



Richard

Apple Facts

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Welcome to **AppleFacts**—a concise guide to Apple computers, printers, displays, and other Apple products. Thank you for your suggestions—we have tried to incorporate as many of them as possible. 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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A key to symbols used in *AppleFacts*:

- ★** 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

Apple System Software

System 7.1: Setting the standard

System software version 7.1 takes Macintosh to a new level of performance and ease of use, through a number of new features designed to help you work smarter and faster.

- *Rapid installation.* Lets you get your applications up and running with a simple click of the mouse.
- *Improved Finder.* Gives you a variety of flexible options to organize your desktop.
- *Publish and subscribe.* Saves time by creating “live links” between documents—so changes you make to one document will appear automatically in a “linked” document that uses the same data—even across a network.
- *Multitasking.* Lets you run multiple applications at the same time.
- *File sharing.* Makes it easy to share files with other users on your network.
- *Improved font management.* Includes 21 TrueType fonts—with centralized storage of fonts in a Fonts folder, so you can manage your fonts more easily.

A/UX 3.0: The open systems solution

Apple's A/UX 3.0 operating system smoothly integrates the power and innovation of the Macintosh operating system with UNIX, an industry-standard operating system. A/UX 3.0 runs on most Macintosh computers, and supports many peripherals, such as Apple scanners and printers.

- *Compliance with UNIX standards.* A/UX complies with all relevant UNIX standards, combining features from two different

versions of UNIX—AT&T System V and Berkeley Software Distribution (BSD) 4.3—while allowing users to perform UNIX tasks through the familiar Macintosh interface.

- *Mix-and-match applications.* Allows users to simultaneously run Macintosh, UNIX, X Window System, MS-DOS, and Motif applications from the Macintosh desktop.
- *Interactive Macintosh interface for UNIX.* Allows users to apply Macintosh as well as UNIX techniques to UNIX operations.
- *Support for multitasking, multiple users, and virtual memory.* Lets you run many processes simultaneously, and lets you share information with other users on the same system. Virtual memory allows your system to run more applications than its physical memory could otherwise accommodate.
- *Built-in networking ports.* Provides standard UNIX communications based on TCP/IP and AppleTalk protocols.
- *Programming options.* Offers an assembler, a C compiler, an ANSI-standard Fortran compiler, debuggers, and the Source Code Control System (SCCS) to assist in developing Macintosh, UNIX, and X Window System applications.

System Software Extensions

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*.



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

Macintosh PC Exchange software makes it easy for Macintosh users to work with files stored on MS-DOS and Microsoft Windows floppy disks. You can move files between a Macintosh and a PC as easily as you can between two Macintosh computers. Macintosh PC Exchange 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 the corresponding Macintosh applications—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, or OS/2.
- *A/UX compatibility.*

At Ease: The best way to share your Macintosh with others

Now, with At Ease software, you can comfortably share your Macintosh with others while protecting your files—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. It also protects the contents of your hard disk. At Ease provides:



- *Customized icons.* Lets you represent documents and applications as large “buttons” that appear on your Macintosh screen. A single click of the mouse on the appropriate button launches the application or document.
- *Improved memory.* Replaces the Finder desktop at startup—freeing up an additional 200K of RAM.
- *Access limitation.* Enables you to require that users enter a password if they want to access the Finder on your Macintosh. You can also prevent users from adding files to your hard disk by requiring that they save new files to floppy disks only.
- *A/UX compatibility.*

AppleTalk Remote Access: Easy access to a Macintosh computer or AppleTalk network over the phone

AppleTalk Remote Access software  119 lets you use a modem and telephone lines to connect a remote Macintosh computer to another Macintosh computer or to an entire AppleTalk network.



- *At home or on the road.* Lets you use your desktop

Macintosh or PowerBook to “call” a Macintosh at work and retrieve files and applications stored on it.

- *All the benefits of being connected to a network.* Allows you to access an AppleTalk network as if you were directly connected to it. You can use network services such as electronic mail, AppleShare file servers, and even printers.

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 configuration 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 new 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.

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 Japanese applications and 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.

Desktop Computer Systems

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The Macintosh Advantage

Macintosh is easier to use than other personal computers

- 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.

Macintosh offers you more and better applications

- There are more than 5,000 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. There are about twice as many applications available for Macintosh as for Windows.¹
- 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, Microsoft Word for Windows uses 15 megabytes of hard disk space, while Microsoft Word for Macintosh uses about 7.7 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 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 file 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, Program Manager, and a text editor.
- 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. In recent performance benchmarks, the Macintosh Centris 610 delivered better performance for the price than any IBM compatible tested.²

¹ Source: Ziff-Davis's Computer Select CD-ROM Database, November 1992.

² Source: Ingram Laboratories Benchmark Study, February 1993.

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-based systems.³ And cost savings over OS/2 and DOS systems were even greater.

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.

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

³ Source: "Desktop Technology: A Cost Benefit Analysis." A life-cycle cost study conducted by Gartner Group, Inc., November 1992.

electronic mail, and share files with other Macintosh users.

- Macintosh lets you connect to a wide variety of network environments.  117 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.

- Most Macintosh models come standard with an Apple SuperDrive floppy disk drive, which lets you read from and write to MS-DOS, Windows, OS/2, and ProDOS disks.

Most important, Macintosh users are more satisfied and productive than Windows users

- 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,⁴ Macintosh scored highest on overall satisfaction. Similarly, for two years running, Apple was rated the number one personal computer company in overall customer satisfaction among business users by the prestigious research company J.D. Power and Associates.⁵

- In June 1992, Evans Research surveyed people who use both Macintosh and Windows systems. Macintosh was preferred by nearly two out of three people.⁶ 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. When people who use

⁴ Source: March 1993 study conducted by The Roper Organization.

⁵ Source: J.D. Power and Associates' 1991 and 1992 Computer End-User Satisfaction Studies. 1992 study conducted among 2,255 U.S. business end users at 1,145 business sites.

⁶ Source: June 1992 study conducted by Evans Research Associates.

both Macintosh and DOS without Windows were surveyed, they, too, preferred Macintosh and felt they accomplished more with Macintosh, by an even wider margin.

Macintosh computers outperform comparable personal computers running Windows 3.1

At the heart of any Macintosh computer is the powerful Motorola 680X0 processor. The following is a summary of how specific configurations of the Motorola processor outperform Intel 80X86 processors, which are commonly used in DOS- and Window-based personal computers:⁷

- The Motorola 68040 processor running at 33 megahertz outperformed a personal computer based on the 80486DX/2 processor running at 50 megahertz. The Macintosh Quadra 800 and the Macintosh Quadra 950 use this Motorola processor.
- The Motorola 68040 processor running at 25 megahertz outperformed a personal computer based on the 80486 processor running at 33 megahertz. The Macintosh Quadra 700 and the Macintosh Centris 650 use this Motorola processor.
- The Motorola 68040 processor running at 20 megahertz outperformed all tested personal computers based on the 80486 processor running at 25 megahertz. The Macintosh Centris 610 uses this Motorola processor.
- The Motorola 68030 processor running at 25 megahertz outperformed a personal computer based on the 80386SX processor running at 25 megahertz. The Macintosh LC III uses this Motorola processor.

⁷ Source: Ingram Laboratories Benchmark Study, February 1993. Study was conducted using comparable applications software on Macintosh computers running System 7.1 and DOS computers running Windows 3.1.

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,⁸ offering capabilities such as multitasking, virtual memory, on-screen help, and file sharing. 📁 6

- *An Apple SuperDrive floppy disk drive.* The Apple SuperDrive floppy disk drive⁹ is a high-density floppy disk drive that can read from and write to Macintosh, MS-DOS, Windows, OS/2, 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.¹⁰

- *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. 📁 117

- *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.

⁸ System 7 requires 2MB of RAM and a hard disk.

⁹ The PowerBook Duo 210 and 230 can be purchased with an external Apple SuperDrive.

¹⁰ Requires use of either Macintosh PC Exchange or Apple File Exchange.

- *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.¹¹

- *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.

- *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 Classic II, Macintosh Color Classic, Macintosh LC 520, 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 keystrokes 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.

- Every Macintosh comes 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.

¹¹ The PowerBook Duo Dock, MiniDock, and Floppy Adapter offer ADB ports for the PowerBook Duo systems.

Apple's new AV Technologies lay the foundation for the future of computing

AV Technologies are providing Macintosh users with revolutionary tools for all the ways they communicate. These technologies come built into the new Macintosh Centris 660AV and Macintosh Quadra 840AV computers, and include the following:

- *Integrated telecommunications.* The GeoPort hardware and software architecture lets you connect your Macintosh to a telephone line to gain access to information services (such as electronic mail), send and receive faxes through your Macintosh, and take advantage of voice telephony.

- *Video-in.* By connecting a video source to your Macintosh—such as a VCR, camcorder, or videodisc player—you can view video on your Macintosh display, import video frames from a VCR or camcorder, or capture QuickTime movies and integrate them into your work.

- *Video-out.* You can connect your Macintosh to a television to display your work to an audience, or you can connect it to a VCR and record everything on your Macintosh screen onto videotape.

- *Speech.* Apple's PlainTalk software enables speech recognition and text-to-speech capabilities. It allows you to issue voice commands to your Macintosh to navigate through files or create speech macros for common tasks. Text-to-speech capability will make proofreading documents even simpler, and, with the help of third-party software, you'll be able to access files from remote locations and ask your Macintosh to read them to you over the phone.

- *Audio.* 16-bit audio capability allows you to play and record CD-quality sound at your Macintosh.

Macintosh Classic II

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At a glance

- The Macintosh Classic II is the most affordable Macintosh—it offers the classic compact Macintosh design and takes up very little space on your desk.
- It's well suited for word processing, spreadsheet, database, record keeping, and personal finance functions.

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

- *Processor:* 68030
- *Speed:* 16 megahertz
- *Memory:* 2MB of RAM, expandable to 10MB
—2MB on logic board and two 30-pin SIMM slots
- *Storage:*
—Internal Apple SuperDrive floppy disk drive
—Internal 40MB or 80MB hard disk drive
- *Expansion capabilities:* Supports seven SCSI devices
- *Ports:* Two serial ports, ADB port, SCSI port, external disk drive port
- *Displays:* Built-in 10-inch (diagonal) monochrome display
- *Sound:* Input port (mono), output port (mono)
- *Networking ports:* Built-in LocalTalk
- *Dimensions (HWD):* 13.2 by 9.7 by 11.2 inches (33.5 by 24.6 by 28.5 cm)
- *Weight:* 16.0 to 17.1 lb. (7.2 to 7.7 kg)

Key features

- Offers the “all-in-one” classic Macintosh design—great for even the tightest of work spaces.
- Is a complete, fully functional Macintosh.
- Can take advantage of the virtual memory feature of System 7.
- Lets you easily expand RAM when your needs change.

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Upgrade information

- The Macintosh Classic can be upgraded to a Classic II with the Macintosh Classic II Logic Board Upgrade.

Other Macintosh models to consider

- The Macintosh Color Classic offers the convenience of the classic Macintosh design—with a built-in color display.
- The Macintosh LC II offers a flexible, modular design that lets you choose from a wide variety of displays, and has the ability to connect to Ethernet and Token Ring networks (requires networking card).

Macintosh Color Classic

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At a glance

- The Macintosh Color Classic offers affordable color in a classic Macintosh design.
- It's a fully functional, expandable Macintosh system that allows you to work with your favorite applications in color—while taking advantage of its all-in-one, transportable design.

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

- *Processor:* 68030; 68882 math coprocessor (optional)
- *Speed:* 16 megahertz
- *Memory:* 4MB of RAM, expandable to 10MB
—4MB on logic board and two 30-pin SIMM slots
- *Storage:*
—Internal Apple SuperDrive floppy disk drive
—Internal 40MB, 80MB, or 160MB hard disk drive
- *Expansion capabilities:* Macintosh LC-compatible processor-direct slot; socket for math coprocessor; supports seven SCSI devices
- *Ports:* Two serial ports, two ADB ports, SCSI port
- *Displays:* Built-in 10-inch (diagonal) Sony Trinitron RGB display; supports 256 colors (32,768 colors with optional upgrade)
- *Sound:* Input port (mono), output port (mono); integrated microphone
- *Networking ports:* Built-in LocalTalk

- *Dimensions (HWD)*: 14.5 by 9.9 by 12.6 inches (36.8 by 25.1 by 32.0 cm)
- *Weight*: 22.5 lb. (10.1 kg)
- *Other features*:
 - Power on/off from keyboard
 - Front controls for sound and contrast
 - Power Down mode to let you save energy

Key features

- Offers exceptional color in an improved Classic design—while maintaining its small footprint and transportability.
- Lets you easily expand the capabilities of your system through the expansion slot or with a VRAM upgrade.

Accessories

- Apple IIe Card
- Macintosh 256K VRAM SIMM
- Apple Ethernet LC Card

Other Macintosh models to consider

If you need even greater performance, and flexibility in configuring your system, you should consider the Macintosh LC II, which offers:

- A flexible, modular design that lets you choose from a wide variety of displays.

Macintosh LC II

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At a glance

- The Macintosh LC II is the most affordable modular Macintosh.
- It's a versatile system that's ideal for education and business uses, from color presentations to spreadsheets.

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

- *Processor:* 68030
- *Speed:* 16 megahertz
- *Memory:* 2MB or 4MB of RAM, expandable to 10MB
—2MB or 4MB on logic board and two 30-pin SIMM slots
- *Storage:*
—Internal Apple SuperDrive floppy disk drive
—Internal 40MB or 80MB hard disk drive
- *Expansion capabilities:* Macintosh LC-compatible processor-direct slot; supports seven SCSI devices
- *Ports:* Two serial ports, ADB port, video port, SCSI port
- *Displays:* Built-in support for the Macintosh 12-inch Mono-chrome Display, Apple Basic Color Monitor, and Macintosh Color Display; supports several third-party VGA monitors
- *Sound:* Input port (mono), output port (mono)
- *Networking ports:* Built-in LocalTalk
- *Dimensions (HWD):* 3.0 by 12.2 by 15.0 inches (7.6 by 31.0 by 38.1 cm)
- *Weight:* 8.8 lb. (4.0 kg)

Key features

- Offers built-in video support for several Apple monitors.
- Comes with an expansion slot for customizing your system, for instance, to add high-speed networking capabilities or to run Apple IIe applications.
- Offers built-in sound capabilities that let you add sound, music, and voice annotation to your work.

Accessories

- Apple IIe Card
- Macintosh LC 512K VRAM SIMM
- Apple Ethernet LC Card

Upgrade information

- The Macintosh LC can be upgraded to the LC II with the Macintosh LC II Logic Board Upgrade.

Other Macintosh models to consider

- The Macintosh LC III offers higher performance, greater memory expansion capability, and support for more Apple displays.
- The Macintosh IIfx offers three NuBus expansion slots, greater storage capacity, and an internal CD-ROM drive (optional).

Macintosh LC III



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At a glance

- The Macintosh LC III is the most powerful, versatile Macintosh featuring a slim desktop design.
- It's a flexible system that can grow as your needs change—offering a wide variety of monitor options and color capability.

