes with DRAM video support, providing up to 32,768 colors on 14-inch display (included).
- Provides 16-bit, CD-quality sound-input/output capabilities.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

# Macintosh Quadra 605

46



## At a glance

- The Macintosh Quadra 605 is Apple's most affordable modular Macintosh that features a Motorola 68LC040 microprocessor. [Note: This Macintosh is not sold in the same channels worldwide as the Macintosh LC 475.] It can be upgraded to take advantage of the PowerPC processor.
- It's an ideal entry-level business system that provides plenty of power to handle computation-intensive tasks with ease.

## Specifications *(Note: Configurations may vary worldwide.)*

- **Processor:** 68LC040 with built-in paged memory management unit (PMMU) and 8K memory cache
- **Speed:** 25 megahertz
- **Memory:** 4MB or 8MB of RAM, expandable to 36MB—4MB on logic board and one 72-pin SIMM slot
- **Storage:**
  - Internal Apple SuperDrive floppy disk drive
  - Internal 160MB or 250MB hard disk drive
- **Expansion capabilities:** Expansion slot compatible with LC III processor-direct slot; supports seven SCSI devices
- **Ports:** Two serial ports, ADB port, video-output port, high-performance SCSI port, sound-input port (mono), sound-output port (stereo)
- **Displays:** Built-in support for all Apple displays
- **Networking ports:** Built-in LocalTalk
- **Dimensions (HWD):** 2.9 by 12.2 by 15.3 inches (7.4 by 31.0 by 38.9 cm)
- **Weight:** 8.8 lb. (4.0 kg)

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### **Key features**

- Features the Motorola 68LC040 processor, which enables it to handle even the most complex tasks with ease.
- Can be upgraded to take advantage of the PowerPC processor.
- Comes with 512K of on-board video RAM for extensive video support; the Macintosh Quadra 605 can be used with any Apple display, including the Apple Multiple Scan 20 Display.
- Allows you to expand video RAM to 1MB, so you can work with up to 32,768 colors on some displays.
- Comes with an expansion slot for customizing your system, for instance, to add high-speed networking capabilities.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

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### **Other Macintosh models to consider**

- The Macintosh Quadra 630 offers a faster processor, and the flexibility to provide advanced multimedia capabilities through new integrated hardware and software technologies.
- Power Macintosh computers take full advantage of the RISC-based PowerPC processor, providing exceptional speed and productivity.




# Macintosh Quadra 630

★48



## At a glance

- The Macintosh Quadra 630 is an affordable Macintosh desktop system designed to handle the user's multimedia needs. [Note: This Macintosh is not sold in the same channels worldwide as the Macintosh LC 630 or Macintosh Performa 630 series.]
- Its unique industrial design—including a modular logic board and special internal connectors—allows users to tailor the system to their needs by adding a PowerPC upgrade, a CD-ROM drive, or one of a range of new multimedia kits.  24


## Specifications *(Note: Configurations may vary worldwide.)*

- **Processor:** 68040 with built-in math coprocessor, paged memory management unit (PMMU), and 8K memory cache
- **Speed:** 33 megahertz
- **Memory:** 4MB or 8MB of RAM, expandable to 36MB—4MB on logic board and one 72-pin SIMM slot
- **Storage:**
  - Internal Apple SuperDrive floppy disk drive
  - Internal 250MB hard disk drive
  - Supports one internal half-height 5.25-inch peripheral, such as a hard disk drive, a CD-ROM drive, or a magneto-optical drive
- **Expansion capabilities:** Macintosh LC-compatible expansion slot; communications slot for Ethernet or modem card; video slot for NTSC, PAL, S-VIDEO, or SECAM video-input card, or MPEG decompression; supports seven SCSI devices
- **Ports:** Two serial ports, ADB port, video-output port, SCSI port, sound-input/output ports

- *Displays:* Built-in support for the Apple Color Plus 14" Display, Macintosh Color Display, Apple AudioVision 14 Display, and Apple Multiple Scan 15 Display; supports several third-party VGA and SVGA monitors
- *Networking ports:* Built-in LocalTalk; optional Ethernet (requires Ethernet card)
- *Dimensions (HWD):* 4.3 by 12.6 by 16.5 inches (10.9 by 32.0 by 41.9 cm)
- *Weight:* 19.0 lb. (8.6 kg)—will vary based on internal devices installed
- *Other features:*
  - Energy Star compliant
  - Keyboard power switch
  - Headphone jack and push-button sound controls located on front

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### Key features

- Provides the power of a Motorola 68040 processor.
- Can be upgraded to take advantage of the PowerPC processor.
- Lets you easily expand the multimedia capabilities of your system, by connecting one of a variety of multimedia kits, via an internal video slot.  59
- Lets you add either an Ethernet card or a high-speed modem, through its communications slot.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

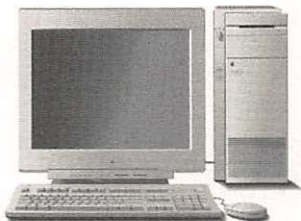
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### Other Macintosh models to consider

If your tasks might require even greater performance and flexibility, you should consider the Power Macintosh 6100/60, which offers:

- A faster processor architecture (66-megahertz PowerPC 601 processor).
- A NuBus slot.
- More memory expansion capability—up to 72MB.
- Built-in Ethernet capability.
- A configuration that takes advantage of Apple AV Technologies.

# Macintosh Quadra 950



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## At a glance

- The most expandable Macintosh computer, the Macintosh Quadra 950 provides exceptional processing power, as well as maximum expansion capabilities and storage options.
- It's ideal for professional projects including design and modeling, color illustration and photo manipulation, architecture, engineering, scientific visualization, multimedia authoring, and three-dimensional rendering.

## Specifications *(Note: Configurations may vary worldwide.)*

- *Processor:* 68040 with built-in math coprocessor, paged memory management unit (PMMU), and 8K memory cache
- *Speed:* 33 megahertz
- *Memory:* 8MB of RAM, expandable to 256MB  
—Eight 1MB SIMMs and eight 30-pin SIMM slots
- *Storage:*  
—Internal Apple SuperDrive floppy disk drive  
—Internal 230MB, 500MB, or 1GB hard disk drive (optional)  
—Supports up to three internal half-height 5.25-inch peripherals, such as hard disk drives, CD-ROM drives, or magneto-optical drives
- *Expansion capabilities:* Five NuBus slots and one 040 processor-direct slot; supports seven SCSI devices
- *Ports:* Two serial ports, ADB port, video-output port, dual-channel SCSI port, sound-input port (mono), sound-output port (stereo)
- *Displays:* Built-in support for all Apple displays; supports several third-party VGA, SVGA, and 19-inch monitors
- *Networking ports:* Built-in LocalTalk and Ethernet

- *Dimensions (HWD)*: 16.8 by 8.9 by 20.6 inches (42.7 by 22.6 by 52.3 cm)
- *Weight*: 36.8 lb. (16.6 kg)—will vary based on internal devices installed
- *Other features*:
  - High-performance, video RAM-based video
  - High-performance NuBus
  - Electronic security lock
  - Dual-channel SCSI provides faster SCSI performance than the SCSI used by the Macintosh II computers

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### **Key features**

- Offers the widest variety of storage options of any Macintosh.
- Features the Motorola 68040 processor, which enables the Macintosh Quadra 950 to handle even the most complex tasks easily.
- Can be upgraded to take advantage of the PowerPC processor.
- Offers built-in accelerated 24-bit graphics capability, which allows you to display photographic-quality images.
- Has built-in Ethernet capability, which lets you transfer information up to 10 times faster than with LocalTalk cabling—and also allows for other types of cabling schemes that let you easily integrate the Macintosh Quadra 950 into multivendor environments.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

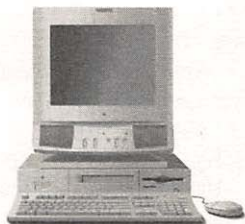
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### **Upgrade information**

- The Macintosh Quadra 900 can be upgraded to the Macintosh Quadra 950 with a Macintosh Quadra 950 Logic Board Upgrade.



# Power Macintosh 6100/60



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## At a glance

- The Power Macintosh 6100/60 is the most affordable Power Macintosh computer, offering industry-leading performance in a personal computer.
- Its RISC-based PowerPC 601 microprocessor makes it ideal for handling business tasks with exceptional speed.

## Specifications *(Note: Configurations may vary worldwide.)*

- **Processor:** PowerPC 601 RISC with integrated math coprocessor and 32K on-chip cache
- **Speed:** 60 megahertz
- **Memory:** 8MB of RAM, expandable to 72MB  
—8MB on logic board and two 72-pin SIMM slots
- **Storage:**
  - Internal Apple SuperDrive floppy disk drive
  - Internal 160MB or 250MB hard disk drive
  - Supports one internal half-height 5.25-inch peripheral, such as a hard disk drive, a CD-ROM drive, or a magneto-optical drive
- **Expansion capabilities:** Internal expansion slot for one processor-direct card or one 7-inch NuBus expansion card (requires adapter); supports seven SCSI devices
- **Ports:** Two serial ports (both can be used with Apple's GeoPort Telecom Adapter), ADB port, monitor port that can support an Apple AudioVision Display or another display, high-performance SCSI port, sound-input port (stereo), sound-output port (stereo)
- **Displays:** Built-in support for all Apple displays
- **Networking ports:** Built-in LocalTalk and Ethernet

- *Dimensions (HWD)*: 3.4 by 16.3 by 15.6 inches (8.6 by 41.4 by 39.6 cm)
- *Weight*: 14.0 lb. (6.3 kg)—will vary based on internal devices installed

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### **Key features**

- Features the RISC-based PowerPC 601 processor, which provides unprecedented power for your Power Macintosh computer.
- Offers built-in, high-performance SCSI for faster data transfer.
- Has built-in Ethernet, for faster data transfer over a network.
- Comes with DRAM video support, providing up to 32,768 colors on 14-inch displays.
- Is available in a configuration that supports Apple AV Technologies.
- Provides 16-bit, CD-quality sound-input/output capabilities.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

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### **Upgrade information**

- The Macintosh Centris 610, Quadra 610, Centris 660Av, and Quadra 660Av can be upgraded to the Power Macintosh 6100/60 with the purchase of the Power Macintosh 6100/60 Logic Board Upgrade.

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### **Other Macintosh models to consider**

If your tasks might require greater speed or more expansion options, you should consider the Power Macintosh 7100/66, which offers:

- A faster processor (66 megahertz, compared with 60 megahertz for the Power Macintosh 6100/60).
- More expansion options than the Power Macintosh 6100/60—three NuBus slots (as opposed to one).
- More memory expansion capability—up to 136MB.
- Greater video RAM expansion capability and dual-display support.

# Power Macintosh 7100/66

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## At a glance

- The Power Macintosh 7100/66 is Apple's midrange Power Macintosh computer, providing the speed of the PowerPC 601 processor and a variety of expansion options in a convenient desktop design.
- It's designed to handle complicated business tasks, such as page layout, data retrieval, and work with complex spreadsheets.

## Specifications *(Note: Configurations may vary worldwide.)*

- **Processor:** PowerPC 601 RISC with integrated math coprocessor and 32K on-chip cache
- **Speed:** 66 megahertz
- **Memory:** 8MB of RAM, expandable to 136MB—8MB on logic board and four 72-pin SIMM slots
- **Storage:**
  - Internal Apple SuperDrive floppy disk drive
  - Internal 250MB or 500MB hard disk drive
  - Supports one internal half-height 5.25-inch peripheral, such as a hard disk drive, a CD-ROM drive, or a magneto-optical drive
- **Expansion capabilities:** Three NuBus slots; supports seven SCSI devices
- **Ports:** Two serial ports (both can be used with Apple's GeoPort Telecom Adapter), ADB port, monitor port that can support an Apple AudioVision Display or another display, standard monitor port, high-performance SCSI port, sound-input port (stereo), sound-output port (stereo)
- **Displays:** Built-in support for all Apple displays
- **Networking ports:** Built-in LocalTalk and Ethernet
- **Dimensions (HWD):** 6.0 by 13.0 by 16.5 inches (15.2 by 33.0 by 41.9 cm)

• *Weight:* 25.0 lb. (11.3 kg)—will vary based on internal devices installed

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### **Key features**

- Features the RISC-based PowerPC 601 processor, which provides unprecedented power for your Power Macintosh computer.
- Offers built-in, high-performance SCSI for faster data transfer.
- Has built-in Ethernet, for faster data transfer over a network.
- Has three NuBus slots, so you can add the capabilities you want to your computer.
- Comes with 1MB of on-board video RAM for more extensive video support.
- Allows you to expand video RAM to 2MB, so you can work with as many as 16.7 million colors on the Apple Multiple Scan 17 Display.
- Is available in a configuration that supports Apple AV Technologies.
- Provides 16-bit, CD-quality sound-input/output capabilities.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

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### **Upgrade information**

- The Macintosh IIvi and IIvx, Centris 650, Quadra 650, and Performa 600 can be upgraded to the Power Macintosh 7100/66 with the Power Macintosh 7100/66 Logic Board Upgrade.

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### **Other Macintosh models to consider**

If your tasks require exceptional computing speed and greater storage capacity, you should consider the Power Macintosh 8100/80, which offers:

- A faster processor (80 megahertz, compared with 66 megahertz for the Power Macintosh 7100/66).
- A 256K memory cache, for increased performance capability.
- Greater storage capacity—larger hard disk drives and space for two additional 3.5-inch storage devices.
- More memory expansion capability—up to 264MB.
- Greater video RAM expansion capability—video support for up to 16.7 million colors on the Apple Multiple Scan 20 Display.



# Power Macintosh 8100/80



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## At a glance

- Apple's most powerful desktop computer ever, the Power Macintosh 8100/80 provides phenomenal speed, along with ample storage capacity and expansion capabilities to handle your work now—and in the future.
- The RISC-based PowerPC 601 processor running at 80 megahertz makes it ideal for work that involves computation-intensive tasks, such as professional color publishing, computer-aided design, scientific visualization, and three-dimensional modeling.

## Specifications *(Note: Configurations may vary worldwide.)*

- **Processor:** PowerPC 601 RISC with integrated math coprocessor and 32K on-chip cache; 256K memory cache
- **Speed:** 80 megahertz
- **Memory:** 8MB of RAM, expandable to 264MB—8MB on logic board and eight 72-pin SIMM slots
- **Storage:**
  - Internal Apple SuperDrive floppy disk drive
  - Internal 250MB, 500MB, or 1GB hard disk drive
  - Supports two additional 3.5-inch peripherals, and one internal half-height 5.25-inch peripheral, such as a hard disk drive, a CD-ROM drive, or a magneto-optical drive
- **Expansion capabilities:** Three NuBus slots; supports seven SCSI devices
- **Ports:** Two serial ports (both can be used with Apple's GeoPort Telecom Adapter), ADB port, monitor port that can support an Apple AudioVision Display or another display, standard monitor port, high-performance SCSI port, sound-input port (stereo), sound-output port (stereo)

- *Displays:* Built-in support for all Apple displays
- *Networking ports:* Built-in LocalTalk and Ethernet
- *Dimensions (HWD):* 14.2 by 8.9 by 16.0 inches (36.1 by 22.6 by 40.6 cm)
- *Weight:* 25.3 lb. (11.4 kg)—will vary based on internal devices installed
- *Other features:*  
—“Mini-tower” design allows vertical use on a floor or desktop

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### **Key features**

- Features the RISC-based PowerPC 601 processor, which provides unprecedented power for your Power Macintosh computer.
- Offers built-in, high-performance SCSI for faster data transfer.
- Has built-in Ethernet, for faster data transfer over a network.
- Has three NuBus slots, so you can add the capabilities you want to your computer.
- Supports up to four internal storage devices, so you can configure your system the way you want—without sacrificing desk space.
- Allows you to expand video RAM up to 4MB, so you can work with up to 16.7 million colors on the Apple Multiple Scan 20 Display.
- Is available in a configuration that supports Apple AV Technologies.
- Provides 16-bit, CD-quality sound-input/output capabilities.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

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### **Upgrade information**

- The Macintosh Quadra 800 and 840AV can be upgraded to the Power Macintosh 8100/80 with the Power Macintosh 8100/80 Logic Board Upgrade.

# Desktop System Accessories

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## General Macintosh Accessories

- Macintosh 1MB, 2MB, 4MB, and 8MB Memory Expansion Kits
  - Apple Multimedia Kit for Macintosh
- Includes AppleDesign Powered Speakers II, Apple Headphones, AppleCD 300e Plus CD-ROM player, CD-ROM setup software, a Multimedia Starter CD, and a selection of CD-ROM titles. All cables included.

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## Macintosh LC 475 and LC 575

- Apple IIe Card
- Macintosh 256K VRAM SIMM
- Macintosh 512K VRAM SIMM
- Apple Ethernet LC Card
- Apple PlainTalk Microphone

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## Macintosh Quadra 605

- Macintosh 512K VRAM SIMM
- Apple Ethernet LC Card
- Apple PlainTalk Microphone

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## Macintosh Quadra 950

- Macintosh VRAM Expansion Kit (two 256K SIMMs)
- Apple Ethernet Cable System
- DOS Compatibility Card for Macintosh
- Power Macintosh Upgrade Card

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## **Macintosh LC 630, Macintosh Quadra 630, and Performa 630 Series**

- Apple Video System
- Apple TV/Video System
- Apple Presentation System
- Macintosh 14.4 Fax/Modem Kit

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## **Power Macintosh 6100/60, 7100/66, and 8100/80**

- Power Macintosh 6100/60 NuBus Adapter Card
- Apple Ethernet Cable System
- PlainTalk for Power Macintosh
- Apple PlainTalk Microphone
- Power Macintosh GeoPort Telecom Adapter
- Power Macintosh Display Adapter
- Power Macintosh 256K Cache Card (Power Macintosh 6100/60 and 7100/66 only)
- Power Macintosh 7100/66 1MB VRAM Upgrade Kit
- Power Macintosh 8100/80 2MB VRAM Upgrade Kit

# *The Apple Display Advantage*

60

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## **Great computers deserve great displays**

The original Macintosh set the standard for display quality with its innovative screen—it was the first computer to display text and graphics just as they'd appear when printed. And as the needs of Macintosh users have become more sophisticated, so have Macintosh displays.

