



Apple Facts

The Very Informative Guide to Apple Products

1.98

The Apple Advantage

5

Desktop Computer Systems

15

Portable Computers

33

Servers

43

Displays and Printer Products

51

Newton Mobile Products

65

Apple Software and Technologies

71

QuickCharts

85

Welcome to AppleFacts 1.98—a concise guide to Apple products offered worldwide. Because product availability, configurations, and part numbers vary worldwide, we suggest that you contact your local Apple dealer or Apple office for this information.

The Apple Advantage

The Apple Advantage	6
---------------------------	----------

Desktop Computer Systems

	15
Power Macintosh 5400 Series	16
Power Macintosh 5500 Series NEW	18
Power Macintosh 6500 Series	20
Power Macintosh 8600 Series	22
Power Macintosh G3 Series NEW	24
Power Macintosh 9600/300	26
The Twentieth Anniversary Macintosh	28
Desktop System Accessories NEW	30
Apple Keyboards and Mouse	32

Portable Computers

	33
Macintosh PowerBook 1400 Series	34
Macintosh PowerBook 2400 Series NEW	36
Macintosh PowerBook 3400 Series	38
Macintosh PowerBook G3 NEW	40
Portable Computer Accessories	42

Servers

	43
Workgroup Server 7350/180	44
Workgroup Server 9650/350	46
Server Software Bundles	48

Displays and Printer Products	51
Apple Multiple Scan 15AV Display W	52
Apple Multiple Scan 720 Display NEW, W	54
Apple ColorSync Display (17-inch Color Display) NEW, W	56
Apple ColorSync Display (20-inch Color Display) NEW, W	58
Apple LaserWriter 12/640 PS W	60
Apple LaserWriter 8500 W	62
Newton Mobile Products	65
MessagePad 2100 NEW, W	66
Apple eMate 300 W	68
Newton Mobile Products and eMate Accessories	70
Apple Software and Technologies	71
System Software and Related Products W	72
Apple Media Products W	75
Apple Internet Products W	78
Networks and Communications	81
Language Kits	84
QuickCharts	85
Desktop Computers QuickChart	86
Portable Computers QuickChart	90
Apple Servers QuickChart	92
Apple Displays QuickChart	94
Apple Printers QuickChart	96
Apple Printer Supplies QuickChart	98

A key to symbols used in AppleFacts:

- W** Indicates either a product that is available in a configuration specifically designed for use with Windows software, or a peripheral product that can be used with Windows software-based systems.
- NEW** Indicates a new product or a new configuration within a series.
-  Represents a cross-reference. For more information, simply turn to the page listed (for example 32).

The Apple Advantage

6 *The Apple Advantage*

What comes with every Macintosh

- *The Mac OS.* Imitated, but never equaled, the popular Macintosh operating system makes computers from Apple incredibly easy to learn and use. The latest version, Mac OS 8, dramatically improves user productivity and Internet integration, setting a new standard in user-friendly power.  9, 72
- *Faster and more robust PowerPC processor technology.* Every Macintosh computer available today comes with a RISC-based PowerPC processor. And our latest desktop and portable systems are based on the “next-generation” PowerPC processor: the PowerPC G3, which provides a number of advantages.  9 Taking advantage of the PowerPC processor family’s power and speed, software developers have already designed more than 2,000 applications that provide new levels of performance.
- *Easier-to-expand Peripheral Component Interconnect (PCI) slots.* All current Power Macintosh computers feature PCI expansion slots. PCI offers three main advantages over the NuBus slots used by earlier Apple computers: higher performance (up to three times faster), more solutions (because PCI is a cross-platform standard), and lower cost.
- *Superior cross-platform support with the Apple SuperDrive floppy disk drive.* The Apple SuperDrive floppy disk drive is a high-density floppy disk drive that can read from and write to Mac OS, 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 Mac OS program, and save your work back to the MS-DOS disk.

- *Built-in networking ports.* All Macintosh computers come with a LocalTalk port for convenient, low-cost AppleTalk network connections, as well as built-in Ethernet ports or an Ethernet option for higher-speed networking. You can also connect a Macintosh to virtually any of the most commonly used networking environments.
- *WYSIWYG.* Macintosh offers “what you see is what you get” capabilities—things you create and view on the screen will appear exactly as you expect when you print them.
- *Easy connectivity.* All Macintosh computers include an Apple Desktop Bus (ADB) port for input devices, and at least one SCSI port for connecting devices such as hard disk drives, CD-ROM drives, and scanners—with no need for extra cards or connectors. In fact, all you need to connect your Macintosh to an Apple peripheral is a single cable. (And by the way, if your computer is connected to more than one printer over a network, it’s also extremely easy to select the particular printer you want to use.)
- *Integrated sound capabilities.* Every Macintosh features sound-output capabilities that allow you to play back high-quality sound, as well as sound-input capabilities for adding voice annotation or music to your work.
- *Built-in video.* All Macintosh computers include built-in display support, so there’s no need to purchase, configure, or install video cards. Many offer additional video features, such as the ability to plug in a camcorder or VCR for easy, direct video input and output. And some even let you watch television in a window on your Macintosh desktop.
- *Features for individuals with disabilities.* Out of the box, the Macintosh is the most accessible personal computer available, offering features for individuals with difficulties in sight, hearing, and movement.