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

- **Processor:** 68030 with 32-bit data bus; 68882 math coprocessor (optional)
- **Speed:** 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 40MB, 80MB, or 160MB hard disk drive
- **Expansion capabilities:** Macintosh LC-compatible processor-direct slot, math coprocessor socket; supports seven SCSI devices
- **Ports:** Two serial ports, ADB port, video port, SCSI port
- **Displays:** Built-in support for the Macintosh 12-inch Monochrome Display, Macintosh Color Display, Apple Basic Color Monitor, Macintosh Portrait Display, and Macintosh 16-inch Color Display; supports several third-party VGA and SVGA monitors
- **Sound:** Input port (mono), output port (mono)
- **Networking ports:** Built-in LocalTalk
- **Dimensions (HWD):** 3.0 by 12.2 by 15.0 inches (7.6 by 31.0 by 38.1 cm)
- **Weight:** 8.8 lb. (4.0 kg)

Key features

- Offers faster processing and greater storage capabilities.
- Comes with 512K of on-board VRAM for more extensive video support.
- Comes with an expansion slot for customizing your system, for instance, to add high-speed networking capabilities or to run Apple IIe applications.

Accessories

- Apple IIe Card
- Macintosh 256K VRAM SIMM
- Apple Ethernet LC Card

Upgrade information

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

Other Macintosh models to consider

- The Macintosh LC 520 offers a built-in 14-inch color display, an integrated AppleCD 300i CD-ROM drive, an integrated microphone, and stereo-quality speakers.
- The Macintosh IIfx offers three NuBus expansion slots, twice as much memory capacity, greater storage capacity, and an internal CD-ROM drive (optional).

Macintosh LC 520

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At a glance

- The Macintosh LC 520 is a new all-in-one Macintosh computer—with a built-in 14-inch color display, an integrated double-speed CD-ROM drive, and enhanced stereo speakers.
- The LC 520 is ideal for customers who have limited work space and want to take advantage of built-in multimedia features and a high-quality color display.

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

- **Processor:** 68030; 68882 math coprocessor (optional)
- **Speed:** 25 megahertz
- **Memory:** 5MB of RAM, expandable to 36MB—4MB on logic board and one 30-pin SIMM slot
- **Storage:**
 - Internal Apple SuperDrive floppy disk drive
 - Internal 80MB or 160MB hard disk drive
 - Internal AppleCD 300i CD-ROM drive
- **Expansion capabilities:** Macintosh LC-compatible processor-direct slot; supports seven SCSI devices
- **Ports:** Two serial ports, two ADB ports, SCSI port
- **Displays:** Built-in 14-inch (diagonal) Sony Trinitron RGB display; supports 256 colors (32,768 colors with optional upgrade)
- **Sound:** Input port (mono), two output ports (stereo); built-in microphone; enhanced stereo-quality sound
- **Networking ports:** Built-in LocalTalk

- *Dimensions (HWD)*: 17.9 by 13.5 by 16.5 inches (45.5 by 34.3 by 41.9 cm)
- *Weight*: 40.5 lb. (18.2 kg)
- *Other features*:
 - Push-button sound and contrast controls
 - Front headphone jack
 - Keyboard power switch

Key features

- Offers exceptional color and a large viewing area in a new all-in-one design.
- Lets you easily expand the capabilities of your system through the expansion slot.
- Comes with a variety of multimedia features built in, so you don't have to add extra accessories.

Accessories

- Apple IIe Card
- Macintosh 256K VRAM SIMM
- Apple Ethernet LC Card

Other Macintosh models to consider

If you need more expansion capacity and flexibility in configuring your system, you should consider the Macintosh IIvx, which offers:

- Three NuBus expansion slots.
- Nearly twice as much memory capacity—up to 68 megabytes.
- Greater storage capacity.
- A modular design that lets you choose the display you want to use.

Macintosh IIfx



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At a glance

- The Macintosh IIfx comes equipped with a math coprocessor and memory cache for increased speed and performance.
- It can accommodate a CD-ROM drive, a removable-cartridge drive, a magneto-optical drive, or an additional hard disk drive.
- It's ideal for users who want to take advantage of multimedia capabilities on their Macintosh.

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

- **Processor:** 68030; 68882 math coprocessor;
32K memory cache
- **Speed:** 32 megahertz
- **Memory:** 4MB of RAM, expandable to 68MB
—4MB on logic board and four 30-pin SIMM slots
- **Storage:**
—Internal Apple SuperDrive floppy disk drive
—Internal 40MB, 80MB, 160MB, 230MB, or 400MB 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, accelerator slot; supports seven SCSI devices
- **Ports:** Two serial ports, two ADB ports, video port, SCSI port
- **Displays:** Built-in support for Macintosh 12-inch Monochrome Display, Apple Basic Color Monitor, and Macintosh Color Display; supports some third-party VGA monitors
- **Sound:** Input port (mono), output port (mono); optional CD-ROM audio (stereo)

- *Networking ports:* Built-in LocalTalk
- *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
- *Other features:*
 - Optional internal AppleCD 300i drive

Key features

- Can be equipped with a built-in CD-ROM drive, letting you easily access large volumes of information stored on compact discs.
- Offers built-in video support for a variety of color displays.
- Offers high-performance VRAM-based video, which accelerates screen performance when running complex graphics applications.

Accessories

- Macintosh Display Card 8•24

Other Macintosh models to consider

If your tasks might require greater performance, you should consider the Macintosh Centris 610, which offers:

- A Motorola 68040 processor, which enables the Macintosh Centris 610 to handle even the most computation-intensive tasks easily.
- Built-in support for all Apple displays.
- A higher-performance SCSI connection for faster data transfer.
- Optional Ethernet capability, which lets you transfer information up to 10 times faster than with LocalTalk cabling.

Macintosh Centris 610

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At a glance

- The Macintosh Centris 610 is the most affordable 68040-based Macintosh, offering exceptional power and expandability in a low-profile design.
- It's ideal for mainstream business users who want high performance and flexibility in configuring their systems.

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


- **Processor:** 68040LC with built-in paged memory management unit (PMMU) and 8K memory cache
- **Speed:** 20 megahertz
- **Memory:** 4MB of RAM, expandable to 68MB—4MB on logic board and two 72-pin SIMM slots
- **Storage:**
 - Internal Apple SuperDrive floppy disk drive
 - Internal 80MB, 230MB, 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:** Internal expansion slot for one processor-direct card or one 7-inch NuBus expansion card (NuBus card requires NuBus adapter); supports seven SCSI devices
- **Ports:** Two serial ports, two ADB ports, video port, SCSI port
- **Displays:** Built-in support for all Apple displays; supports several third-party VGA, SVGA, and 19-inch monitors
- **Sound:** Input port (mono), output port (stereo)
- **Networking ports:** Built-in LocalTalk and optional 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
- *Other features*:
 - Optional internal AppleCD 300i drive

Key features

- Features the Motorola 68040 processor, which enables it to handle even the most complex tasks with ease.
- Offers built-in, high-performance SCSI for faster data transfer.
- Can be purchased with Ethernet capability, for faster data transfer over a network.
- Can be equipped with a built-in CD-ROM drive, letting you easily access large volumes of information stored on compact discs.
- Comes with 512K of on-board VRAM for more extensive video support.

Accessories

- Macintosh Centris 610 NuBus Adapter Card
- Macintosh VRAM Expansion Kit (two 256K SIMMs)
- Apple Ethernet Cable System  113

Other Macintosh models to consider

If your tasks might require more processing power, you should consider the Macintosh Centris 650, which offers:

- A faster processor (25 megahertz, compared with 20 megahertz for the Macintosh Centris 610).
- More expansion options than the Macintosh Centris 610—three NuBus slots (as opposed to one) and a processor-direct slot, for faster processing.
- More memory expansion capability—up to 136MB.

Macintosh Centris 650

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At a glance

- The Macintosh Centris 650 offers the high performance and power of a 68040 processor—with extensive built-in storage and expansion capabilities.
- With its speed and expansion options, the Macintosh Centris 650 is equipped to handle the complex tasks that professional users require—from sophisticated spreadsheets to graphics-intensive publishing to database retrieval.

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


- **Processor:** 68040LC with built-in paged memory management unit (PMMU) and 8K memory cache; or 68040 with built-in math coprocessor (optional)
- **Speed:** 25 megahertz
- **Memory:** 4MB or 8MB of RAM, expandable to 132MB or 136MB—4MB or 8MB on logic board and four 72-pin SIMM slots
- **Storage:**
 - Internal Apple SuperDrive floppy disk drive
 - Internal 80MB, 230MB, 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, 040 processor-direct slot; supports seven SCSI devices
- **Ports:** Two serial ports, two ADB ports, video port, SCSI port
- **Displays:** Built-in support for all Apple displays; supports several third-party VGA and SVGA monitors
- **Sound:** Input port (mono), output port (stereo)
- **Networking ports:** Built-in LocalTalk and optional 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
- *Other features*:
—Optional internal AppleCD 300i drive

Key features

- Features the Motorola 68040 processor, which enables it to handle even the most complex tasks with ease.
- Offers built-in, high-performance SCSI for faster data transfer.
- Can be purchased with Ethernet capability, for faster data transfer over a network.
- Can be equipped with a built-in CD-ROM drive, letting you easily access large volumes of information stored on compact discs.
- Comes with 512K of on-board VRAM for more extensive video support.

Accessories

- Macintosh VRAM Expansion Kit (two 256K SIMMs)
- Apple Ethernet Cable System  113

Upgrade information

- The Macintosh IIvx can be upgraded to the Macintosh Centris 650 with the Macintosh Centris 650 Logic Board Upgrade.

Other Macintosh models to consider

- The Macintosh Quadra 660Av provides a dual-processor architecture and AV Technologies, for all the ways you communicate.
- The Macintosh Quadra 800 offers faster performance, greater storage capacity, and built-in Ethernet.

Macintosh Centris 660AV

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At a glance

- The Macintosh Centris 660AV is the newest Macintosh Centris computer, providing a host of integrated communications technologies and a digital signal processor (DSP) in addition to its Motorola 68040 microprocessor.
- Its integrated AV Technologies—including integrated telecommunications, video input/output, 16-bit audio, and speech technologies—provide tools for all the ways you communicate.

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


- *Processor:* 68040 with built-in math coprocessor
- *Digital signal processor:* AT&T 3210
- *Speed:* 25-megahertz 68040; 55-megahertz DSP
- *Memory:* 8MB of RAM, expandable to 68MB
 - 4MB on logic board, one 4MB SIMM, and one empty SIMM slot
- *Storage:*
 - Internal Apple SuperDrive floppy disk drive
 - Internal 80MB, 230MB, 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:* Internal expansion slot for one 7-inch NuBus expansion card (NuBus card requires NuBus adapter); supports seven SCSI devices
- *Ports:* Two serial ports, ADB port, two video-input ports, two video-output ports, SCSI port
- *Displays:* Built-in support for all Apple displays; supports several third-party VGA and SVGA monitors
- *Sound:* Input port (stereo), output port (stereo)
- *Networking ports:* Built-in LocalTalk and Ethernet

- *Dimensions (HWD)*: 3.0 by 16.1 by 15.2 inches (7.5 by 40.3 by 38.0 cm)
- *Weight*: 14.0 lb. (6.3 kg)
- *Other features*:
 - Supports GeoPort telecom architecture
 - 16-bit stereo sound
 - PlainTalk speech-recognition and text-to-speech software

Key features

- Offers integrated telecommunications capability through its GeoPort architecture, giving you low-cost access to data, fax, and voice technologies.
- Provides advanced video-input/output capabilities, so you can easily capture video from external sources, incorporate it into your work, and record your work directly onto videotape or display it on a television.
- Includes a DSP, a second processor that handles the communications-specific processes so the 68040 processor can take care of standard computing tasks.
- Comes with 1MB of on-board VRAM.
- Has built-in Ethernet capability.

Accessories

- GeoPort Telecom Adapter
- Macintosh Centris 660AV NuBus Adapter Card
- Apple Ethernet Cable System  113

Upgrade information

- The Macintosh Centris 610 can be upgraded to the Macintosh Centris 660AV with a Macintosh Centris 660AV Logic Board Upgrade.

Other Macintosh models to consider

- The Macintosh Quadra 800 offers faster performance and two additional NuBus expansion slots.
- The Macintosh Quadra 840AV provides more expansion slots, more video expansion options, and significantly higher performance.

Macintosh Quadra 800



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At a glance

- One of the most powerful desktop Macintosh computers, the Macintosh Quadra 800 comes equipped with many built-in features and a high-performance 68040 processor—for tasks that require production-level computing.
- It's ideal for color publishing, multiuser accounting, software development, data analysis, scientific visualization, three-dimension modeling, CAD, and CAE.

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 136MB—8MB on logic board and four 72-pin SIMM slots
- **Storage:**
 - Internal Apple SuperDrive floppy disk drive
 - Internal 230MB, 500MB, or 1GB hard disk drive
 - Supports two additional internal 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, 040 processor-direct slot; supports seven SCSI devices
- **Ports:** Two serial ports, two ADB ports, video port, SCSI port
- **Displays:** Built-in support for all Apple displays; supports several third-party VGA, SVGA, and 19-inch monitors
- **Sound:** Input port (mono), output port (stereo)

- *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 depending on internal devices installed
- *Other features:*
—Optional internal AppleCD 300i drive
—“Mini-tower” design allows vertical use on a floor or desktop

Key features

- Offers an overall accelerated graphics architecture for exceptional performance.
- 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 800 into multivendor environments.
- Supports up to four internal storage devices, so you can configure your system the way you want—without sacrificing desk space.
- Comes with 512K of on-board VRAM for more extensive video support.
- Offers redesigned SCSI and NuBus for increased overall system performance.

Accessories

- Macintosh VRAM Expansion Kit (two 256K SIMMs)
- Apple Ethernet Cable System  113

Other Macintosh models to consider

- The Macintosh Quadra 950 offers more expansion options, accelerated 24-bit graphics capability, and greater memory capacity.
- The Macintosh Quadra 840AV offers a digital signal processor in addition to its 68040 processor, and a host of integrated communications 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)
 - Support for 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, 040 processor-direct slot; supports seven SCSI devices
- **Ports:** Two serial ports, ADB port, video port, dual-channel SCSI port
- **Displays:** Built-in support for all Apple displays; supports several third-party VGA, SVGA, and 19-inch monitors
- **Sound:** Two-line input port (mono), output port (stereo)
- **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)
- *Other features*:
 - High-performance, VRAM-based video
 - High-performance NuBus
 - Electronic security lock
 - Faster SCSI performance than the SCSI used by the Macintosh II computers

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.
- 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.
- Features redesigned NuBus and SCSI for increased overall system performance.
- Can run A/UX (version 3.0), so you can work with UNIX applications.

Accessories

- Macintosh VRAM Expansion Kit (two 256K SIMMs)
- Apple Ethernet Cable System  113

Upgrade information

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

Macintosh Quadra 840AV



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At a glance

- The Macintosh Quadra 840AV incorporates advanced communications technology with our highest-performance processor, making it the most powerful and versatile Macintosh available.
- Its integrated AV Technologies—including integrated telecommunications, video input/output, 16-bit audio, and speech technologies—provide tools for all the ways you communicate.