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## **Six Macintosh displays to choose from**

Apple offers six displays for Macintosh computers—in a range of sizes. All of our displays are known for their unprecedented brightness, clarity, and fidelity. Their flat screens have sharp focus and virtually no distortion, even at the edges. And our displays meet even the strict Swedish specifications for magnetic-field emissions.

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## **Easy to connect**

Apple displays are easy to install and configure. To connect one to your Macintosh, all you have to do is take a single cable and plug one end into the back of your display and the other into the back of your Macintosh. When you turn on your Macintosh, it will automatically adjust to the size and type of Apple display you're using.

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## **Easy to add a second display**

With Macintosh, you can use multiple displays simultaneously. For instance, you might want to use a color display to view graphics and a full-page display to view word processing documents—simultaneously. It's a cost-effective way to increase your on-screen work area.



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## **Energy efficient**

All Apple displays meet the requirements for the Environmental Protection Agency's Energy Star rating. This means that they won't waste energy—and they *will* save you money on your electric bill.

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## **Multiple-scan display technology**

Apple has incorporated multiple-scan technology into the Apple Multiple Scan displays. This technology enables the displays to provide multiple resolution modes, for flexible viewing. You can switch among viewing modes to optimize your viewing area and resolution for presentations, publishing, two-page layouts, or enlarged page layouts.

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## **Advanced display performance with the Macintosh Display Card 24Ac**

You can get the most out of your display by adding a Macintosh Display Card 24Ac in your Macintosh computer's NuBus slot. This video card improves the performance and resolution of your display, making it ideal for high-end publishing and graphic design. On-board QuickDraw acceleration boosts Macintosh drawing speed up to 30 times faster than with nonaccelerated QuickDraw video. It also lets you work with up to 16.7 million colors.

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## **Compatibility with Windows software-based systems**

Our Apple Multiple Scan displays can also be used with Windows software-based systems—so everyone in your office or school can take advantage of their excellent quality.

# Key Features of the Apple Display Family

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## **Apple Color Plus 14" Display**

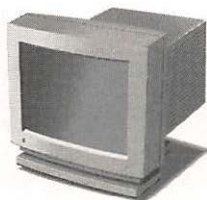
- Most affordable Apple color display
- Tilt-and-swivel base for adjustable viewing angle
- Energy Star compliant (requires software)
- 14-inch (diagonal) [13-inch (viewable)] RGB screen
- 640 by 480 pixels; 76 dots per inch
- 67-hertz screen refresh rate
- 14.2 by 14.2 by 16.0 inches (HWD) (36.1 by 36.1 by 40.6 cm)
- 26.0 lb. (11.7 kg)



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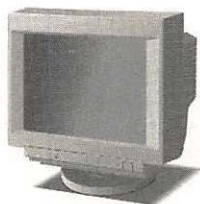
## **Macintosh Color Display**

- Low-cost, high-quality color display
- Provides both color and gray-scale capabilities
- Tilt-and-swivel base for adjustable viewing angle
- Energy Star compliant (requires software)
- 14-inch (diagonal) screen [13-inch (viewable)]; Sony Trinitron tube
- 640 by 480 pixels; 70 dots per inch
- 67-hertz screen refresh rate
- 13.0 by 13.4 by 14.0 inches (HWD) (33.0 by 34.0 by 35.6 cm)
- 25.0 lb. (11.3 kg)



## ★ Apple Multiple Scan 15 Display

- Most affordable RGB display offering multiple-scan technology, which lets you adjust the resolution to meet your needs
- Works with both Macintosh and Windows software-based computers
- Flat, square screen minimizes image distortion
- Energy Star compliant
- Tilt-and-swivel base for adjustable viewing angle
- 15-inch (diagonal) screen [13.8-inch (viewable)]
- Adjustable resolution through software (included): selectable from 640 by 480 pixels to 1,024 by 768 pixels
- 60-hertz to 70-hertz screen refresh rate (depending on resolution)
- 16.7 by 15.9 by 17.8 inches (HWD) (42.4 by 40.5 by 45.2 cm)\*
- 31.0 lb. (14.0 kg)\*



63★

## Apple AudioVision 14 Display

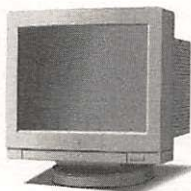
- Offers integrated audio and video features that take full advantage of your software's multimedia features
- Built-in stereo speakers and microphone
- Energy Star compliant
- Autodegaussing circuitry—eliminates magnetic interference
- Tilt-and-swivel base for adjustable viewing angle
- 14-inch (diagonal) screen [13-inch (viewable)]; Sony Trinitron tube
- 640 by 480 pixels; 70 dots per inch
- 66.7-hertz screen refresh rate
- Two ADB ports, sound-input port, headphone and microphone ports
- 13.0 by 13.4 by 14.0 inches (HWD) (33.0 by 34.0 by 35.6 cm)
- 25.0 lb. (11.3 kg)



\* Two designs available worldwide—dimensions and weight may vary

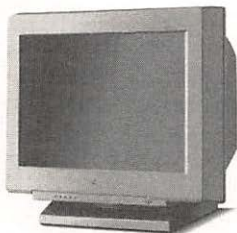
### • **Apple Multiple Scan 17 Display**

- Multiple-scan technology allows you to adjust resolution
- Works with both Macintosh and Windows software-based computers.
- Large work area can be adjusted for different viewing needs
- Energy Star compliant
- Tilt-and-swivel base with convenient audio and ADB pass-through connectors
- 17-inch (diagonal) screen [16.5-inch (viewable)]; Sony Trinitron tube
- Adjustable resolution through software (included): Selectable from 640 by 480 pixels to 1,024 by 768 pixels
- 75-hertz screen refresh rate
- 16.7 by 15.9 by 17.8 inches (HWD) (42.4 by 40.5 by 45.2 cm)
- 50.0 lb. (22.5 kg)



### • **Apple Multiple Scan 20 Display**

- Largest Apple display available
- Multiple-scan technology allows you to adjust resolution to suit your needs (four resolution settings available)
- Works with both Macintosh and Windows software-based computers.
- Energy Star compliant
- Tilt-and-swivel base for adjustable viewing angle
- 20-inch (diagonal) screen [14.1-inch (viewable)]; Sony Trinitron tube
- Adjustable resolution through software (included): Selectable from 640 by 480 pixels to 1,152 by 870 pixels
- Antistatic, antiglare screen coating
- 75-hertz screen refresh rate
- 18.7 by 18.7 by 19.7 inches (HWD) (47.5 by 47.5 by 50.0 cm)
- 66.0 lb. (29.7 kg)



# Apple Keyboards and Mouse

65★

## ★ AppleDesign Keyboard

- Sleek, ergonomically designed keyboard for use with any Macintosh computer
- Adjustable keyboard slope
- Includes function keys, a numeric keypad, cursor arrow keys, and special screen-editing keys
- Dual-legend keycaps represent some of the most common functions of the MS-DOS environment



## Apple Extended Keyboard II

- Includes function keys, a numeric keypad, cursor arrow keys, and special screen-editing keys
- Adjustable keyboard slope
- Ideal for running alternate operating systems or terminal-emulation programs

## Apple Desktop Bus Mouse II

- Round shape fits the contour of the palm of the hand
- Large button allows easy clicking and dragging
- Front ball design allows finer movements with ease





# AppleCD 300e Plus AppleCD 300i Plus



66

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## At a glance

- The AppleCD 300e Plus is an external double-speed CD-ROM drive that gives you fast access to the content on CD-ROM discs.
- It allows you to access QuickTime movies, Kodak Photo CD images, and the wide range of information stored on CD-ROM discs.
- The AppleCD 300i Plus is the version that can be installed inside some Macintosh computers and Workgroup Servers.

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## Specifications

- *Data transfer rate:* 342K per second; 256K cache buffer
- *Average data access time:* Less than 290 milliseconds
- *Ports:* Two 50-pin SCSI connectors, two RCA jacks, headphone jack
- *Dimensions (HWD):* AppleCD 300e Plus—2.3 by 6.2 by 12.7 inches (5.9 by 15.8 by 32.3 cm); AppleCD 300i Plus—1.7 by 5.8 by 8.3 inches (4.3 by 14.8 by 21.0 cm)
- *Weight:* AppleCD 300e Plus—5.7 lb. (2.6 kg); AppleCD 300i Plus—2.1 lb. (.95 kg)

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## Key features

- Offers double-speed data transfer, at rates of up to 342K per second.
- Provides a loading tray—just like an audio CD player.
- Provides full compatibility with any SCSI-equipped personal computer, including Macintosh (running System 6.0.7 or later) and Power Macintosh systems, Windows software-based computers, and UNIX workstations.
- Reads multisession Kodak Photo CD discs.

# AppleDesign Powered Speakers



67

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## At a glance

- The AppleDesign Powered Speakers were specifically engineered to provide high-quality sound for computer use.
- They let you take advantage of CD-quality output from multimedia and audio compact discs.

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## Specifications

- *Amplifier:* Built-in dual channel
- *Ports:* Computer sound-input jack (stereo), CD sound-input jack (stereo); front-panel headphone jack
- *Dimensions (HWD):* 9.25 by 4.5 by 4.75 inches (23.5 by 11.4 by 12.1 cm)
- *Weight:* 4.8 lb. (2.2 kg)—pair
- *Other features:*
  - Tuned-port bass-reflex system for low-frequency response
  - Active equalization for best frequency response at all levels
  - Noise-reduction circuitry for audio clarity

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## Key features

- Can connect directly to any personal computer, CD player, cassette player, or television.
- Feature a dual-input mixer for mixing computer and audio sound tracks.
- Provide controlled sound dispersion so you can enjoy excellent sound quality while maintaining a private listening environment.
- Incorporate magnetic shielding, so you can use them near displays without distorting image quality.
- Provide convenient power, volume, and balance controls and a front headphone jack.

# AppleDesign Powered Speakers II



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## At a glance

- The extremely compact AppleDesign Powered Speakers II were designed to provide high-quality sound output from a personal computer—or a home stereo system.

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## Specifications

- *Amplifier:* Built-in dual channel
- *Ports:* Computer sound-input jack (stereo), CD sound-input jack (stereo); front-panel headphone jack
- *Dimensions (HWD):* 6.9 by 4.2 by 4.0 inches (17.5 by 10.7 by 10.1 cm)
- *Weight:* 2.7 lb. (1.2 kg)—pair
- *Other features:*
  - Tuned-port bass-reflex system for low-frequency response
  - Active equalization for best frequency response at all levels
  - Noise-reduction circuitry for audio clarity

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## Key features

- Can connect directly to any personal computer, as well as to a CD player, cassette player, or television, with a simple cable (included).
- Feature a dual-input mixer for mixing computer and audio sound tracks.
- Provide controlled sound dispersion, so you can enjoy excellent sound quality while maintaining a private listening environment.
- Incorporate magnetic shielding, so you can use them near displays without distorting image quality.
- Provide convenient volume controls and a front headphone jack.

# Portable Computers

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# *The PowerBook Advantage*

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## **The PowerBook advantage: Truly portable computing**

- Apple understands the difference between portable computing and desktop computing. That's why Apple PowerBook computers are not just miniature desktop computers—they were designed specifically to meet the needs of notebook computer users. Although PowerBook computer systems use the same system software as the Macintosh desktop systems, their unique design and carefully selected feature set make PowerBook computers very personal machines, designed to be part of your life.
- Since you'll probably use your PowerBook when you're away from your desk, all of the features you'll need are built in—there are no snap-on components or extra pieces.\* We offer the capability to connect to your world through the fax/modem technology available in all PowerBook models, and through Apple Remote Access software. PowerBook computers are available in both gray-scale and color models. And they comply with the Environmental Protection Agency's Energy Star guidelines for energy conservation.
- PowerBook computers are available in three series: the PowerBook 500 series, the PowerBook 200 series, and the PowerBook 100 series. Each offers a unique set of capabilities, allowing PowerBook computers to meet a range of needs.

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## **PowerBook computers equal success**

- The success of PowerBook is evident in the number of units sold—to date, more than 1.4 million PowerBook computers have

\* Applies specifically to the PowerBook 100 and PowerBook 500 series.



been sold, making it one of the top notebook computers on the market.

- PowerBook systems bring success to both first-time computer owners and seasoned professionals.
- Praise from the industry has been phenomenal. PowerBook computers have won numerous awards, including “Breakthrough Product of the Year” for the PowerBook Duo (*MacUser*, March 1993) and “Best Product of the Year” for the PowerBook (*BusinessWeek*, *Time*, and *Fortune* magazines, 1992). The PowerBook is consistently listed as one of the top two notebook computers on the market.

### **The PowerBook 500 series: High performance and advanced mobile computing technology**

The newest PowerBook computers, the 500 series, show particular strength in key areas:

- *Performance.* With the power of a Macintosh Quadra, PowerBook 500 computers offer exceptional performance through their Motorola 68LC040 processor, as well as providing an upgrade path to the PowerPC processor. They even come with built-in Ethernet capability for connection to high-speed networks. And some are available with active-matrix displays.
- *Innovation.* The PowerBook 500 series computers have a full-size keyboard with function keys and a built-in Apple trackpad instead of a trackball, for maximum comfort and cursor control. In addition, their multimedia capabilities include stereo speakers and a built-in microphone housed in the display, giving you a convenient way to present your work in 16-bit stereo sound and with excellent image quality. And a dual intelligent battery system helps ensure that you won't run out of power when you're on the road—new battery-charging technology and power-management software let you monitor and adjust your battery usage no matter where you are.
- *Expandability.* The PowerBook 500 computers have a variety of expansion options. They have three expansion slots: one for a modem, one for RAM, and one processor-direct slot that can

accommodate the PowerBook PCMCIA Expansion Module, so you can add PC cards and take advantage of features such as cellular communications capability, today. And the PowerBook 520, 520c, and 540 can be upgraded to active-matrix color screen technology. The PowerBook 500 series computers come with a variety of expansion ports, including sound, SCSI, and ADB ports.

- *PowerBook Mobility Bundle.* As mobile computing becomes a business standard, the PowerBook is an excellent tool to help you stay connected to your world. The preinstalled PowerBook Mobility Bundle software provides communications software such as Apple Remote Access, so you can have access to the information you need no matter where you are; compatibility software such as Macintosh PC Exchange and a variety of file-translation options, so you can work with files that are in DOS or Windows formats; and power- and information-management software, such as the PowerBook Control Strip, so you can use your PowerBook in the most efficient way possible.

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### **PowerBook 200 series—The leading full-featured subnotebook computers**

For users who value exceptionally small size and light weight in a portable computer, the PowerBook 200 series systems are an excellent choice, providing a range of features in a product that weighs just over 4 pounds. The PowerBook Duo 280 and 280c computers show particular strength in a few key areas:

- *High performance in a lightweight design.* PowerBook Duo users don't have to compromise power or ease of use to benefit from the convenience of a subnotebook computer. All PowerBook Duo models have plenty of memory and hard-disk expansion options. The PowerBook Duo 280 and 280c have a high-performance Motorola 68040 processor—and are designed to accommodate a future version of the PowerPC processor. They also use active-matrix screen technology, for excellent display quality.

- *Easy-to-use, mobile computing solution.* PowerBook 200 series computers offer features that make them excellent systems for when you're away from the office, including long battery life

and battery-management software, as well as built-in modem slots and serial ports. The PowerBook Duo 280 and 280c come with the PowerBook Mobility Bundle software installed. And they can also be used with a variety of docking products from Apple and third-party vendors, which give you access to the services and peripheral devices provided by a traditional desktop system.

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### **All-in-one PowerBook 100 series—All the features you need, with you all the time**

Featuring the award-winning PowerBook design, the Apple PowerBook 100 series provides the essential built-in features that have made PowerBook computers so popular from the start. They're excellent systems for users in homes and schools, offering an affordable portable solution with the best hardware and software integration available, as well as these key features:

- *Original PowerBook design.* The award-winning PowerBook 100 series product design is one of Apple's strongest advantages. Some of our competitors manage to shrink the features of their desktop computers into notebook size by offering a clip-on mouse or leaving out a palm rest. In contrast, all PowerBook 100 series computers have an integrated palm rest, keyboard, and trackball, so you don't have to sacrifice comfort or deal with additional components.
- *Expansion options.* The PowerBook 100 series computers come with SCSI, serial, and modem ports. And they have a built-in Apple SuperDrive, which can read from and write to DOS, Windows, and OS/2 disks, as well as Macintosh disks.
- *Preinstalled software.* Like all current PowerBook computers, the PowerBook 150 comes with the PowerBook Mobility Bundle installed. And it also comes with ClarisWorks software, so you can be productive from the moment you start up your PowerBook.

# PowerBook 150



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## At a glance

- The PowerBook 150 is the most affordable PowerBook computer.
- It comes with all of the features that made the original PowerBook computers so popular, including an Apple SuperDrive, an integrated high-quality display, SCSI and serial ports, and a modem port—incorporated in the award-winning PowerBook design.

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## Specifications *(Note: Configurations may vary worldwide.)*


- *Processor:* 68030
- *Speed:* 33 megahertz
- *Memory:* 4MB of RAM, expandable to 40MB  
—4MB on logic board and one memory expansion slot
- *Storage:*  
—Internal Apple SuperDrive floppy disk drive  
—Internal 120MB (IDE) hard disk drive
- *Expansion capabilities:* Two internal expansion slots—one for RAM, one for a modem
- *Ports:* Serial port, SCSI port—supports six SCSI devices
- *Displays:* 9.5-inch (diagonal) backlit FSTN passive-matrix display (640 by 480 pixels)
- *Battery:* Nickel-cadmium; average life: 2 to 4 hours
- *Networking ports:* Built-in LocalTalk
- *Dimensions (HWD):* 2.25 by 11.25 by 9.3 inches (5.8 by 28.7 by 23.6 cm)
- *Weight:* 5.5 lb. (2.5 kg)
- *Internal modem:* Optional fax/data modem

- *Other features:*

- Backup application included on hard disk drive
- Restore application included on System Tools disk

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## **Key features**

- Offers an award-winning design—provides palm rests and a convenient trackball that can be used equally well by left- and right-handed users.
- Comes with the PowerBook Mobility Bundle—preinstalled software that makes mobile computing even easier.  72
- Weighs only 5.5 pounds.
- Comes with a built-in, industry-standard 9.5-inch gray-scale display.
- Offers a SCSI port for expandability.
- Takes advantage of Apple Remote Access software.
- Runs thousands of Macintosh applications—and comes with ClarisWorks software.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

**75★**

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## **Other PowerBook models to consider**

- The PowerBook Duo 280 offers high-performance portable computing in a smaller, more lightweight design. It provides an upgrade path to PowerPC technology, and has an active-matrix screen.
- The PowerBook 520 provides support for PC cards, 16-bit stereo sound, a larger display, three expansion slots, and an Apple trackpad.