The short answer to that question is this: People are more productive with Macintosh computers than with PCs running Windows. This productivity translates into some distinct advantages:

- *Low total cost of ownership.* In practical, financial terms, the productivity of using a Macintosh translates into an overall low cost of ownership. In addition to the initial costs of purchasing a computer, the costs of owning a computer include configuration, installation of the system and its software and peripherals, training of a user or users, and ongoing expansion and maintenance. Because the Macintosh comes with built-in networking and multimedia capabilities, and supports true plug and play for expanding the system, it is much easier to configure, install, expand, and maintain over time. And since the Macintosh provides a consistent user interface, new users can be productive with their systems with little or no training.
- *Low administrative costs.* Because the Macintosh requires little or no training, and is designed to support easy expansion with peripherals and software, it typically requires fewer system administrators than do PCs. For example, while it is common for Macintosh administrators to manage 100 computers, their PC counterparts typically manage about one-half that load. Not surprisingly, Macintosh computers are extremely popular among organizations that do not have large technical staffs, such as schools, small businesses, and design and new media studios.
- *Higher return on investment.* A recent GISTICS study quantified the fact that design and graphics professionals who use Macintosh computers enjoy nearly double the profits over PC-based firms.
- *Increased satisfaction.* “Dual users,” those who routinely use both Macintosh computers and PCs running Windows 95, have been shown to prefer the Macintosh in many important categories, including productivity, ease of use, multimedia, and overall satisfaction.

The productivity advantages of a Macintosh also add up to a creative advantage that is commonly experienced among Macintosh users: Because they spend less time on computer hassles, they can

spend more time on creative pursuits. While not as easily quantified, perhaps this is part of why Macintosh customers have the most brand loyalty of any computer users, and why the Macintosh is the computer of choice among the majority of the world's leading creative authors, designers, producers, and developers.

Apple "raised the bar" yet again with the release of Mac OS 8. Featuring a user experience that's far more responsive and efficient, and a complete set of Internet services, Mac OS 8 is the most significant release of the Mac OS since 1984. It enhances everything from the look of the desktop to the way you interact with your computer, and provides a wealth of Internet services to integrate Internet capabilities into your everyday computer use. For additional specifics about Mac OS 8, and how it can help you to get more done—better—read the Apple Software and Technologies section in this book.  71

A new era of speed and power

Another major reason that people can get more done with Macintosh computers is their power and speed. And with the release of our first systems based on the PowerPC G3 processor, we're writing a whole new chapter in the Macintosh performance story.

PowerPC enters a new era. The emergence of the PowerPC G3 processor marks the third phase in the development of this advanced RISC technology. As the PowerPC G3 becomes central to Apple system designs, increasing numbers of our users will experience the following benefits:

- Significant performance gains, which will provide the power needed to handle such resource-intensive tasks as video editing, Internet authoring, and Windows emulation through software alone, rather than more costly and complex hardware add-ons.
- Even more affordable and higher performance—in particular, providing a radical improvement in the value offered by our entry-level and midrange systems.
- The ability to purchase a notebook system that can truly offer the performance of a desktop computer.

Although the PowerPC G3 builds on many of the features pioneered by the PowerPC 603 and 604, it also differs from the earlier implementations of PowerPC processor technology in several significant

ways. For example, not only is the PowerPC G3 the first processor to be specifically optimized for Mac OS code, it also features a different, more efficient approach to level 2 cache design known as *backside cache*. In this approach, the cache is located directly on the processor card, rather than on the logic board, allowing the processor to gain access to the cache directly at speeds that vary proportionally to the processor speed—and providing significant performance increases by effectively bypassing the limitations previously imposed by the system bus. Another advantage of the backside cache approach is its tremendous flexibility—by varying cache amounts and the ratios between processor speed and cache memory, PowerPC G3 processors can be designed to provide a wide range of performance. In addition, this new processor design has significantly lower power requirements, making the PowerPC G3 suitable for use in high-end portables and entry-level desktop systems, as well as scalable to provide high-end desktop and server performance. As a result, unlike the PowerPC 604e, which was conceived as a second-generation replacement for the initial PowerPC 601, the PowerPC G3 is intended not merely to replace the PowerPC 603 and 604e, but to supersede them. It represents a brand-new approach to chip design, one that can provide workstation-class performance—affordably.

Learning to look beyond megahertz

With its highly efficient backside cache design, the PowerPC G3 processor significantly reduces the usefulness of clock speed in attempting to compare computer performance. Consider the following:

- Internal Apple testing shows that a 233-megahertz Power Macintosh G3 system provides more than twice the performance of the system it's replacing, the Power Macintosh 7300/200.
- A 233-megahertz Power Macintosh G3 is faster than both the Power Macintosh 6500/300 and 8600/300.
- A 250-megahertz Macintosh PowerBook G3 is faster than a 266-megahertz Pentium II-based desktop system.
- A 266-megahertz Power Macintosh G3 is faster than a comparable 266-megahertz Pentium II-based system.