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

- **Processor:** 68040 with built-in math coprocessor, paged memory management unit (PMMU), and 8K memory cache
- **Digital signal processor:** AT&T 3210
- **Speed:** 40-megahertz 68040; 66-megahertz DSP
- **Memory:** 8MB of RAM, expandable to 128MB
- **Storage:**
 - Internal Apple SuperDrive floppy disk drive
 - Internal 230MB, 500MB, or 1GB hard disk drive
 - Supports two additional internal 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, ADB port, video port, SCSI port
- **Displays:** Built-in support for all Apple displays; supports several third-party VGA and SVGA monitors
- **Sound:** Input port (stereo), output port (stereo)
- **Networking ports:** Built-in LocalTalk and Ethernet

- *Dimensions (HWD)*: 14.2 by 7.8 by 16.0 inches (36.1 by 19.7 by 40.6 cm)
- *Weight*: 25.3 lb. (11.4 kg)—will vary depending on internal devices installed
- *Other features*:
 - Supports GeoPort telecom architecture
 - 16-bit stereo sound
 - PlainTalk speech-recognition and text-to-speech software

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Key features

- Has the highest-performance 68040 processor available in a Macintosh.
- Offers integrated telecommunications capability through its GeoPort architecture, giving you low-cost access to data, fax, and voice technologies.
- Provides advanced video-input/output capabilities, so you can easily capture video from external sources, incorporate it into your work, and record your work directly onto videotape or display it on a television.
- Includes a DSP, a second processor that handles the communications-specific processes so the 68040 processor can take care of standard computing tasks.
- Comes with 1MB of on-board VRAM for extensive video support, which can be expanded to 2MB.
- Has built-in Ethernet capability.

Accessories

- GeoPort Telecom Adapter
- Macintosh 1MB VRAM SIMM
- Apple Ethernet Cable System  113

Upgrade information

- The Macintosh Quadra 800 can be upgraded to the Macintosh Quadra 840AV with a Macintosh Quadra 840AV Logic Board Upgrade.

The Apple Display Advantage

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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.

Seven Macintosh displays to choose from

Apple offers seven displays for Macintosh computers—in a range of sizes, and in both monochrome and color. 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 color displays meet even the strict Swedish specifications for magnetic field emissions.

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.

Easy to add a second display

With Macintosh, you can use multiple displays at once. 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.

Key Features of the Apple Display Family

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Macintosh 12-inch Monochrome Display

- Most affordable Apple display
- 12-inch (diagonal) screen
- 640 by 480 pixels; 76 dots per inch
- 66.7-hertz screen refresh rate
- 12.2 by 14.4 by 10.2 inches (HWD)
(31.0 by 36.6 by 25.9 cm)
- 16.0 lb. (7.2 kg)



Macintosh Portrait Display

- Displays full page of text and graphics
- 15-inch (diagonal) screen
- 640 by 870 pixels; 80 dots per inch
- 75-hertz screen refresh rate
- 13.1 by 11.5 by 14.9 inches (HWD)
(33.3 by 29.2 by 37.9 cm)
- 35.0 lb. (15.8 kg)



Apple Basic Color Monitor

- Most affordable Apple color display, offering all the features of a standard 14-inch VGA display
- Can connect directly to any Macintosh capable of supporting VGA monitors
- Tilt-and-swivel base for adjustable viewing angle
- Shadow mask screen, for exceptional image clarity
- 14-inch (diagonal) screen
- 640 by 480 pixels; 76 dots per inch
- 60-hertz screen refresh rate



Macintosh Color Display

- Low-cost, high-quality color display
- Provides both color and gray-scale capabilities
- Tilt-and-swivel base for adjustable viewing angle
- 14-inch (diagonal) screen; Sony Trinitron tube
- 640 by 480 pixels; 70 dots per inch
- 66.7-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 AudioVision 14 Display

- Apple's newest color display, offering integrated audio and video features that let you take full advantage of the multimedia features of your software applications
- Built-in stereo speakers and microphone are specifically engineered to take advantage of the integrated telecommunications and speech technologies of the Macintosh Centris 660Av and Macintosh Quadra 840Av computers
- 14-inch (diagonal) screen; Sony Trinitron tube
- 640 by 480 pixels; 70 dots per inch
- 66.7-hertz screen refresh rate
- .26mm stripe pitch
- Autodegaussing circuitry—eliminates magnetic interference
- Tilt-and-swivel base for adjustable viewing angle
- 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)



Macintosh 16-inch Color Display

- Up to 70 percent more work area than standard color monitors
- Tilt-and-swivel base for adjustable viewing angle
- 17-inch (diagonal) screen; 16-inch (viewable); Sony Trinitron tube
- Three ADB ports for easy and convenient setup
- 832 by 624 pixels; 70 dots per inch
- 75-hertz screen refresh rate
- 16.5 by 16.0 by 17.6 inches (HWD) (42.0 by 40.6 by 44.7 cm)
- 47.0 lb. (21.2 kg)



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Macintosh 21-inch Color Display

- Vibrant color and uniform focus across the entire screen
- Autodegaussing circuitry—eliminates magnetic interference
- Tilt-and-swivel base for adjustable viewing angle
- Antiglare screen
- Three ADB ports for easy and convenient setup
- 21-inch (diagonal) screen
- 1,152 by 870 pixels; 79 dots per inch
- 75-hertz screen refresh rate
- 18.5 by 19.6 by 20.9 inches (HWD) (47.0 by 49.8 by 53.0 cm)
- 79.6 lb. (35.8 kg)



Apple Keyboards and Mouse

48

Apple Keyboard II

- Apple's most affordable keyboard
- Provides a small footprint, taking up less space on your desk
- Adjustable keyboard slope

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 Adjustable Keyboard

- Comfortable design—it splits into two sections, which can be adjusted up to a 30-degree angle on the desktop to accommodate a user's particular physiology, work habits, and work space for the most comfortable typing position
- Separate, extended keypad with function keys and numeric keypad, for maximum flexibility
- Removable palm rests provide a flat surface for resting hands
- Adjustable keyboard and keypad slope
- Easy-to-reach sound keys to control volume and to start and stop recording

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



Macintosh Performa

50

At a glance

- Macintosh Performa computers are intended for first-time and home computer users who want simpler choices of hardware, software, and peripherals to suit the various computing needs of their family members.
- Macintosh Performa computers are sold through retail merchandising channels around the world.
- All Macintosh Performa computers include customized system software installed on the hard disk drive, software applications bundles, built-in AppleTalk networking capability, a keyboard, mouse, and microphone, as well as toll-free telephone support and in-home service (United States only). There are currently three series of Macintosh Performa models available worldwide—the 200, 400, and 600 series.

Specifications—Macintosh Performa 200 series

(Note: Configurations, software bundles, and availability vary worldwide. Check with your local distributor for more information.)

- *Processor:* 68030
- *Speed:* 16 megahertz
- *Memory:* 4MB of RAM, expandable to 10MB
- *Storage:*
 - Internal Apple SuperDrive floppy disk drive
 - Internal 40MB or 80MB hard disk drive
- *Displays:* Built-in 10-inch (diagonal) RGB display; supports 256 colors (32,768 colors with optional upgrade)

- *Modem:* Teleport fax/data modem by Global Village Communications, Inc.
- *Other features:*
 - Comes with Apple Standard Keyboard
 - Comes with a variety of Macintosh system software extensions and third-party applications

Specifications—Macintosh Performa 400 series

(Note: Configurations, software bundles, and availability vary worldwide. Check with your local distributor for more information.)

- *Processor:* 68030
- *Speed:* 16 megahertz (405 and 430 models) and 25 megahertz (450 model)
- *Memory:* 4MB of RAM, expandable to 10MB (450 model expandable to 36MB)
- *Storage:*
 - Internal Apple SuperDrive floppy disk drive
 - Internal 80MB hard disk drive (405 model); internal 120MB hard disk drive (430 and 450 models)
- *Displays:* Supports 16 colors on 14-inch color Apple Performa Display (405 model), expandable to 256 colors; supports 256 colors on 14-inch Apple Performa Display (430 model); and 256 colors on 14-inch Apple Performa Plus Display (450 model), expandable to 32,768 colors
- *Modem:* Teleport fax/data modem by Global Village Communications, Inc.
- *Other features:*
 - 405 and 430 models come with the Apple Performa Display; 450 model comes with the Apple Performa Plus Display
 - Comes with Apple Standard Keyboard
 - Comes with a variety of Macintosh system software extensions and third-party applications

Specifications—Macintosh Performa 600 series

(Note: Configurations, software bundles, and availability vary worldwide. Check with your local distributor for more information.)

- *Processor:* 68030
- *Speed:* 32 megahertz
- *Memory:* 4MB and 5MB of RAM (5MB for 600CD model), expandable to 68MB
- *Storage:*
 - Internal Apple SuperDrive floppy disk drive
 - Internal 160MB hard disk drive
- *Displays:* Supports 256 colors on 14-inch Apple Performa Plus Display (600 model); supports 32,768 colors on 14-inch Apple Performa Plus Display (600CD model); both expandable to 16.7 million colors with Macintosh Display Card 8•24
- *Other features:*
 - Comes with Apple Extended Keyboard II
 - Comes with a variety of Macintosh system software extensions and third-party applications

AppleCD 150



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At a glance

- The AppleCD 150 is a CD-ROM drive that allows you to use text, graphics, and sound stored on digitally recorded CD-ROM discs.
- It's a cost-effective tool for accessing volumes of information stored on commercially available business/professional, reference, educational, and entertainment CD-ROM discs made for the Macintosh.

Specifications

- *Data transfer rate:* 150K per second
- *Data access time:* 380 milliseconds; 64K cache
- *Ports:* Two 50-pin SCSI connectors, two RCA jacks, headphone jack
- *Dimensions (HWD):* 1.9 by 7.0 by 12.9 inches (4.8 by 17.8 by 32.8 cm)
- *Weight:* 6.5 lb. (2.9 kg)
- *Other features:*
 - Front-loading door
 - Automatic lens-cleaning mechanism

Key features

- Provides full compatibility with System 7 and QuickTime.
- Offers AppleShare file server support, which lets users on a network access information stored on a shared AppleCD 150 drive connected to an AppleShare file server.
- Provides RCA jacks, which let you connect external speakers to your AppleCD 150.
- Provides a headphone jack, which lets you listen privately to your CDs.

AppleCD 300 and AppleCD 300i



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At a glance

- The AppleCD 300 is a high-performance CD-ROM drive that allows you to use text, graphics, and sound stored on digitally recorded CD-ROM discs.
- With the support of QuickTime, it allows you to access original-photography images stored on Kodak Photo CD discs, so you can copy and paste them into your documents.
- The AppleCD 300i is the version of the AppleCD 300 that can be installed inside some Macintosh computers.

Specifications

- *Data transfer rate:* 300K per second; 256K buffer
- *Data access time:* 295 milliseconds
- *Ports:* Two 50-pin SCSI connectors, two RCA jacks, headphone jack
- *Dimensions (HWD):* AppleCD 300—2.0 by 7.0 by 13.1 inches (5.1 by 17.8 by 33.3 cm); AppleCD 300i—1.7 by 5.6 by 8.2 inches (4.3 by 14.2 by 20.8 cm)
- *Weight:* AppleCD 300—6.3 lb. (2.8 kg); AppleCD 300i—2.8 lb. (1.3 kg)

Key features

- Offers twice the transfer rate of ordinary CD-ROM drives, to give you much faster access to the information stored on CD-ROM discs.
- Provides full compatibility with System 7 and QuickTime.
- Reads multisession Kodak Photo CD discs. Designated Kodak centers can convert your original camera film, negatives, or slides into high-quality images on a Kodak Photo CD disc. You can then copy and paste those images into applications on your Macintosh.

AppleDesign Powered Speakers



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At a glance

- The AppleDesign Powered Speakers were specifically engineered for computer use, providing high-quality sound output from a Macintosh or other personal computer.
- These speakers let you take advantage of CD-quality output from multimedia and audio compact discs, providing a perfect complement to a compact disc system.

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)
- *Other features:*
 - Tuned-port bass-reflex system for extended low-frequency response
 - Active equalization for best frequency response at all listening levels
 - Noise-reduction circuitry for audio clarity

Key features

- Can connect directly to any personal computer equipped for sound output.
- Can connect directly to a CD player, cassette player, or television with a simple cable (included).
- Feature a dual-input mixer, so you can connect them to your CD-ROM drive and your computer and receive high-quality sound from both—simultaneously.

- Provide controlled sound dispersion that is optimized for low listening levels, so you can enjoy excellent sound quality while maintaining a private listening environment.
- Can connect to a portable CD player, so you can listen to your favorite audio compact discs.
- Incorporate magnetic shielding, so you can use them near computer displays and peripheral devices without distorting image quality.
- Provide convenient power, volume, and balance 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 to fit the specific life-style and usage patterns of a notebook computer user. Although PowerBook computer systems use the same system software as the Macintosh desktop systems—providing the familiar, easy-to-use graphical user interface for all of your computing tasks—their unique design and carefully selected feature set make the PowerBook computers very personal machines, designed to be part of your life.
- In designing the PowerBook computer, Apple provided a range of capabilities to fit the specific needs of notebook computer users. 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 AppleTalk Remote Access software. PowerBook computers utilize special power-saving features to enable you to work where you want to, when you want to.

PowerBook computers equal success

- PowerBook systems bring success to both first-time computer owners and seasoned professionals. They have become a popular work tool and a symbol of success in business.
- Praise from the industry has been phenomenal. PowerBook and PowerBook Duo 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). PowerBook is consistently listed as one of the top two notebook computers—which is especially impressive considering its short time on the market.

All-in-one PowerBook computers

The original, all-in-one PowerBook computers provide a range of built-in features, which is one of the major factors behind their success.

- *Ergonomics.* An award-winning product design is one of our 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. PowerBook computers have an integrated palm rest, keyboard, and trackball, so you don’t have to sacrifice comfort or deal with additional components.
- *Communications capability.* As mobile computing becomes a business standard, the PowerBook is an excellent tool to help you stay connected to your world. Features such as file sharing, the PowerBook Express Modem, and AppleTalk Remote Access software (which lets you use a modem and telephone lines to connect to remote Macintosh computers and AppleTalk networks) let you have access to all the files and services you need—no matter where you’re working.
- *Color.* The PowerBook 165c and 180c computers have built-in displays that show your work in 256 bright, vivid colors. Most other color notebook computers on the market can display only 16 colors. PowerBook computers have consistent color handling through QuickDraw, ColorSync, and QuickTime, so you can easily copy and paste graphics between applications, and maintain the same vibrant color.
- *Flexible video-out.* Most PowerBook computers have video-out ports, so you can connect them to external displays or presentation equipment. You can use a second display to increase your work area without having to add a video card—a capability unique

to Apple computer technology. Or you can show the same work on your PowerBook screen as on an external display—which makes it easier for you to stay focused on your material while you're giving a presentation. PowerBook computers can connect to Apple displays (up to the 16-inch color display), and some third-party VGA and SVGA monitors.

- *More built-in expansion.* PowerBook computers come with a variety of expansion ports on each unit. The SCSI port lets you connect your PowerBook to as many as six SCSI devices, such as scanners and CD-ROM drives. An ADB port lets you connect a 10-key keypad, or a mouse, if you prefer. Sound input/output ports and/or integrated microphones help you incorporate audio into your work.

PowerBook Duo System: The best of both worlds

You don't need to buy two computers to get the best of notebook *and* desktop computing: The revolutionary Apple PowerBook Duo System offers you the best of both worlds.