# PowerBook Duo 280



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## At a glance

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- The PowerBook Duo 280 is Apple's top-of-the-line monochrome subnotebook computer, offering a high-performance Motorola 68LC040 processor and an upgrade path to the PowerPC processor. It weighs just over 4 pounds.
- Its backlit, active-matrix display offers up to 16 levels of gray, which makes it ideal for people who want to display their work with sharp, crisp text and graphics.

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## Specifications *(Note: Configurations may vary worldwide.)*

- *Processor:* 68LC040
- *Speed:* 66/33 megahertz
- *Memory:* 4MB of RAM, expandable to 40MB
  - 4MB on logic board and one memory expansion slot
- *Storage:*
  - Optional external Apple SuperDrive floppy disk drive
  - Internal 240MB hard disk drive
- *Expansion capabilities:* Two slots—one for the optional PowerBook Duo Express Modem, one for RAM
- *Ports:* Serial port, docking connector, power adapter port, modem port; integrated microphone and speakers
- *Displays:* 9-inch (diagonal) backlit active-matrix display with 16 levels of gray (640 by 400 pixels)
- *File transfer options:*
  - LocalTalk cables or serial cable and System 7 file sharing
  - Fax/data modem and Apple Remote Access software
  - External floppy disk drive (optional)
  - SCSI disk mode

- *Battery*: High-capacity Type II nickel-metal-hydride; typical life: 2 to 4 hours; power adapter included
- *Networking ports*: Built-in LocalTalk
- *Dimensions (HWD)*: 1.4 by 10.9 by 8.5 inches (3.8 by 27.7 by 21.6 cm)
- *Weight*: 4.2 lb. (1.9 kg)
- *Internal modem*: Optional PowerBook Duo Express Modem (includes optical character recognition software)

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### **Key features**

- Has a built-in, active-matrix, 16-level gray-scale display.
- Features the high-performance Motorola 68LC040 processor.
- Will accommodate a future version of the PowerPC processor.
- Comes with the PowerBook Mobility Bundle—preinstalled software that makes mobile computing even easier.  72
- Takes advantage of Apple Remote Access software.
- Offers easy file transfer capability through the PowerBook Duo Dock or Duo MiniDock; by connecting your PowerBook Duo to a Macintosh computer via the SCSI port; through file sharing over LocalTalk; or by using an optional fax/data modem and Apple Remote Access software.
- Features the award-winning design shared by all PowerBook 200 series computers—provides palm rests and a convenient, integrated trackball.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

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### **Other PowerBook 200 series models to consider**

- If you require a built-in color display, you should consider the PowerBook Duo 280c, which features a backlit active-matrix color display with two resolution modes.

# PowerBook Duo 280c



## At a glance

- The PowerBook Duo 280c is Apple's top-of-the-line color sub-notebook computer, offering a Motorola 68LC040 processor, an upgrade path to the PowerPC processor, and extensive memory and storage expansion in a design that weighs just over 4 pounds.
- Its backlit, active-matrix display offers up to thousands of bright, vivid colors, which makes it ideal for people who want to develop, display, and present their work in color, for maximum impact.


## Specifications *(Note: Configurations may vary worldwide.)*

- *Processor:* 68LC040
- *Speed:* 66/33 megahertz
- *Memory:* 4MB of RAM, expandable to 40MB
  - 4MB on logic board and one memory expansion slot
- *Storage:*
  - Optional external Apple SuperDrive floppy disk drive
  - Internal 320MB hard disk drive
- *Expansion capabilities:* Two slots—one for the optional PowerBook Duo Express Modem, one for RAM
- *Ports:* Serial port, docking connector, power adapter port, modem port; integrated microphone and speakers
- *Displays:* 8.4-inch (diagonal) backlit active-matrix color display with two display modes:
  - 256 colors at 640- by 480-pixel resolution
  - Thousands of colors at 640- by 400-pixel resolution
- *File transfer options:*
  - LocalTalk cables or serial cable and System 7 file sharing
  - Fax/data modem and Apple Remote Access software
  - External floppy disk drive (optional)
  - SCSI disk mode

- *Battery*: High-capacity Type III nickel-metal-hydride; typical life: 2 to 4 hours; power adapter included
- *Networking ports*: Built-in LocalTalk
- *Dimensions (HWD)*: 1.5 by 10.9 by 8.5 inches (3.8 by 27.7 by 21.6 cm)
- *Weight*: 4.8 lb. (2.2 kg)
- *Internal modem*: Optional PowerBook Duo Express Modem (includes optical character recognition software)

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## Key features

- Features the high-performance Motorola 68LC040 processor.
- Has a built-in, active-matrix color display, which provides exceptional resolution in up to thousands of colors.
- Will accommodate a future version of the PowerPC processor.
- Comes with the PowerBook Mobility Bundle—preinstalled software that makes mobile computing even easier.  72
- Takes advantage of Apple Remote Access software.
- Offers easy file transfer capability through the PowerBook Duo Dock or Duo MiniDock; by connecting your PowerBook Duo to a Macintosh computer via the SCSI port; or by using an optional fax/data modem and Apple Remote Access software.
- Features the award-winning design shared by all PowerBook Duo computers—provides palm rests and a convenient, integrated trackball.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

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## Other PowerBook models to consider

- If your tasks might require more advanced features in a portable computer, you should consider the PowerBook 520c computer, which offers:
  - Support for PC cards.
  - 16-bit stereo sound.
  - A larger display.
  - Three expansion slots (as opposed to one).
  - An Apple trackpad.
  - A built-in Apple SuperDrive

# PowerBook 520



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## At a glance

- The PowerBook 520 is Apple's entry-level PowerBook computer that uses a high-performance Motorola 68LC040 processor.
- It incorporates features that make mobile computing even easier, such as built-in Ethernet capability, a PCMCIA card expansion module, and an intelligent battery system.

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## Specifications *(Note: Configurations may vary worldwide.)*

- **Processor:** 68LC040
- **Speed:** 50/25 megahertz
- **Memory:** 4MB of RAM, expandable to 36MB  
—4MB on logic board and one memory expansion slot
- **Storage:**  
—Internal Apple SuperDrive floppy disk drive  
—Internal 160MB hard disk drive
- **Expansion capabilities:** Three slots—one for a processor-direct card, one for an internal modem, one for RAM; PowerBook PCMCIA Expansion Module (optional)
- **Ports:** Serial port, ADB port, video-output port, power adapter port, sound-input port (stereo) and integrated microphone, sound-output port (stereo) and speakers, SCSI port
- **Displays:** 9.5-inch (diagonal) FSTN, passive-matrix display (16-level gray scale); 640 by 480 pixels
- **Battery:** Nickel-metal-hydride; average life: 2 to 4 hours on one battery; 4 to 7 hours on two batteries; power adapter included
- **Networking ports:** Built-in LocalTalk and Ethernet
- **Dimensions (HWD):** 2.3 by 11.5 by 9.7 inches (5.8 by 29.2 by 24.6 cm)



- *Weight:* 6.3 lb. (2.9 kg)
- *Internal modem:* Optional fax/data modem
- *Security:* Security slot for locking (requires third-party cable)

### Key features

- Features the Motorola 68LC040 processor, which enables the PowerBook 520 to handle even the most complex tasks easily.
- Has built-in Ethernet capability, which lets you transfer information up to 10 times faster than with LocalTalk cabling.
- Will accommodate a future version of the PowerPC processor.
- Has a built-in, 16-level gray-scale display—which you can upgrade to an active-matrix color display.
- Can accommodate PC cards for storage and expansion (requires the PowerBook PCMCIA Expansion Module, which fits into the processor-direct slot).
- Offers an Apple trackpad for more precise cursor control.
- Has two speakers and microphone housed in the display to give you convenient access to 16-bit, stereo sound input and output.
- Comes with the PowerBook Mobility Bundle—preinstalled software that makes mobile computing even easier.  72
- Takes advantage of Apple Remote Access software.
- Offers support for many external Apple displays, including the Apple Multiple Scan 17 Display.
- Offers a SCSI port for expandability; optional SCSI disk adapter and system cable allow you to use your PowerBook 520 as an external Macintosh hard disk.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

### Other PowerBook models to consider

- The PowerBook 520c features a color display with 256 bright, vivid colors.

# PowerBook 520c



## At a glance

- The PowerBook 520c has a high-performance Motorola 68LC040 processor and a dual-scan color display that lets you show your work in 256 bright, vivid colors.
- Its high-quality color display and video-output capability make this a good choice for people who use their notebook computer to present to clients.


## Specifications *(Note: Configurations may vary worldwide.)*

- **Processor:** 68LC040
- **Speed:** 50/25 megahertz
- **Memory:** 4MB of RAM, expandable to 36MB  
—4MB on logic board and one memory expansion slot
- **Storage:**  
—Internal Apple SuperDrive floppy disk drive  
—Internal 160MB or 320MB hard disk drive
- **Expansion capabilities:** Three slots—one for a processor-direct card, one for an internal modem, one for RAM; PowerBook PCMCIA Expansion Module (optional)
- **Ports:** Serial port, ADB port, video-output port, power adapter port, sound-input port (mono) and integrated microphone, sound-output port (stereo) and speakers, SCSI port
- **Displays:** 9.5-inch (diagonal) dual-scan, passive-matrix display (256 colors); 640 by 480 pixels
- **Battery:** High-capacity Type II nickel-metal-hydride; average life: 2 to 4 hours on one battery; 4 to 7 hours on two batteries; power adapter included
- **Networking ports:** Built-in LocalTalk and Ethernet
- **Dimensions (HWD):** 2.3 by 11.5 by 9.7 inches (5.8 by 29.2 by 24.6 cm)

- *Weight:* 6.4 lb. (2.9 kg)
- *Internal modem:* Optional fax/data modem
- *Security:* Security slot for locking (requires third-party cable)

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### **Key features**

- Features the Motorola 68LC040 processor, which enables the PowerBook 520c to handle even the most complex tasks easily.
- Has a built-in, passive-matrix, dual-scan 256-color display—which you can easily upgrade to an active-matrix display.
- Will accommodate a future version of the PowerPC processor.
- Has built-in Ethernet capability, which lets you transfer information up to 10 times faster than with LocalTalk cabling.
- Can accommodate PC cards for storage and expansion (requires PCMCIA Expansion Module, which fits into the processor-direct slot).
- Offers an Apple trackpad instead of a trackball, for more precise cursor control.
- Has speakers and microphone housed in the display to give you convenient access to 16-bit, stereo sound output.
- Comes with the PowerBook Mobility Bundle—preinstalled software that makes mobile computing even easier.  72
- Takes advantage of Apple Remote Access software.
- Offers support for many external Apple displays, including the Apple Multiple Scan 17 Display.
- Offers a SCSI port for expandability; optional SCSI disk adapter and system cable allow you to use your PowerBook 520c as an external Macintosh hard disk.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

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### **Other PowerBook models to consider**

- The PowerBook 540c features a high-quality color, active-matrix display with 256 bright, vivid colors. (It can support up to thousands of colors at a lower resolution.)

# PowerBook 540



## At a glance


- The PowerBook 540 is Apple's top-of-the-line monochrome PowerBook computer that uses a high-performance Motorola 68LC040 processor.
- Its active-matrix display and fast processor make it an ideal system for business users who use spreadsheet and page-layout applications.

## Specifications *(Note: Configurations may vary worldwide.)*

- *Processor:* 68LC040
- *Speed:* 66/33 megahertz
- *Memory:* 4MB of RAM, expandable to 36MB  
—4MB on logic board and one memory expansion slot
- *Storage:*  
—Internal Apple SuperDrive floppy disk drive  
—Internal 240MB hard disk drive
- *Expansion capabilities:* Three slots—one for a processor-direct card, one for an internal modem, one for RAM; PowerBook PCMCIA Expansion Module (optional)
- *Ports:* Serial port, ADB port, video-output port, power adapter port, sound-input port (stereo) and integrated microphone, sound-output port (stereo) and speakers, SCSI port
- *Displays:* 9.5-inch (diagonal) active-matrix display (64-level gray scale); 640 by 480 pixels
- *Battery:* High-capacity Type II nickel-metal-hydride (two included); average life: 1.5 to 3 hours on one battery; 3 to 6 hours on two batteries; power adapter included
- *Networking ports:* Built-in LocalTalk and Ethernet
- *Dimensions (HWD):* 2.3 by 11.5 by 9.7 inches (5.8 by 29.2 by 24.6 cm)

- *Weight:* 7.1 lb. (3.2 kg)
- *Internal modem:* Optional fax/data modem
- *Security:* Security slot for locking (requires third-party cable)

## Key features

- Features the Motorola 68LC040 processor, which enables the PowerBook 540 to handle even the most complex tasks easily.
- Has a built-in, 64-level gray-scale, active-matrix display—which can be easily upgraded to an active-matrix color display.
- Will accommodate a future version of the PowerPC processor.
- Has built-in Ethernet capability, which lets you transfer information up to 10 times faster than with LocalTalk cabling.
- Can accommodate PC cards for storage and expansion (requires PCMCIA Expansion Module, which fits into the processor-direct slot).
- Offers an Apple trackpad for more precise cursor control.
- Has two speakers and microphone housed in the display to give you convenient access to 16-bit, stereo sound input and output.
- Comes with the PowerBook Mobility Bundle—preinstalled software that makes mobile computing even easier.  72
- Takes advantage of Apple Remote Access software.
- Offers support for many external Apple displays, including the Apple Multiple Scan 17 Display.
- Offers a SCSI port for expandability; optional SCSI disk adapter and system cable allow you to use your PowerBook 540 as an external Macintosh hard disk.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

## Other PowerBook models to consider

- The PowerBook 540c and PowerBook Duo 280c feature an active-matrix color display with 256 bright, vivid colors. (They can support up to thousands of colors at a lower resolution.)
- The PowerBook Duo 280c is an exceptionally lightweight subnotebook computer.



# PowerBook 540c



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## At a glance

- The PowerBook 540c is Apple's top-of-the-line color PowerBook computer, combining the power of a high-performance Motorola 68LC040 processor with a high-quality active-matrix color display.
- Color capability, built-in speakers, and an integrated microphone make this an ideal system for people who use their notebook computer to present to clients.


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## Specifications *(Note: Configurations may vary worldwide.)*

- **Processor:** 68LC040
- **Speed:** 66/33 megahertz
- **Memory:** 4MB of RAM, expandable to 36MB—4MB on logic board and one memory expansion slot
- **Storage:**
  - Apple SuperDrive floppy disk drive
  - Internal 320MB or 500MB hard disk drive
- **Expansion capabilities:** Three slots—one for a processor-direct card, one for an internal modem, one for RAM; PowerBook PCMCIA Expansion Module (optional)
- **Ports:** Serial port, ADB port, video-output port, power adapter port, sound-input port (stereo) and integrated microphone, sound-output port (stereo) and speakers, SCSI port
- **Displays:** 9.5-inch (diagonal) active-matrix display with two display modes:
  - 256 colors at 640- by 480-pixel resolution
  - Thousands of colors at 640- by 400-pixel resolution
- **Battery:** High-capacity Type II nickel-metal-hydride (two included); average life: 1.5 to 3 hours on one battery; 3 to 6 hours on two batteries; power adapter included

- *Networking ports:* Built-in LocalTalk and Ethernet
- *Dimensions (HWD):* 2.3 by 11.5 by 9.7 inches (5.8 by 29.2 by 24.6 cm)
- *Weight:* 7.3 lb. (3.3 kg)
- *Internal modem:* Optional fax/data modem
- *Security:* Security slot for locking (requires third-party cable)

### Key features

- Features the Motorola 68LC040 processor, which enables the PowerBook 540c to handle even the most complex tasks easily.
- Has a built-in, active-matrix display that supports 256 colors (supports up to thousands of colors at a lower resolution).
- Will accommodate a future version of the PowerPC processor.
- Has built-in Ethernet capability, which lets you transfer information up to 10 times faster than with LocalTalk cabling.
- Can accommodate PC cards for storage and expansion (requires PCMCIA Expansion Module, which fits into the processor-direct slot).
- Offers an Apple trackpad instead of a trackball, for more precise cursor control.
- Has speakers and microphone housed in the display to give you convenient access to 16-bit, stereo sound input and output.
- Comes with the PowerBook Mobility Bundle—preinstalled software that makes mobile computing even easier.  72
- Takes advantage of Apple Remote Access software.
- Offers support for many external Apple displays, including the Apple Multiple Scan 17 Display.
- Offers a SCSI port for expandability; optional SCSI disk adapter and system cable allow you to use your PowerBook 540c as an external Macintosh hard disk.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

### Other PowerBook models to consider

- The PowerBook Duo 280c is an exceptionally lightweight subnotebook computer.

# PowerBook Duo Docking Products

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## **PowerBook Duo Dock and PowerBook Duo Dock II at a glance**

- Inserting your PowerBook Duo notebook computer into the PowerBook Duo Dock or PowerBook Duo Dock II gives you access to a complete Macintosh desktop system.
- PowerLatch docking technology gives the PowerBook Duo System:
  - Easy connection between the PowerBook Duo computer and the dock; there are no cables to hook up.
  - Powered insert and eject.
  - Data protection. You can't accidentally lose your work-in-progress by ejecting your PowerBook Duo while it is docked.
- Both docks are compatible with all PowerBook Duo computers.
- The PowerBook Duo Dock physically supports external displays weighing up to 50 pounds—including the Apple Multiple Scan 17 Display.
- The PowerBook Duo Dock II physically supports external displays weighing up to 85 pounds—including the Apple Multiple Scan 20 Display.



