Apple Facts

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Welcome to AppleFacts—a concise guide to Macintosh computers, printers, displays, and other Apple products. It includes vital facts, tips, and product comparisons—all in a handy, quick-reference format. And it even has information about our newest products, including the Macintosh Centris computers, Macintosh Quadra 800, and Macintosh PowerBook 165c. We hope you'll find it useful.

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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).

The Apple Advantage

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 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 more disk storage. 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. Several independent studies have shown that the Macintosh generally runs application programs faster than comparable PCs running Windows.[2]

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

[2] Source: Ingram Laboratories Benchmark Study, May 1992, and National Software Testing Laboratory (NSTL), September 1989.

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 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. ☞88 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, MS-DOS, and Windows 3.0 users were surveyed by Diagnostic Research, Inc.,[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

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[4] Source: *Macintosh or Windows 3.0?,* a study by Diagnostic Research, Inc. (1991).

[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.

Apple 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.* 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.

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

QuickTime
Starter Kit

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.*

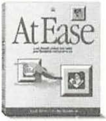
Macintosh PC Exchange: The easiest way to work with PC files on your Macintosh

Macintosh PC
Exchange
PC

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 or third-party external floppy disk drive.
- *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 that can be used by your Macintosh applications.

- *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

AppleTalk Remote Access software ☞90 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 Macintosh 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

Apple
FontPack

The Apple Font Pack provides a carefully chosen selection of 43 TrueType fonts from the world's leading type foundries. These fonts provide the highest-quality results possible and ensure that your work looks great. 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 new Apple symbol font that features a variety of useful symbols—to enhance any document you're working on.

Macintosh Computers

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,[1] offering capabilities such as multitasking, virtual memory, on-screen help, and file sharing. ☞11

An Apple SuperDrive floppy disk drive

The Apple SuperDrive floppy disk drive[2] 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.[3]

Built-in networking capabilities

All Macintosh computers come with AppleTalk, which lets you easily connect Macintosh computers together. You can also connect a Macintosh to DECnet, TCP/IP, SNA, APPC, 3270, and X.25 networking environments. ☞88

WYSIWYG

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

Easy connection to printers

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

SCSI port

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

Apple Desktop Bus

The Apple Desktop Bus (ADB) port is a built-in peripheral port for input devices—such as mouse controllers, keyboards, and graphics tablets. It lets you easily customize your Macintosh to work the way you do by adding input devices to suit your needs. All Macintosh computers offer an ADB port—and some models have two.[4]

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 PowerBook, and Macintosh PowerBook Duo computers have displays built in. All other Macintosh computers have built-in support for a variety of Apple displays.

Built-in features to meet the needs of individuals with disabilities

Out of the box, the Macintosh is the most accessible personal computer available. In every Macintosh, there are features built into the operating system that are useful for people who have difficulty viewing their work, hearing the system beep, typing on the keyboard, or manipulating the Macintosh mouse.

[1] System 7 requires 2MB of RAM and a hard disk.

[2] The Macintosh PowerBook Duo 210 and 230 can be purchased with an external Apple SuperDrive.

[3] Requires use of either Macintosh PC Exchange or Apple File Exchange.

[4] The Macintosh Duo Dock, MiniDock, and Floppy Adapter offer ADB ports for the PowerBook Duo systems.

Disability Solutions

The Worldwide Disability Solutions Group

In 1985, the Worldwide Disability Solutions Group was formed at Apple Computer, with a specific charter: to meet the needs of children and adults with disabilities. The group's principal focus is to bring technology to individuals to ensure increased independence, opportunity, and participation by all members of society.

For more information, please contact:
Worldwide Disability Solutions Group
Apple Computer, Inc.
20525 Mariani Avenue, M/S 2-SE
Cupertino, CA 95014
AppleLink: AppleDSG
AOL: AppleDSG

Apple believes in the power—and the ability—of the individual

- Apple Computer has always developed products that help people express their ideas—and their dreams.
- More than half a billion people worldwide have at least one disability. They also typically have at least one dream—or ought to. But because individuals with disabilities are too often stereotyped as less than capable, they may face additional obstacles when trying to express themselves.
- Apple believes that Macintosh computers can help change what it means to be disabled. They give *all* individuals the power to be creative, inventive, analytical, and collaborative. They help people with disabilities let the world know who they are and what they can do, in their terms—not anyone else's.

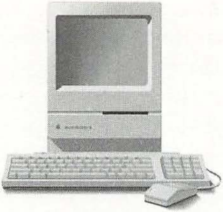
Macintosh computers were specifically designed to facilitate access by individuals with disabilities

Features built into every Macintosh help meet the needs of people with disabilities—no other computer company can say that about its products. These features are especially useful for individuals who have trouble typing on the keyboard, manipulating a mouse, seeing their work on the Macintosh screen, or hearing the system prompts.

- 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.

In addition, there are hundreds of third-party tools and software programs that provide solutions for individuals with disabilities. The Worldwide Disability Solutions Group can help direct people to specific resources, so that they can make effective decisions about the technology solutions that are right for them.

Macintosh Classic II



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:* Built-in AppleTalk
- *Dimensions (HWD):* 13.2 by 9.7 by 11.2 inches (33.6 by 24.6 by 28.5 cm)
- *Weight:* 16.0 to 17.1 lb. (7.3 to 7.8 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.