- *Notebook computer convenience.* At the heart of the PowerBook Duo System are the PowerBook Duo computers—the most flexible members of Apple's acclaimed PowerBook family of notebook computers. They are our most lightweight, compact notebook computers, and their powerful 68030 processor enables you to accomplish virtually anything you want—just about anywhere you want.
- *Desktop computer capabilities.* When you're back at the office, simply slide your PowerBook Duo notebook computer into the PowerBook Duo Dock—and instantly, you're working with a complete Macintosh desktop system. The PowerBook Duo Dock provides instant connection to a network, a full-size color display, an extended keyboard, a mouse, and expansion slots. There's nothing to reconfigure, no switches to flip, and no cables to connect. The PowerBook Duo Dock uses the hard disk in your PowerBook Duo, so you can be assured that you're always working on your latest files and documents.

- *PowerLatch technology.* PowerLatch docking technology provides easy, reliable connection and integration between a PowerBook Duo computer and a PowerBook Duo Dock. This integration of hardware and software gives the PowerBook Duo System a unique advantage over similar systems: No cables are necessary when you insert a PowerBook Duo computer into the PowerBook Duo Dock. Its automatic insert and eject capabilities make inserting the PowerBook Duo into a PowerBook Duo Dock as easy as inserting a videotape into a VCR. And the system automatically recognizes what it's connected to—such as displays, NuBus devices, and input/output devices—so, unlike with other computer docking systems, no reconfiguration is required. The PowerBook Duo Dock also secures your PowerBook Duo computer so that it can't be accidentally ejected while you're working—and provides other data protection features, such as asking you whether you want to save changes before you eject your PowerBook Duo computer from the dock.

- *A cost-effective solution.* The PowerBook Duo system provides a cost-effective computing solution for a wide range of users, from entry-level to experienced Macintosh or DOS users. It's a notebook computer with an upgrade path to desktop-computer status: You can use PowerBook Duo computers strictly as notebook computers, or with the addition of a PowerBook Duo Dock, you can have access to the services provided by a traditional desktop system. Another option is to extend your existing investment in a Macintosh desktop computer by using a PowerBook Duo MiniDock, which lets you connect your PowerBook Duo computer to another Macintosh computer and use your PowerBook Duo as if it were an external hard disk. The Duo MiniDock comes with built-in support for a variety of displays, and has ADB ports so you can connect printers, larger keyboards, and other peripheral devices to your PowerBook Duo computer. This modular approach lets you decide which capabilities of a desktop system you want, letting you invest in exactly the setup that suits your needs.

PowerBook 145B



At a glance

- The PowerBook 145B is Apple's most affordable notebook computer, offering PowerBook convenience and functionality at an exceptionally low price.
- It offers you the power and performance of a desktop Macintosh in a small, notebook design—so you can work anywhere, anytime.


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

- *Processor:* 68030
- *Speed:* 25 megahertz
- *Memory:* 4MB of RAM, expandable to 8MB
—4MB on logic board and one memory expansion slot
- *Storage:*
—Internal Apple SuperDrive floppy disk drive
—Internal 40MB or 80MB hard disk drive
- *Expansion capabilities:* Internal expansion RAM, modem; all external ports
- *Ports:* Two serial ports, ADB port, SCSI port—supports six SCSI devices
- *Displays:* 10-inch (diagonal) monochrome, backlit supertwist display (640 by 400 pixels)
- *Battery:* Nickel-cadmium; average life: 2.5 to 3 hours; power adapter included
- *Sound:* Input port (mono), output port (mono)
- *Networking ports:* Built-in LocalTalk
- *Dimensions (HWD):* 2.3 by 11.3 by 9.3 inches (5.8 by 28.7 by 23.6 cm)
- *Weight:* 6.8 lb. (3.1 kg)

- *Internal modem:* Optional PowerBook Fax/Data Modem
 - *Other features:*
 - Backup application included on hard disk drive
 - Restore application included on System Tools disk
-

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.
 - Offers SCSI port, which allows you to connect to external peripherals such as hard disks, CD-ROMs, and scanners.
 - Has built-in AppleTalk networking capability through a LocalTalk port.
 - Takes advantage of AppleTalk Remote Access software (optional).  119
 - Runs thousands of Macintosh applications.
-

Accessories

- PowerBook Rechargeable Battery
 - PowerBook AC Adapter
 - PowerBook Battery Recharger
 - PowerBook Fax/Data Modem
 - PowerBook 4MB Memory Expansion Kit
-

Other PowerBook models to consider

- The PowerBook 160 offers a 16-level gray-scale display and more memory expansion options. It also offers video-output capabilities, letting you use an external color display.
- The PowerBook Duo 210 offers high performance in a smaller size—and can be “docked” to a PowerBook Duo Dock or PowerBook Duo MiniDock to take advantage of the expansion capabilities and peripherals of a desktop system.

PowerBook 160



At a glance


- The PowerBook 160 offers video-output capability, as well as more memory, more expansion options, and a better display than the PowerBook 145B.
- Its gray-scale supertwist display and video-output capabilities make the PowerBook 160 a good choice for people who use their notebook computer to present to clients.

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

- *Processor:* 68030
- *Speed:* 25 megahertz
- *Memory:* 4MB of RAM, expandable to 14MB (requires third-party card)
 - 4MB on logic board and one memory expansion slot
- *Storage:*
 - Internal Apple SuperDrive floppy disk drive
 - Internal 40MB, 80MB, or 120MB hard disk drive
- *Expansion capabilities:* Two slots—one for internal modem, one for RAM; all external ports
- *Ports:* Two serial ports, ADB port, video port, SCSI port—supports six SCSI devices
- *Displays:* 10-inch (diagonal) backlit supertwist display (16-level gray scale); built-in support for all Apple displays except the Macintosh 21-inch Color Display; supports some third-party VGA and SVGA monitors
- *Battery:* Nickel-cadmium; average life: 2.5 to 3 hours; power adapter included
- *Sound:* Input port (mono), output port (mono); integrated microphone

- *Networking ports:* Built-in LocalTalk
- *Dimensions (HWD):* 2.3 by 11.3 by 9.3 inches (5.8 by 28.7 by 23.6 cm)
- *Weight:* 6.8 lb. (3.1 kg)
- *Internal modem:* Optional PowerBook Express Modem
- *Security:* Security slot for locking (requires third-party cable)

Key features

- Offers video-output capabilities, so you can view your work on a dual display or in “mirror mode” on a variety of Apple and third-party VGA and SVGA displays.
- Offers a built-in, 16-level gray-scale display.
- Offers an award-winning design—provides palm rests and a convenient trackball that can be used equally well by left- and right-handed users.
- Offers SCSI port for expandability; optional SCSI disk adapter and system cable allow you to use your PowerBook 160 as an external Macintosh hard disk.
- Takes advantage of AppleTalk Remote Access software (optional).  119

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Accessories

- PowerBook Rechargeable Battery
- PowerBook AC Adapter
- PowerBook Battery Recharger
- PowerBook Express Modem
- PowerBook 4MB Memory Expansion Kit
- Apple HDI-30 SCSI System Cable
- Apple HDI-30 SCSI Disk Adapter

Other PowerBook models to consider

- The PowerBook 165c features a built-in, 256-color display, and higher performance than the PowerBook 160.
- The PowerBook 180 offers even higher performance and one of the highest-quality displays available.
- The PowerBook Duo computers offer high performance in a smaller size—and can be “docked” to a PowerBook Duo Dock or PowerBook Duo MiniDock.

PowerBook 165c



At a glance

- The PowerBook 165c offers a bright, vivid 256-color built-in display and top-of-the-line performance.
- It's ideal for customers who want to present, display, and develop their work in color, for maximum impact.


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

- *Processor:* 68030; 68882 math coprocessor
- *Speed:* 33 megahertz
- *Memory:* 4MB of RAM, expandable to 14MB (requires third-party card)
 - 4MB on logic board and one memory expansion slot
- *Storage:*
 - Internal Apple SuperDrive floppy disk drive
 - Internal 80MB or 120MB hard disk drive
- *Expansion capabilities:* Two slots—one for internal modem, one for RAM; all external ports
- *Ports:* Two serial ports, ADB port, video port, SCSI port—supports six SCSI devices
- *Displays:* 10-inch (diagonal) backlit passive-matrix display (256 colors); built-in support for all Apple displays except the Macintosh 21-inch Color Display; supports some third-party VGA and SVGA monitors
- *Battery:* Nickel-cadmium; average life: 1.5 to 2 hours; power adapter included
- *Sound:* Input port (mono), output port (mono); integrated microphone
- *Networking ports:* Built-in LocalTalk

- *Dimensions (HWD):* 2.3 by 11.3 by 9.3 inches (5.8 by 28.7 by 23.6 cm)
- *Weight:* 7.0 lb. (3.2 kg)
- *Internal modem:* Optional PowerBook Express Modem
- *Security:* Security slot for locking (requires third-party cable)

Key features

- Has a built-in, 256-color passive-matrix display.
- Offers video-output capabilities, so you can view your work on a dual display or in “mirror mode” on a variety of Apple and third-party VGA and SVGA displays.
- Offers an award-winning design—provides palm rests and a convenient trackball that can be used equally well by left- and right-handed users.
- Offers SCSI port for expandability; optional SCSI disk adapter and system cable allow you to use your PowerBook 165c as an external Macintosh hard disk.
- Takes advantage of AppleTalk Remote Access software (optional).  119

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Accessories

- PowerBook Rechargeable Battery
- PowerBook AC Adapter
- PowerBook Battery Recharger
- PowerBook Express Modem
- PowerBook 4MB Memory Expansion Kit
- Apple HDI-30 SCSI System Cable
- Apple HDI-30 SCSI Disk Adapter

Other PowerBook models to consider

- The PowerBook 180c features a high-quality active-matrix display with 256 bright, vivid colors.
- The PowerBook Duo computers offer gray-scale capability and high performance in a smaller size—and can be “docked” to a PowerBook Duo Dock or PowerBook Duo MiniDock.

PowerBook 180



At a glance

- The PowerBook 180 is Apple's most powerful monochrome PowerBook computer.
- Its high-quality, backlit active-matrix display and video-output capabilities make the PowerBook 180 ideal for people who use their notebook computer to present to clients—and who might want to use a bigger display while working at their desk.


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

- *Processor:* 68030; 68882 math coprocessor
- *Speed:* 33 megahertz
- *Memory:* 4MB of RAM, expandable to 14MB (requires third-party card)
 - 4MB on logic board and one memory expansion slot
- *Storage:*
 - Internal Apple SuperDrive floppy disk drive
 - Internal 80MB or 120MB hard disk drive
- *Expansion capabilities:* Two slots—one for internal modem, one for RAM
- *Ports:* Two serial ports, ADB port, video port, SCSI port—supports six SCSI devices
- *Displays:* 10-inch (diagonal) backlit active-matrix display (16-level gray scale); built-in support for all Apple displays except the Macintosh 21-inch Color Display; supports some third-party VGA and SVGA monitors
- *Battery:* Nickel-cadmium; average life: 2.5 to 3 hours; power adapter included
- *Sound:* Input port (mono), output port (mono); integrated microphone

- *Networking ports:* Built-in LocalTalk
 - *Dimensions (HWD):* 2.3 by 11.3 by 9.3 inches (5.8 by 28.7 by 23.6 cm)
 - *Weight:* 6.8 lb. (3.1 kg)
 - *Internal modem:* Optional PowerBook Express Modem
 - *Security:* Security slot for locking (requires third-party cable)
-

Key features

- Offers video-output capabilities, so you can view your work on a dual display or in “mirror mode” on a variety of Apple and third-party VGA and SVGA displays.
- Offers a built-in, 16-level gray-scale display.
- Offers an award-winning design—provides palm rests and a convenient trackball that can be used equally well by left- and right-handed users.
- Offers SCSI port for expandability; optional SCSI disk adapter and system cable allow you to use your PowerBook 180 as an external Macintosh hard disk.
- Takes advantage of AppleTalk Remote Access software (optional).  119

Accessories

- PowerBook Rechargeable Battery
 - PowerBook AC Adapter
 - PowerBook Battery Recharger
 - PowerBook Express Modem
 - Apple HDI-30 SCSI System Cable
 - Apple HDI-30 SCSI Disk Adapter
-

Other PowerBook models to consider

- The PowerBook 180c features a built-in, 256-color active-matrix display and offers the same performance as the PowerBook 180.
- The PowerBook Duo computers offer high performance in a smaller size—and can be “docked” to a PowerBook Duo Dock or PowerBook Duo MiniDock.

PowerBook 180c



At a glance

- The PowerBook 180c combines advanced color display capabilities with the PowerBook 180 computer's top-of-the-line performance.
- Its active-matrix display—the highest-quality color PowerBook display available—offers 256 bright, vivid colors, which makes it ideal for customers who want to present, display, and develop their work in color, for maximum impact.


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

- *Processor:* 68030; 68882 math coprocessor
- *Speed:* 33 megahertz
- *Memory:* 4MB of RAM, expandable to 14MB (requires third-party card)
—4MB on logic board and one memory expansion slot
- *Storage:*
—Internal Apple SuperDrive floppy disk drive
—Internal 80MB or 160MB hard disk drive
- *Expansion capabilities:* Internal expansion RAM, modem; all external ports
- *Ports:* Two serial ports, ADB port, video port, SCSI port—supports six SCSI devices
- *Displays:* 10-inch (diagonal) backlit active-matrix display (256 colors); built-in support for all Apple displays except the Macintosh 21-inch Color Display; supports some third-party VGA and SVGA monitors
- *Battery:* Nickel-cadmium; average life: 1 to 2 hours; power adapter included
- *Sound:* Input port (mono), output port (mono); integrated microphone

- *Networking ports:* Built-in LocalTalk
- *Dimensions (HWD):* 2.3 by 11.3 by 9.3 inches (5.8 by 28.7 by 23.6 cm)
- *Weight:* 7.1 lb. (3.2 kg)
- *Internal modem:* Optional PowerBook Express Modem
- *Security:* Security slot for locking (requires third-party cable)

Key features

- Has a built-in, 256-color active-matrix display.
- Offers video-output capabilities, so you can view your work on a dual display or in “mirror mode” on a variety of Apple and third-party VGA and SVGA displays.
- Offers an award-winning design—provides palm rests and a convenient trackball that can be used equally well by left- and right-handed users.
- Offers SCSI port for expandability; optional SCSI disk adapter and system cable allow you to use your PowerBook 180 as an external Macintosh hard disk.
- Takes advantage of AppleTalk Remote Access software (optional).  119

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Accessories

- PowerBook Rechargeable Battery
- PowerBook AC Adapter
- PowerBook Battery Recharger
- PowerBook Express Modem
- PowerBook 4MB Memory Expansion Kit
- Apple HDI-30 SCSI System Cable
- Apple HDI-30 SCSI Disk Adapter

Other PowerBook models to consider

- The PowerBook Duo computers offer gray-scale capability and high performance in a smaller size—and can be “docked” to a PowerBook Duo Dock or PowerBook Duo MiniDock to take advantage of the expansion capabilities and peripherals of a desktop system.