### **Specifications** *(Note: Configurations may vary worldwide.)*

- **Coprocessor:** 68882 math coprocessor; 32K memory cache (PowerBook Duo Dock II only; benefits PowerBook Duo computers with 68030 processor only)

- *Storage:*

- Internal Apple SuperDrive floppy disk drive

- Bay for 3.5-inch hard disk drive

- *Expansion capabilities:* Two NuBus slots; supports six SCSI devices

- *Ports:* Two serial ports, ADB port, SCSI port, video-output port, pass-through port for modem, sound-input port (mono), sound-output port (mono)

- *Video support:*

- PowerBook Duo Dock:* Comes with 512K of video RAM, providing built-in support for 256 colors on the Apple Multiple Scan 17 Display;

- PowerBook Duo Dock II:* Comes with 1MB of video RAM, providing built-in support for up to thousands of colors on the Apple Multiple Scan 17 Display, and up to 256 colors on the Apple Multiple Scan 20 Display; both support some third-party VGA and SVGA displays

- *Networking ports:* Built-in LocalTalk; Ethernet (PowerBook Duo Dock II only)

- *Dimensions (HWD):* 5.1 by 12.5 by 16.3 inches (13.0 by 31.8 by 41.4 cm)

- *Weight:* PowerBook Duo Dock—13.1 lb. (5.9 kg); PowerBook Duo Dock II—13.5 lb. (6.1 kg)

- *Other features:*

- Mouse

- Automatic PowerLatch insert and eject, which makes inserting a PowerBook Duo computer into a PowerBook Duo Dock as easy as inserting a videotape into a VCR

- Manual eject if power is out

## **PowerBook Duo MiniDock at a glance**

- The portable PowerBook Duo MiniDock provides convenient connection to a modem, an external floppy disk drive, and a variety of external displays for presentations, including the Apple Multiple Scan 17 Display and some third-party VGA and SVGA displays.



- Offers standard Macintosh input and output ports—and supports up to six SCSI devices.
- Features PowerLatch docking technology for easy, one-step docking.
- Lets you connect your PowerBook Duo to another Macintosh computer—and use the PowerBook Duo as if it were an external Macintosh hard disk.

### Specifications

- *Ports:* Two serial ports, ADB port, power adapter port, video-output port, SCSI port, external disk drive port, pass-through port for modem, sound-input port (mono), sound-output port (mono)
- *Security features:* Built-in security slot
- *Video support:* Built-in support for up to 256 colors on Apple displays and on some third-party VGA and SVGA displays
- *Networking ports:* Built-in LocalTalk
- *Dimensions (HWD):* 2.1 by 10.6 by 3.2 inches (5.3 by 26.9 by 8.1 cm)
- *Weight:* 1.24 lb. (.56 kg)

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### PowerBook Duo Floppy Adapter at a glance

- The PowerBook Duo Floppy Adapter allows you to access an external floppy disk drive with any PowerBook Duo.
- Its ADB port lets you connect a mouse or an extended keyboard.
- Its security slot helps ensure that the system cannot be removed from your work space.



### Specifications

- *Ports:* External floppy disk drive port; ADB port
- *Dimensions (HWD):* 1.5 by 5.0 by 2.6 inches (3.8 by 12.7 by 6.6 cm)
- *Weight:* .3 lb. (.14 kg)



# Portable System Accessories

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## **PowerBook Accessories (all models)**

- PowerBook 4MB Memory Expansion Kit
- PowerBook 8MB Memory Expansion Kit
- PowerBook AC Adapter
- Apple HDI-30 SCSI System Cable
- Apple HDI-30 SCSI Disk Adapter

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## **PowerBook 150**

- PowerBook Rechargeable Battery
- PowerBook Battery Recharger

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## **PowerBook 520, 520c, 540, 540c**

- PowerBook PCMCIA Expansion Module
- PowerBook Active-Matrix Color Screen Upgrade  
(PowerBook 520, 520c, and 540 only)
- PowerBook Intelligent Battery
- PowerBook Expansion Bay Cover
- PowerBook Express Modem II (not sold in the United States)

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## **PowerBook Duo Accessories**

- PowerBook Duo Dock and PowerBook Duo Dock II
- PowerBook Duo MiniDock
- PowerBook Duo Floppy Adapter
- Macintosh HDI-20 External 1.4MB Floppy Disk Drive
- PowerBook Duo Express Modem

- PowerBook Duo Rechargeable Battery
- PowerBook Duo Battery Recharger
- PowerBook Duo AC Adapter
- PowerBook File Assistant
- PowerBook/DOS Companion

# Printers & Imaging

# *The Apple Printer Advantage*

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## **Apple printers come complete**

All essential features are built in. So there's no need to buy interface cards, special printer drivers, or font cartridges.

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## **They're incredibly easy to set up and use**

Setting up any Apple printer is a simple matter of connecting a cable from the back of your Macintosh to the back of the printer. Connecting a printer to a network of Macintosh computers is just as simple. And when it comes time to print, you just use the Print command.

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## **They're built to work with all Macintosh, Power Macintosh, and PowerBook models and all Macintosh applications**

If you can create it on a Macintosh screen, you can print it on an Apple printer. Our printers are designed to help you get the most out of your Macintosh and software. They can be used with all Macintosh computers that use System 7 and support color QuickDraw—and the LaserWriter Select 360, LaserWriter 16/600 PS, and LaserWriter Pro 810 printers can even be used in mixed workgroup environments with Windows software-based systems, and with some UNIX-based systems.

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## **They're versatile**

No matter which printer you choose, you'll get great printed results. All Apple printers let you use fonts in a wide range of sizes to create clear, compelling documents—from simple letters to complex desktop publishing projects. You can print on a variety of materials, including envelopes, labels, and transparencies. And Apple's GrayShare and ColorShare software add gray-scale

and color printing and printer sharing capability to the StyleWriter II, Color StyleWriter 2400, Color StyleWriter Pro, and Personal LaserWriter 300.

### **They offer excellent print quality, through Apple's core imaging technologies**

Apple has developed six key technologies that not only make scanning simpler and printing crisper, but also make adding images to your work easier than ever. These technologies redefine the way computers handle graphics and increase the number of ways you can express your ideas.

- *TrueType*. With Apple's TrueType outline font technology, even the most affordable Apple printers can exceed the type quality of most printers currently on the market. All TrueType fonts are expertly crafted to produce type that's perfect at any size, and they look as good on the screen as they do in print.



The letters, numbers, symbols, and punctuation marks of a TrueType font are defined mathematically and stored as outlines. As you type, the Macintosh computer uses those outlines to determine how the characters will look on your display, and then fills in the outlines. Your Macintosh can enlarge, reduce, or stretch TrueType outlines to give you the exact type size you want. And when you print your work, the computer uses the same TrueType outlines to create smooth, high-resolution characters for the printer.

- *FinePrint*. Most laser printers generate text and line art with jagged edges, because they print dots of only one size. Apple's FinePrint technology, on the other hand, gives some Apple laser printers the capability of printing dots of different widths, producing precise, smooth text and line art. By adjusting the widths of individual dots, Apple printers can produce crisper text and sharper graphics than ever before.



- *PhotoGrade*. Photographs retain more detail when printed from the Personal LaserWriter 320, LaserWriter 16/600 PS, and LaserWriter Pro printers, because these printers can use Apple's PhotoGrade technology.





PhotoGrade can designate many different gray levels for each pixel, as well as control the size of the dots, enabling you to print photographs that closely resemble the originals.

- *GrayShare*. GrayShare technology is part of Apple printers that use QuickDraw software. GrayShare provides ease of use and full compatibility with all Macintosh computers, and it offers two key capabilities that were once available only in high-end PostScript printers: gray-scale printing and printer sharing.



—*Gray-scale printing*. GrayShare makes it easy for you to include photographs in your work, because it gives your printer the ability to produce images with multiple colors and gray levels.

—*Printer sharing*. Now it's a simple matter of clicking the mouse when you want to share your printer with others who are connected to an AppleTalk or EtherTalk network. And GrayShare comes with options for controlling printer access with passwords and for monitoring printer use.

- *ColorShare*. Like GrayShare, this technology allows you to share your color printer with other users on a network. It includes “scatter” or diffusion halftoning for better print quality.



- *ColorSync*. Apple's ColorSync software addresses one of the most common difficulties associated with color desktop publishing: the wide variations in color from original document to scanned image (continuous color) to displayed image [RGB (red, green, and blue) color] to printed image [CMYK (cyan, magenta, yellow, and black) color].



Unlike color-matching applications—which are designed to work with specific programs only—ColorSync is part of the Macintosh System 7 operating system. It works behind the scenes with Macintosh applications, making sure that colors are consistent across input, display, and output devices.

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## **Apple printers are Energy Star compliant**

Most Apple printers qualify for the EPA Energy Star rating (U.S.A.) as energy-efficient products, making them more affordable to use.

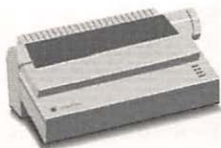
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## **There's a printer for every task—and budget**

With a family of ten printers to choose from, you can be certain that there's an Apple printer that meets your needs. You can also rest assured that your Apple printer will continue to do so for a long time to come: All of our printers are designed to provide years of dependable service.

If you should need further information about Apple printers, you can order additional product literature by calling AppleFAX, at 1-800-462-4396 or (415) 598-4329. AppleFAX will send high-quality images of a wide array of Apple literature to your fax device within minutes, 24 hours a day, 7 days a week.

# ImageWriter II



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## At a glance

- The ImageWriter II is a dot-matrix printer well suited for classroom, personal, and professional use.
- It's ideal for printing on continuous-feed paper, such as payroll checks or preprinted forms.

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## Specifications

- *Resolution:* 144 dots per inch
- *Printing speed:* .5 page per minute (best mode); 2 pages per minute (draft mode)
- *Processor:* Uses the computer's processor
- *Fonts:* Built-in character sets for English, Italian, Danish, German, Swedish, French, and Spanish
- *Paper handling:* Supports both cut sheet and fanfold continuous (3 to 10 inches in width); prints forms, labels, envelopes
- *Interfaces:* Direct connection—RS-422/RS-232 (serial); LocalTalk (requires ImageWriter II/LQ LocalTalk Option); QuickDraw
- *Dimensions (HWD):* 5.0 by 17.0 by 12.0 inches (12.7 by 43.2 by 30.5 cm)
- *Weight:* 15.0 lb. (6.8 kg)
- *Recommended number of users:* One to three (with LocalTalk option)
- *Other features:*
  - Capable of printing color documents (requires color ribbon).
  - Can be equipped with a cut-sheet feeder, which holds as many as 100 single-sheet pages of cut-sheet paper.

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## **Key features**

- Prints dot-matrix format, so it's good for drafts, and can handle multipart forms.
- Has tractor-feed feature, which allows it to print on continuous-feed paper.
- Prints in two modes—draft mode and best mode.
- Can print on envelopes and labels.
- Can print in color (requires color ink ribbon).
- Is compatible with Apple II and Macintosh computers.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

# StyleWriter II



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## At a glance

- The StyleWriter II is an ink-jet printer that offers laser-quality printing at a very affordable price.
- It takes advantage of Apple's GrayShare software—which allows printer sharing, and gray-scale printing for sharp printed graphics.
- Its compact design lets you use it in even the smallest of work spaces, such as a dorm room or a one-person office.

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## Specifications

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- *Resolution:* 360 dots per inch
- *Printing speed:* 1 page per minute (best mode); 2 pages per minute (draft mode)
- *Processor:* Uses the computer's processor
- *Memory:* 128K of RAM
- *Fonts:* 39 scalable TrueType fonts
- *Paper tray size:* 100 sheets; automatically feeds up to 15 envelopes
- *Paper handling:* Supports U.S. letter, U.S. legal, A4, envelopes, labels, and transparencies
- *Interfaces:* RS-232 serial interface; QuickDraw; LocalTalk, EtherTalk, and TokenTalk support via GrayShare
- *Networking capability:* Printer sharing through GrayShare software
- *Dimensions (HWD):* 7.0 by 13.6 by 7.9 inches (17.8 by 34.5 by 20.1 cm)
- *Weight:* 6.6 lb. (3.0 kg)
- *Recommended number of users:* One; supports multiple users through GrayShare



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## **Key features**

- Provides laser-quality printing in a small, compact design.
- Can print on a variety of materials, including envelopes and transparencies.
- Takes advantage of GrayShare software, which allows printer sharing and gray-scale printing for sharp printed graphics.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

# Portable StyleWriter



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## At a glance

- The Portable StyleWriter is a portable ink-jet printer that offers laser-quality printing at an affordable price.
- Its small, lightweight design and battery-operation mode make it ideal for PowerBook users to take with them on the road.

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## Specifications

- *Resolution:* 360 dots per inch
- *Printing speed:* .5 page per minute (best mode);  
1 page per minute (draft mode)
- *Processor:* Uses the computer's processor
- *Memory:* 16K of RAM
- *Fonts:* 39 scalable TrueType fonts
- *Paper tray size:* Single-sheet feed; 65-sheet feeder optional
- *Paper handling:* Supports U.S. letter, U.S. legal, A4, envelopes, labels, and transparencies
- *Interfaces:* Parallel interface with serial-to-parallel cable;

### QuickDraw

- *Battery:* Nickel-cadmium; average life: 2 to 2.5 hours (approximately 50 pages per charge)
- *Dimensions (HWD):* 1.9 by 12.2 by 8.7 inches (4.8 by 31.0 by 22.1 cm)
- *Weight:* 4.5 lb. with battery included (2.0 kg)
- *Recommended number of users:* One
- *Other features:*  
—Battery and battery recharger included

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**Key features**

- Provides laser-quality printing in an extremely small design.
- Is designed for printing when you're on the road—which makes it perfect for use with a PowerBook or PowerBook Duo computer.
- Operates on either batteries or AC power.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

# Color StyleWriter 2400



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## At a glance

- The Color StyleWriter 2400 is an economical, compact ink-jet printer that produces vibrant colors and crisp text.
- Its exceptional print quality and affordable price make the Color StyleWriter 2400 ideal for families, educators, and small-business owners.

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## Specifications

- ★104 • *Resolution:* 360 dots per inch
- *Printing speed:* 3 pages per minute (black and white); 0.3 minutes per page (color)—depends on computer's processor
- *Processor:* Uses the computer's processor
- *Memory:* 96K input buffer
- *Fonts:* 64 scalable TrueType fonts
- *Paper tray size:* Multipurpose tray holds up to 100 sheets of paper or 15 envelopes
- *Interfaces:* RS-232 serial interface; optional LocalTalk; QuickDraw; enhanced with ColorShare and ColorSync; LocalTalk, EtherTalk, and TokenTalk support via ColorShare
- *Networking capability:* Printer sharing through ColorShare software; optional LocalTalk
- *Dimensions (HWD):* 8.3 by 14.4 by 8.4 inches (21.1 by 36.5 by 21.5 cm)
- *Weight:* 7.9 lb. (3.6 kg)
- *Recommended number of users:* One; can support multiple users through ColorShare
- *Other features:*
  - Cable included
  - Energy Star compliant
  - One color ink cartridge; separate black ink cartridge

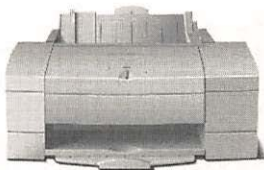
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## **Key features**

- Has a small, compact design, making it ideal for dormitories or small work spaces.
- Ink cartridges are separate—one for the color and one for the black—so you can replace the black ink (which is most commonly used) without wasting remaining ink in the color tanks.
- Has ColorSync color-matching technology, so the color you see on the screen will match the colors on the printed page.
- Supports a variety of paper formats: plain paper, premium paper, transparencies, and coated papers.
- Has ColorShare software, so you can share your printer with others on a network.
- Provides high-quality printing at a low cost per page.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.



# Color StyleWriter Pro



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## At a glance

- The Color StyleWriter Pro is an ink-jet printer that provides fast, high-quality color printing in a compact design.
- It's a versatile printer that's perfect for home or office use, since it lets you print your color files at your desk at about half the cost per page of other desktop color printers.

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## Specifications

- *Resolution:* 360 dots per inch
- *Printing speed:* Up to 2 pages per minute (black and white); up to .5 page per minute (color)
- *Memory:* 96K input buffer
- *Fonts:* 64 scalable TrueType fonts
- *Paper tray size:* Multipurpose tray holds up to 100 sheets or 15 envelopes
- *Interfaces:* RS-232 serial interface; QuickDraw; enhanced with ColorShare and ColorSync; LocalTalk, EtherTalk, and TokenTalk support via GrayShare
- *Networking capability:* Printer sharing through ColorShare software
- *Dimensions (HWD):* 7.2 by 16.5 by 10.1 inches (18.3 by 41.9 by 25.7 cm)
- *Weight:* 11.0 lb. (5.0 kg)
- *Recommended number of users:* One; can support multiple users through ColorShare
- *Other features:*
  - Cable included

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## **Key features**

- Prints using fast-drying, fade-resistant ink.
- Uses four separate ink cartridges for a low cost per page.
- Has ColorSync color-matching technology, so the color you see on the screen will match the colors on the printed page.
- Supports a variety of paper formats: plain paper, premium paper, transparencies, and coated papers.
- Has ColorShare software, so you can share your printer with others on a network.
- Provides fast, high-quality printing at a low cost per page.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.

# Personal LaserWriter 300



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## At a glance

- The Personal LaserWriter 300 is Apple's most affordable laser printer.
- Its gray-scale capability enables the Personal LaserWriter 300 to offer sharp graphics printing.
- It's a compact, energy-efficient laser printer that's perfect for home use.

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## Specifications

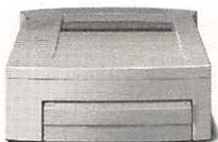
- *Resolution:* 300 dots per inch
- *Printing speed:* 4 pages per minute
- *Processor:* Uses the computer's processor
- *Memory:* 512K of RAM (can operate as though it has 2MB of RAM)
- *Fonts:* 39 scalable TrueType fonts
- *Paper tray size:* Multipurpose tray holds 100 sheets
- *Paper handling:* Manual feed supports straight-through paper path
- *Interfaces:* RS-422 serial interface; QuickDraw; enhanced with GrayShare; LocalTalk, EtherTalk, and TokenTalk support via GrayShare
- *Networking capability:* Printer sharing through GrayShare software
- *Dimensions (HWD):* 6.3 by 15.2 by 14.9 inches (16.0 by 38.6 by 37.9 cm)
- *Weight:* 15.0 lb. (6.8 kg)
- *Recommended number of users:* One to three
- *Other features:*
  - Energy conservation mode

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**Key features**

- Most affordable, most compact Apple laser printer.
- Has a small, compact design and quiet operation, which makes it perfect for home use.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.
- Provides password-protected printer sharing and gray-scale printing through GrayShare printer driver software.