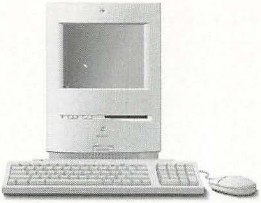
Upgrade information

- 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



★22

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; 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:* Built-in AppleTalk
- *Dimensions (HWD):* 14.5 by 9.9 by 12.6 inches (36.8 by 25.1 by 32.0 cm)
- *Weight:* 22.5 lb. (10.2 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

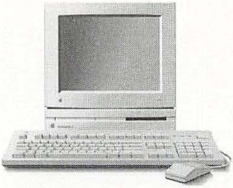
- Apple IIe Card
- Macintosh Color Classic 256K VRAM SIMM
- Apple Ethernet LC Card

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



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 Monochrome Display, Apple Basic Color Monitor, and Macintosh Color Display; supports several third-party VGA monitors
- *Sound:* Input port (mono), output port (mono)
- *Networking:* Built-in AppleTalk
- *Dimensions (HWD):* 3.0 by 12.2 by 15.0 inches (7.7 by 31.0 by 38.2 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 II 512K VRAM SIMM
- Apple Ethernet LC Card

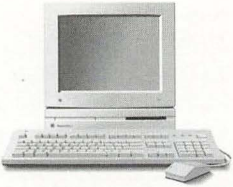
Upgrade information

- 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 IIvi and IIvx offer three NuBus expansion slots, greater storage capacity, and an internal CD-ROM drive (optional).

Macintosh LC III



At a glance

- The Macintosh LC III is the most powerful, versatile, and affordable 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:* Built-in AppleTalk
- *Dimensions (HWD):* 3.0 by 12.2 by 15.0 inches (7.7 by 31.0 by 38.2 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 LC III 256K VRAM SIMM
- Apple Ethernet LC Card

Upgrade information

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

Other Macintosh models to consider

- The Macintosh IIvi and IIvx offer three NuBus expansion slots, twice as much memory capacity, greater storage capacity, and an internal CD-ROM drive (optional).

Macintosh IIvi

At a glance

- The Macintosh IIvi[1] offers affordable power, speed, and flexibility in a desktop Macintosh.
- It can be equipped with an internal CD-ROM drive, for instant access to the thousands of volumes of information stored on compact discs.
- It's ideal for users who have outgrown their first Macintosh and are looking for faster performance, more memory, a wider variety of supported monitor options, multimedia capabilities, and potential for future expansion.

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

- *Processor:* 68030; 68882 math coprocessor (optional)
- *Speed:* 16 megahertz
- *Memory:* 4MB of RAM, expandable to 20MB

—4MB on logic board and four 30-pin SIMM slots

- *Storage:*

—Internal Apple SuperDrive floppy disk drive

—Internal 40MB, 80MB, 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

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[1] Not available in the United States.

- *Sound:* Input port (mono), output port (mono); optional CD-ROM audio (stereo)
- *Networking:* Built-in AppleTalk
- *Dimensions (HWD):* 6.0 by 13.0 by 16.5 inches (15.2 by 33.0 by 41.9 cm)
- *Weight:* 25.0 lb. (11.4 kg)
- *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.

Other Macintosh models to consider

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

- A faster processor (32 megahertz compared with 16 megahertz for the IIvi).
- A built-in math coprocessor.
- A built-in 32K memory cache.

Macintosh IIvx

At a glance

- The Macintosh IIvx comes equipped with a math coprocessor and 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:* Built-in AppleTalk
- *Dimensions (HWD):* 6.0 by 13.0 by 16.5 inches
(15.2 by 33.0 by 41.9 cm)
- *Weight:* 25.0 lb. (11.4 kg)
- *Other features:*
—Optional internal AppleCD 300i drive

Key features

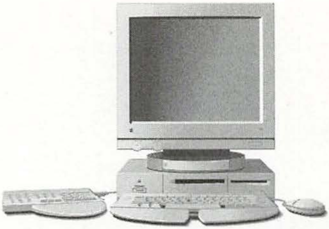
- Can be equipped with a built-in CD-ROM drive, letting you easily access large volumes of information stored on compact discs.
- Offers built-in video support for a variety of color displays.
- Offers high-performance VRAM-based video, which accelerates screen performance when running complex graphics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

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



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:* 68040 with a 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, Ethernet port (optional)
- *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:* Built-in AppleTalk; on-board Ethernet (optional)

- *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)
- *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 on-board 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 Centris 610 512K VRAM SIMM
- Apple Ethernet Cable System ☞85

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 132MB.

Macintosh Centris 650

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:* 68040 with a built-in paged memory management unit (PMMU) and 8K memory cache; 68882 math coprocessor (optional)
- *Speed:* 25 megahertz
- *Memory:* 4MB of RAM, expandable to 132MB
—4MB 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, Ethernet port (optional)
- *Displays:* Built-in support for all Apple displays; supports several third-party VGA and SVGA monitors
- *Sound:* Input port (mono), output port (stereo)

- *Networking:* Built-in AppleTalk; on-board Ethernet (optional)
- *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 on-board 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 650 512K VRAM SIMM
- Apple Ethernet Cable System ☞85

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

If your tasks might require production-level performance, you should consider the Macintosh Quadra 800, which offers:

- A Motorola 68040 processor with a built-in math coprocessor, running at 33 megahertz.
- Built-in Ethernet capability, which lets you transfer information up to 10 times faster than with LocalTalk cabling.
- Two 3.5-inch storage bays.
- A new "mini-tower" design, which accommodates an even greater number and variety of storage components.