PowerBook Duo 210




At a glance

- The PowerBook Duo 210 packs tremendous computing power in a package that's only 1.4 inches (3.6 cm) thick.
- It comes standard with a 25-megahertz 68030 processor, 4 megabytes of RAM (expandable to 24 megabytes), and an 80-megabyte hard disk drive. When teamed with the Duo Dock, it provides you with a complete desktop Macintosh system.

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

- *Processor:* 68030
- *Speed:* 25 megahertz
- *Memory:* 4MB of RAM, expandable to 24MB (requires third-party card)
 - 4MB on logic board and one memory expansion slot
- *Storage:*
 - External 1.4MB floppy disk drive (optional; requires PowerBook Duo Floppy Adapter or PowerBook Duo MiniDock)
 - Internal 80MB hard disk drive
- *Expansion capabilities:* Two slots—one for an internal modem, one for RAM
- *Ports:* Serial port, docking connector, power adapter port, modem port
- *Displays:* 9-inch (diagonal) backlit supertwist 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 AppleTalk Remote Access software  119
 - External floppy disk drive

- *Battery*: Nickel-metal-hydride; average life: 2 to 4.5 hours; power adapter included
- *Sound*: Input port (mono), output port (mono); integrated microphone and speaker
- *Networking ports*: Built-in LocalTalk
- *Dimensions (HWD)*: 1.4 by 10.9 by 8.5 inches (3.6 by 27.7 by 21.6 cm)
- *Weight*: 4.2 lb. (1.9 kg)
- *Internal modem*: Optional PowerBook Express Modem

Key features

- Is an exceptionally powerful, light PowerBook that lets you work wherever you want, whenever you want.
- Can be inserted into a Duo Dock—and instantly, you're working with a complete desktop Macintosh system.
- Offers a bright, backlit display that's exceptionally clear.
- Offers support for many external Apple monochrome and color displays (including the Macintosh 16-inch Color Display) via the PowerBook Duo Dock or MiniDock.
- Can be easily connected to an external floppy disk drive, using the Duo MiniDock or the PowerBook Duo Floppy Adapter. Can also be connected to another Macintosh and used as if it were an external hard disk.
- Features the award-winning design shared by all PowerBook computers—provides palm rests and a convenient, integrated trackball.

Accessories

- PowerBook Duo Dock
- PowerBook Duo MiniDock
- PowerBook Duo Floppy Adapter
- PowerBook Express Modem
- PowerBook Duo Rechargeable Battery
- PowerBook Duo Battery Recharger
- PowerBook Duo AC Adapter
- PowerBook Duo Memory Expansion Kit (4MB or 8MB)

PowerBook Duo 230




At a glance

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- The PowerBook Duo 230 offers you all the advantages the PowerBook Duo 210 does, and its processor is faster (running at 33 megahertz compared with 25 megahertz). You can also configure the 230 with a larger hard disk drive.
- It comes standard with 4 megabytes of RAM (expandable to 24 megabytes) and an 80-megabyte or 120-megabyte hard disk drive. When teamed with the Duo Dock, it provides you with a complete desktop Macintosh system.

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

- *Processor:* 68030
- *Speed:* 33 megahertz
- *Memory:* 4MB of RAM, expandable to 24MB (requires third-party card)
 - 4MB on logic board and one memory expansion slot
- *Storage:*
 - External 1.4MB floppy disk drive (optional; requires PowerBook Duo Floppy Adapter or PowerBook Duo MiniDock)
 - Internal 80MB or 120MB hard disk drive
- *Expansion capabilities:* Two slots—one for an internal modem, one for RAM
- *Ports:* Serial port, docking connector, power adapter port, modem port
- *Displays:* 9-inch (diagonal) backlit supertwist 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 AppleTalk Remote Access software  119
 - External floppy disk drive

- *Battery*: Nickel-metal-hydride; average life: 2 to 4.5 hours; power adapter included
- *Sound*: Input port (mono), output port (mono); integrated microphone and speaker
- *Networking ports*: Built-in LocalTalk
- *Dimensions (HWD)*: 1.4 by 10.9 by 8.5 inches (3.6 by 27.7 by 21.6 cm)
- *Weight*: 4.2 lb. (1.9 kg)
- *Internal modem*: Optional PowerBook Express Modem

Key features

- Is an exceptionally powerful, light PowerBook that lets you work wherever you want, whenever you want.
- Can be inserted into a Duo Dock—and instantly, you're working with a complete desktop Macintosh system.
- Offers a bright, backlit display that's exceptionally clear.
- Offers support for many external Apple monochrome and color displays (including the Macintosh 16-inch Color Display) via the PowerBook Duo Dock or MiniDock.
- Can be easily connected to an external floppy disk drive, using the Duo MiniDock or PowerBook Duo Floppy Adapter. Can also be connected to another Macintosh and used as if it were an external hard disk.
- Features the award-winning design shared by all PowerBook computers—provides palm rests and a convenient, integrated trackball.

Accessories

- PowerBook Duo Dock
- PowerBook Duo MiniDock
- PowerBook Duo Floppy Adapter
- PowerBook Express Modem
- PowerBook Duo Rechargeable Battery
- PowerBook Duo Battery Recharger
- PowerBook Duo AC Adapter
- PowerBook Duo Memory Expansion Kit (4MB or 8MB)

PowerBook Duo System Accessories

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PowerBook Duo Dock at a glance

- Inserting your PowerBook Duo notebook computer into the Duo Dock gives you access to a complete Macintosh desktop system.
- Its PowerLatch docking technology gives the PowerBook Duo System:
 - Easy connection between the PowerBook Duo and the Duo Dock; there are no cables to hook up.
 - Automatic insert and eject.
 - Data protection. You can't accidentally eject your PowerBook Duo while it is docked.
- It physically supports external Apple monochrome and color displays weighing up to 50 pounds—such as the Macintosh 16-inch Color Display.




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

- *Coprocessor:* 68882 math coprocessor (optional)
- *Storage:*
 - Internal Apple SuperDrive floppy disk drive
 - Bay for 3.5-inch hard disk drive
- *Expansion capabilities:* Two NuBus slots; supports six SCSI devices
- *Security features:* Built-in security slot and key lock
- *Ports:* Two serial ports, ADB port, SCSI port, video-output port, pass-through port for modem
- *Sound:* Input port (mono), output port (mono)

- *Video support:*

- Built-in support for up to 256 colors on Apple displays (including the Macintosh 16-inch Color Display) and some third-party VGA and SVGA displays

- With 512K of additional video RAM, supports up to 32,000 colors  138

- *Networking ports:* Built-in LocalTalk

- *Dimensions (HWD):* 4.8 by 12.5 by 16.3 inches (12.2 by 31.8 by 41.4 cm)

- *Weight:* 13.1 lb. (5.9 kg)

- *Other features:*

- Mouse

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

- Manual eject if the power is out

Accessories

- Macintosh Math Coprocessor Kit
- Apple Ethernet NB Card
- Macintosh 512K VRAM Expansion Kit

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 Macintosh 16-inch Color 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 210 or 230 to another Macintosh computer—and use the PowerBook Duo as if it were an external Macintosh hard disk.

Specifications (Note: Configurations may vary worldwide.)

- *Ports:* Two serial ports, ADB port, power adapter port, video-output port, SCSI port; pass-through port for modem, AC power adapter port
- *Security features:* Built-in security slot
- *Sound:* Input port (mono), output port (mono)
- *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)

Accessories

- Apple HDI-30 SCSI System Cable
- Apple HDI-30 SCSI Disk Adapter
- PowerBook HDI-20 External 1.4MB Floppy Disk Drive
- PowerBook Duo AC Adapter

PowerBook Duo Floppy Adapter at a glance

- The PowerBook Duo Floppy Adapter allows you to access an external floppy disk drive with either 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)

Accessories

- PowerBook HDI-20 External 1.4MB Floppy Disk Drive

Printers & Scanners

The Apple Imaging Advantage

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.

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 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—and the Personal LaserWriter NTR and LaserWriter Pro printers can even be used with Windows computers on a network.

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 software adds printer sharing and gray-scale printing capability to the StyleWriter II, Personal LaserWriter 300, LaserWriter Select 300, and Apple Color Printer.

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

Apple has developed five 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.

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- *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 LaserWriter Select 300 and the LaserWriter Pro printers, because these printers can use Apple's PhotoGrade technology.



PhotoGrade makes it possible for some Apple laser printers to generate images with as many as 91 shades of gray. That's up to three times the number of grays that other 300- and 600-dpi

laser printers are capable of producing. 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.

- *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—with no intervention on your part.

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- *GrayShare*. GrayShare technology is part of Apple printers that use QuickDraw software (GrayShare upgrades are available for the StyleWriter and Personal LaserWriter LS).



GrayShare provides greater 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 network. And GrayShare comes with options for controlling printer access with passwords and for monitoring printer use.

There's a printer for every task—and budget

With a family of 10 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 (510) 417-7711. 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



At a glance

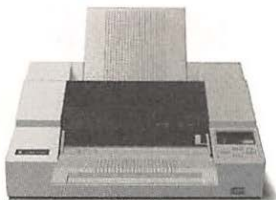
- The ImageWriter II is a dot-matrix printer well suited for both personal and professional use.
- It's capable of printing multipart forms.
- It's ideal for printing on continuous-feed paper, such as payroll checks or preprinted forms.
- It's also compatible with Apple II computers.

Specifications

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- *Resolution:* 144 dots per inch
- *Printing speed:* .5 page per minute (best mode); 2 pages per minute (draft mode)
- *Fonts:* Built-in character sets for English, Italian, Danish, German, Swedish, French, and Spanish
- *Interfaces:* Direct connection—RS-422/RS-232 (serial); LocalTalk (requires ImageWriter II/LQ LocalTalk Option)
- *Paper handling:* Supports both cut sheet and fanfold continuous (3 to 10 inches in width); prints forms, labels, envelopes
- *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
- *Other features:*
 - Capable of printing color documents (requires color ribbon)
 - Can be equipped with a cut-sheet feeder, which lets you print as many as 100 pages of cut-sheet paper at a time

Apple Color Printer



At a glance

- The Apple Color Printer complements Apple's color products by offering high-quality color printing at an affordable price.
- Its ColorSync color-matching technology lets you produce documents with WYSIWYG color—from scanner to monitor to printer.
- Its printer driver software, GrayShare, allows password-protected printer sharing, optimizes printing for specific paper types, and enables background printing.

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Specifications

- *Resolution:* 360 dots per inch
- *Printing speed:* 2 minutes per page (depends on computer's processor speed)
- *Fonts:* 64 scalable TrueType fonts
- *Interfaces:* SCSI
- *Paper tray size:* 100 sheets (letter); supports up to 11.0- by 17.0-inch paper (27.9 by 43.2 cm)
- *Networking:* Printer sharing through GrayShare software
- *Dimensions (HWD):* 6.7 by 20.5 by 20.0 inches (17.0 by 52.1 by 50.8 cm)
- *Weight:* 22.0 lb. (9.9 kg)
- *Recommended number of users:* One

StyleWriter II



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.
- It can print on a variety of materials, including envelopes and transparencies.

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Specifications

- *Resolution:* 360 dots per inch
- *Printing speed:* 1 page per minute (best mode), 2 pages per minute (draft mode)
- *Fonts:* 39 scalable TrueType fonts
- *Interfaces:* RS-232 serial interface
- *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
- *Networking:* 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

Portable StyleWriter



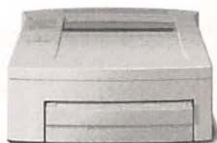
At a glance

- 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.

Specifications

- *Resolution:* 360 dots per inch
- *Printing speed:* .5 page per minute (best mode), 1 page per minute (draft mode)
- *Fonts:* 39 scalable TrueType fonts
- *Interfaces:* Parallel interface with serial-to-parallel cable
- *Paper tray size:* Single-sheet feed; 60-sheet feeder optional
- *Paper handling:* Supports U.S. letter, U.S. legal, A4, envelopes, labels, and transparencies
- *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 recharger included

Personal LaserWriter 300



At a glance

- The Personal LaserWriter 300 is Apple's most affordable laser printer.
- It's a compact, energy-efficient laser printer that's perfect for home use.
- Its gray-scale capability enables the Personal LaserWriter 300 to offer sharp graphics printing.
- Its printer driver software, GrayShare, allows password-protected printer sharing, optimizes printing for specific paper types, and enables background printing.

★88

Specifications

- *Resolution:* 300 dots per inch
- *Printing speed:* 4 pages per minute
- *Fonts:* 39 built-in scalable TrueType fonts
- *Interfaces:* RS-422 serial interface
- *Paper tray size:* 100 sheets
- *Networking:* 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
- *Other features:*
 - Energy conservation mode

LaserWriter Select 300



At a glance

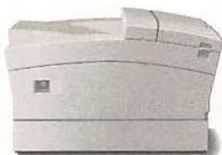
- The LaserWriter Select 300 is Apple's expandable laser printer for personal use.
- Its FinePrint technology produces smooth text and line art.
- Its gray-scale capability enables the LaserWriter Select 300 to offer sharp graphics printing.
- It offers expansion capabilities, such as extensive paper handling capabilities, and optional PostScript and PhotoGrade upgrades.
- It lets you take advantage of "background printing," which lets you continue working while you print.
- Its GrayShare software provides printer-sharing capability.

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Specifications

- *Resolution:* 300 dots per inch
- *Printing speed:* 5 pages per minute
- *Memory:* 512K of RAM, with data compression/decompression software that allows the LaserWriter Select 300 to operate as if it had 2.5MB of RAM; expandable to 4.5MB of RAM
- *Supported languages:* Adobe PostScript support available via optional upgrade
- *Fonts:* 39 scalable TrueType fonts
- *Interfaces:* High-speed RS-422 serial interface
- *Paper tray size:* 250 sheets or 15 envelopes (50-sheet multi-purpose tray and 250- and 500-sheet second bins optional)
- *Networking:* Printer sharing through GrayShare 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:* One

LaserWriter Select 310



At a glance

- The LaserWriter Select 310 is Apple's most affordable PostScript laser printer, offering exceptional print quality at a low price.
- Its parallel port lets you print from Windows computers.
- It includes a printer driver for Windows.

Specifications

- *Resolution:* 300 dots per inch
- *Printing speed:* 5 pages per minute
- *Processor:* AMD 29205 RISC
- *Processor speed:* 16 megahertz
- *Memory:* 1.5MB of RAM, expandable to 5.5MB
- *Supported languages:* Adobe PostScript Level 1
- *Fonts:* 13 scalable PostScript fonts
- *Interfaces:* RS-422 serial interface; parallel
- *Paper tray size:* 250 sheets (50-sheet multipurpose tray and 250- and 500-sheet second bins optional)
- *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:* One

Upgrade information

- The LaserWriter Select 300 can be upgraded to the LaserWriter Select 310 with a LaserWriter Select 310 Accessory Kit (upgrade board included).

Personal LaserWriter NTR



At a glance

- The Personal LaserWriter NTR offers Adobe PostScript Level 2 printing capabilities for individuals and small workgroups.
- Its “all ports active” feature lets you print from Macintosh, MS-DOS, Windows, and OS/2 computers.
- Its RISC processor offers fast processing and printing performance—even for complex documents.