So when you're looking for the computer that's just right for you, it's more important than ever to consider overall product design

factors such as logic board design, system software, memory and support for memory expansion, mass storage devices, number and type of expansion slots, and networking capabilities.

Looking toward MacBench

Still, performance remains an important consideration. So the question becomes this: If processor clock speed no longer provides an accurate means of comparing computer performance, what does?

The answer is MacBench, a benchmarking system that measures the speed at which Mac OS-based computers execute instructions that closely match those generated by many of the most commonly used applications. To learn more about MacBench, or to find the latest results of benchmarking studies conducted by Apple, visit the Apple web site at www.apple.com.

Why is Apple the industry leader in multimedia?

Apple's role as the industry leader in cutting-edge multimedia for personal computers has been widely acknowledged ever since the emergence of the Macintosh, with its integrated sound and graphics capabilities. And we continue to lead in the new media industry of today—and tomorrow—with an impressive array of advanced platform technologies, tools, and support programs.

Currently, in fact, Apple—and in particular, the Macintosh computer—can boast some pretty impressive figures. For example, a study by Dataquest named Apple the leading personal computer vendor worldwide for multimedia. In addition, research has indicated that approximately 48 percent of CD-ROM authoring—and more than 40 percent of the digital video data creation for the Internet—is done using Apple media technologies. There are a couple of primary reasons for Apple's leading role in multimedia:

The Mac OS includes advanced media software. The performance of PowerPC processor technology enables Apple to provide software-only solutions in areas such as graphics and video. The current version of the Mac OS includes the latest QuickTime technologies—QuickTime, QuickDraw 3D, and QuickTime VR—now an industry standard for the creation of media-rich Internet content.

Apple tools and technologies were designed with digital media in mind. If you're creating digital media projects, the intersection

of PowerPC processor performance with Apple's advanced multi-media capabilities offers you the power to take on even the most demanding projects. If your plans include video integration, 3D animation, virtual reality, music composition, speech recognition, or use of other digital media, Apple provides the best environment for both integration and playback of these elements—whether you're working with the Mac OS or Windows, distributing the results via CD-ROM or the Internet.

How does Apple fit into Internet/intranet solutions?

Networking is another historical "Apple win": We were the first company to integrate networking into a personal computer as a standard feature. And we continue to enhance our networking support over time, for example, by including full support for TCP/IP at the system software level.

The explosive growth of the Internet has put new demands on what it means to provide outstanding networking capabilities. Apple can add to its numerous networking credentials a long—and continuing—history of Internet involvement, support, and pioneering development. Apple's current Internet support focuses on making it easier to connect to, explore, and publish your own information on the Internet and the World Wide Web, with solutions for Internet access and servers.

All Apple products come Internet-ready. All of our products come complete with everything required for Internet access, including built-in networking capabilities and Internet access software, as well as adequate power, memory, and storage to let you take full advantage of your online experience. In fact, Mac OS 8 even makes it easy to publish your own information online.  72

Apple offers a range of unique Internet server solutions. For our customers who want to publish material on the Internet on a slightly grander scale—and for the rapidly growing number of organizations interested in taking advantage of Internet technology to meet their internal communications needs—Apple offers numerous possibilities. For example, our Apple Internet Server Solution  78 is a unique combination of our Mac OS-based Workgroup Servers  44, 46 with a complete set of the state-of-the-art software tools required to set up an Internet or intranet server. Already, its outstanding ease of

use and simplicity of maintenance have made this solution a favorite among web publishers. In addition, AppleShare IP 5.0  78 is a PowerPC-native application that combines traditional file and print service with web, mail, and File Transfer Protocol (FTP) services, to provide an easy, effective, and efficient solution for departments, workgroups, and small businesses that need to share information and resources.

Apple technologies facilitate content creation. Our QuickTime technologies are already web standards—used to create the majority of multimedia content currently posted on the Internet. By using QuickTime plug-ins for Netscape's popular Navigator browser, you'll find that it's easy to make media-rich web content broadly accessible to potential viewers.

Apple provides proven solutions for corporate intranets. More and more organizations—from global enterprises to small businesses—are adopting Internet technology to meet internal networking and communications needs. As organizations move to Internet Protocol (IP) networking, they gain the advantages of streamlined development, since they can create an application that will run on all of their supported client platforms without requiring porting or even modification. And the popular Macintosh computer, with its ease of use and versatile connectivity and networking, fits easily into corporate intranets. The Macintosh is especially popular with developers and support staff, who enjoy its extensive tool set and ease of development, as well as its comparatively low maintenance, support, and training requirements. Considerations such as these explain why Apple itself has become a model intranet user—and why growing numbers of organizations are taking a second look at what Apple products can do for them.

Apple provides proven solutions for dynamic, high-capacity web transactions and business. Using WebObjects, scores of large businesses have produced web sites that link their customers to existing business processes, such as the ability to place orders; track shipments; enjoy 24-hour, 7-day-a-week customer service via the web; and express interest in a company's products. Proved in high-traffic web sites such as the Sharper Image online store and Club Med's vacation picker, WebObjects provides a reliable way of truly conducting business via the web.