Macintosh Quadra 800

At a glance

- The most powerful desktop Macintosh, 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 a 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, Ethernet 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:* Built-in AppleTalk 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:*

—Optional internal AppleCD 300i drive

—New "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

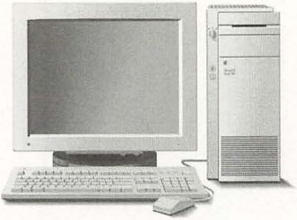
- Macintosh Quadra 800 512K VRAM SIMM
- Apple Ethernet Cable System ☞85

Other Macintosh models to consider

If your tasks require even greater expansion options, you should consider the Macintosh Quadra 950, which offers:

- More expansion options than the Macintosh Quadra 800—five NuBus slots (compared with three).
- Two 25-watt NuBus expansion slots, which provide more power than the NuBus slots in the Macintosh Quadra 800.
- Built-in accelerated 24-bit graphics capability, which allows you to display photographic-quality images.
- More memory expansion capability—up to 256MB.
- Dual SCSI architecture.

Macintosh Quadra 950



At a glance

- The most powerful 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, Ethernet 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:* Built-in AppleTalk 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. (16.7 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

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Key features

- Offers the widest variety of storage options of any Macintosh.
- Features the Motorola 68040 processor, which enables the Macintosh Quadra 950 to handle even the most complex tasks easily.
- 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 multi-vendor 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 Quadra VRAM Expansion Kit
- Apple Ethernet Cable System ☞85

Upgrade information

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

Macintosh PowerBook 145

At a glance

- The Macintosh PowerBook 145 is Apple's most affordable notebook computer.
- It offers you the power and performance of a desktop Macintosh in a small, notebook design—so you can work anywhere, anytime.

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

- *Processor:* 68030
- *Speed:* 25 megahertz
- *Memory:* 4MB of RAM, expandable to 8MB (requires third-party card)
  —2MB on logic board and 2MB on card in memory expansion slot
- *Storage:*
  —Internal Apple SuperDrive floppy disk drive
  —Internal 40MB or 80MB hard disk drive
- *Expansion capabilities:* Two slots—one for an internal modem, one for RAM; SCSI port—supports six SCSI devices
- *Ports:* Two serial ports, ADB port, SCSI port
- *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:* Built-in AppleTalk
- *Dimensions (HWD):* 2.3 by 11.3 by 9.3 inches (5.7 by 28.6 by 23.6 cm)
- *Weight:* 6.8 lb. (3.1 kg)
- *Internal modem:* Optional Macintosh PowerBook Fax/Data Modem

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 for expandability.
- Takes advantage of AppleTalk Remote Access software (optional). ☞90

Accessories

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

Other Macintosh models to consider

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

The PowerBook is the most acclaimed notebook computer in the world:

Readers' Choice Award—*BYTE* magazine
Gold Design Award—Germany's Industrie Forum
Gold Award—*International Design* magazine
Product of the Year—*Time* magazine
Product of the Year—*Fortune* magazine
Product of the Year—*Business Week* magazine
Portable/Notebook Product of the Year—*InfoWorld* magazine

Macintosh PowerBook 160

At a glance

- The Macintosh PowerBook 160 offers video-output capability, as well as more memory, more expansion options, and a better display than the PowerBook 145.
- Its gray-scale supertwist display and video-output capabilities make the PowerBook 160 a good choice for people who work outside the office and 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; SCSI port—supports six SCSI devices
- *Ports:* Two serial ports, ADB port, video port, SCSI port
- *Displays:* 10-inch (diagonal) backlit supertwist display (16-level gray scale); built-in support for the Macintosh 12-inch Monochrome Display, Apple Basic Color Monitor, Macintosh Color Display, Macintosh Portrait Display, and Macintosh 16-inch Color Display; supports several 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:* Built-in AppleTalk
- *Dimensions (HWD):* 2.3 by 11.3 by 9.3 inches (5.7 by 28.6 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 variety of Apple, displays, as well as on 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 hard disk on another Macintosh.
- Takes advantage of AppleTalk Remote Access software. (optional) ☞90

Accessories

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

Other Macintosh models to consider

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

Macintosh PowerBook 165c

At a glance

- The Macintosh 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.

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

- *Processor:* 68030
- *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:* Two slots—one for internal modem, one for RAM; SCSI port—supports six SCSI devices
- *Ports:* Two serial ports, ADB port, video port, SCSI port
- *Displays:* 9-inch (diagonal) backlit passive-matrix display (256 colors); built-in support for the Macintosh 12-inch Monochrome Display, Apple Basic Color Monitor, Macintosh Color Display, Macintosh Portrait Display, and Macintosh 16-inch Color Display; supports many 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:* Built-in AppleTalk

- *Dimensions (HWD):* 2.3 by 11.3 by 9.3 inches (5.8 by 28.6 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 variety of Apple displays, as well as on 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 a hard disk on another Macintosh system.
- Takes advantage of AppleTalk Remote Access software. (optional) ☞90

Accessories

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

Other Macintosh models to consider

- The Macintosh PowerBook Duo systems offer gray-scale capability and high performance in a smaller size—and can be "docked" to a Macintosh Duo Dock or Macintosh Duo MiniDock.

Macintosh PowerBook 180

At a glance

- The Macintosh PowerBook 180 is Apple's most powerful PowerBook computer.
- Its backlit active-matrix display and video-output capabilities offer the best screen quality available on a notebook computer, making the PowerBook 180 ideal for people who work outside the office and use their notebook computer to present to customers or clients—and who might want to use a bigger display while working at their desk.