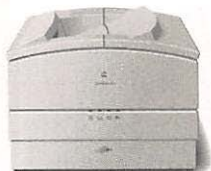
Specifications

- *Resolution:* 300 dots per inch
- *Printing speed:* 4 pages per minute
- *Processor:* AMD 29005 RISC processor
- *Processor speed:* 16 megahertz
- *Memory:* 3MB of RAM, expandable to 4MB
- *Supported languages:* Adobe PostScript Level 2, PCL 4+ emulation
- *Fonts:* 64 scalable TrueType and PostScript fonts
- *Interfaces:* Simultaneous connection to LocalTalk, parallel, and RS-232
- *Paper tray size:* 70 sheets (250-sheet bin optional)
- *Dimensions (HWD):* 8.0 by 15.0 by 18.3 inches (20.3 by 38.1 by 46.5 cm)
- *Weight:* 29.5 lb. (13.3 kg)
- *Recommended number of users:* One to five

Upgrade information

- The Personal LaserWriter NT and Personal LaserWriter SC can be upgraded to the Personal LaserWriter NTR with a Personal LaserWriter NTR Accessory Kit/Controller Card.

LaserWriter Pro 600



At a glance

- The LaserWriter Pro 600 printer—Apple's mainstream 600-dpi laser printer—is designed for groups in both Macintosh and Windows environments.
- It delivers camera-ready print quality, because it prints at four times the resolution of conventional laser printers.
- It prints scanned images in as many as 91 shades of gray, so images retain nearly all of the detail and tonal range of the original.
- Its multiple ports provide easy connection to different computers or networks.

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Specifications

- *Resolution:* 600 dots per inch or uses PhotoGrade and FinePrint
- *Printing speed:* 8 pages per minute
- *Processor:* 68030 plus I/O processors and ASICs
- *Processor speed:* 25 megahertz
- *Memory:* 8MB of RAM, expandable to 32MB; 4MB of ROM
- *Supported languages:* Adobe PostScript Level 2, PCL 4+ emulation
- *Fonts:* 64 scalable TrueType and PostScript fonts
- *Interfaces:* LocalTalk, parallel, RS-232
- *Paper tray size:* One 100- and one 250-sheet tray (500-sheet tray and 75-envelope feeder optional)
- *Dimensions (HWD):* 12.0 by 16.9 by 16.8 inches (30.5 by 42.9 by 42.7 cm)
- *Weight:* 39.0 lb. (17.6 kg)
- *Recommended number of users:* Five or more

LaserWriter Pro 630



At a glance

- The LaserWriter Pro 630 printer offers all the advantages of the LaserWriter Pro 600, plus EtherTalk networking support, and connections for internal and external hard disks.
- It delivers camera-ready print quality, because it prints at four times the resolution of conventional laser printers.
- It prints scanned images in as many as 91 shades of gray, so images retain nearly all of the detail and tonal range of the original.
- It provides direct connections to Macintosh and Windows computers.
- It provides excellent expansion capabilities.

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Specifications

- *Resolution:* 600 dots per inch or uses PhotoGrade and FinePrint
- *Printing speed:* 8 pages per minute
- *Processor:* 68030 plus I/O processors and ASICs
- *Processor speed:* 25 megahertz
- *Memory:* 8MB of RAM, expandable to 32MB; 4MB of ROM
- *Supported languages:* Adobe PostScript Level 2, PCL 4+ emulation
- *Fonts:* 64 scalable TrueType and PostScript fonts
- *Interfaces:* EtherTalk, LocalTalk, parallel, RS-232, two SCSI ports (for internal or external hard disk to store additional fonts)
- *Paper tray size:* One 100- and one 250-sheet tray (500-sheet tray and 75-envelope feeder optional)

- *Dimensions (HWD):* 12.0 by 16.9 by 16.8 inches (30.5 by 42.9 by 42.7 cm)
 - *Weight:* 39.0 lb. (17.6 kg)
 - *Recommended number of users:* Five or more
-

Upgrade information

- The LaserWriter Pro 600 can be upgraded to the LaserWriter Pro 630 with a LaserWriter Pro 630 Accessory Kit/Controller Card.

Apple Printer Accessories

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

Apple Color Printer

- Black Ink Cartridge
- Yellow Ink Cartridge
- Magenta Ink Cartridge
- Cyan Ink Cartridge
- Letter-size Coated Paper
- Legal-size Coated Paper
- Ledger-size Coated Paper (11- by 17-inch)
- A4-size Coated Paper
- A3-size Coated Paper
- Letter-size Transparencies
- A4-size Transparencies

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StyleWriter II

- StyleWriter Ink Cartridge

★ Portable StyleWriter

- StyleWriter Ink Cartridge
- Personal StyleWriter Accessory Kit
- Portable StyleWriter 60-sheet feeder

★ **Personal LaserWriter 300**

- Personal LaserWriter 300 100-Sheet Universal Paper Tray
- Personal LaserWriter 300 Toner Cartridge

LaserWriter Select 300 and 310

- LaserWriter Select Toner Cartridge
- LaserWriter Select 500-Sheet Feeder with Cassette (letter only)
- 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 Multipurpose Tray Option (50 sheets or 5 envelopes)
- LaserWriter Select 300 PhotoGrade Upgrade

Personal LaserWriter NTR

- Personal LaserWriter Toner Cartridge
- Personal LaserWriter Letter Cassette
- Personal LaserWriter Legal Cassette
- Personal LaserWriter Envelope Cassette
- Personal LaserWriter 250-Sheet Cassette Base

LaserWriter Pro 600 and 630

- LaserWriter Pro 250-Sheet Universal Cassette
- LaserWriter Pro 500-Sheet Universal Cassette
- LaserWriter Pro 500-Sheet Feeder (includes 500-sheet Universal Cassette)
- LaserWriter Pro Envelope Feeder

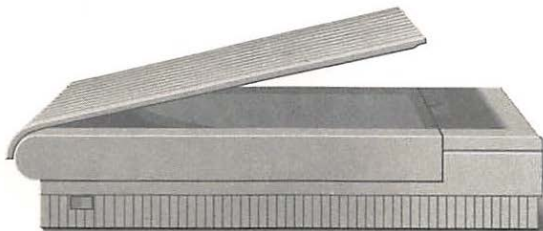
Apple OneScanner and Apple OneScanner for Windows

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 comes with HyperScan 2.0 software, which lets you easily incorporate scans into HyperCard stacks.

Specifications

- *Gray-scale capabilities:* 256 levels (8 bits per pixel)
- *Scanning resolution:* 75 to 1,200 dots per inch (300 dpi for OneScanner for Windows) 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 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 computers



- *System requirements:* Macintosh system software version 6.0.7 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)

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 scanning.
- Provides adaptive calibration that adjusts scans to achieve the highest-quality output possible from your printer.

Apple Color OneScanner



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.
- It comes with HyperScan 2.0 software, which lets you easily incorporate scans into HyperCard stacks.

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)

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.”

Personal Integrated Electronics

Newton MessagePad



At a glance

- The Newton MessagePad communications assistant integrates Apple's Newton Intelligence technology in a hand-held communications device that intelligently assists you as you capture, organize, and communicate information—no matter where you are.
- Its communications options allow you to send faxes, receive wireless messages, “beam” information to other Newton MessagePad units through point-to-point infrared technology, connect to your desktop computer to take advantage of files, printers, or network services, and connect directly to printers.
- When you write on its built-in screen with the Newton Pen, the Newton MessagePad converts your printed or cursive handwritten notes into 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 personal computers (requires appropriate connection kit), and lets you print to a wide range of printers.

★102

Specifications

- *Processor:* ARM 610 RISC
- *Memory:* 640K RAM, 2MB ROM
- *Storage:* Expandable with the Newton 1MB Storage Card or Newton 2MB Flash Storage Card
- *Expansion:* Slot for one PCMCIA expansion card
- *Ports:* AC power port, serial port
- *Display:* 3-inch by 4-inch reflective LCD
- *Battery:* Newton Rechargeable Battery Pack or Newton Battery Booster Pack

- *Dimensions (HWD)*: 7.25 by 4.5 by .75 inches (18.4 by 11.4 by 1.9 cm)
 - *Weight*: .9 lb. (.41 kg)
 - *Other features*:
 - Point-to-point infrared data exchange
-

Key features

- Can connect directly to your Macintosh or Windows 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 Pro Kit translates your Newton files into formats common to popular Macintosh and DOS applications.
 - Can print using 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).
-

Accessories

103★

- Newton Connection Kit
- Newton Connection Pro Kit
- Newton Messaging Card
- Newton Print Pack
- Newton Fax Modem
- Newton 1MB Storage Card
- Newton 2MB Flash Storage Card
- Newton Power Adapter
- Newton Battery Booster Pack
- Newton Rechargeable Battery Pack
- Newton Battery Pack Recharger
- Newton Carrying Case
- Newton Leather Carrying Case



At a glance

- The PowerCD is a portable, three-in-one CD player that lets you play CD-ROM, Photo CD, and audio compact discs.

Specifications

- *SCSI burst rate:* 2.1MB per second; 256K buffer
- *Average data access time:* 550 milliseconds
- *Ports:* Video/audio-output port, 50-pin SCSI connector, sound-output jack (stereo), headphone jack
- *Dimensions (HWD):* 6.5 by 8.7 by 4.9 inches (16.5 by 22.1 by 12.5 cm)
- *Weight:* 3.1 lb. (1.4 kg)
- *Other features:*
 - Remote control for Photo CD and audio CD playback

Key features

- Connects directly to your personal computer, so you can have access to CD-ROM discs for business presentations, database referencing, photo archiving, interactive learning, and entertainment.
- Connects directly to your television using a video cable (included), so you can have instant access to photographic images stored on single- and multisession Kodak Photo CD discs. (PowerCD is sold in two versions: NTSC and PAL.)
- Connects directly to your stereo system or headphones so you can play your music CDs.
- Provides full compatibility with System 7, QuickTime, Apple Photo Access, Apple Foreign File Access, and HyperCard version 2.1.

Networking & Connectivity

Apple Workgroup Server 60



At a glance

- The Apple Workgroup Server 60 is Apple's entry-level server system.
- It's an excellent platform for providing file and print services (such as file sharing and print spooling) to small workgroups that primarily use Macintosh computers.

Specifications

- *Processor:* 68040
- *Speed:* 20 megahertz
- *Memory:* 8MB of RAM, expandable to 68MB
 - 8MB on logic board and four 72-pin SIMM slots
- *Storage:*
 - Internal Apple SuperDrive floppy disk drive
 - Internal 230MB or 500MB hard disk drive
 - Supports an additional internal 5.25-inch peripheral, such as a hard disk drive or a CD-ROM drive
- *Expansion capabilities:* Internal expansion slot for one processor-direct card or one 7-inch NuBus expansion card (NuBus card requires NuBus adapter); supports seven SCSI devices
- *Ports:* Two serial ports, two ADB ports, video port, SCSI port
- *Displays:* Built-in support for all Apple displays; supports several third-party VGA, SVGA, and 19-inch monitors
- *Number of active network users supported:* Up to 20
- *Sound:* Input port (mono), output port (stereo)
- *Networking ports:* Built-in LocalTalk and Ethernet
- *Dimensions (HWD):* 3.4 by 16.3 by 15.6 inches (8.5 by 41.5 by 39.7 cm)

- *Weight:* 14.0 lb. (6.4 kg)—will vary depending on internal devices installed
 - *Other features:*
 - AppleShare 4.0 installed on the hard disk drive
 - Optional internal AppleCD 300i drive
-

Key features

- Features the Motorola 68040 processor, which enables it to handle file and print sharing tasks with ease.
 - Has built-in Ethernet capability, which lets you transfer information between client and server machines up to 10 times faster than with LocalTalk cabling.
 - Includes high-performance AppleShare 4.0 file and print server software.
 - Offers built-in, high-performance SCSI for faster data transfer.
-

Accessories

- Macintosh VRAM Expansion Kit (two 256K SIMMs)
-

Other models to consider

If you need a more powerful server that supports more users, you should consider the Apple Workgroup Server 80, which offers:

- Support for up to 30 concurrently active users.
- Increased performance (a 33-megahertz processor and a built-in math coprocessor).
- More expansion options than the Apple Workgroup Server 60—three NuBus slots (as opposed to one) and a processor-direct slot.
- Twice the memory expansion capability (up to 136MB) and more storage options (two 3.5-inch hard disk drives and an optional internal DDS-DC 4-millimeter tape drive).

Apple Workgroup Server 80



At a glance

- The Apple Workgroup Server 80, Apple's midrange server system, offers file, print, and communications services to medium-size workgroups such as university computer labs and departments within large corporations.
- It can also be used as a communications server for linking multiple AppleTalk internets, and integrating Macintosh networks into a wide-area network.

Specifications

- *Processor:* 68040; 68882 math coprocessor
- *Speed:* 33 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 500MB or 1GB hard disk drive
 - Supports two additional internal peripherals, such as hard disk drives or CD-ROM drives
 - Supports a DDS-DC 4-millimeter tape drive (optional)
- *Expansion capabilities:* Three NuBus slots, 040 processor-direct slot; supports seven SCSI devices
- *Ports:* Two serial ports, two ADB ports, video port, SCSI port
- *Displays:* Built-in support for all Apple displays; supports several third-party VGA, SVGA, and 19-inch monitors
- *Number of active network users supported:* Up to 30
- *Sound:* Input port (mono), output port (stereo)
- *Networking ports:* Built-in LocalTalk and Ethernet

- *Dimensions (HWD)*: 14.2 by 8.9 by 16.0 inches (36.2 by 22.6 by 40.6 cm)
 - *Weight*: 25.3 lb. (11.5 kg)—will vary depending on internal devices installed
 - *Other features*:
 - AppleShare 4.0 installed on the hard disk drive
 - Optional internal AppleCD 300i drive
-

Key features

- Runs communications server applications, such as Apple Internet Router, SNA•ps, MacX25, and MacX.400.
 - Features the Motorola 68040 processor, which enables it to handle file and print sharing tasks with ease.
 - Can be equipped with a DDS-DC 4-millimeter tape 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.
 - Includes high-performance AppleShare 4.0 file and print server software.
 - Offers built-in, high-performance SCSI for faster data transfer.
-

Accessories

- Macintosh VRAM Expansion Kit (two 256K SIMMs)
-

Other models to consider

If you need an exceptionally powerful server that supports more users and has lots of expansion options, you should consider the Apple Workgroup Server 95, which offers:

- Support for up to 50 concurrently active users.
- A/UX 3.0.1 installed on the hard disk drive, tuned to deliver high-performance network services.
- More expansion options than the Apple Workgroup Server 80—four NuBus slots (as opposed to three).
- More memory expansion capability (up to 256MB) and more storage options (three 5.25-inch storage bays).

Apple Workgroup Server 95



At a glance

- The Apple Workgroup Server 95 is Apple's highest-performance server system, offering extensive file, print, and communications services for large workgroups.
- It is ideal for workgroups that have demanding file and print sharing requirements, or that work with large database applications.