In the preceding pages, we've detailed a lot of information to answer one very basic question: "What does all of this mean to me?"

We hope you'll agree that, in short, if you're looking to buy a productive and cost-effective personal computer or related technology, your first look should be at Apple.

Exceptionally productive and cost-effective solutions. Apple's Macintosh computers integrate a host of capabilities that seamlessly combine to enhance productivity and provide an unmatched user experience. For example, all Macintosh computers are extraordinarily easy to set up and use, so you're productive from Day 1. And their flexible communications features support true "plug-and-play" connectivity—so connecting an Apple computer to a network or an Apple display or printer is merely a matter of plugging in a cable and pressing a power switch. Finally, the Macintosh goes beyond the basics to make the extraordinary ordinary, with outstanding audio and video capabilities, as well as ColorSync, Apple's advanced color correction and color-matching technology.

A wide range of solutions to meet your needs. Because different people have very different needs, Apple offers a full spectrum of systems—from an innovative hand-held device based on our award-winning Newton technology to our Macintosh PowerBook line of advanced notebook computers to our feature-rich Power Macintosh desktop computers—as well as our Workgroup Server line of file, print, application, and Internet server systems. Despite their obvious differences in size and functionality, all of these systems continue to reflect the user-centered design principles that lie at the foundation of Apple's approach: They are practical, attractive, easy to set up, and simple to use and maintain. And all of our current system offerings support flexible connectivity and versatile networking capabilities—including easy Internet access.

In short, through our ongoing focus on making complex technology simple, Apple is continuing to make computing more accessible—and people more productive.

Desktop Computer Systems

Power Macintosh 5400 Series

16



Convenient, compact, and multimedia-ready

The Power Macintosh 5400 series systems pack considerable power into a convenient, all-in-one package. Designed for education, these computers offer a number of multimedia options.

(Note: This computer is available to U.S. and Canadian education customers only.)

Key features

Performance

- Features one of the most powerful processors ever used in an all-in-one system

Multimedia

- Provides high-quality audio input/output
- Includes a built-in tray-loading CD-ROM drive
- Features a built-in multiple-scan color display
- Is designed to accommodate a variety of multimedia add-ons for additional media-handling functionality

Communications

- Offers 10BASE-T Ethernet networking (5400/200 only)
- Supports quick, easy Internet access and e-mail

Expandability and flexibility

- Accommodates a number of options, including a module that provides 256K level 2 cache, the Apple Video System, and the Apple TV/FM Radio System*

* Includes a PCI expansion slot (6.88-in.)

Specifications

- **Processor**

- 180- or 200-MHz PowerPC 603e with integrated math coprocessor and 32K on-chip cache

- 256K level 2 cache (optional)

- **Memory**

- 16MB of RAM; supports up to 136MB via logic board and 2 DIMM sockets

- 64-bit memory bus

- **Storage**

- Internal 1.4MB Apple SuperDrive floppy disk drive

- Internal 1.2GB or 1.6GB hard disk drive

- Built-in tray-loading CD-ROM drive

- **Display**

- Built-in 15-inch (12.8-inch diagonal viewable image size) flat, square multiple-scan RGB display—1MB of VRAM

- Support for up to 800- by 600-pixel resolution at 16-bit color setting

- Refresh rate of up to 75 Hz

- **Communications and connectivity**

- One PCI expansion slot (6.88-in.) compatible with PCI 2.0-compliant cards

- Two serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables

- Built-in 10BASE-T Ethernet connector (optional card for 5400/180)
- High-performance SCSI port
- ADB port
- Optional video connector that supports connection to an external display (also supports NTSC or PAL video output—with appropriate hardware)

- **Media support**

- Audio input/output with SRS 3D surround sound

- Video slot (for Apple Video System)

- Bay for optional Apple TV/FM Radio System

- **Size and weight**

- 17.5 by 15.1 by 16.0 inches (44.5 by 38.3 by 40.6 cm)

- 47.0 lb. (21.0 kg)—will vary based on internal devices installed

Other Power Macintosh models to consider

For higher performance without sacrificing all-in-one convenience, look to the Power Macintosh 5500 series, which features faster processors and more built-in multimedia capabilities.

Power Macintosh 5500 Series

18



Compact, powerful, and multimedia-optimized

The Power Macintosh 5500 series systems combine high performance with a full spectrum of multimedia features. These convenient, affordable all-in-ones are ideal for a range of educational uses.

(Note: Configurations and availability may vary worldwide.)

Key features

High performance

- Features one of the most powerful processors ever used in an all-in-one system

Advanced multimedia

- Provides high-quality audio and video input/output
- Includes a 24x-speed (maximum) CD-ROM drive
- Supports the optional Apple TV/FM Radio System
- Offers a built-in multiple-scan color display

Versatile communications

- Offers 10BASE-T Ethernet networking (some configurations)
- Supports quick, easy Internet access and e-mail

Expandability and flexibility

- Accommodates a number of options, including the Apple Video System (comes with the 5500/250) and the Apple TV/FM Radio System*

* Includes a PCI expansion slot (6.88-in.)