# Personal LaserWriter 320



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## At a glance

- The Personal LaserWriter 320 provides advanced print capabilities in Apple's most affordable Adobe PostScript laser printer.
- It's a fast, quiet, energy-efficient printer that's ideal for home or office use.

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## Specifications

- *Resolution:* 300 dots per inch; FinePrint; PhotoGrade (optional)
- *Printing speed:* 4 pages per minute
- *Processor:* 16-megahertz AMD 29205 RISC
- *Memory:* 2MB, expandable to 8MB
- *Supported languages:* Adobe PostScript Level 2
- *Fonts:* 39 scalable TrueType and PostScript fonts
- *Paper tray size:* 100 sheets; manual feed supports straight-through paper path
- *Interfaces:* LocalTalk
- *Networking capability:* Built-in LocalTalk
- *Dimensions (HWD):* 6.3 by 15.2 by 14.9 inches (16.1 by 38.5 by 37.9 cm)
- *Weight:* 15.4 lb. (7.0 kg)
- *Recommended number of users:* One to three

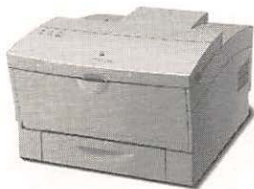


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## **Key features**

- Comes with a RISC processor so you can print at a quick 4 pages per minute.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.
- Can support FinePrint and PhotoGrade technology (PhotoGrade requires 8MB of RAM), to make your work look great.
- Provides TrueType and Adobe PostScript fonts in a range of typefaces.
- Prints quietly—the fan operates only during printing.

# LaserWriter Select 360



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## At a glance

- The award-winning LaserWriter Select 360 is Apple's 600-dot-per-inch laser printer for small and medium-size workgroups that use Macintosh and Windows software-based computers.
- It's a high-speed printer for handling complicated jobs quickly.
- With an optional internal fax card that incorporates PostScript technology, it can send, receive, and print plain-paper faxes at up to 600-dot-per-inch resolution.

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## Specifications

- *Resolution:* 600 dots per inch
- *Printing speed:* 10 pages per minute
- *Processor:* 16-megahertz AMD 29200 RISC
- *Memory:* 7MB, expandable to 16MB
- *Supported languages:* Adobe PostScript Level 2, PCL 5 emulation—autoemulation switching between PostScript and PCL 5
- *Fonts:* 64 scalable TrueType and PostScript fonts
- *Paper tray size:* Built-in 50- and 250-sheet trays (can hold envelopes); 250- or 500-sheet trays optional
- *Interfaces:* Simultaneous connection to parallel, LocalTalk, and serial RS-422; optional fax (send-and-receive)
- *Networking capability:* Built-in LocalTalk; can connect to Ethernet networks via EtherTalk, with software
- *Dimensions (HWD):* 8.0 by 15.0 by 18.3 inches (20.3 by 38.1 by 46.5 cm)
- *Weight:* 26.0 lb. (11.7 kg)
- *Recommended number of users:* Two to six
- *Other features:*  
—Energy Star compliant

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**Key features**

- Prints at 600-dot-per-inch resolution, providing exceptional print quality at your desk.
- Lets you use your printer as a plain-paper fax machine (requires optional fax card).
- Prints at 10 pages per minute, so you can print long documents quickly.
- Can connect to Ethernet networks through software (included).
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.
- Fits easily into both Macintosh and Windows computing environments.
- Provides autoemulation switching between PostScript and PCL 5.

# LaserWriter

## 16/600 PS



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### At a glance

- The Apple LaserWriter 16/600 PS is a high-performance laser printer with exceptional print quality, speed, network compatibility, and expansion options that cannot be matched by other printers in its price range.
- It provides enhanced network support for TCP/IP, Novell NetWare IPX, and EtherTalk protocols over Ethernet networks.
- It can be used in networks of Macintosh computers, networks of Windows software-based computers, or mixed workgroup environments that include both.
- With an optional internal fax card, users can send, receive, and print plain-paper faxes at up to 600-dot-per-inch resolution.

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### Specifications

- *Resolution:* 600 dots per inch standard with FinePrint; PhotoGrade (requires minimum 12MB of RAM)
- *Printing speed:* 16 pages per minute (A4-size paper); 17 pages per minute (letter-size paper)
- *Processor:* 32-megahertz 29030 AMD RISC processor; 80C186 I/O processor
- *Memory:* 8MB, expandable to 16MB
- *Supported languages:* Adobe PostScript Level 2; PCL 5
- *Fonts:* 64 scalable TrueType and PostScript
- *Paper tray size:* 100- and 250-sheet multipurpose trays (can hold envelopes); optional 500-sheet tray can hold 75 envelopes
- *Interfaces:* Simultaneous connection to Ethernet, LocalTalk, bidirectional TCP/IP and Novell NetWare IPX protocols; parallel interface; optional fax (send-and-receive); external SCSI port
- *Networking capability:* Built-in LocalTalk and Ethernet

- *Dimensions (HWD)*: 12.1 by 16.7 by 16.9 inches (30.7 by 42.4 by 42.9 cm)
- *Weight*: 40.0 lb. (18.0 kg)
- *Recommended number of users*: 10 or more
- *Other features*:
  - Energy Star compliant
  - Autoemulation switching

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### **Key features**

- Can be connected to Macintosh and Windows software-based computers over Ethernet networks supporting a variety of protocols, which makes it an ideal solution for a multivendor environment.
- Prints at 600-dot-per-inch resolution, providing exceptional print quality at your desk.
- Offers an optional fax card that incorporates PostScript technology and lets you send faxes from your computer and receive faxes at your printer—at up to 600-dot-per-inch resolution.
- SCSI port lets you add hard disk drives to store a range of fonts.
- Qualifies for the EPA Energy Star rating (U.S.A.) as an energy-efficient product.



# LaserWriter Pro 810



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## At a glance

- The LaserWriter Pro 810 provides enhanced network support for enterprisewide computing, including support for TCP/IP, Novell NetWare IPX, DEC LAT, and EtherTalk protocols over Ethernet.
- It prints 20 pages per minute on standard paper, so your large workgroup can get jobs done quickly while maintaining excellent print quality.
- It has the ability to print on tabloid-size paper (11- by 17-inch).
- With an optional internal fax cartridge, it can send, receive, and print plain-paper faxes at up to 800-dot-per-inch resolution.

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## Specifications

- *Resolution:* 400 dots per inch (default); can be set to 300, 600, or 800 dots per inch for letter-size paper (PostScript mode)—requires additional RAM for 11- by 17-inch paper; 300 dpi (PCL mode)
- *Printing speed:* 20 pages per minute (letter-size or A4 paper); 10 pages per minute (11- by 17-inch paper)
- *Processor:* 7.3-megahertz Weitek 8200 RISC
- *Memory:* 8MB, expandable to 32MB
- *Supported languages:* Adobe PostScript Level 2, PCL 4+ emulation
- *Fonts:* 64 scalable TrueType fonts on disk; 35 PostScript Type 1 fonts in ROM
- *Paper tray size:* 750 sheets (three universal-size paper trays); envelope feeder holds 15 envelopes (optional)
- *Paper handling:* Supports 11- by 17-inch paper

- *Interfaces:* Simultaneous connection to LocalTalk, Ethernet, and RS-232 serial; optional PostScript fax (send-and-receive); external SCSI port
- *Networking capability:* Built-in LocalTalk and Ethernet with simultaneous support for TCP/IP, Novell NetWare IPX, DEC LAT, and EtherTalk protocols
- *Dimensions (HWD):* 19.5 by 20.5 by 21.5 inches (49.5 by 52.1 by 54.6 cm)
- *Weight:* 81.0 lb. (36.8 kg)
- *Recommended number of users:* Workgroups of 10 or more

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### **Key features**

- Can be connected to Macintosh and Windows software-based computers over Ethernet networks supporting a variety of protocols, which makes it an ideal solution for a multivendor environment.
- Can print at up to 800-dot-per-inch resolution, providing outstanding print quality in an office printer.
- Lets you print on tabloid-size (11- by 17-inch) paper.
- Prints at 20 pages per minute, so you can print long documents quickly.
- Provides TrueType and Adobe PostScript fonts in a range of typefaces.
- SCSI port lets you add hard disk drives to store a range of fonts.

# Apple Printer Accessories

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## **ImageWriter II**

- ImageWriter II/LQ LocalTalk Option
- ImageWriter I and II Black Ribbon (six ribbons per box)
- ImageWriter II Color Ribbon (six ribbons per box)
- ImageWriter II Cut Sheet Feeder
- ImageWriter II 32K Memory Option

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## **StyleWriter II**

- StyleWriter Series Ink Cartridge

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## **Portable StyleWriter**

- StyleWriter Series Ink Cartridge
- Personal StyleWriter NiCd Battery Pack
- Portable StyleWriter Auto Sheet Feeder

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## **Color StyleWriter 2400 and Color StyleWriter Pro**

- Color StyleWriter 2400 Ink Cartridge (includes color and black ink tanks)
- Color StyleWriter 2400 replacement ink tank (black and color—C, M, Y)
- Color StyleWriter 2400 Black Ink Cartridge
- Color StyleWriter 2400 LocalTalk Option
- Color StyleWriter Pro Ink Cartridge (four ink tanks—C, M, Y, K)
- Apple Color Ink-jet Premium Coated Paper Film A4
- Apple Color Ink-jet Premium Coated Paper Film LTR
- Apple Color Ink-jet Transparencies Film A4
- Apple Color Ink-jet Transparencies Film LTR
- Apple Color Ink-jet Back-Print Film A4
- Apple Color Ink-jet Back-Print Film LTR

- Apple Color Ink-jet Glossy Paper LTR
- Apple Color Ink-jet Glossy Paper A4

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### **Personal LaserWriter 300**

- Personal LaserWriter 300 Series Universal Cassette
- Personal LaserWriter 300 Series Toner Cartridge

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### **Personal LaserWriter 320**

- Personal LaserWriter 300 Series Universal Cassette
- Personal LaserWriter 300 Series Toner Cartridge
- Personal LaserWriter 320 2MB RAM Upgrade
- Personal LaserWriter 320 6MB PhotoGrade Upgrade

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### **LaserWriter Select 360**

- LaserWriter Select Toner Cartridge
- LaserWriter Bridge software for Ethernet
- LaserWriter Select 500-Sheet Feeder with Letter Cassette
- LaserWriter Select 250-Sheet Legal Cassette
- LaserWriter Select 250-Sheet Feeder with Cassette  
(supports letter, A4, and B5 paper)
- LaserWriter Select 30-Envelope Cassette
- LaserWriter Select 360 PostScript Fax Card
- LaserWriter Select Multipurpose Tray Option

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### **LaserWriter 16/600PS**

- LaserWriter 16/600PS Fax Card (United States only)
- LaserWriter 16/600PS Fax Kit (international)
- LaserWriter 16/600PS Internal Hard Disk Drive
- LaserWriter Toner Cartridge

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### **LaserWriter Pro 810**

- LaserWriter Pro 810 250-Sheet Universal Cassette
- LaserWriter Pro 810 250-Sheet Executive Cassette
- LaserWriter Pro 810 PostScript Fax Cartridge
- LaserWriter Pro 810 Toner Cartridge
- LaserWriter Pro 810 Extended-Capacity EP Cartridge Kit
- LaserWriter Pro 810 4MB Memory Expansion
- LaserWriter Pro 810 8MB Memory Expansion
- LaserWriter Pro 810 8MB Automated Media Feeder

# Apple OneScanner

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## At a glance

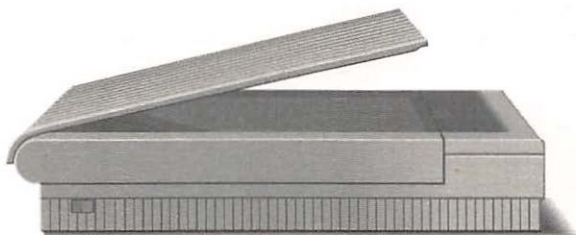
- Both the Apple OneScanner and Apple OneScanner for Windows offer high-quality scanning and single-button simplicity, for both professional and personal use.
- Both come with Ofoto scanning software, which ensures outstanding clarity and fidelity to the original image.
- The Apple OneScanner for Macintosh comes with HyperScan 2.0 software, which lets you easily incorporate scans into HyperCard stacks.

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## Specifications

- *Gray-scale capabilities:* 256 levels (8 bits per pixel)
- *Scanning resolution:* 75 to 1,200 dots per inch in 1-dot-per-inch increments through software interpolation
- *Maximum scan area:* 8.5 by 14.0 inches (21.6 by 35.6 cm)
- *Interface:* SCSI; OneScanner for Windows comes with SCSI interface card





- *File formats:* Supports PICT, TIFF, EPS, and MacPaint formats on Macintosh computers; supports TIFF, PC Paintbrush, Windows bitmap, GEM Image, Microsoft Paint, and EPS formats on Windows software-based computers
- *System requirements:* Macintosh system software version 7.1 or later, HyperCard 2.0 or later to use HyperScan 2.0 software, and appropriate SCSI cabling; OneScanner for Windows requires Windows 3.0 or later
- *Dimensions (HWD):* 4.4 by 13.6 by 21.8 inches (11.2 by 34.5 by 55.4 cm)
- *Weight:* 23.0 lb. (10.4 kg)

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### **Key features**

- Features high-quality rotation and scaling algorithms for image manipulation without loss of quality.
- Is available for both Macintosh and Windows.
- Includes automatic scanning capability for one-step usage.
- Provides adaptive calibration that adjusts scans to achieve the highest-quality output possible from your printer.

# Apple Color OneScanner



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## At a glance

- The Apple Color OneScanner offers high-quality scanning and single-button simplicity—in color.
- It comes with Ofoto 2.0 scanning software, which ensures outstanding clarity and fidelity to the original image—and adds color support, background processing, and an improved user interface.

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## Specifications

- *Color capabilities:* 16.7 million colors
- *Scanning resolution:* 75 to 1,200 dots per inch in 1-dot-per-inch increments through software interpolation
- *Maximum scan area:* 8.5 by 14 inches (21.6 by 35.6 cm)
- *Interface:* SCSI
- *File formats:* Supports PICT, TIFF, EPS, and MacPaint formats
- *System requirements:* System software version 7.0 or later, HyperCard 2.0 or later to use HyperScan 2.0 software
- *Dimensions (HWD):* 4.4 by 13.6 by 21.8 inches (11.2 by 34.5 by 55.4 cm)
- *Weight:* 23.0 lb. (10.4 kg)

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## Key features

- Features high-quality rotation and scaling algorithms for flexible image manipulation without loss of quality.
- Offers a trilinear charge-coupled device, stabilizing the color and maximizing color registration.
- Provides a color-correction ASIC, which adjusts color “behind the scenes.” (Includes ColorSync software.)
- AutoScan feature automatically adjusts brightness, contrast, cropping, alignment, and sharpening of scanned images.

# QuickTake 100



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## At a glance

- The QuickTake 100 for Macintosh and QuickTake 100 for Windows are lightweight digital cameras that allow you to take 24-bit color pictures without using film—and quickly import them directly into your Macintosh or Windows software-based computer.
- They come with QuickTake software, which allows you to download images directly into a personal computer; display those images in up to 16.7 million colors; and rotate, crop, scale, and zoom in on images as you edit them for use in your documents.
- They can run either on batteries (included with the camera) or by plugging them into a standard wall outlet (AC adapter not included).

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## Specifications

- *Image resolution:* High resolution—640 by 480 pixels; standard resolution—320 by 240 pixels
- *Color resolution:* 24-bit color
- *Memory:* 1MB of Flash EPROM stores up to 32 images for over one year
- *Shutter speed:*  $\frac{1}{30}$  to  $\frac{1}{175}$  seconds; self-timer—10 seconds automatic
- *Aperture range:*  $f2.8$  to  $f16$  automatic
- *Focus range:* 4 feet to infinity
- *Flash:* Built-in automatic or manual; flash range from 4 feet to 9 feet
- *Battery:* Runs on three rechargeable AA nickel-cadmium batteries (batteries and battery recharger included); supports

three 1.5-volt AA, R6P, LR-6, or SUM-3 nickel-cadmium, alkaline, or lithium batteries

- *File formats:* Macintosh—PICT, TIFF, QuickTake; Windows—BMP, PCX, JPEG, TIFF, QuickTake
- *Image transfer:* Built-in high-speed serial interface, with appropriate serial cable for connection to Macintosh or Windows computers
- *Dimensions (HWD):* 2.0 by 5.0 by 6.0 inches (5.08 by 12.7 by 15.2 cm)
- *Weight:* .9 lb. (.41 kg)

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### **Key features**

- Lets you quickly download digital images into your computer for use in documents you create.
- Lets you open images directly in most business productivity, graphics, and desktop publishing applications.
- Offers easy one-step use for taking pictures and importing them into your files—with easy-reading icons for monitoring flash and battery status, resolution, self-timer settings, and more.
- Lets you store 32 standard-resolution or 8 high-resolution images in high-quality, 24-bit color.

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### **Accessories**

- QuickTake 100 Battery Booster Pack
- QuickTake 100 AC Adapter
- QuickTake 100 Travel Case
- QuickTake 100 Connection Kit for Windows
- QuickTake 100 Connection Kit for Macintosh

# Personal Interactive Electronics



# Newton MessagePad 110



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## At a glance

- The Newton MessagePad 110 communications assistant integrates Apple's Newton technology in a hand-held communications device that intelligently assists you as you capture, manage, and communicate information—no matter where you are.
- It has a slightly different industrial design than the Newton MessagePad—including a new Newton pen and a lid to protect its screen—but will run existing Newton MessagePad applications without any modification.
- When you write on its built-in screen with a Newton pen, the Newton MessagePad 110 converts your printed or cursive hand-written notes into typed text. It also keeps track of your calendar, stores names and addresses in your card file, and organizes your to-do list. If you prefer, an on-screen keyboard lets you “type” your notes.
- It can connect to Macintosh and Windows software-based personal computers (requires appropriate connection kit).
- Its communications capabilities allow you to send faxes; receive messages; “beam” information to other Newton MessagePad units through point-to-point infrared technology; connect to your desktop computer and its network to take advantage of files, printers, or network services; and connect directly to a wide range of printers.