Specifications

- *Processor:* 68040; 68882 math coprocessor
- *Speed:* 33 megahertz
- *Memory:* 16MB 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
 - Supports three internal 5.25-inch peripherals, such as hard disk drives or CD-ROM drives
 - Supports a DDS-DC 4-millimeter tape drive (optional)
- *Expansion capabilities:* Four NuBus slots; supports up to twenty SCSI devices
- *Ports:* Two serial ports, ADB port, video port, SCSI port
- *Displays:* Built-in support for all Apple displays; supports several third-party VGA, SVGA, and 19-inch monitors
- *Number of active network users supported:* Up to 50
- *Sound:* Two-line input port (mono), output port (stereo)
- *Networking ports:* Built-in LocalTalk and Ethernet; supports TCP/IP networking software

- *Dimensions (HWD)*: 18.6 by 8.9 by 20.6 inches (47.3 by 22.6 by 52.3 cm)
 - *Weight*: 36.8 lb. (16.7 kg)—will vary depending on internal devices installed
 - *Other features*:
 - Runs A/UX 3.0.1
 - Has four high-performance SCSI buses (four SCSI channels; two are SCSI DMA channels)
 - Optional internal AppleCD 300i drive
-

Key features

- Comes with A/UX 3.0.1 installed on the hard disk drive, which allows system administrators to work with the familiar Macintosh graphical user interface while benefiting from the performance and multiuser capabilities of the UNIX operating system.
 - Features the Motorola 68040 processor, which enables it to handle file and print sharing tasks with ease.
 - Can be equipped with a DDS-DC 4-millimeter tape 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, high-performance SCSI for faster data transfer.
-

Accessories

- Macintosh VRAM Expansion Kit (two 256K SIMMs)
-

Upgrade information

- The Macintosh Quadra 900 and Macintosh Quadra 950 can be upgraded to the Apple Workgroup Server 95 with an Apple Workgroup Server 95 PDS Upgrade Kit or an Apple Workgroup Server 95 PDS Card/DDS-DC Drive Upgrade Kit, which provides the added storage capability of a DDS-DC tape drive.

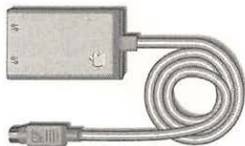
Apple Cables and Networking Cards

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

- *The easy and consistent Macintosh approach.* You can 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.

LocalTalk networks

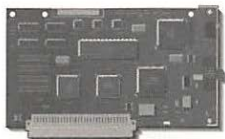
Your Macintosh—and every other Macintosh—comes with AppleTalk networking capability, including software and a LocalTalk networking port. This allows you to build an affordable, easy-to-use network. A LocalTalk network costs little to install, is easy to maintain, and transmits information with high reliability 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 IIs, 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 RJ11 Connector Kit DIN-8.* This is used for connecting Apple IIs, Macintosh Plus, and newer Macintosh computers and LaserWriter printers to a LocalTalk network using unshielded twisted-pair cable (silver satin phone cable). As your networking needs grown, you may also want to use this connector in a star network configuration with a centrally managed hub.

Ethernet networks

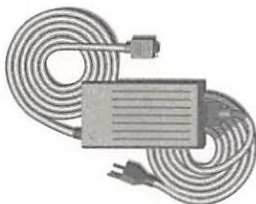
Ethernet capability, including software and hardware connection, is built into the Macintosh Quadra 800 and 950 computers, and the Apple Workgroup Server series, as well as the LaserWriter Pro printers. Apple offers two interface cards that provide Ethernet connections to other Macintosh computers.



- *Apple Ethernet NB Card.* This card lets you connect any Macintosh II or the Macintosh Centris 650 computer to IEEE

802.3 Ethernet networks. You have the choice of using AppleTalk, TCP/IP, or DECnet protocols, so you can communicate in multi-vendor Ethernet environments. Includes EtherTalk software for easy access to network services.

- *Apple Ethernet LC Card.* This card connects your Macintosh Color Classic, LC, LC II, LC III, or LC520 to any Ethernet network. Includes EtherTalk software.



- *Apple Ethernet AUI Adapter.* This adapter adds IEEE 802.3 attachment unit interface (AUI) to either Apple Ethernet card, and can connect to external transceivers for fiber-optic, thick coaxial, and other Ethernet media.



- *Apple Ethernet Thin Coax Transceiver.* This connects either Apple Ethernet card to an Ethernet network using thin coaxial cable, without requiring any other hardware.



- *Apple Ethernet Twisted-Pair Transceiver.* This connects either Apple Ethernet card to an Ethernet network using unshielded twisted-pair cable.

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, and Macintosh Quadra computers, as well as the Apple Workgroup Server series.

- *Apple Token Ring 4/16 NB Card.* This card connects Macintosh computers with NuBus slots to Token Ring networks operating at either 4 or 16 megabits per second. TokenTalk software is included.

Multivendor Connectivity Software

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.

Connecting to IBM environments using Apple SNA•ps

Apple SNA•ps 3270 (Systems Network Architecture protocols and services) is a full-function 3270 terminal emulation program that enables Macintosh computers to communicate with IBM mainframes. Apple SNA•ps 5270 is a full-function 5270 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 local area network (LAN).


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.

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.

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 manage the Macintosh 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)  120; datalink drivers for LocalTalk, Ethernet, and Token Ring; a Domain Name Resolver; support for host files; and a ping text application (MacTCP Ping).

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.

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.

MacX.400 software

MacX.400 software turns the Macintosh computer into an X.400 server that supports the OSI messaging standards. 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 wide-area network (WAN) with MacX25, you can exchange mail with remote sites over X.25 networks.

MacX.400 SD software

MacX.400 SD 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.

MacTerminal 3.0 software

MacTerminal communications software is a desktop terminal emulation and communications application that enables Macintosh computer users to communicate easily with many host computers, such as VAX and UNIX systems. It supports VT102, VT320, serial, modem, and XModem connectivity.

AppleTalk Connection for Macintosh

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.  120 The AppleTalk transport stack includes the latest software drivers for LocalTalk, Ethernet, and Token Ring.

AppleTalk Remote Access software

AppleTalk Remote Access lets you use a modem and telephone lines to connect a remote Macintosh computer to another Macintosh computer or an entire AppleTalk network. It lets you use your desktop Macintosh or PowerBook to “call” your Macintosh at work and retrieve files and applications stored on it. You can even access an AppleTalk network as if you were directly connected to it—so you can use network services such as electronic mail, AppleShare file servers, and printers. AppleTalk Remote Access software can be used with a variety of modems—from 2400 baud to 19.2K baud—and it provides a range of security features, so you can protect your files from unauthorized access.

- *Easy to install.* You don't have to know anything about networks to install it—both the “calling” and “answering” Macintosh computers use the same AppleTalk Remote Access software, and a Macintosh with AppleTalk Remote Access can both call out and answer.
- *Easy to use.* It's integrated with the System 7 file-sharing feature and uses an intuitive graphics-based interface (requires that your Macintosh be running system software version 7.0 or later).
- *Consistent interface.* It lets you work as if you were using your desktop system or were locally attached to the network (copying files, printing, opening documents—everything is done in the same way).

AppleShare software

AppleShare software provides a range of file-, print-, and application-sharing capabilities to users of Macintosh, Apple II, and MS-DOS/Windows 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 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 3.0 supports up to 120 concurrent log-ons, with 15 active users. AppleShare 4.0 is two to three times faster than AppleShare 3.0 and is based on the Macintosh operating system. It can support up to 150 users connected simultaneously to the server, with 30 active users. Alternatively, AppleShare Pro is based on Apple's A/UX operating system, for up to four times the performance capability of AppleShare 3.0. 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, with 50 active users and 5,000 open files, and accommodates up to 20 SCSI hard disks connected to the server.

MacSNMP software

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*.

Apple Internet Router software

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 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.

QuickCharts

Macintosh & PowerBook Families QuickChart

| Model | Processor | Memory | Storage | Key Value Added |
|-------------------------|---|-----------|---|---|
| Macintosh Classic II | 16-MHz 68030 | 2MB–10MB | 40 or 80MB | Twice as fast as Macintosh Classic |
| Macintosh Color Classic | 16-MHz 68030 Math coprocessor ¹ | 4MB–10MB | 40, 80, or 160MB | Classic design; built-in color display |
| Macintosh LC II | 16-MHz 68030 | 2MB–10MB | 40 or 80MB | Modular system; lets you view work in color |
| Macintosh LC III | 25-MHz 68030 Math coprocessor ¹ | 4MB–36MB | 40, 80, or 160MB | More memory; more display options |
| ★ Macintosh LC 520 | 25-MHz 68030 Math coprocessor ¹ | 5MB–36MB | 80 or 160MB; CD-ROM drive | Built-in color display and CD-ROM drive; integrated microphone and stereo speakers |
| Macintosh IIfx | 32-MHz 68030 Math coprocessor 32K memory cache | 4MB–68MB | 40, 80, 160, 230, or 400MB; CD-ROM drive ¹ | Built-in CD-ROM drive (optional) |
| Macintosh Centris 610 | 20-MHz 68040LC with PMMU, 8K memory cache | 4MB–68MB | 80, 230, or 500MB; CD-ROM drive ¹ | Most affordable 68040 Macintosh |
| Macintosh Centris 650 | 25-MHz 68040LC with PMMU, 8K memory cache Math coprocessor configuration ¹ | 4MB–136MB | 80, 230, or 500MB; CD-ROM drive ¹ | Greater memory expansion capability; higher-performance 68040 processor |

| | | | | |
|----------------------------------|--|------------------------|--|---|
| ★ Macintosh Centris 660av | 25-MHz 68040 with integrated math coprocessor; 55-MHz DSP ¹ | 8MB–68MB | 80, 230, or 500MB; CD-ROM drive ¹ | Dual processor architecture; advanced communications technologies |
| Macintosh Quadra 800 | 33-MHz 68040 with integrated math coprocessor, PMMU, 8K memory cache | 8MB–136MB | 230MB, 500MB, or 1GB plus two internal 3.5-inch peripherals and one half-height 5.25-inch peripheral | Powerful and expandable desktop Macintosh system |
| Macintosh Quadra 950 | 33-MHz 68040 with integrated math coprocessor, PMMU, 8K memory cache | 8MB–256MB ² | Three half-height, 5.25-inch peripherals | Most expandable Macintosh system |
| ★ Macintosh Quadra 840av | 40-MHz 68040 with integrated math coprocessor, PMMU, 8K memory cache; 66-MHz DSP | 8MB–128MB | 230MB, 500MB, or 1GB plus two internal 3.5-inch peripherals and one half-height 5.25-inch peripheral | Most powerful desktop Macintosh system; integrated communications technologies |

¹ Optional

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

³ Requires third-party card

★ New model—introduced after June 1, 1993

Macintosh & PowerBook Families QuickChart

| Model | Processor | Memory | Storage | Key Value Added | (continued) |
|-------------------|----------------------------------|-----------------------|------------------|--|-------------|
| ★ PowerBook 145B | 25-MHz 68030 | 4MB–8MB | 40 or 80MB | Most affordable PowerBook notebook computer | |
| PowerBook 160 | 25-MHz 68030 | 4MB–14MB ³ | 40, 80, or 120MB | Backlit supertwist gray-scale display; video-output capability; more storage options | |
| PowerBook 165c | 33-MHz 68030 Math coprocessor | 4MB–14MB ³ | 80 or 120MB | 256-color passive-matrix display; video-output capability | |
| PowerBook 180 | 33-MHz 68030 Math coprocessor | 4MB–14MB ³ | 80 or 120MB | Backlit active-matrix display is the highest-quality screen available in a monochrome notebook computer; video-output capability | |
| ★ PowerBook 180c | 33-MHz 68030 Math coprocessor | 4MB–14MB ³ | 80 or 160MB | 256-colors on active-matrix display; video-output capability | |
| PowerBook Duo 210 | 25-MHz 68030 | 4MB–24MB ³ | 80MB | Offers best of both worlds: PowerBook portability and desktop expandability and access to peripherals | |
| PowerBook Duo 230 | 33-MHz 68030 | 4MB–24MB ³ | 80 or 120MB | Offers best of both worlds: PowerBook portability and desktop expandability and access to peripherals | |

| | | | | |
|---------------------------|--------------------------------|-----------|-------|---|
| PowerBook Duo Dock | 68882 coprocessor ¹ | — | — | Offers capabilities of desktop Macintosh system |
| PowerBook Duo Dock | 68882 coprocessor | 512K VRAM | 230MB | Offers capabilities of desktop Macintosh system; PowerMerge software; support for more displays through additional VRAM |

Note: There are a variety of Macintosh Performa computers sold worldwide; consult your local Apple distributor for information on product specifications.

¹ Optional

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

³ Requires third-party card

★ New model—introduced after June 1, 1993

Upgrades QuickChart

| If you currently have this... | You can upgrade to this... | By purchasing this... |
|-------------------------------|----------------------------|---|
| Macintosh Classic | Macintosh Classic II | Macintosh Classic II Logic Board Upgrade |
| Macintosh LC | Macintosh LC II | Macintosh LC II Logic Board Upgrade |
| | Macintosh LC III | Macintosh LC III Logic Board Upgrade |
| Macintosh LC II | Macintosh LC III | Macintosh LC III Logic Board Upgrade |
| Macintosh II | Macintosh IIx | Macintosh IIx Logic Board Upgrade |
| Macintosh IIx | Macintosh IIx | Macintosh IIx Logic Board Upgrade |
| Macintosh IIcx | Macintosh IIci | Macintosh IIci Logic Board Upgrade |
| | Macintosh Quadra 700 | Macintosh Quadra 700 Logic Board Upgrade |
| Macintosh IIci | Macintosh Quadra 700 | Macintosh Quadra 700 Logic Board Upgrade |
| Macintosh IIvx | Macintosh Centris 650 | Macintosh Centris 650 Logic Board Upgrade |
| Macintosh Centris 610 | Macintosh Centris 660Av | Macintosh Centris 660Av Logic Board Upgrade |
| Macintosh Quadra 800 | Macintosh Quadra 840Av | Macintosh Quadra 840Av Logic Board Upgrade |
| Macintosh Quadra 900 | Macintosh Quadra 950 | Macintosh Quadra 950 Logic Board Upgrade |

| | | |
|-------------------------|----------------------------|--|
| StyleWriter | StyleWriter with GrayShare | GrayShare Kit |
| Personal LaserWriter SC | Personal LaserWriter NTR | Personal LaserWriter NTR Accessory Kit/Controller Card |
| Personal LaserWriter NT | Personal LaserWriter NTR | Personal LaserWriter NTR Accessory Kit/Controller Card |
| LaserWriter Select 300 | LaserWriter Select 310 | LaserWriter Select 310 Accessory Kit |
| LaserWriter IIsc | LaserWriter IIc | LaserWriter IIc Controller Board (4MB) |
| | LaserWriter IIg | LaserWriter IIg Controller Board (8MB) |
| LaserWriter IIxt | LaserWriter IIc | LaserWriter IIc Controller Board (4MB) |
| | LaserWriter IIg | LaserWriter IIg Controller Board (8MB) |
| LaserWriter IIxtx | LaserWriter IIc | LaserWriter IIc Controller Board (4MB) |
| | LaserWriter IIg | LaserWriter IIg Controller Board (8MB) |
| LaserWriter IIc | LaserWriter IIg | LaserWriter IIg Controller Board (8MB) |
| LaserWriter Pro 600 | LaserWriter Pro 630 | LaserWriter Pro 630 Accessory Kit/Controller Card |