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; SCSI port—supports six SCSI devices
- *Ports:* Two serial ports, ADB port, video port, SCSI port
- *Displays:* 10-inch (diagonal) backlit active-matrix display (16-level gray scale); built-in support for the Macintosh 12-inch Monochrome Display, Apple Basic Color Monitor, Macintosh Color Display, Macintosh Portrait Display, and Macintosh 16-inch Color Display; supports several 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:* Built-in AppleTalk
- *Dimensions (HWD):* 2.3 by 11.3 by 9.3 inches (5.7 by 28.6 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 variety of Apple displays, as well as on 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 hard disk.
- Takes advantage of AppleTalk Remote Access software. (optional) ☞90

Accessories

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

Other Macintosh models to consider

- The Macintosh PowerBook 165c features a built-in, 256-color display.
- The Macintosh PowerBook Duo systems offer high performance in a smaller size—and can be "docked" to a Macintosh Duo Dock or Macintosh Duo MiniDock.

The Macintosh Duo System

Macintosh 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 Macintosh Duo System offers you the best of both worlds. At the heart of the Macintosh Duo System are the Macintosh PowerBook Duo 210 and 230—the most flexible members of the world's most acclaimed family of notebook computers. When you're out on the road, their small, compact size and powerful 68030 processor enable you to accomplish virtually anything you want—just about anywhere you want. When you're back at the office, simply slide your PowerBook Duo notebook computer into the Macintosh Duo Dock—and instantly, you're working with a complete Macintosh desktop system.

A PowerBook at heart...

The Macintosh PowerBook Duo 210 and PowerBook Duo 230 are our lightest, most compact PowerBook computers—they weigh only 4.2 pounds (1.9 kilograms). They incorporate a standard-size keyboard, integrated palm rests, a built-in trackball, and an exceptionally easy-to-read 16-gray-level display.

...and a complete Macintosh desktop system

Insert your PowerBook Duo 210 or 230 into a Macintosh Duo Dock and get everything you expect from a desktop Macintosh—instant connection to a network, a full-size color display, an extended keyboard, a mouse, and expansion slots. It's easy: There's nothing to reconfigure, no switches to flip, and no cables to connect. The Macintosh Duo Dock uses the hard disk in your Macintosh PowerBook Duo, so you can be assured that you're always working on your latest files and documents.

PowerLatch docking technology

PowerLatch docking technology provides easy, reliable connection and integration between a PowerBook Duo computer and a Macintosh Duo Dock. It offers:

- *Easy connection.* No cables are necessary when you insert a PowerBook Duo 210 or 230 into the Macintosh Duo Dock. Its automatic insert and eject capabilities make inserting the PowerBook Duo into a Macintosh Duo Dock as easy as inserting a videotape into a VCR.
- *One-step docking.* Insert your PowerBook Duo and the system automatically recognizes what it's connected to—such as displays, NuBus devices, and input/output devices—so you don't have to reconfigure anything. The system is automatically configured for maximum performance. The Macintosh Duo Dock also secures your PowerBook Duo 210 or 230 so that it can't be accidentally ejected while you're working.

The Macintosh Duo MiniDock

The portable Macintosh Duo MiniDock provides convenient connection to large displays (especially useful for presentations), printers, a full-size keyboard, a mouse, an external floppy disk drive, and other peripherals. It offers standard Macintosh input/output ports, including a video-output port, an ADB port, a floppy disk drive port, and a SCSI port that supports up to six peripherals. The Macintosh Duo MiniDock lets you connect your PowerBook Duo 210 or 230 to another Macintosh computer—and use your PowerBook Duo as if it were an external hard disk. The Macintosh Duo MiniDock offers built-in support for a variety of large displays, including the Macintosh 16-inch Color Display.

The Macintosh PowerBook Duo Floppy Adapter

You can use the PowerBook Duo Floppy Adapter to connect your PowerBook Duo 210 or 230 to an external floppy disk drive. The adapter includes an ADB port for an external mouse—and a security slot for securing your PowerBook Duo.

Macintosh 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 Macintosh Duo Dock, it provides you with a complete desktop Macintosh system.

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 Macintosh 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 ☞90
  —External floppy disk drive

- *Battery:* Nickel-metal-hydride; average life: 2.0 to 4.5 hours; power adapter included
- *Sound:* Input port (mono), output port (mono); integrated microphone and speaker
- *Networking:* Built-in AppleTalk
- *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 Macintosh 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 Macintosh Duo Dock or MiniDock.
- Can be easily connected to an external floppy disk drive, using the Macintosh 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 Macintosh PowerBook computers—provides palm rests and a convenient, integrated trackball.

Accessories

- Macintosh Duo Dock
- Macintosh Duo MiniDock
- Macintosh PowerBook Duo Floppy Adapter
- Macintosh PowerBook Express Modem
- Macintosh PowerBook Duo Rechargeable Battery
- Macintosh PowerBook Duo Battery Recharger
- Macintosh PowerBook Duo AC Adapter
- Macintosh PowerBook Duo Memory Expansion Kit

Macintosh PowerBook Duo 230

At a glance

- The Macintosh 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 Macintosh 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 Macintosh 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 ☞90
—External floppy disk drive

- *Battery:* Nickel-metal-hydride; average life: 2.0 to 4.5 hours; power adapter included
- *Sound:* Input port (mono), output port (mono); integrated microphone and speaker
- *Networking:* Built-in AppleTalk
- *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 Macintosh 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 Macintosh Duo Dock or MiniDock.
- Can be easily connected to an external floppy disk drive, using the Macintosh 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 Macintosh PowerBook computers—provides palm rests and a convenient, integrated trackball.