Specifications

- **Processor**

- 225- or 250-MHz PowerPC 603e with integrated math coprocessor and 32K on-chip cache

- 256K level 2 cache

- **Memory**

- 16MB or 32MB of RAM; supports up to 128MB via 2 DIMM slots

- **Storage**

- Internal 1.4MB Apple SuperDrive floppy disk drive

- Internal 2GB IDE hard disk drive

- Internal 12x- or 24x-speed (maximum) CD-ROM drive

- **Display**

- Built-in 15-inch (12.8-inch diagonal viewable image size) flat, square multiple-scan RGB display—2MB of SGRAM video memory

- Support for up to 16 million colors (24-bit color) at 832- by 624-pixel resolution

- Refresh rate of up to 75 Hz

- **Communications and connectivity**

- One PCI expansion slot (6.88-in.) compatible with PCI 2.0-compliant cards

- Two serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables

- Built-in 10BASE-T Ethernet connector (some configurations)

- High-performance SCSI port (up to 5 MBps)

- ADB port

- TV video-output port

- **Media support**

- Audio input/output with SRS 3D surround sound
- Video input (NTSC, PAL, or SECAM), video output (NTSC) on some configurations

- Bay for optional Apple TV/FM Radio System

- Hardware-accelerated 2D and 3D graphics

- **Size and weight**

- 17.5 by 15.1 by 16.0 inches (44.5 by 38.3 by 40.6 cm)

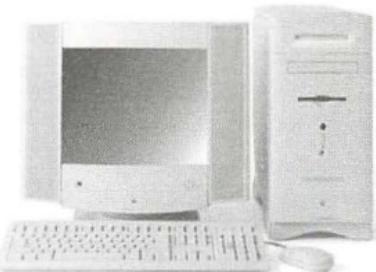
- 47.0 lb. (21.0 kg)—will vary based on internal devices installed

Other Power Macintosh models to consider

If you want even higher performance, more built-in capabilities, and greater flexibility, you should consider the Power Macintosh 6500 series.

Power Macintosh 6500 Series

20



Powerful, feature-rich, and flexible

The Power Macintosh 6500 series systems are high-performance computers designed specifically for home, small-business, and education use. They come in a variety of configurations to accommodate a range of users and uses.

(Note: Configurations and availability may vary worldwide.)

Key features

High performance

- Features a PowerPC 603e running at a range of clock speeds—up to an impressive 300 MHz

Advanced multimedia

- Provides audio and video input/output
- Includes a 12x- or 24x-speed (maximum) CD-ROM drive
- Offers hardware acceleration of 2D and 3D graphics
- Supports QuickTime and MPEG-1 movie playback

Versatile communications

- Offers 10BASE-T Ethernet networking or a fax/data modem
- Supports quick, easy Internet access and e-mail

Expandability and flexibility

- Accommodates a variety of options, including the Avid Cinema video-editing system and the Apple TV/FM Radio System (comes with the Creative Studio Edition)*

* Includes two standard PCI expansion slots (6.88-in.)

Specifications

- **Processor**

- 225-, 250-, 275-, or 300-MHz PowerPC 603e with integrated math coprocessor and 32K on-chip cache

- 256K or 512K level 2 cache

- **Memory**

- 32MB, 48MB, or 64MB of RAM; supports up to 128MB via 2 DIMM slots

- **Storage**

- Internal 1.4MB Apple SuperDrive floppy disk drive

- Internal 3GB, 4GB, or 6GB hard disk drive

- Internal 12x- or 24x-speed (maximum) CD-ROM drive

- Internal Iomega Zip drive for fast, easy storage or backup (some configurations)

- **Display support**

- 2MB of fast SGRAM video memory

- Support for up to 16 million colors (24-bit color) at 832- by 624-pixel resolution

- Refresh rate of up to 85 Hz

- **Communications and connectivity**

- Two PCI expansion slots (6.88-in.) compatible with PCI 2.0-compliant cards

- Two serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables

- Built-in 10BASE-T Ethernet connector or 33.6/56-Kbps modem** (varies by configuration)

- High-performance SCSI port (up to 5 MBps)

- ADB port

- DB-15 connector for monitor

- **Media support**

- Audio input/output with SRS 3D surround sound and built-in dual-mode subwoofer

- Hardware-accelerated 2D and 3D graphics

- Options (may be preinstalled on some models):

- Avid Cinema for simple yet powerful video editing
- Apple Video System for low-cost video input
- Apple TV/FM Radio System
- NTSC video out for output to a TV, VCR, or camcorder

- **Size and weight**

- 16.0 by 7.8 by 16.9 inches (40.6 by 19.8 by 42.8 cm)

- 44.5 lb. (20.2 kg)—will vary based on internal devices installed

**Data speeds up to 33.6 or 56 Kbps, fax speeds up to 14.4 Kbps. Actual download speeds vary with line conditions and your Internet service provider's modem capabilities. FCC regulations limit ISP transmission speeds to 53 Kbps in the United States.

Other Power Macintosh models to consider

If you want even higher performance and more built-in multimedia capabilities, look to the Power Macintosh 8600 series or the new Power Macintosh G3 series minitower models, which are optimized for convenient media authoring.