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## Specifications

- *Processor:* ARM 610 RISC
- *Speed:* 20 megahertz
- *Memory:* 1MB of RAM, 4MB of ROM

- *Storage:* Expandable with the Newton 1MB Storage Card, 2MB Flash Storage Card, or 4MB Flash Storage Card
- *Expansion:* Slot for one Type II PCMCIA expansion card
- *Ports:* AC power port, serial port
- *Display:* 3-inch by 4-inch reflective LCD
- *Battery:* Four AA alkaline batteries (included); optional Newton Rechargeable Battery Pack (nickel-cadmium), Newton Battery Booster Pack (requires eight AA alkaline batteries), Newton MessagePad 110 Charging Station
- *Communications:*
  - Built-in LocalTalk port; point-to-point infrared data exchange
- *Dimensions (HWD):* 1.2 by 4.2 by 7.9 inches (3.0 by 10.7 by 20.1 cm)
- *Weight:* 1.3 lb. (.59 kg)
- *Other features:*
  - Selection of games and information tools included in Extras drawer
  - Newton Telescoping Pen

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## Key features

- Can connect directly to your Macintosh or Windows software-based personal computer with the optional Newton Connection Kit, so you can use your computer to view, edit, and back up the notes, name cards, and appointments you create on your MessagePad. The Newton Connection Kit software also translates your Newton files into formats common to popular Macintosh and DOS applications.
- Can print to thousands of industry-standard printers by using the Newton Print Pack.
- Lets you send faxes and access electronic mail via the Newton Fax Modem; it also allows you to receive wireless messages over networks from local and nationwide paging services, and store them using the Newton Messaging Card.
- Can run on AC power, or using a Newton Rechargeable Battery Pack (nickel-cadmium batteries), or a Newton Booster Pack (alkaline batteries).

# *Newton MessagePad Accessories*

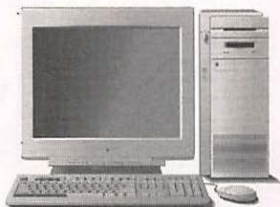
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## **Newton MessagePad 110**

- Newton Connection Kit
- Newton Messaging Card
- Newton Fax Modem
- Newton PCMCIA Fax Modem Card
- Newton 1MB Storage Card, Newton 2MB Flash Storage Card, Newton 4MB Flash Storage Card
- Newton Print Pack
- Newton Power Adapter
- Newton Battery Booster Pack
- Newton Rechargeable Battery Pack
- Newton Battery Pack Recharger
- Newton MessagePad 110 Charging Station
- Newton Telescoping Pen
- Newton Carrying Case
- Newton Leather Carrying Case
- Newton Leather Carrying Case LC
- Newton Communications Case

# Networking & Connectivity

# Workgroup Server 95



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## At a glance

- The Workgroup Server 95, based on the Motorola 68040 processor, is Apple's highest-performance AppleShare server, offering extensive file, print, and database services for large workgroups.
- It's ideal for workgroups that have demanding file- and print-sharing requirements or that work with large database applications.
- It can run Oracle7 database software for A/UX, to take advantage of cross-platform compatibility for Macintosh, Windows, and UNIX clients.

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## Specifications

- *Processor:* 68040 with built-in math coprocessor, paged memory management unit (PMMU), and 8K memory cache; up to 512K second-level memory cache
- *Speed:* 33 megahertz
- *Memory:* 16MB of RAM, expandable to 256MB—16 SIMM sockets (parity SIMMs optional)
- *Storage:*
  - Internal Apple SuperDrive floppy disk drive
  - Supports six internal 5.25-inch peripherals, such as SCSI hard disk drives, 4-millimeter DAT drives with Digital Data Storage-Data Compression, or CD-ROM drives
- *Expansion capabilities:* Five NuBus slots (one occupied by processor-direct card); 040 processor-direct expansion slot; supports up to 20 SCSI devices
- *Ports:* Two serial ports, ADB port, video-output port, four SCSI channels, sound-input port (mono)



- *Displays:* Built-in support for all Apple displays; supports third-party VGA, SVGA, and 19-inch monitors
- *Number of active network users supported:* Up to 200 connected users with AppleShare Pro (up to 50 concurrently active users)
- *Networking ports:* Built-in LocalTalk and Ethernet; supports AppleTalk and TCP/IP networking software
- *Dimensions (HWD):* 18.6 by 8.9 by 20.6 inches (47.2 by 22.6 by 52.3 cm)
- *Weight:* 36.8 lb. (16.6 kg)—will vary based on internal devices installed
- *Other features:*
  - Has four high-performance SCSI buses (four SCSI channels; two are SCSI DMA channels)
  - Runs Apple A/UX 3.1

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### **Key features**

- Comes with A/UX 3.1 installed on the hard disk drive, which allows system administrators to enjoy both the familiar Macintosh interface and UNIX performance and multiuser capabilities.
- Comes with AppleShare Pro software installed on the hard disk drive, which provides a range of network services to workgroups.
- Can be equipped with a DAT drive, for backup storage of large volumes of data.
- Has built-in Ethernet capability, which lets you transfer information up to 10 times faster than with LocalTalk cabling.
- Offers built-in, SCSI DMA support for faster data transfer.

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### **Upgrade information**

- The Macintosh Quadra 900 and Quadra 950 can be upgraded to the Workgroup Server 95 with a Workgroup Server 95 PDS Card Upgrade Kit or a Workgroup Server 95 PDS Card/DDS-DC Drive Upgrade Kit.

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### **Other models to consider**

If you need the fastest and most expandable Workgroup Server based on the Macintosh operating system, you should consider the Workgroup Server 9150, which features the PowerPC 601 RISC processor.

# Workgroup Server 6150



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## At a glance

- The Workgroup Server 6150 is Apple's affordable, entry-level server system based on the high-performance PowerPC RISC processor.
- It's perfect for small workgroups or as an additional server on an existing network of primarily Macintosh and Power Macintosh computers.

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## Specifications

- *Processor:* PowerPC 601 RISC with integrated math coprocessor and 32K on-chip cache; 256K second-level memory cache
- *Speed:* 60 megahertz
- *Memory:* 8MB of RAM, expandable to 72MB—8MB on logic board and two 72-pin SIMM slots
- *Storage:*
  - Internal Apple SuperDrive floppy disk drive
  - Internal 500MB hard disk drive
  - AppleCD 300i Plus CD-ROM drive
- *Expansion capabilities:* Internal expansion slot for one processor-direct card or one 7-inch NuBus expansion card (requires adapter); supports seven SCSI devices
- *Ports:* Two serial ports, two ADB ports, video-output port, SCSI port, sound-input port (mono), sound-output port (stereo)
- *Displays:* Built-in support for all Apple displays; supports third-party VGA, SVGA, and 19-inch monitors
- *Networking ports:* Built-in LocalTalk and Ethernet; supports TCP/IP networking software via MacTCP
- *Dimensions (HWD):* 3.4 by 16.3 by 15.6 inches (8.6 by 41.4 by 39.6 cm)

- *Weight:* 14.0 lb. (6.3 kg)—will vary based on internal devices installed

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### **Key features**

- Features the PowerPC 601 RISC processor, which enables it to handle computation-intensive tasks with exceptional speed.
- Has on-board Ethernet capability.
- Offers built-in, high-performance SCSI for faster data transfer.
- Includes Apple RAID software, for increased data protection and performance.
- Comes with AppleShare 4 installed on the hard disk drive (selected configurations).

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### **Upgrade information**

- The Workgroup Server 60 can be upgraded to the Workgroup Server 6150 with a Workgroup Server 6150 Logic Board Upgrade.

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### **Other models to consider**

If you need even more speed and expansion options, you should consider the Workgroup Server 8150, which offers:

- A faster processor (80 megahertz compared with 60 megahertz for the Workgroup Server 6150).
- More than twice the memory expansion capability (up to 264MB) and more storage options (two 3.5-inch hard disk drives and an optional internal DAT drive).
- More expansion options—three NuBus slots (as opposed to one).

# Workgroup Server 8150



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## At a glance

- The Workgroup Server 8150 is Apple's versatile midrange server system based on the PowerPC 601 RISC processor.
- It's perfect for workgroups that require high performance and expansion options—at an attractive price.
- It can be used as a communications server for linking multiple AppleTalk internets and integrating Macintosh networks into a wide-area network.

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## Specifications

- *Processor:* PowerPC 601 RISC with integrated math coprocessor and 32K on-chip cache; 256K second-level memory cache
- *Speed:* 80 megahertz
- *Memory:* 8MB or 16MB of RAM, expandable to 264MB—8MB on logic board and eight 72-pin SIMM slots
- *Storage:*
  - Internal Apple SuperDrive floppy disk drive
  - Internal 500MB or 1GB hard disk drive
  - Internal DAT drive (selected configurations)
  - AppleCD 300i Plus CD-ROM drive (selected configurations)
  - Supports a total of three internal SCSI devices, such as hard disk drives
- *Expansion capabilities:* Three NuBus slots and one processor-direct expansion slot; supports up to eight SCSI devices (internal and external)
- *Ports:* Two serial ports, one ADB port, video-output port, high-performance SCSI port, sound-input port (mono), sound-output port (stereo)
- *Displays:* Built-in support for all Apple displays; supports third-party VGA, SVGA, and 19-inch monitors

- *Networking ports:* Built-in LocalTalk and Ethernet; supports TCP/IP networking software via MacTCP
- *Dimensions (HWD):* 14.2 by 8.9 by 16.0 inches (36.1 by 22.6 by 40.6 cm)
- *Weight:* 25.3 lb. (11.4 kg)—will vary based on internal devices installed
- *Other features:*  
—AppleShare 4 installed on the hard disk drive (selected configurations)

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### **Key features**

- Runs communications service applications, such as Apple Internet Router, SNA•ps, MacX25, and MacX.400.
- Features the PowerPC 601 RISC processor, which enables it to handle computation-intensive tasks with exceptional speed.
- Equipped with a DAT-2 drive, for backup storage of 10GB to 14GB of data (using compression).
- Configurations with a DAT drive include Retrospect Remote software, for automatic backup of the server and clients on the network.
- Has built-in Ethernet capability.
- Offers built-in, high-performance SCSI for faster data transfer.
- Includes Apple RAID software, for increased data protection and performance.

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### **Upgrade information**

- The Workgroup Server 80 can be upgraded to the Workgroup Server 8150 with a Workgroup Server 8150 Logic Board Upgrade.

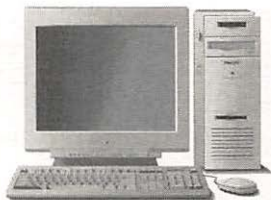
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### **Other models to consider**

If you need an exceptionally powerful server that provides extensive expansion options, you should consider the Workgroup Server 9150, which offers more hard disk storage capacity, and a larger cache.



# Workgroup Server 9150



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## At a glance

- The Workgroup Server 9150 is Apple's fastest and most expandable server system, offering extensive file, print, and communications services for large workgroups.
- It's ideal for workgroups that have demanding file- and print-sharing requirements, or that work with large database applications.

---

## Specifications

- *Processor:* PowerPC 601 RISC with integrated math coprocessor and 32K on-chip cache; 512K second-level memory cache
- *Speed:* 80 megahertz
- *Memory:* 8MB or 16MB of RAM, expandable to 264MB  
—Eight 72-pin SIMM slots
- *Storage:*  
—Internal Apple SuperDrive floppy disk drive  
—Space for 1GB or 2GB internal hard disk drives  
—DAT tape drive (selected configurations)  
—AppleCD 300i Plus CD-ROM drive
- *Expansion capabilities:* Four NuBus slots and one processor-direct expansion slot; supports 14 SCSI devices
- *Ports:* Two serial ports, ADB port, video-output port, high-performance SCSI port, sound-input port (mono), sound-output port (stereo)
- *Displays:* Built-in support for all Apple displays; supports third-party VGA, SVGA, and 19-inch monitors
- *Networking ports:* Built-in LocalTalk and Ethernet; supports TCP/IP networking software via MacTCP

- *Dimensions (HWD)*: 18.6 by 8.9 by 20.6 inches (47.2 by 22.6 by 52.3 cm)
  - *Weight*: 36.8 lb. (16.6 kg)
  - *Other features*:
    - Has two high-performance SCSI buses (both SCSI DMA channels)
- 

### **Key features**

- Features the PowerPC 601 RISC processor, which enables it to handle computation-intensive tasks with exceptional speed.
- Equipped with a DAT drive, for backup storage of 10GB to 14GB of data (using compression).
- Configurations with a DAT drive include Retrospect Remote software, for automatic backup of the server and clients on the network.
- Has space for 1GB or 2GB internal hard disk drives.
- Offers built-in, high-performance SCSI for faster data transfer.
- Includes Apple RAID software, for increased data protection and performance.

# Apple Cables and Cards

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## **You can easily connect your Macintosh to almost any kind of network or computing platform.**

- *The easy and consistent Macintosh approach.* Macintosh lets you connect to an IBM mainframe across town just as readily as to an AppleShare file server in the next room. Using AppleTalk, the networking system built into every Macintosh, any device on the network can appear as an icon on your screen. AppleTalk lets you navigate complex networks without special skills. It hides all the intricacies of networking, and it readily adapts to different technologies.
- *Expanding the capacity of your AppleTalk network.* You can begin by connecting your Macintosh computers using LocalTalk cables that plug into any Macintosh. Should you require more speed, you can move to an Ethernet or Token Ring network. This will speed printing of documents, delivery of electronic mail, and transfer of large documents and QuickTime video segments.

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## **LocalTalk networks**

Your Macintosh—and every other Macintosh—comes with AppleTalk networking capability, including software and a LocalTalk networking port. This allows you to build an affordable, easy-to-use network. A LocalTalk network costs little to install, is easy to maintain, and transmits information with high reliability at 230.4 kilobits per second.

- *LocalTalk Locking Connector Kit—DB-9.* This is used for connecting Macintosh 128K, 512K, and 512K Enhanced computers and original LaserWriter and LaserWriter Plus printers to a LocalTalk network. The kit contains one LocalTalk connector with a DB-9 plug, and two meters of LocalTalk cable.

- *LocalTalk Locking Connector Kit—DIN-8.* This is used for connecting Apple IIgs, Macintosh Plus, and newer Macintosh computers and LaserWriter printers to a LocalTalk network. The kit contains one LocalTalk connector with a circular 8-pin plug (DIN-8), and two meters of LocalTalk cable.
- *LocalTalk RJ-11 Connector.* This connector comes in two versions, sold separately. It is used for connecting any Macintosh computer or LaserWriter printer to a LocalTalk network using unshielded twisted-pair LocalTalk network cable (silver-satin phone cable). As your networking needs grow, you may also want to use this connector in a “star” or “bus” network configuration with a centrally managed hub.

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## Ethernet networks

Built-in Ethernet connectivity is provided through an Apple Ethernet port in the Macintosh Centris 650, all Macintosh Quadra and Power Macintosh computers (with the exception of the Macintosh Quadra 605 and 630), the Workgroup Server series, and the LaserWriter Pro printers. You simply choose the appropriate Apple Ethernet transceiver to match your cabling system. For all other Macintosh computers, Apple offers several interface cards that enable access to Ethernet networks. Apple also offers the portable, easy-to-install Apple Ethernet 10T/5 Workgroup Hub for creating or extending 10Base-T Ethernet networks. All Apple Ethernet solutions comply with IEEE 802.3 standards, include EtherTalk software, and support a variety of popular networking protocols, including AppleTalk, TCP/IP, OSI, and DECnet.

- *Apple Ethernet 10T/5 Workgroup Hub.* This portable, 5-port IEEE 802.3-compliant Ethernet hub allows you to create or extend 10Base-T Ethernet networks quickly and easily. It comes with one Apple AUI Connector and four RJ-45 connectors, and can be used with Apple's Ethernet twisted-pair products. An optional external power adapter is available. Any Macintosh, PowerBook, printer, or Ethernet card with an Apple AUI port can serve as a host to supply power and a network connection.
- *Apple Ethernet Twisted-Pair Transceiver.* This connects all Macintosh computers or Ethernet cards equipped with

an Apple Ethernet port to a 10Base-T Ethernet network using industry-standard twisted-pair cable.

- *Apple Ethernet Thin Coax Transceiver.* This connects all Macintosh computers or Ethernet cards equipped with an Apple Ethernet port to Thin Coax Ethernet networks using thin coaxial cable.

- *Apple Ethernet AUI Adapter.* This adapter adds IEEE 802.3 attachment unit interface (AUI) to any Macintosh computer or Ethernet card equipped with an Apple Ethernet port, and can be used to connect to external transceivers for use with fiber-optic, thick coaxial, and other Ethernet media.

- *Apple Ethernet LC Card.* This card comes with an Apple Ethernet port and connects your Macintosh Color Classic, Macintosh LC, LC II, LC III, LC 475, LC 520, Macintosh Quadra 605, and most Macintosh Performa computers to any Ethernet network.

- *Apple Ethernet LC Twisted-Pair Card.* This card connects your Macintosh Color Classic, Macintosh LC, LC II, LC III, LC 475, LC 520, Macintosh Quadra 605, and most Macintosh Performa computers to IEEE 802.3 10Base-T Ethernet networks. It has a built-in RJ-45 connector, which allows you to directly connect to a 10Base-T hub. No transceiver required.

- *Apple Ethernet LC Thin Coax Connection.* This comes with an Apple Ethernet LC Card and a Thin Coax Transceiver in one convenient package and connects your Macintosh Color Classic, Macintosh LC, LC II, LC III, LC 475, LC 520, Macintosh Quadra 605, and most Macintosh Performa computers to a Thin Coax Ethernet network.

★140 • *Apple Ethernet NB Card.* This card lets you connect any Macintosh II or the Macintosh Centris 610 computer to IEEE 802.3 Ethernet networks. It comes with an Apple AUI port for maximum flexibility. You can choose the appropriate Ethernet transceiver to match your cabling system, or use the card as a host to the Apple Ethernet 10T/5 Workgroup Hub.

- *Apple Ethernet NB Twisted-Pair Card.* This card allows you to connect any Macintosh II or the Macintosh Centris 610 computer to IEEE 802.3 10Base-T Ethernet networks. It has a built-in RJ-45 connector, which allows you to connect directly



to an industry-standard 10Base-T hub. No transceiver required.

- *Apple Ethernet NB Thin Coax Connection.* This comes with an Apple Ethernet NB Card and a Thin Coax Transceiver in one convenient package and connects any computer with a NuBus slot including the Macintosh II, Macintosh Centris, Macintosh Quadra, and Power Macintosh computers to a Thin Coax Ethernet network.