Memory Configurations QuickChart

| Model | Minimum configuration | | Amount of memory (RAM) you want... | And how to get it... |
|-------------------------|-----------------------------|-------------------------------|------------------------------------|--|
| | Built-in RAM on logic board | Number of SIMM and card slots | | |
| Macintosh Classic II | 2MB | Two empty SIMM slots | 2MB configuration | = 2MB on logic board |
| | | | 4MB configuration | = 2MB on logic board + two 1MB SIMMs |
| | | | 6MB configuration | = 2MB on logic board + two 2MB SIMMs |
| | | | 10MB configuration | = 2MB on logic board + two 4MB SIMMs |
| Macintosh Color Classic | 4MB | Two empty SIMM slots | 4MB configuration | = 4MB on logic board |
| | | | 6MB configuration | = 4MB on logic board + two 1MB SIMMs |
| | | | 10MB configuration ¹ | = 4MB on logic board + two 4MB SIMMs |
| Macintosh LC II | 2MB or 4MB | Two empty SIMM slots | 2MB configuration | = 2MB on logic board |
| | | | 4MB configuration | = 4MB on logic board, or 2MB on logic board + two 1MB SIMMs |
| | | | 10MB configuration ¹ | = 4MB on logic board + two 4MB SIMMs |
| Macintosh LC III | 4MB | One empty SIMM slot | 4MB configuration | = 4MB on logic board |
| | | | 5MB configuration | = 4MB on logic board + one 1MB SIMM |
| | | | 6MB configuration | = 4MB on logic board + one 2MB SIMM |
| | | | 8MB configuration | = 4MB on logic board + one 4MB SIMM |
| | | | 12MB configuration | = 4MB on logic board + one 8MB SIMM |
| | | | 20MB configuration ² | = 4MB on logic board + one 16MB SIMM |
| | | | 36MB configuration ² | = 4MB on logic board + one 32MB SIMM |

| | | | | |
|----------------------------------|-----|--------------------------|---------------------------------|--|
| ★ Macintosh LC 520 | 4MB | One empty SIMM slot | 4MB configuration | = 4MB on logic board |
| | | | 5MB configuration | = 4MB on logic board + one 1MB SIMM |
| | | | 6MB configuration | = 4MB on logic board + one 2MB SIMM |
| | | | 8MB configuration | = 4MB on logic board + one 4MB SIMM |
| | | | 12MB configuration | = 4MB on logic board + one 8MB SIMM |
| | | | 20MB configuration ² | = 4MB on logic board + one 16MB SIMM |
| Macintosh IIvx | 4MB | Four empty SIMM slots | 36MB configuration ² | = 4MB on logic board + one 32MB SIMM |
| | | | 4MB configuration | = 4MB on logic board |
| | | | 5MB configuration | = 4MB on logic board + four 256K SIMMs |
| | | | 8MB configuration | = 4MB on logic board + four 1MB SIMMs |
| | | | 20MB configuration | = 4MB on logic board + four 4MB SIMMs |
| Macintosh Centris 610 | 4MB | Two empty SIMM slots | 68MB configuration ² | = 4MB on logic board + four 16MB SIMMs |
| | | | 4MB configuration | = 4MB on logic board |
| | | | 12MB configuration | = 4MB on logic board + two 4MB SIMMs |
| | | | 20MB configuration | = 4MB on logic board + two 8MB SIMMs |
| | | | 36MB configuration ² | = 4MB on logic board + two 16MB SIMMs |
| | | | 68MB configuration ² | = 4MB on logic board + two 32MB SIMMs |

¹ System addresses only 10 of the 12 megabytes

² Requires third-party product

Memory Configurations QuickChart

(continued)

| Model | Minimum configuration | | Amount of memory (RAM) you want... | And how to get it... |
|---------------------------|-----------------------------|--------------------------------------|---|---|
| | Built-in RAM on logic board | Number of SIMM and card slots | | |
| Macintosh Centris 650 | 4MB | Four empty SIMM slots | 4MB configuration 20MB configuration 36MB configuration ² 68MB configuration ² 132MB configuration ² | = 4MB on logic board = 4MB on logic board + four 4MB SIMMs = 4MB on logic board + four 8MB SIMMs = 4MB on logic board + four 16MB SIMMs = 4MB on logic board + four 32MB SIMMs |
| | 8MB | Four empty SIMM slots | 8MB configuration 24MB configuration 40MB configuration 72MB configuration ² 136MB configuration ² | = 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 |
| ★ Macintosh Centris 660av | 4MB | One 4MB SIMM and one empty SIMM slot | 8MB configuration 12MB configuration 20MB configuration 36MB configuration ² 68MB configuration ² | = 4MB on logic board + one 4MB SIMM + one empty SIMM slot = 4MB on logic board + two 4MB SIMMs = 4MB on logic board + two 8MB SIMMs = 4MB on logic board + two 16MB SIMMs = 4MB on logic board + two 32MB SIMMs |

| | | | |
|---------------------------------|------|--|--|
| Macintosh Quadra 800 | 8MB | Four empty SIMM slots | 8MB configuration = 8MB on logic board 24MB configuration = 8MB on logic board + four 4MB SIMMs 40MB configuration = 8MB on logic board + four 8MB SIMMs 72MB configuration ² = 8MB on logic board + four 16MB SIMMs 136MB configuration ² = 8MB on logic board + four 32MB SIMMs |
| ★ Macintosh Quadra 840Av | None | Four empty SIMM slots | 8MB configuration = two 4MB SIMMs + two empty SIMM slots 32MB configuration = Four 8MB SIMMs 64MB configuration ² = Four 16MB SIMMs 128MB configuration ² = Four 32MB SIMMs |
| 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 ³ = Eight 16MB SIMMs + eight 16MB SIMMs |
| ★ PowerBook 145B | 4MB | One memory expansion slot | 4MB configuration = 4MB on logic board 6MB configuration = 4MB on logic board + 2MB memory card 8MB configuration = 4MB on logic board + 4MB memory card |

¹ System addresses only 10 of the 12 megabytes

² Requires third-party product

³ For 256MB, install sixteen noncomposite 16MB DRAM SIMMs (16-megabit technology)

Memory Configurations QuickChart

(continued)

| Model | Minimum configuration | | Amount of memory (RAM) you want... | And how to get it... |
|-------------------------|-----------------------------|-------------------------------|--|---|
| | Built-in RAM on logic board | Number of SIMM and card slots | | |
| PowerBook 160 | 4MB | One memory expansion slot | 4MB configuration 6MB configuration 8MB configuration 14MB configuration ² | = 4MB on logic board = 4MB on logic board + 2MB memory card = 4MB on logic board + 4MB memory card = 4MB on logic board + 10MB memory card |
| PowerBook 165c | 4MB | One memory expansion slot | 4MB configuration 6MB configuration 8MB configuration 14MB configuration ² | = 4MB on logic board = 4MB on logic board + 2MB memory card = 4MB on logic board + 4MB memory card = 4MB on logic board + 10MB memory card |
| PowerBook 180 | 4MB | One memory expansion slot | 4MB configuration 6MB configuration 8MB configuration 14MB configuration ² | = 4MB on logic board = 4MB on logic board + 2MB memory card = 4MB on logic board + 4MB memory card = 4MB on logic board + 10MB memory card |
| ★ PowerBook 180c | 4MB | One memory expansion slot | 4MB configuration 6MB configuration 8MB configuration 14MB configuration ² | = 4MB on logic board = 4MB on logic board + 2MB memory card = 4MB on logic board + 4MB memory card = 4MB on logic board + 10MB memory card |

| | | | | |
|--------------------------|-----|---------------------------|---------------------------------|---|
| PowerBook Duo 210 | 4MB | One memory expansion slot | 4MB configuration | = 4MB on logic board |
| | | | 8MB configuration | = 4MB on logic board + 4MB memory card |
| | | | 12MB configuration | = 4MB on logic board + 8MB memory card |
| | | | 24MB configuration ² | = 4MB on logic board + 20MB memory card |
| PowerBook Duo 230 | 4MB | One memory expansion slot | 4MB configuration | = 4MB on logic board |
| | | | 8MB configuration | = 4MB on logic board + 4MB memory card |
| | | | 12MB configuration | = 4MB on logic board + 8MB memory card |
| | | | 24MB configuration ² | = 4MB on logic board + 20MB memory card |

¹ System addresses only 10 of the 12 megabytes

² Requires third-party product

³ For 256MB, install sixteen noncomposite 16MB DRAM SIMMs (16-megabit technology)

Apple Printers QuickChart

| Model | Resolution (Dots per inch) | Printing Speed (Pages per minute) | Recommended Number of Users | Fonts | Key Value Added |
|-----------------------------------|-------------------------------|--|--------------------------------|---|---|
| ImageWriter II | 144 dpi | .5 ppm (best mode) 2 ppm (draft mode) | 1–3 users | Built-in character sets for many languages | Prints on forms; color printing capability |
| Apple Color Printer | 360 dpi | 2 minutes per page | 1 user | 64 TrueType fonts | Affordable color printing; GrayShare software |
| StyleWriter II | 360 dpi | 1 ppm (best mode) 2 ppm (draft mode) | 1 user | 39 TrueType fonts | High-resolution ink-jet printing |
| ★ Portable StyleWriter | 360 dpi | .5 ppm (best mode) 1 ppm (draft mode) | 1 user | 39 TrueType fonts perfect for PowerBook computers | Portable; battery operation mode; |
| ★ Personal LaserWriter 300 | 300 dpi | 4 ppm | 1 user | 39 TrueType fonts | Most affordable laser printer; energy efficient |

| | | | | | |
|-------------------------------------|--|-------|-----------------|-------------------------------------|---|
| LaserWriter Select 300 | 300 dpi | 5 ppm | 1 user | 39 TrueType fonts | True laser printing; GrayShare software |
| LaserWriter Select 310 | 300 dpi | 5 ppm | 1 user | 13 Adobe PostScript fonts | Most affordable PostScript printer; can be used with Windows computers |
| Personal LaserWriter NTR | 300 dpi | 4 ppm | 1-5 users | 64 TrueType and PostScript fonts | Network capability |
| LaserWriter Pro 600 | 600 dpi PhotoGrade and FinePrint | 8 ppm | 5 or more users | 64 TrueType and PostScript fonts | Handles large networks |
| LaserWriter Pro 630 | 600 dpi PhotoGrade and FinePrint | 8 ppm | 5 or more users | 64 TrueType and PostScript fonts | Ethernet support; highest-performance Apple printer |

Apple Displays QuickChart

| Model | Macintosh 12-inch Monochrome Display | Macintosh Portrait Display (15-inch) | Apple Basic Color Monitor (14-inch) | Macintosh Color Display (14-inch) | Apple AudioVision 14 Display | Macintosh 16-inch Color Display | Macintosh 21-inch Color Display |
|-------------------------------------|---|---|--|---|------------------------------------|---------------------------------------|---------------------------------------|
| Macintosh LC II | | | | | | | |
| Built-in video | 16 grays | — | 256 colors | 16 colors | 16 colors | — | — |
| With 512K VRAM SIMM | 256 grays | — | 32,768 colors | 256 colors | 256 colors | — | — |
| Macintosh LC III | | | | | | | |
| Built-in video | 256 grays | 16 grays | 256 colors | 256 colors | 256 colors | 256 colors | — |
| With 256K VRAM SIMM | 256 grays | 256 grays | 32,768 colors | 32,768 colors | 32,768 colors | 256 colors | — |
| Macintosh IIfx | | | | | | | |
| Built-in video | 256 grays | — | 256 colors | 256 colors | 256 colors | — | — |
| With Macintosh Display Card 8•24 | 256 grays | 256 grays | 16.7 million colors | 16.7 million colors | 16.7 million colors | 256 colors | 256 colors |

Macintosh Centris 610 and 650

| | | | | | | | |
|--------------------------------------|-----------|-----------|---------------|---------------|---------------|---------------|------------|
| Built-in video | 256 grays | 16 grays | 256 colors | 256 colors | 256 colors | 256 colors | 16 colors |
| With Macintosh VRAM Expansion Kit | 256 grays | 256 grays | 32,768 colors | 32,768 colors | 32,768 colors | 32,768 colors | 256 colors |

★ Macintosh Centris 660Av

| | | | | | | | |
|----------------|-----------|-----------|---------------|---------------|---------------|---------------|------------|
| Built-in video | 256 grays | 256 grays | 32,768 colors | 32,768 colors | 32,768 colors | 32,768 colors | 256 colors |
|----------------|-----------|-----------|---------------|---------------|---------------|---------------|------------|

Macintosh Quadra 800

| | | | | | | | |
|--------------------------------------|-----------|-----------|---------------|---------------|---------------|---------------|------------|
| Built-in video | 256 grays | 256 grays | 256 colors | 256 colors | 256 colors | 256 colors | 256 colors |
| With Macintosh VRAM Expansion Kit | 256 grays | 256 grays | 32,768 colors | 32,768 colors | 32,768 colors | 32,768 colors | 256 colors |

★ Macintosh Quadra 840Av

| | | | | | | | |
|--|-----------|-----------|------------------------|------------------------|------------------------|------------------------|---------------|
| Built-in video | 256 grays | 256 grays | 32,768 colors | 32,768 colors | 32,768 colors | 32,768 colors | 256 colors |
| With Macintosh Quadra 840Av 1MB VRAM SIMM | 256 grays | 256 grays | 16.7 million colors | 16.7 million colors | 16.7 million colors | 16.7 million colors | 32,768 colors |

Macintosh Quadra 950

| | | | | | | | |
|---|-----------|-----------|------------------------|------------------------|------------------------|------------------------|---------------|
| Built-in video | 256 grays | 256 grays | 32,768 colors | 32,768 colors | 32,768 colors | 32,768 colors | 256 colors |
| With two Macintosh VRAM Expansion Kits | 256 grays | 256 grays | 16.7 million colors | 16.7 million colors | 16.7 million colors | 16.7 million colors | 32,768 colors |

Apple Displays QuickChart

(continued)

| Model | Macintosh 12-inch Monochrome Display | Macintosh Portrait Display (15-inch) | Apple Basic Color Monitor (14-inch) | Macintosh Color Display (14-inch) | Apple AudioVision 14 Display | Macintosh 16-inch Color Display | Macintosh 21-inch Color Display |
|-------|---|---|--|---|------------------------------------|---------------------------------------|---------------------------------------|
|-------|---|---|--|---|------------------------------------|---------------------------------------|---------------------------------------|

★ PowerBook 180c, 165c, 160, and 180

| | | | | | | | |
|----------------|-----------|----------|------------|------------|------------|------------|---|
| Built-in video | 256 grays | 16 grays | 256 colors | 256 colors | 256 colors | 256 colors | — |
|----------------|-----------|----------|------------|------------|------------|------------|---|

PowerBook Duo 210 and 230 with PowerBook Duo Dock

| | | | | | | | |
|---------------------|-----------|-----------|---------------|---------------|---------------|---------------|---|
| Built-in video | 256 grays | 16 grays | 256 colors | 256 colors | 256 colors | 256 colors | — |
| With 512K VRAM SIMM | 256 grays | 256 grays | 32,768 colors | 32,768 colors | 32,768 colors | 32,768 colors | — |

PowerBook Duo 210 and 230 with PowerBook Duo MiniDock

| | | | | | | | |
|----------------|-----------|----------|------------|------------|------------|------------|---|
| Built-in video | 256 grays | 16 grays | 256 colors | 256 colors | 256 colors | 256 colors | — |
|----------------|-----------|----------|------------|------------|------------|------------|---|

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

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