Power Macintosh 8600 Series

22



Feature-rich and multimedia-optimized

Power Macintosh 8600 series computers are high-performance systems designed for complex work with media and other demanding tasks. Their built-in video functionality makes them particularly well suited for activities such as video editing and integrated media authoring.

(Note: Configurations and availability may vary worldwide.)

Key features

High performance

- Features the enhanced PowerPC 604e running at up to an impressive 300 MHz
- Includes 1MB of Apple Inline Cache, to further boost their power

Integrated multimedia

- Includes a 64-bit VRAM graphics subsystem
- Provides built-in digital video-input/output capabilities (24-bit composite and S-video input and output)
- Supports high-quality audio
- Includes a 24x-speed (maximum) CD-ROM drive

High-quality communications support

- Features built-in 10BASE-T and AAUI-15 Ethernet networking
- Supports quick, easy Internet access and e-mail

Outstanding expandability and flexibility

- Provides three standard 12-inch PCI expansion slots
- Includes expansion bays for additional storage devices (3.5- or 5.25-inch)

Specifications

• Processor

- 250- or 300-MHz enhanced PowerPC 604e
- 1MB Apple Inline Cache on processor card
- Integrated floating-point unit and 32K level 1 on-chip data and instruction caches
- 50-MHz system bus

• Memory

- 32MB of RAM; supports up to 512MB via 8 DIMM slots
- 4MB of ROM
- 64-bit memory bus

• Storage

- Internal 1.4MB Apple SuperDrive floppy disk drive
- Internal 4GB Fast SCSI hard disk drive
- Internal 24x-speed (maximum) CD-ROM drive
- Internal Iomega Zip drive for fast, easy storage or backup
- Expansion bays for additional storage devices—four 5.25-inch bays for removable media, three internal bays (open bays vary with configuration)

• Display support (configured through accelerated graphics card)

- 2MB of VRAM, supports up to 4MB
- Fast 64-bit data path to VRAM

- Support for up to thousands of colors at up to 1,280- by 1,024-pixel resolution; 24-bit color at up to 1,152- by 870-pixel resolution
- Refresh rate of up to 75 Hz

• Communications and connectivity

- Three PCI expansion slots (12-in.) compatible with PCI 2.1-compliant cards
- Two high-speed DMA serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables
- Built-in 10BASE-T and AAUI-15 Ethernet connector
- Internal Fast SCSI bus (up to 10 MBps); external SCSI bus (up to 5 MBps)
- ADB port
- Mini-jacks for 16-bit stereo audio input and output
- DB-15 connector for monitor
- Internal digital audio/video (DAV) connector for video compression/decompression cards

• Media support

- Audio input/output capabilities
- Video input/output and DAV connector

• Size and weight

- 17.3 by 9.7 by 17.3 inches (44.0 by 24.6 by 44.0 cm)
- 35.0 lb. (15.9 kg)—will vary based on internal devices installed

Other Power Macintosh models to consider

For the very latest in processor technology and system design, you should consider the Power Macintosh G3, which features the innovative PowerPC G3 processor for affordable high-performance computing.

Power Macintosh G3 Series

24



Outstanding performance at an affordable price

Power Macintosh G3 series computers feature innovations in processor technology and system architecture that enhance both performance and flexibility. These affordable systems available in desktop and mini-tower models set new standards for value in a mainstream computer that's highly multimedia-capable.

(Note: Configurations and availability may vary worldwide.)

Key features

Next-generation PowerPC processor technology

- Introduces the first processor specifically optimized for the Mac OS: the PowerPC G3, running at 233 or 266 MHz
- Uses a leading-edge, 0.25-micron process for a smaller, lower-power chip design
- Features an innovative backside cache architecture to increase performance

Innovative system architecture

- Debuts a new, more efficient, and flexible logic board design
- Increases the system bus speed to maximize processor performance gains

High-quality communications and multimedia support

- Makes communications fast and easy through built-in Ethernet networking
- Offers 16-bit stereo audio input/output, professional-quality video input/output, and a digital audio/video (DAV) connector (varies by configuration)
- Includes a 24x-speed (maximum) CD-ROM drive
- Is available with a Zip drive for easy file transfer and backup

Outstanding flexibility

- Provides three standard 12-inch PCI slots for easy expansion of system functionality
- Includes expansion bays for additional storage devices (varies by configuration)
- Speeds system expansion and servicing through an exceptionally easy-to-access design

Specifications

• Processor

- 233- or 266-MHz PowerPC G3
- 512K backside level 2 cache on processor module
- 117- or 133-MHz dedicated 64-bit backside bus
- Integrated floating-point unit and 32K level 1 on-chip data and instruction caches
- 66-MHz system bus

• Memory

- 32MB of SDRAM; 3 DIMM slots supports up to 192MB or 384MB
- 4MB of ROM
- 64-bit memory bus

• Storage

- Internal 4GB or 6GB IDE hard disk drive
- Internal 1.44MB Apple SuperDrive floppy disk drive
- Internal 24x-speed (maximum) CD-ROM drive
- Internal 100MB Zip drive for fast, easy storage or backup (some configurations)
- Expansion bays available for additional storage devices: one or two 3.5-in. SCSI bays (desktop models; varies by configuration); one 5.25-inch SCSI bay (minitower model)