Accessories

- Macintosh Duo Dock
- Macintosh Duo MiniDock
- Macintosh PowerBook Duo Floppy Adapter
- Macintosh PowerBook Express Modem
- Macintosh PowerBook Duo Rechargeable Battery
- Macintosh PowerBook Duo Battery Recharger
- Macintosh PowerBook Duo AC Adapter
- Macintosh PowerBook Duo Memory Expansion Kit

Macintosh Duo System Accessories

Macintosh Duo Dock at a glance

- Inserting your PowerBook Duo notebook computer into the Macintosh Duo Dock gives you access to a complete Macintosh desktop system.
- Its PowerLatch docking technology gives the Macintosh Duo System:

—Easy connection between the Macintosh PowerBook Duo and the Macintosh Duo Dock; there are no cables to hook up.

—Automatic insert and eject.

—Data protection. You can't accidentally eject your Macintosh 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.)*

- *Processor:* 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); microphone included

- *Video support:*

—Built-in support for up to 256 colors on Apple displays and some third-party VGA and SVGA displays

—With 512K of additional video RAM, supports up to 32,000 colors ☞108

- *Networking:* Built-in AppleTalk
- *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 insert and eject, which makes inserting a Macintosh PowerBook Duo computer into a Macintosh 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 VRAM Expansion Kit (one 512K SIMM)

Macintosh Duo MiniDock at a glance

- The portable Macintosh 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 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:* Built-in AppleTalk
- *Dimensions (HWD):* 2.1 by 10.6 by 3.2 inches (5.3 by 26.9 by 8.2 cm)
- *Weight:* 1.24 lb. (.56 kg)

Accessories

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

Macintosh PowerBook Duo Floppy Adapter at a glance

- The Macintosh 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 (3.9 by 12.6 by 6.7 cm)
- *Weight:* .3 lb. (.14 kg)

Accessories

- Macintosh HDI-20 External 1.4MB Floppy Disk Drive

Apple Printers

The Apple Printing 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. And when it comes time to print, you just use the Print command.

They're built to work with all Macintosh 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 other types of 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, LaserWriter Select 300, and Apple Color Printer.

They offer excellent print quality

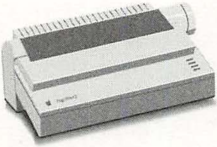
Our LaserWriter Pro printers set new standards in output quality by taking advantage of PhotoGrade and FinePrint—unique proprietary technologies developed by Apple.

- *PhotoGrade.* PhotoGrade lets the 600-dpi LaserWriter Pro 630 printer produce images that appear as if they were printed on a 1,000-dpi printer. (And, with an optional upgrade, so can the LaserWriter Pro 600.) It substantially enhances the quality of printed scanned photographs, with up to 91 levels of gray on the LaserWriter Pro 630 and LaserWriter Pro 600 (with PhotoGrade option installed), and up to 67 levels of gray on the LaserWriter Select 300 (with PhotoGrade option installed).
- *FinePrint.* Text and graphics printed on other laser printers often appear jagged. FinePrint uses variable-width dots to enhance the appearance of line art and text, virtually eliminating "jaggies." It adjusts the size of the dots to produce text and lines with extraordinarily smooth edges.

There's a printer for every task—and budget

With a family of eight 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.

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

- *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. (6.7 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.

StyleWriter II

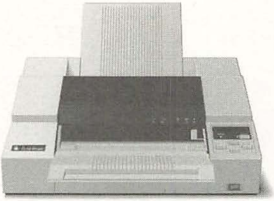
At a glance

- The StyleWriter II is an ink-jet printer that offers laser-quality printing at a very affordable price.
- It takes advantage of Apple's new 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.

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

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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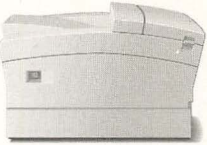
Specifications

- *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 (43.2 by 29.7 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. (10.0 kg)
- *Recommended number of users:* One

LaserWriter Select 300



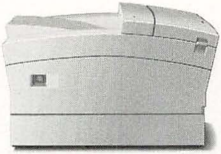
At a glance

- The LaserWriter Select 300 is Apple's most affordable laser printer.
- 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 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.

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 (makes use of Apple QuickDraw; PostScript support available via optional upgrade)
- *Fonts:* 39 scalable TrueType fonts
- *Interfaces:* High-speed (833K) RS-422 serial interface
- *Paper tray size:* 250 sheets or 15 envelopes (50-sheet multipurpose 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 (25.3 by 38.1 by 46.5 cm)
- *Weight:* 26.0 lb. (11.8 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.

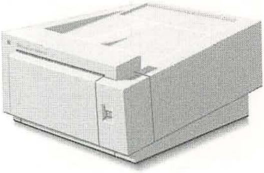
Specifications

- *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 or 15 envelopes (50-sheet multi-purpose tray and 250- and 500-sheet second bins optional)
- *Dimensions (HWD):* 8.0 by 15.0 by 18.3 inches (25.3 by 38.1 by 46.5 cm)
- *Weight:* 26.0 lb. (11.8 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.