- *Apple Ethernet CS Twisted-Pair Card.* This card works with all Macintosh models that have a communications slot (CS), such as the Macintosh LC 575 and LC 630, the Macintosh Quadra 630, and the Macintosh Performa 630 series. It has a built-in RJ-45 connector, which allows you to directly connect to an IEEE 802.3 10Base-T hub. No transceiver required.

- *Apple Ethernet CS Thin Coax Card.* This card works with all Macintosh models that have a communications slot (CS), such as the Macintosh LC 575 and LC 630, the Macintosh Quadra 630, and the Macintosh Performa 630 series. It has a built-in BNC connector, which allows you to connect to IEEE 802.3 thin coax networks using thin coaxial cable. No transceiver required.

- *Apple Ethernet CS AAUI Card.* This card comes with an Apple Ethernet port and works with all Macintosh models that have a communications slot (CS). It can also serve as a host connection to the Apple Ethernet 10T/5 Workgroup Hub.

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## Token Ring networks

Token Ring networks often serve a mixture of personal computers, minicomputers, and mainframes. Software drivers and hardware for Token Ring networks are available for Macintosh II, Macintosh Centris, Macintosh Quadra, and Power Macintosh computers, as well as for the Workgroup Server series.

- *Apple Token Ring 4/16 NB Card.* This card connects any Macintosh computer with NuBus slots to an IEEE 802.5 Token Ring network at either 4 or 16 megabits per second, and is the ideal card for implementing gateway solutions.

- *Apple Token Ring NB/c Card.* This highly integrated, compact card connects any Macintosh computer with NuBus slots to an IEEE 802.5 Token Ring network at either 4 or 16 megabits per second.

# Network Services Software

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## Apple Remote Access

Apple Remote Access lets you use a modem and telephone lines to connect a remote Macintosh or PowerBook computer to another Macintosh computer or to an entire AppleTalk network. The Apple Remote Access product family provides an easy-to-use, cost-effective, and secure solution for an entire range of Macintosh users—from individuals to workgroups to large organizations that require remote access to electronic information. These products include:

- *Apple Remote Access Personal Server.* Ideal for individuals or small organizations, this product provides remote access to a single Macintosh computer or an entire AppleTalk network over a single telephone line. It offers enhanced ease of use, productivity features, and security options, and includes Remote Access Client for Macintosh software.
- *Apple Remote Access Client for Macintosh.* This allows you to connect to any Apple Remote Access-compatible server, so your server's capabilities can expand as your needs grow. When used with the single-line Personal Server, it can support up to 10 regular users or up to 20 infrequent users—and the multiline MultiPort Server software can support as many as 200 users.
- *Apple Remote Access MultiPort Server.* This offers remote AppleTalk network access for large numbers of mobile professionals. When used in conjunction with Remote Access Client software and the appropriate hardware, this software converts a single Macintosh into a server that can support 4 simultaneous connections. And, when combined with one or more Apple Remote Access MultiPort Server 4-Port Expansion Kits, your server can support up to 16 simultaneous connections.

- *Apple Remote Access MultiPort Server 4-Port Expansion Kit.* Expand your Apple Remote Access MultiPort Server with the Apple Remote Access MultiPort Server 4-Port Expansion Kit and get 4 more simultaneous connections with each expansion kit.
- *Apple Remote Access MultiPort X.25 Extension.* This gives you the ability to connect Apple Remote Access clients to an Apple Remote Access MultiPort Server through public or private networks, taking advantage of the communications cost savings that X.25 offers (requires MacX25).

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## **AppleShare**

AppleShare software provides a range of file-, print-, and application-sharing capabilities to users of Macintosh, Apple II, MS-DOS, and Windows software-based computers connected to an AppleTalk network. The software includes a number of features that enable network administrators to control centralized applications, data files, and printers effectively. AppleShare allows multiple network services, such as electronic-mail servers, to run on the same machine. It supports CD-ROM drives, and allows Macintosh computers running either System 6 or System 7 to function as clients. And it provides a variety of security features—such as launch-count limits on applications, minimum password length, password aging, automatic disconnect after *n* unsuccessful log-in attempts, and network administrator-controlled log-off capabilities.

The difference between versions of AppleShare software lies in performance and in the number of users that can be supported on the network. AppleShare 3 runs on any Macintosh 680x0-based computer and supports up to 120 concurrent users. AppleShare 4.0 is two to three times faster than AppleShare 3 and supports up to 150 users simultaneously connected to the server (it runs on Macintosh and Power Macintosh computers, and Workgroup Servers). Alternatively, AppleShare Pro runs on the Workgroup Server 95 with Apple's A/UX operating system, for up to four times the performance capability of AppleShare 3. Its system-caching capability and asynchronous input/output provide excellent server performance. AppleShare Pro can support as many as

200 users connected simultaneously to the server, and 5,000 open files, and accommodates up to 20 SCSI hard disks connected to the server.

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## **AppleSearch**

AppleSearch information access and retrieval software provides an easy-to-use, powerful way for Macintosh users to find text-based information within documents stored on a file server—whether it's a local server in your office or a remote WAIS server connected to the Internet. AppleSearch lets you conduct concurrent, personalized searches on a server, and ranks the found documents in order of relevance. User-defined search criteria, called "reporters," track topics of interest—including on-line news feeds—and automatically send you a formatted update. Client users can quickly find information on topics they specify, or they can let AppleSearch act as a personal agent that periodically provides updated information. Because AppleSearch processes natural-language search queries, users can simply ask for information in their own words.

- *AppleSearch server software.* Maintains a feature-rich search engine that processes the queries of AppleSearch Client users.
- *AppleSearch client software.* Provides electronic reporters and newspaper-like updates as an intuitive way to retrieve information from the server, when necessary.
- *AppleSearch Client Developer Kit.* Includes basic software for developers who want to write custom client interfaces to the AppleSearch server or to integrate AppleSearch functionality into other applications.

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## **PowerShare Collaboration Server**

PowerShare Collaboration Server software provides System 7 Pro/PowerTalk users with server-based messaging, catalog, and network privacy services on an AppleTalk network. The PowerShare servers allow network administrators to consolidate the management of PowerTalk services, and can be easily configured to handle teams of 10 or 10,000 users. Many developers are writing server gateways to interface PowerShare systems with



other messaging systems such as QuickMail, Microsoft Mail, SMTP, and X.400.

- *Collaboration on demand.* Provides powerful electronic-mail and distributed catalog services for AppleTalk networks; stores and forwards messages when PowerTalk senders' and recipients' systems are off-line.
- *Catalog services.* Stores collaboration information, such as user and group addresses, in shared catalogs for convenient access by all PowerTalk users and applications.
- *Information security.* Authenticates AppleTalk connections and encrypts network traffic among PowerTalk users and PowerShare servers.
- *Mobility.* Lets mobile PowerTalk users keep in touch with others easily—anytime, anywhere.
- *Extensibility.* Automatically replicates and synchronizes catalogs on multiserver networks for higher performance and reliability.

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## MacSNMP

MacSNMP is Apple's implementation of the industry-standard network management protocol. It allows easy management of Macintosh computers on a network using a variety of available third-party consoles. MacSNMP is supplied with all of the Connection for Macintosh products, which include AppleTalk Connection for Macintosh and TCP/IP Connection for Macintosh.

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## Apple Internet Router

The Apple Internet Router represents a major evolutionary advance in network routing. It implements the AppleTalk Update-based Routing Protocol (AURP), to substantially reduce network traffic over WANs and to maximize use of network resources. It supports LocalTalk, Ethernet, and Token Ring connection, with wide-area linkage via dial-up modems, X.25, or TCP/IP.

- *Basic Connectivity Package.* Routes AppleTalk over local area networks (LANs) and dial-up modem connections.
- *AppleTalk/X.25 Wide Area Extension.* Routes AppleTalk over X.25 WANs.



- *AppleTalk/IP Wide Area Extension.* Routes AppleTalk over an IP internet via IP tunneling.

## ★ **The Apple IP Gateway**

- *Outstanding information access.* Lets mobile, remote, and local AppleTalk network users access Ethernet-based TCP/IP services, such as the Internet—even if the user's AppleTalk network does not directly support IP. Also provides access to Ethernet-based TCP/IP services such as SMTP-based electronic mail, Telnet, FTP, and NFS on UNIX hosts
- *Flexible configuration.* In conjunction with the Apple Internet Router software, the Apple IP Gateway provides IP access to any Macintosh computer that is part of the router's internet. When used in conjunction with an Apple Remote Access server, it provides access to remote or mobile users. Can be used as a stand-alone product, and can be installed on a wide range of Macintosh computers and Workgroup Servers, including those based on PowerPC technology.
- *Ease of setup, use, and administration.* Installs in minutes. Lets users transparently access TCP/IP and Internet resources. Allows a single MacTCP configuration for all IP users, eliminating the need for individual IP addresses. Simplifies the maintenance of Internet firewalls; only one Ethernet address need be updated. Enables network administrators to monitor gateway activity visually.
- *Increased security.* Dynamic address assignment reduces the chance of entry from external networks. IP access can be restricted to specific AppleTalk networks.

★146

With the Apple IP Gateway, Macintosh users with Apple Remote Access, LocalTalk, or any other AppleTalk network connection can connect easily to an Ethernet-based TCP/IP network to use the full range of Internet Protocol (IP) services—including the vast array of Internet services such as Telnet, File Transfer Protocol (FTP), Gopher, World Wide Web, and Wide Area Information Servers (WAIS).

Acting as a translator between AppleTalk and TCP/IP networks, the Apple IP Gateway allows data to move between them easily

and transparently. As a stand-alone product, it allows Macintosh computers connected on an AppleTalk network to connect to an IP network and access any of its services. In conjunction with the Apple Internet Router software, Apple IP Gateway software provides IP access to any Macintosh computer on any AppleTalk network that is part of the router's network. And with an Apple Remote Access Personal or MultiPort Server, it provides Apple Remote Access clients with remote access to IP and AppleTalk services—just as if there was a local connection.

Administration is simple. Dynamic addressing allows network administrators to use a single MacTCP configuration for all IP users. The Apple IP Gateway automatically assigns new IP addresses whenever workgroup members change location, providing continuous access for PowerBook users whether they're in the office, at home, or on the road. And users don't have to change MacTCP settings as they move between IP subnets. In addition, the Apple IP Gateway makes it easier for administrators to control access through Internet firewalls. Firewall administrators don't have to continually add and delete user-specific IP addresses as a network grows; the single Ethernet address of the Apple IP Gateway provides access for all approved users.

To keep the network secure, the IP Gateway allows network administrators to restrict IP access to specific AppleTalk networks. This gives administrators tight control and allows them to easily track service use easily. The gateway also enables the monitoring of network activity and errors, keeping administrators up to date on network status. The Apple IP Gateway even has built-in support for the Simple Network Management Protocol (SNMP) so it can be easily monitored by any SNMP-based management station.

# *Multivendor Connectivity Software*

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## **Connecting to mainframe database servers using Apple's Data Access Language (DAL)**

Apple's Data Access Language (DAL) lets users easily access information that resides on UNIX servers, minicomputers, or mainframes. DAL allows users to access a wide variety of relational databases, including Ingres, Informix/SQL, ORACLE, Sybase, Rdb/VMS, SQL/DS, and DB/2, on VAX and IBM computers.

Apple's DAL Servers are networking software products that provide DAL access to files and databases running on a variety of host systems. DAL for AS/400, for example, allows users to get at data stored on IBM AS/400 machines—and use the intuitive Macintosh user interface.

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## **Connecting to IBM environments using Apple SNA•ps**

Apple SNA•ps (Systems Network Architecture protocols and services) 3270 is a full-function 3270 terminal emulation program that enables Macintosh computers to communicate with IBM mainframes. Apple SNA•ps 5250 is a full-function 5250 display terminal emulation program that enables Macintosh personal computers to communicate with IBM AS/400 midrange computer systems. Apple SNA•ps products provide file transfer and 3287 printer emulation capabilities for Macintosh computers over a LAN.

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## **Connecting to DEC environments using Digital PATHWORKS**

Digital PATHWORKS for Macintosh allows Macintosh users to access data residing on Digital VAX/VMS minicomputers, from the desktop—as if those systems were simply another node on an AppleTalk network.


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## **Connecting to X Window environments using MacX**

MacX is an X Window System display server for the Macintosh and A/UX operating systems. The server allows users in multi-vendor environments to run a variety of network-based X client applications on the same Macintosh desktop.

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## **Connecting to TCP/IP networks using TCP/IP Connection for Macintosh**

TCP/IP Connection *for Macintosh* provides the software to connect a Macintosh computer to a TCP/IP network and to allow the Macintosh to be managed from a console using the Simple Network Management Protocol (SNMP). The product includes a TCP/IP protocol stack implementation (MacTCP); SNMP network management software (MacSNMP)  145; datalink drivers for LocalTalk, Ethernet, and Token Ring; a Domain Name Resolver; support for host files; and a ping text application (MacTCP Ping).

TCP/IP Administration *for Macintosh* is a companion product that includes additional documentation and software (MacSNMP Admin) for configuring and administering end-user systems with TCP/IP Connection installed.

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## **Connecting to OSI networks using OSI Connection for Macintosh**

With OSI Connection *for Macintosh*, developers can create Apple Macintosh applications and solutions for network environments that use the Open Systems Interconnection (OSI) protocol suite—a set of standards used for networking heterogeneous systems. OSI Connection is also a retail product that includes an OSI CTB connection tool.



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### **MacX25 software**

MacX25 software links Macintosh computers to packet-switched data networks (PSDNs) supporting CCITT Recommendation X.25. Access to host computers and end-user services on the PSDN is then distributed from the server to Macintosh computers over the AppleTalk network system. MacX25 supports AppleTalk routing over X.25 when used with the Apple Internet Router, and it supports standard messaging when used with MacX.400 software.

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### **MacX.400 software**

MacX.400 software turns the Macintosh computer into an X.400 server that supports the OSI messaging standards over OSI and TCP/IP networks. With MacX.400, you can send electronic mail from a Macintosh to users connected to X.400 networks—even if they're on different platforms. And if you use MacX.400 on a WAN with MacX25, you can exchange mail with remote sites over X.25 networks.

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### **MacX.400 SD software**

MacX.400 SD (single domain) software is the more affordable version of MacX.400 for small and medium-size businesses. With MacX.400 SD, your computer is connected to a single adjacent Message Transfer Agent (MTA), making it very easy to exchange electronic mail with users who work on different computer platforms.

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### **AppleTalk Connection for Macintosh software**

AppleTalk Connection *for Macintosh* software provides the most current version of AppleTalk networking software and Apple's implementation of the industry-standard SNMP network management protocol.  145 The AppleTalk transport stack includes the latest software drivers for LocalTalk, Ethernet, and Token Ring.

AppleTalk Administration for Macintosh is a companion product that includes additional documentation and software (MacSNMP Admin) for configuring and administering end-user systems with AppleTalk Connection installed.



# QuickCharts

# Desktop & Portable Computers QuickChart

Model	Processor	Memory	Storage	Key Value Added
<b>Macintosh LC 475</b> <b>Macintosh Quadra 605</b>	25-MHz 68LC040 with integrated PMMU, 8K memory cache	4MB or 8MB–36MB	160 or 250MB	Most affordable modular 68040 Macintosh; PowerPC upgrade capability; Energy Star compliant
<b>Macintosh LC 575</b>	33-MHz 68LC040 with integrated PMMU, 8K memory cache	4MB–36MB	160, 250MB, or 320MB; CD-ROM drive <sup>1</sup>	All-in-one Macintosh; PowerPC upgrade capability; Energy Star compliant
★ <b>Macintosh LC 630</b>	33-MHz 68LC040 with integrated PMMU, 8K memory cache	4MB or 8MB–36MB	250 or 350MB; one half-height 5.25-inch peripheral	Unique multimedia expansion options; PowerPC upgrade capability
★ <b>Macintosh Quadra 630</b>	33-MHz 68040 with integrated math coprocessor, PMMU, 8K memory cache	4MB or 8MB–36MB	250MB; one half-height 5.25-inch peripheral	Unique multimedia expansion options; PowerPC upgrade capability
<b>Macintosh Quadra 950</b>	33-MHz 68040 with integrated math coprocessor, PMMU, 8K memory cache	8MB–256MB <sup>2</sup>	230MB, 500MB, or 1GB <sup>1</sup> three half-height 5.25-inch peripherals	Most expandable Macintosh system; PowerPC upgrade capability; Energy Star compliant

<b>Macintosh Performa 475</b> <b>Macintosh Performa 476</b>	50/25-MHz 68LC040	4MB–36MB	160 or 230MB	Display, keyboard, fax modem, and software included; PowerPC upgrade capability
<b>Macintosh Performa 550</b>	66/33-MHz 68030	5MB–36MB	160MB; CD-ROM drive	All-in-one design with built-in color display; PowerPC upgrade capability; fax modem, keyboard, software applications, and mouse included
<b>Macintosh Performa 570</b> <b>series</b>	66/33-MHz 68LC040	5MB or 8MB–36MB	250 or 320MB; CD-ROM drive <sup>1</sup>	High performance; built-in color display; PowerPC upgrade capability; fax modem, keyboard, software applications, and mouse included
★ <b>Macintosh Performa 630</b> <b>series</b>	66/33-MHz 68LC040	5MB or 8MB–36MB	250 or 350MB; CD-ROM drive <sup>1</sup>	Display, keyboard, fax modem <sup>1</sup> , and software included; Unique multimedia expansion options; PowerPC upgrade capability
★ <b>Macintosh Performa 6100</b> <b>series</b>	60-MHz PowerPC 601 with integrated math coprocessor, 32K on-chip cache	8MB–72MB	250, 350, or 500MB; CD-ROM drive <sup>1</sup>	High performance; PowerPC processor; keyboard, software applications, and mouse included

<sup>1</sup> Optional

<sup>2</sup> For 256MB, install sixteen noncomposite 16MB DRAM SIMMs (16-megabit technology)