• Display support

- 2MB of SGRAM video memory; supports up to 6MB

- Supports thousands of colors at up to 1,024- by 768-pixel resolution (16-bit); supports millions of colors at up to 832- by 624-pixel resolution (32-bit)

- Refresh rate of up to 85 Hz

• Communications and connectivity

- Three PCI expansion slots (12-in.) compatible with PCI 2.1-compliant cards
- Two high-speed DMA serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables
- Built-in 10BASE-T Ethernet connector
- Internal/external SCSI bus (up to 5 MBps)
- ADB port
- Mini-jacks for 16-bit stereo audio input and output
- DB-15 connector for monitor

• Media support

- ATI 3D RAGE II+ 64-bit graphics and multimedia accelerator chip
- Audio input/output capabilities
- Composite and S-video connectors for video input/output and DAV connector (minitower model)

• Size and weight

Desktop models:

- 6.2 by 14.4 by 16.9 inches (15.6 by 36.5 by 43.0 cm)
- 22.7 lb. (10.2 kg)—will vary based on internal devices installed

Minitower model:

- 15.2 by 9.6 by 17.8 inches (38.6 by 24.3 by 45.2 cm)
- 33.1 lb. (15.0 kg)—will vary based on internal devices installed

Visit our web site

Getting all the information you need about Apple products has never been easier. Visit us at www.apple.com to download and print any of Apple's product data sheets.

Power Macintosh 9600/300

26



The top of the line in flexible expandability

The Power Macintosh 9600/300 computer is Apple's premier publishing system, designed for professionals who require optimized performance and expandability. Its six PCI slots and 12 DIMM slots make it easy for you to customize this computer's capabilities to accommodate even the most demanding tasks.

Key features

High performance

- Features the enhanced PowerPC 604e running at up to 300 MHz
- Includes 1MB of Apple Inline Cache, to further boost its power

Communications and multimedia

- Features built-in 10BASE-T and AAUI-15 Ethernet networking
- Supports quick, easy Internet access and e-mail
- Offers high-quality audio
- Includes a 24x-speed (maximum) CD-ROM drive

Unrivaled flexibility and expandability

- Provides six standard 12-inch PCI expansion slots
- Supports memory expansion up to 768MB
- Includes expansion bays for additional storage devices (3.5- or 5.25-inch)

Specifications

- **Processor**

- 300-MHz enhanced PowerPC 604e
- 1MB Apple Inline Cache on processor card
- Integrated floating-point unit and 32K level 1 on-chip data and instruction caches
- 50-MHz system bus

- **Memory**

- 64MB of RAM; supports up to 768MB via 12 DIMM slots
- 4MB of ROM
- 64-bit memory bus

- **Storage**

- Internal 1.4MB Apple SuperDrive floppy disk drive
- Internal 4GB Fast SCSI hard disk drive
- Internal 24x-speed (maximum) CD-ROM drive
- Internal Iomega Zip drive for fast, easy storage or backup
- Expansion bays for additional storage devices—four 5.25-inch bays for removable media, three internal bays (open bays vary with configuration)

- **Display support (configured through accelerated graphics card)**

- 8MB of VRAM (IMS Twin Turbo)

- Support for up to thousands of colors at up to 1,600- by 1,200-pixel resolution; 24-bit color at up to 1,152- by 870-pixel resolution

- Refresh rate of up to 75 Hz

- **Communications and connectivity**

- Six PCI expansion slots (12-in.) compatible with PCI 2.1-compliant cards
- Two high-speed DMA serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables
- Built-in 10BASE-T and AAUI-15 Ethernet connector
- Internal Fast SCSI bus (up to 10 MBps); external SCSI bus (up to 5 MBps)
- ADB port
- Mini-jacks for 16-bit stereo audio input and output
- DB-15 connector for monitor

- **Media support**

- Audio input/output capabilities

- **Size and weight**

- 17.3 by 9.7 by 17.3 inches (44.0 by 24.6 by 44.0 cm)
- 35.0 lb. (15.9 kg)—will vary based on internal devices installed

Other Power Macintosh models to consider

For the very latest in processor technology and system design, consider the Power Macintosh G3, which features the innovative PowerPC G3 processor for affordable high-performance computing.

The Twentieth Anniversary Macintosh



A unique celebration of Apple's 20th birthday

Commemorating 20 years of engineering excellence, this special, limited-edition computer offers a glimpse of the future, while paying tribute to the past. It also features custom service and support offerings.

Key features

Innovative industrial design

- Features a unique, futuristic all-in-one design
- Incorporates a custom keyboard with an adjustable trackpad and Italian leather palm rests

Outstanding multimedia support

- Comes with a custom Acoustimass sound system by Bose
- Includes integrated stereo speakers and a floor-standing bass unit
- Offers an integrated Apple TV/FM Radio System—so you can watch anything from Fox's *Married with Children* to Bergman's *Scenes from a Marriage* (as long as it's being televised), and listen to everything from rock to Rachmaninoff
- Provides built-in S-video input, as well as an adapter cable for composite video

Custom service and support

- Includes on-site setup
- Comes with three years of hardware repair coverage (parts and labor; eligibility as specified under standard one-year limited warranty)
- Entitles you to free telephone support on an as-needed basis*

* Availability may vary by location; check with your authorized Apple reseller.