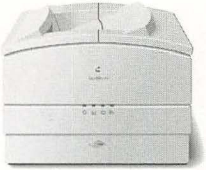
Specifications

- *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 or 15 envelopes (250-sheet bin optional)
- *Dimensions (HWD):* 8.0 by 15.0 by 18.3 inches (20.3 by 38.0 by 46.4 cm)
- *Weight:* 29.5 lb. (13.4 kg)
- *Recommended number of users:* Two 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 is Apple's mainstream office printer for individuals and workgroups using both Macintosh and Windows computers.
- All of its ports are active, which allows networked Windows and Macintosh computers to print to the same LaserWriter Pro 600.
- Its FinePrint technology produces smooth text and line art.
- It includes printer drivers for Windows.
- It supports PhotoGrade technology and 600-dot-per-inch resolution (requires memory upgrade).

Specifications

- *Resolution:* 300 dots per inch
- *Printing speed:* 8 pages per minute
- *Processor:* 68030 plus I/O processors and ASICs
- *Processor speed:* 25 megahertz
- *Memory:* 4MB of RAM, expandable to 32MB (PhotoGrade requires 5MB of RAM); 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. (17.7 kg)
- *Recommended number of users:* Five or more

LaserWriter Pro 630

At a glance

- The LaserWriter Pro 630 is Apple's highest-performance laser printer—for both Macintosh and Windows.
- All of its ports are active, which allows networked Windows and Macintosh computers to print to the same LaserWriter Pro 630.
- Its PhotoGrade technology enhances the quality of printed scanned photographs—and you can choose to print with PhotoGrade or at 600 dpi.
- Its FinePrint technology produces smooth text and line art, making it especially good for printing from graphics applications.
- It offers built-in Ethernet support, for up to 10 times the data-transfer rate possible with LocalTalk cabling.
- It includes printer drivers for Windows.

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. (17.7 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

★ **StyleWriter II**
- StyleWriter Ink Cartridge

★ **Apple Color Printer**
- Black Ink Cartridge
- Yellow Ink Cartridge
- Magenta Ink Cartridge
- Cyan Ink Cartridge
- Letter-size Coated Paper
- Legal-size Coated Paper
- 11- by 17-inch Coated Paper
- A4-size Coated Paper
- A3-size Coated Paper
- Letter-size Transparencies
- A4-size Transparencies

★ **LaserWriter Select 300 and 310**
- LaserWriter Select Toner Cartridge
- LaserWriter Select 500-Sheet Letter Cassette
- LaserWriter Select 250-Sheet Legal Cassette
- LaserWriter Select Envelope Cassette
- LaserWriter Select Universal Cassette
- LaserWriter Select 50-Sheet Multipurpose Tray

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 Cassette
- LaserWriter Pro 500-Sheet Cassette
- LaserWriter Pro 500-Sheet Feeder with Universal Cassette
- LaserWriter Pro Envelope Cassette

Other Apple Products

The Apple Display Advantage

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.

Six Macintosh displays to choose from

Apple offers six 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

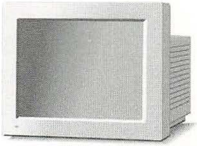
Apple displays are easy to install and configure. To connect one to your Macintosh, all you have to do is take a single cable and plug one end into the back of your display and the other into the back of your Macintosh. When you turn on your Macintosh, it will automatically adjust to the size and type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

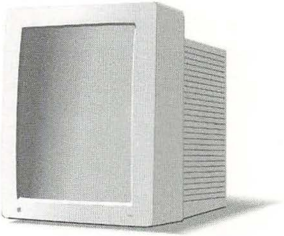
Macintosh 12-inch Monochrome Display



- 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 36.5 by 25.9 cm)
- 16.0 lb. (7.3 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)
(33.2 by 29.2 by 37.9 cm)
- 35.0 lb. (16.0 kg)

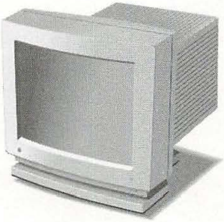


★ Apple Basic Color Monitor

- 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

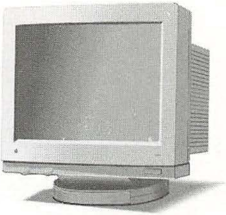
Macintosh Color Display

- 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
- 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)



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)
- 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. (21.3 kg)



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. (36.2 kg)

Apple Keyboards and Mouse

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

Apple OneScanner and Apple OneScanner for Windows

At a glance

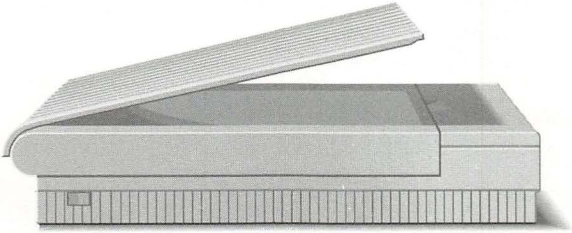
- Both the Apple OneScanner and Apple OneScanner for Windows offer high-quality scanning and single-button simplicity, for both professional and personal use.
- Both come with Ofoto scanning software, which ensures outstanding clarity and fidelity to the original image.
- The Apple OneScanner comes with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

Specifications

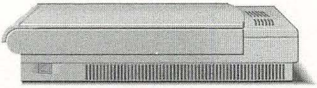
- *Gray-scale capabilities:* 256 levels (8 bits per pixel)
- *Scanning resolution:* 75 to 1,200 dots per inch (300 dpi for OneScanner for Windows) in 1-dot-per-inch increments through software interpolation
- *Maximum scan area:* 8.5 by 14.0 inches (21.6 by 35.6 cm)
- *Interface:* SCSI; OneScanner for 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. (10.5 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. (10.5 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."