# Desktop & Portable Computers QuickChart

Model	Processor	Memory	Storage	Key Value Added
<b>Power Macintosh 6100/60</b>	60-MHz PowerPC 601 with integrated math coprocessor, 32K on-chip cache	8MB–72MB	160 or 250MB; one half-height 5.25-inch peripheral	Most affordable Power Macintosh computer; Ethernet capability
<b>Power Macintosh 7100/66</b>	66-MHz PowerPC 601 with integrated math coprocessor, 32K on-chip cache	8MB–136MB	250 or 500MB; one half-height 5.25-inch peripheral	Great memory and expansion options; faster performance; Ethernet capability; Energy Star compliant
<b>Power Macintosh 8100/80</b>	80-MHz PowerPC 601 with integrated math coprocessor, 32K on-chip cache, 256K memory cache	8MB–264MB	250MB, 500MB, or 1GB; two 3.5-inch peripherals and one half-height 5.25-inch peripheral	Most powerful Power Macintosh computer; Ethernet capability; Energy Star compliant
★ <b>PowerBook 150</b>	33-MHz 68030	4MB–40MB <sup>3</sup>	120MB (IDE)	Most affordable PowerBook notebook computer; Energy Star compliant
<b>PowerBook 520</b>	50/25-MHz 68LC040	4MB–36MB <sup>3</sup>	160MB	FSTN display; Apple trackpad; Ethernet capability; supports PCMCIA; Energy Star compliant; PowerPC upgrade capability
<b>PowerBook 520c</b>	50/25-MHz 68LC040	4MB–36MB <sup>3</sup>	160 or 320MB	Dual-scan 256-color display; supports PCMCIA; PowerPC upgrade capability; Energy Star compliant

<b>PowerBook 540</b>	66/33-MHz 68LC040	4MB–36MB <sup>3</sup>	240MB	Active-matrix gray-scale display; supports PCMCIA; PowerPC upgrade capability; Energy Star compliant
<b>PowerBook 540c</b>	66/33-MHz 68LC040	4MB–36MB <sup>3</sup>	320 or 500MB	Active-matrix 256-color display; can support thousands of colors; supports PCMCIA; PowerPC upgrade capability; Energy Star compliant
<b>PowerBook Duo 280</b>	66/33-MHz 68LC040	4MB–40MB <sup>3</sup>	240MB	Full-featured subnotebook computer; PowerPC upgrade capability; Energy Star compliant
<b>PowerBook Duo 280c</b>	66/33-MHz 68LC040	4MB–40MB <sup>3</sup>	320MB	Active-matrix color display; can support thousands of colors; PowerPC upgrade capability; Energy Star compliant
<b>PowerBook Duo Dock</b>	68882 coprocessor <sup>1</sup> 32K memory cache	512K of VRAM	One 3.5-inch peripheral	Offers capabilities of desktop Macintosh system
<b>PowerBook Duo Dock II</b>	68882 coprocessor 32K memory cache	1MB of VRAM	One 3.5-inch peripheral	Support for more displays through additional VRAM; built-in Ethernet

<sup>1</sup> Optional

<sup>2</sup> For 256MB, install sixteen noncomposite 16MB DRAM SIMMs (16-megabit technology)

<sup>3</sup> Requires third-party card

★ New model—introduced after July 1, 1994



# Upgrades QuickChart

<b>If you currently have this...</b>	<b>You can upgrade to this...</b>	<b>By purchasing this...</b>
Macintosh LC II	Macintosh LC 475	Macintosh LC 475 Logic Board Upgrade
Macintosh LC III	Macintosh LC 475	Macintosh LC 475 Logic Board Upgrade
Macintosh LC 550	PowerPC processor	See Apple Dealer
Macintosh LC 575	PowerPC processor	See Apple Dealer
★ Macintosh LC 630	PowerPC processor	Power Macintosh Upgrade Card
★ Macintosh Performa 630 series	PowerPC processor	Power Macintosh Upgrade Card
Macintosh IIvi	Power Macintosh 7100/66	Power Macintosh 7100/66 Logic Board Upgrade
Macintosh IIvx	Macintosh Quadra 650	Macintosh Quadra 650 Logic Board Upgrade
	Power Macintosh 7100/66	Power Macintosh 7100/66 Logic Board Upgrade Power Macintosh 7100/66av Logic Board Upgrade

Macintosh Centris 610	PowerPC processor	Power Macintosh Upgrade Card
Macintosh Quadra 610	Power Macintosh 6100/60	Power Macintosh 6100/60 Logic Board Upgrade
★ Macintosh Quadra 630	PowerPC processor	Power Macintosh Upgrade Card
Macintosh Centris 650	Power Macintosh 7100/66	Power Macintosh 7100/66 Logic Board Upgrade
Macintosh Quadra 650		Power Macintosh 7100/66av Logic Board Upgrade
Macintosh Performa 600 series		
	PowerPC processor	Power Macintosh Upgrade Card
Macintosh Centris 660av	Power Macintosh 6100/60	Power Macintosh 6100/60 Logic Board Upgrade
Macintosh Quadra 660av		Power Macintosh 6100/60av Logic Board Upgrade
Macintosh Quadra 700	PowerPC processor	Power Macintosh Upgrade Card
Macintosh Quadra 800	Power Macintosh 8100/80	Power Macintosh 8100/80 Logic Board Upgrade
Macintosh Quadra 840av		Power Macintosh 8100/80av Logic Board Upgrade
Macintosh Quadra 900	PowerPC processor	Power Macintosh Upgrade Card
Macintosh Quadra 950	PowerPC processor	Power Macintosh Upgrade Card
PowerBook 520, 520c, 540	Color active-matrix display	PowerBook Active-Matrix Color Display Upgrade

★ New model—introduced after July 1, 1994

# Memory Configurations QuickChart

## Minimum configuration

Model	Built-in RAM on logic board	Number of SIMM and card slots	Amount of memory (RAM) you want...	And how to get it... <sup>1</sup>
Macintosh LC 475	4MB	One empty SIMM slot	4MB configuration	= 4MB on logic board
Macintosh LC 575			5MB configuration	= 4MB on logic board + one 1MB SIMM
Macintosh Quadra 605			6MB configuration	= 4MB on logic board + one 2MB SIMM
★ Macintosh Quadra 630			8MB configuration	= 4MB on logic board + one 4MB SIMM
Macintosh Performa 400 series			12MB configuration	= 4MB on logic board + one 8MB SIMM
Macintosh Performa 500 series			20MB configuration <sup>2</sup>	= 4MB on logic board + one 16MB SIMM
★ Macintosh Performa 630 series			36MB configuration <sup>2</sup>	= 4MB on logic board + one 32MB SIMM
Macintosh Quadra 950	None	Eight SIMM slots filled with 1MB SIMMs, and eight empty SIMM slots	8MB configuration	= Eight 1MB SIMMs
			40MB configuration	= Eight 1MB SIMMs + eight 4MB SIMMs
			72MB configuration	= Eight 1MB SIMMs + eight 8MB SIMMs
			256MB configuration <sup>3</sup>	= Eight 16MB SIMMs + eight 16MB SIMMs

<b>Power Macintosh 6100/60</b>	8MB	Two empty SIMM slots	<b>8MB</b> configuration <b>16MB</b> configuration <b>24MB</b> configuration <b>40MB</b> configuration <b>72MB</b> configuration	= 8MB on logic board = 8MB on logic board + two 4MB SIMMs = 8MB on logic board + two 8MB SIMMs = 8MB on logic board + two 16MB SIMMs = 8MB on logic board + two 32MB SIMMs
<b>Power Macintosh 7100/66</b>	8MB	Four empty SIMM slots	<b>8MB</b> configuration <b>24MB</b> configuration <b>40MB</b> configuration <b>72MB</b> configuration <b>136MB</b> configuration	= 8MB on logic board = 8MB on logic board + four 4MB SIMMs = 8MB on logic board + four 8MB SIMMs = 8MB on logic board + four 16MB SIMMs = 8MB on logic board + four 32MB SIMMs
<b>Power Macintosh 8100/80</b>	8MB	Eight empty SIMM slots	<b>8MB</b> configuration <b>40MB</b> configuration <b>72MB</b> configuration <b>136MB</b> configuration <b>264MB</b> configuration	= 8MB on logic board = 8MB on logic board + eight 4MB SIMMs = 8MB on logic board + eight 8MB SIMMs = 8MB on logic board + eight 16MB SIMMs = 8MB on logic board + eight 32MB SIMMs

<sup>1</sup> Check with your Apple dealer for SIMM availability and installation

<sup>2</sup> Requires third-party product

<sup>3</sup> For 256MB, install 16 noncomposite 16MB DRAM SIMMs (16-megabyte technology)

★ New model—introduced after July 1, 1994

# Memory Configurations QuickChart

## Minimum configuration

Model	Built-in RAM on logic board	Number of SIMM and card slots	Amount of memory (RAM) you want...	And how to get it... <sup>1</sup>
★ PowerBook 150	4MB	One memory expansion slot	4MB configuration 8MB configuration 12MB configuration 24MB configuration <sup>2</sup> 40MB configuration <sup>2</sup>	= 4MB on logic board = 4MB on logic board + 4MB memory card = 4MB on logic board + 8MB memory card = 4MB on logic board + 20MB memory card = 4MB on logic board + 36MB memory card
PowerBook 520	4MB	One memory expansion slot	4MB configuration	= 4MB on logic board
PowerBook 520c			6MB configuration	= 4MB on logic board + 2MB memory card
PowerBook 540			8MB configuration	= 4MB on logic board + 4MB memory card
PowerBook 540c			14MB configuration <sup>2</sup> 36MB configuration <sup>2</sup>	= 4MB on logic board + 10MB memory card = 4MB on logic board + 32MB memory card



<b>PowerBook Duo 280</b>	4MB	One memory expansion slot	<b>4MB</b> configuration	= 4MB on logic board
<b>PowerBook Duo 280c</b>			<b>8MB</b> configuration	= 4MB on logic board + 4MB memory card
			<b>12MB</b> configuration	= 4MB on logic board + 8MB memory card
			<b>24MB</b> configuration <sup>2</sup>	= 4MB on logic board + 20MB memory card
			<b>40MB</b> configuration <sup>2</sup>	= 4MB on logic board + 36MB memory card

<sup>1</sup> Check with your Apple dealer for SIMM availability and installation

<sup>2</sup> Requires third-party product

<sup>3</sup> For 256MB, install 16 noncomposite 16MB DRAM SIMMs (16-megabyte technology)

★ New model—introduced after July 1, 1994

# Apple Printers QuickChart

Model	Resolution (Dots per inch)	Printing Speed (Pages per minute)	Recommended Number of Users	Fonts	Key Value Added
<b>ImageWriter II</b>	144 dpi	.5 ppm (best mode) 2 ppm (draft mode)	1 user	Built-in character sets for many languages	Prints on forms; color printing capability; Energy Star compliant
<b>StyleWriter II</b>	360 dpi	1 ppm (best mode) 2 ppm (draft mode)	1-3 users with GrayShare	39 TrueType fonts	High-resolution ink-jet printing; GrayShare software; Energy Star compliant
<b>Portable StyleWriter</b>	360 dpi	.5 ppm (best mode) 1 ppm (draft mode)	1 user	39 TrueType fonts	Portable; battery operation mode; perfect for PowerBook computers; Energy Star compliant
<b>Color StyleWriter Pro</b> ★ <b>Color StyleWriter 2400</b>	360 dpi	2 ppm (black & white—Color StyleWriter Pro) .5 ppm (color—Color StyleWriter Pro) 3 ppm (black & white—Color StyleWriter 2400) .3 ppm (color—Color StyleWriter 2400)	1-3 users with ColorShare	64 TrueType fonts	Superior quality color ink-jet printing; low- cost per page; ColorShare software; Energy Star compliant
<b>Personal LaserWriter 300</b>	300 dpi	4 ppm	1-3 users with GrayShare	39 TrueType fonts	Most affordable laser printer; Energy Star compliant; GrayShare software

<b>Personal LaserWriter 320</b>	300 dpi FinePrint	4 ppm	1-3 users with GrayShare	39 scalable fonts	Most affordable PostScript printer; PhotoGrade option; Energy Star compliant
<b>LaserWriter Select 360</b>	600 dpi	10 ppm	2-6 users	64 TrueType and PostScript fonts	Can send, receive, and print plain-paper faxes; autoemulation switching between Macintosh and Windows; Energy Star compliant
★ <b>LaserWriter 16/600 PS</b>	600 dpi FinePrint PhotoGrade <sup>1</sup>	16 ppm	7-10 users	64 TrueType and PostScript fonts	Ethernet support; SCSI port supports hard disk for font storage; supports Macintosh and Windows systems; Energy Star compliant
<b>LaserWriter Pro 810</b>	Up to 800 dpi	20 ppm	10 or more users	64 TrueType 35 PostScript Type 1 fonts in ROM	Ethernet support using a variety of networking protocols; prints on tabloid-size paper; supports Macintosh and Windows systems

<sup>1</sup> Requires minimum 12MB of RAM

★ New model—introduced after September 1, 1994

# Video Support QuickChart

Model and Video RAM	Apple Color Plus 14" Display	Macintosh Color Display (14-inch)	Apple AudioVision 14 Display	Apple Multiple Scan 15 Display	Apple Multiple Scan 17 Display	Apple Multiple Scan 20 Display
<b>Macintosh LC 475 and Macintosh Quadra 605</b>						
Built-in video (512K)	256 colors	256 colors	256 colors	256 colors	256 colors	16 colors
Expanded to 1MB	32,768 colors	32,768 colors	32,768 colors	32,768 colors	32,768 colors	256 colors
★ <b>Macintosh LC 630 and Quadra 630</b>						
Built-in video (1MB)	32,768 colors	32,768 colors	32,768 colors	32,768 colors	—	—
<b>Macintosh Quadra 950</b>						
Built-in video (1MB)	32,768 colors	32,768 colors	32,768 colors	32,768 colors	32,768 colors	256 colors
Expanded to 2MB	16.7 million colors	16.7 million colors	16.7 million colors	16.7 million colors	16.7 million colors	32,768 colors

**Power Macintosh 6100/60**

Built-in video (DRAM)	32,768 colors	32,768 colors	32,768 colors	32,768 colors	256 colors	—
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**Power Macintosh 7100/66**

Built-in video (1MB)	32,768 colors	32,768 colors	32,768 colors	32,768 colors	32,768 colors	256 colors
Expanded to 2MB (Standard in Apple AV Technologies configuration)	16.7 million colors	16.7 million colors	16.7 million colors	16.7 million colors	16.7 million colors	32,768 colors

**Power Macintosh 8100/80**

Built-in video (2MB)	16.7 million colors	16.7 million colors	16.7 million colors	16.7 million colors	16.7 million colors	32,768 colors
Expanded to 4MB	16.7 million colors	16.7 million colors	16.7 million colors	16.7 million colors	16.7 million colors	16.7 million colors

*Note: Macintosh Performa computers are sold with special Apple displays; consult your local Apple distributor for specifics.*

★ New model—introduced after July 1, 1994



# Video Support QuickChart

Model and Video RAM	Apple Color Plus 14" Display	Macintosh Color Display (14-inch)	Apple AudioVision 14 Display	Apple Multiple Scan 15 Display	Apple Multiple Scan 17 Display	Apple Multiple Scan 20 Display
<b>PowerBook 520, 520c, 540, and 540c</b>						
Built-in video	256 colors	256 colors	256 colors	256 colors	256 colors	—
<b>PowerBook Duo 230 and 280 with PowerBook Duo Dock and Duo Dock II</b>						
PowerBook Duo Dock (512K)		256 colors	256 colors	256 colors	256 colors	—
PowerBook Duo Dock II (1MB)		32,768 colors	32,768 colors	32,768 colors	32,768 colors	256 colors
<b>PowerBook Duo 230 and 280 with PowerBook Duo MiniDock</b>						
Built-in video	256 colors	256 colors	256 colors	256 colors	256 colors	—

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**PowerBook Duo 280c with PowerBook Duo Dock or PowerBook Duo MiniDock**

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At 640 by 480 resolution	256 colors	256 colors	256 colors	256 colors	256 colors	—
At 640 by 400 resolution	thousands of colors	thousands of colors	thousands of colors	thousands of colors	thousands of colors	—

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*Note: Macintosh Performa computers are sold with special Apple displays; consult your local Apple distributor for specifics.*

★ New model—introduced after July 1, 1994

# Apple Displays QuickChart

Model	Screen size	Screen refresh rate	Resolution	Dimensions and weight (HWD)	Key Features
<b>Apple Color Plus 14" Display</b>	14-inch (diagonal); RGB	67 hertz	640 by 480 pixels; 76 dots per inch	14.2 by 14.2 by 16.0 in.; 26.0 lb.	Most affordable color display; Energy Star compliant (requires additional software)
<b>Macintosh Color Display</b>	14-inch (diagonal); Sony Trinitron tube	67 hertz	640 by 480 pixels; 70 dots per inch	13.0 by 13.4 by 14.0 in.; 25.0 lb.	Provides both color and gray-scale capabilities; Energy Star compliant (requires additional software)
<b>Apple AudioVision 14 Display</b>	14-inch (diagonal); Sony Trinitron tube	66.7 hertz	640 by 480 pixels; 70 dots per inch	13.0 by 13.4 by 14.0 in.; 25.0 lb.	Built-in stereo speakers and microphone; Energy Star compliant
★ <b>Apple Multiple Scan 15 Display</b>	15-inch (diagonal); flat square screen	67-75 hertz (varies by resolution)	Selectable from 640 by 480 pixels to 832 by 624 pixels	16.7 by 15.9 by 17.8 in.*; 31.0 lb.	Multiple scan technology for user-adjustable resolution settings; works with Macintosh and Windows software-based computers; Energy Star compliant

<b>Apple Multiple Scan 17 Display</b>	17-inch (diagonal); 16.5-inch (viewable); Sony Trinitron tube	75 hertz (varies by resolution)	Selectable from 640 by 480 pixels to 1,024 by 768 pixels	16.7 by 15.9 by 17.8 in.; 50.0 lb.	Multiple scan technology for user-adjustable resolution settings; works with Macintosh and Windows software-based computers; Energy Star compliant
<b>Apple Multiple Scan 20 Display</b>	20-inch (diagonal); Sony Trinitron tube	75 hertz	Selectable from 640 by 480 pixels to 1,152 by 870 pixels	18.7 by 18.7 by 19.7 in.; 66.0 lb.	Largest Apple display available; multiple scan technology for adjustable resolution settings; Energy Star compliant

\* Two designs available worldwide—dimensions and weight may vary

★ New model—introduced after September 1, 1994

## About *AppleFacts*

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