AppleCD 150

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 access time:* 380 milliseconds; 64K cache
- *Ports:* Two 50-pin SCSI connectors, two RCA jacks, headphone jack
- *Networking:* Built-in AppleTalk
- *Dimensions (HWD):* 1.9 by 7.0 by 12.9 inches (4.8 by 17.8 by 32.5 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

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 (5.0 by 17.8 by 33.4 cm); AppleCD 300i—1.7 by 5.6 by 8.2 inches (4.3 by 14.9 by 20.8 cm)
- *Weight:* AppleCD 300—6.3 lb. (2.9 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.

Networking & Connectivity

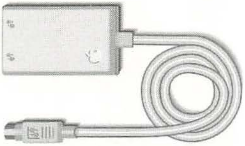
Apple Cables and Networking Cards

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

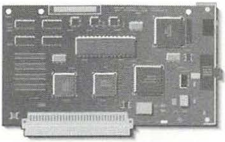
Your Macintosh—and every other Macintosh—comes with AppleTalk networking capability, including software and a LocalTalk network connection. This allows you to build an affordable, easy-to-use network. A LocalTalk network costs little to install, is easy to maintain, and transmits information with high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



- *LocalTalk Locking Connector Kit DB-9.* This is used for connecting Macintosh 128K, 512K, and 512K Enhanced computers and original LaserWriter and LaserWriter Plus printers to a LocalTalk network. The kit contains one LocalTalk connector with a DB-9 plug, and two meters of LocalTalk cable.
- *LocalTalk Locking Connector Kit DIN-8.* This is used for connecting Apple IIGS, Macintosh Plus, and newer Macintosh computers and LaserWriter printers to a LocalTalk network. The kit contains one LocalTalk connector with a circular 8-pin plug (DIN-8), and two meters of LocalTalk cable.

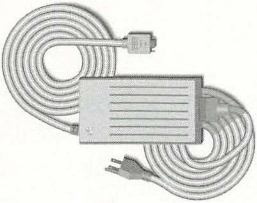
Ethernet networks

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

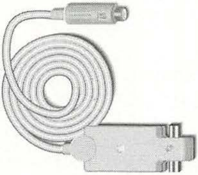


- *Apple Ethernet NB Card.* This card lets you connect any Macintosh II or the Macintosh Centris 650 computer to IEEE 802.3 Ethernet networks. You have the choice of using AppleTalk, TCP/IP, or DECnet protocols, so you can communicate in multivendor Ethernet environments. Includes EtherTalk software for easy access to network services.

- *Apple Ethernet LC Card.* This card connects your Macintosh Color Classic, LC, LC II, or LC III 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.

- *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. In addition, 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 multivendor environments to run a variety of network-based X client applications on the same Macintosh desktop.

Connecting to TCP/IP networks using MacTCP

With MacTCP software, developers can create Apple Macintosh applications and solutions for network environments that use the Transmission Control Protocol/Internet Protocol (TCP/IP) protocol suite—a set of standards widely used for networking heterogeneous systems. It works with Macintosh computers running either the Macintosh operating system or A/UX.

Connecting to OSI networks using MacOSI

With MacOSI software, 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.

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 Macintosh 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 Server 3.0 software

AppleShare Server 3.0 software lets users of Macintosh, Apple II, and MS-DOS computers connected to an AppleTalk network share files and printers. (MS-DOS computers require a third-party product. Windows requires Windows for Workgroups as well as networking cards.) Version 3.0 includes a number of features that enable network administrators to control centralized applications, data files, and printers effectively. It allows multiple applications, such as network services (mail servers), to run on the same machine. 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 manager–controlled log-off capabilities. AppleShare Server 3.0 supports CD-ROM drives, and it allows Macintosh computers running either System 6 or System 7 to function as clients.

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, TCP/IP Connection for Macintosh, and OSI Connection for Macintosh.

MacX25 software

MacX25 software links Macintosh computers to packet-switched data networks (PSDNs) supporting CCITT Recommendation X.25. It allows Macintosh to be set up as a single entry point to the PSDN. 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.

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.

Apple Internet Router 3.0 software

The Apple Internet Router 3.0 represents a major evolutionary advance in network routing. It implements the AppleTalk Update-based Routing Protocol, 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.

QuickCharts

Macintosh Family 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	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 IIvi	16-MHz 68030 Math coprocessor[1]	4MB–20MB	40, 80, 230, or 400MB; CD-ROM drive[1]	Built-in CD-ROM drive (optional)
Macintosh IIvx	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 68040 with PMMU, 8K memory cache	4MB–68MB	80, 230, or 500MB; CD-ROM drive[1]	Most affordable 68040 Macintosh
★ **Macintosh Centris 650**	25-MHz 68040 with PMMU, 8K memory cache Math coprocessor[1]	4MB–132MB	80, 230, or 500MB; CD-ROM drive[1]	Greater memory expansion capability; higher-performance 68040 processor

★ **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	Most powerful 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 powerful Macintosh system
Macintosh PowerBook 145	25-MHz 68030	4MB–8MB[3]	40 or 80MB	Most affordable Macintosh notebook computer
Macintosh PowerBook 160	25-MHz 68030	4MB–14MB[3]	40, 80, or 120MB	Backlit supertwist display; video-output capability; more storage options
★ **Macintosh PowerBook 165c**	33-MHz 68030	4MB–14MB[3]	80 or 160MB	256-color display; video-output capability; more storage options
Macintosh 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 notebook computer; video-output capability

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[1] Optional

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

[3] Requires third-party card

★ New model—introduced after January 1993

(continued)

Model	Processor	Memory	Storage	Key Value Added
Macintosh PowerBook Duo 210	25-MHz 68030	4MB–24MB[3]	80MB	Offers best of both worlds: PowerBook portability and desktop expandability and access to peripherals
Macintosh 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

[1] Optional

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

[3] Requires third-party card

★ New model—introduced after January 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 II	Macintosh LC III	Macintosh LC III Logic Board Upgrade
Macintosh II	Macintosh IIfx	Macintosh IIfx Logic Board Upgrade
Macintosh IIx	Macintosh IIfx	Macintosh IIfx 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 Quadra 900	Macintosh Quadra 950	Macintosh Quadra 950 Logic Board Upgrade
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 IIf	LaserWriter IIf Controller Board (4MB)
	LaserWriter IIg	LaserWriter IIg Controller Board (8MB)
LaserWriter IINT	LaserWriter IIf	LaserWriter IIf Controller Board (4MB)
	LaserWriter IIg	LaserWriter IIg Controller Board (8MB)
LaserWriter IINTX	LaserWriter IIf	LaserWriter IIf Controller Board (4MB)
	LaserWriter IIg	LaserWriter IIg Controller Board (8MB)
LaserWriter IIf	LaserWriter IIg	LaserWriter IIg Controller Board (8MB)

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 + one 4MB SIMM
			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 IIvi	4MB	Four empty SIMM slots	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 IIvx	4MB	Four empty SIMM slots	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
			36MB configuration	= 4MB on logic board + four 8MB SIMMs
			68MB configuration[2]	= 4MB on logic board + four 16MB SIMMs
★ **Macintosh Centris 610**	4MB	Two empty SIMM slots	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
★ **Macintosh Centris 650**	4MB	Four empty SIMM slots	4MB configuration	= 4MB on logic board
			20MB configuration	= 4MB on logic board + four 4MB SIMMs
			36MB configuration[2]	= 4MB on logic board + four 8MB SIMMs
			68MB configuration[2]	= 4MB on logic board + four 16MB SIMMs
			132MB configuration[2]	= 4MB on logic board + four 32MB SIMMs

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[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 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 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 145	2MB	One memory expansion slot filled with 2MB memory card	4MB configuration	= 2MB on logic board + 2MB memory card
			6MB configuration	= 2MB on logic board + 4MB memory card
			8MB configuration[2]	= 2MB on logic board + 6MB memory card
PowerBook 160	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
			14MB configuration[2]	= 4MB on logic board + 10MB memory card

★ **PowerBook 165c**	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
			14MB configuration[2]	= 4MB on logic board + 10MB memory card
PowerBook 180	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
			14MB configuration[2]	= 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
★	**StyleWriter II**	360 dpi	1 ppm (best mode) 2 ppm (draft mode)	1 user	39 TrueType fonts	High-resolution ink-jet printing
★	**Apple Color Printer**	360 dpi	2 minutes per page	1 user	64 TrueType fonts	Affordable color printing; GrayShare software
★	**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	2–5 users	64 TrueType and PostScript fonts	Network capability

★ **LaserWriter Pro 600**	300 dpi PhotoGrade[1] FinePrint	8 ppm	5 or more users	64 TrueType and PostScript fonts	Handles large networks; 600 dpi optional
★ **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

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[1] Requires 5MB of RAM

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)	Macintosh 16-inch Color Display	Macintosh 21-inch Color Display
Macintosh LC II						
Built-in video	16 grays	—	256 colors	16 colors	—	—
With 512K VRAM SIMM	256 grays	—	32,768 colors	256 colors	—	—
★ **Macintosh LC III**						
Built-in video	256 grays	16 grays	256 colors	256 colors	256 colors	—
With 256K VRAM SIMM	256 grays	256 grays	32,768 colors	32,768 colors	256 colors	—
Macintosh IIvi and IIvx						
Built-in video	256 grays	—	256 colors	256 colors	—	—
With Macintosh Display Card 8•24	256 grays	256 grays	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	16 colors
With 512K VRAM SIMM	256 grays	256 grays	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	—
With Macintosh Quadra VRAM Expansion Kit	256 grays	256 grays	32,768 colors	32,768 colors	32,768 colors	256 colors
Macintosh Quadra 950						
Built-in video	256 grays	256 grays	32,768 colors	32,768 colors	32,768 colors	256 colors
With two Macintosh Quadra VRAM Expansion Kits	256 grays	256 grays	16.7 million colors	16.7 million colors	16.7 million colors	32,768 colors
★ **Macintosh PowerBook 165c, 160, and 180**						
Built-in video	256 grays	16 grays	256 colors	256 colors	256 colors	—

(continued)

Model	Macintosh 12-inch Monochrome Display	Macintosh Portrait Display (15-inch)	★Apple Basic Color Monitor (14-inch)	Macintosh Color Display (14-inch)	Macintosh 16-inch Color Display	Macintosh 21-inch Color Display
Macintosh PowerBook Duo 210 and 230 with Macintosh Duo Dock						
Built-in video	256 grays	16 grays	256 colors	256 colors	256 colors	—
With 512K VRAM SIMM	256 grays	256 grays	32,768 colors	32,768 colors	32,768 colors	--
Macintosh PowerBook Duo 210 and 230 with Macintosh Duo MiniDock						
Built-in video	256 grays	16 grays	256 colors	256 colors	256 colors	—

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Here's an all-in-one guide to Macintosh computers and Apple printers, displays, and accessories.

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