Specifications

- **Processor**

- 250-MHz PowerPC 603e with integrated math coprocessor and 32K on-chip data and instruction caches
- 256K level 2 cache

- **Memory**

- 32MB of EDO RAM; supports up to 128MB via 2 DIMM slots
- 4MB of ROM
- 64-bit memory bus

- **Storage**

- Internal 1.4MB Apple SuperDrive floppy disk drive
- Internal 2GB hard disk drive
- Custom vertical-mount CD-ROM drive

- **Display**

- 12.1-inch (diagonal) color active-matrix flat-panel display with backlighting
- 2MB of SGRAM video memory
- Support for thousands of colors (16-bit color) at 800- by 600-pixel resolution

- **Communications and connectivity**

- One PCI expansion slot
- PCI-based communications slot for Ethernet card or fax/modem card
- 33.6-Kbps GeoPort modem and Apple Internet Connection Kit (Internet access requires an Internet service account)

- **Media support**

- Custom Acoustimass sound system by Bose with integrated stereo speakers and floor-standing bass unit
- Integrated Apple TV/FM Radio System
- Built-in S-video input (and adapter cable for composite video)

- **Size and weight**

- 17.3 by 16.5 by 10.0 inches (43.8 by 41.9 by 25.4 cm) for computer; 10.6 by 8.3 by 11.8 inches (27.0 by 21.1 by 29.8 cm) for bass unit
- 14.9 lb. (6.8 kg) for computer; 10.5 lb. (4.8 kg) for bass unit

Visit our web site

Getting all the information you need about Apple products has never been easier. Visit us at www.apple.com to download and print any of Apple's product data sheets.

Desktop System Accessories

30



Power Macintosh 233-MHz Processor Upgrade Kit

An easy, economical way to give existing systems a new lease on life, the Power Macintosh 233-MHz Processor Upgrade Kit is the ideal solution for anyone who currently owns any of a number of older-model Power Macintosh computers—or either of two earlier Workgroup Server systems—and wants the advanced capabilities of more powerful models. It includes a card that contains a 233-megahertz PowerPC 604e processor, a 256K level 2 cache module specifically designed to work effectively with this processor, and an auxiliary fan and grounding clip (not required for most installations). Includes everything you need to upgrade any of the supported systems—and to experience dramatic increases in power and speed. This kit supports the following systems: Power Macintosh 7300, 7500, 7600, 8500, 8600, 9500, or 9600 desktop computers, and the Workgroup Server 7350 or 8550. (Because this installation can be technically challenging, Apple recommends that it be performed by an authorized Apple reseller or service provider. In particular, only a qualified technician or Apple authorized service provider should perform the upgrade on any of the Power Macintosh 8500 models.)

Avid Cinema

Avid Cinema is a complete hardware and software solution that lets you create professional-looking movies right on your Macintosh computer—easily and inexpensively. Designed for novices, it steps you through the process of storyboarding, filming, and editing, as well as recording the finished movie to videotape or storing it as a QuickTime movie for use in multimedia presentations or on a

World Wide Web site. Avid Cinema works with PowerPC processor-based Macintosh Performa or Power Macintosh computers that are equipped with a PCI slot and either built-in composite or S-video input or the Apple Video System. It consists of the following components:

- Avid Cinema card
- Avid Cinema software
- Two triple-head composite video cables
- One S-video cable
- Y-adapter cable for providing two-channel audio from your computer to a VCR

Apple MPEG Media System

The Apple MPEG Media System lets you watch full-screen, full-motion, high-resolution, VHS-quality video on your Macintosh. It lets you resize the video window up to the full size of your screen, and place it anywhere on the screen. And it gives you comprehensive control over your viewing of multimedia CDs, letting you play, pause, step forward, or reverse. (The MPEG standard, set by the Motion Picture Experts Group [MPEG], ensures that various hardware and software systems all use the same rules of compression and decompression, producing consistently high-quality video display.) The Apple MPEG Media System works with Macintosh and Power Macintosh computers that are equipped with an LC processor-direct slot, a video slot, a CD-ROM drive, and the Apple Video System or Apple TV/Video System.

The Apple MPEG Media System consists of the following components:

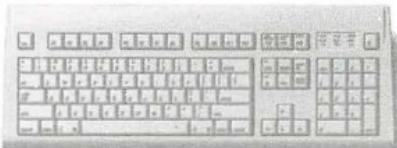
- Apple MPEG Card
- Apple Video Player software
- A selection of CD-ROMs, including games and interactive education titles
- Internal connector cable

Apple Keyboards and Mouse

32

AppleDesign Keyboard

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



Apple Extended Keyboard II

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

Apple Desktop Bus Mouse II

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



Portable Computers

33

Macintosh PowerBook 1400 Series



Affordable performance in a stylish package

34

The Macintosh PowerBook 1400 series systems—the 1400cs/133, 1400cs/166, and 1400c/166—combine Apple's traditional strengths in design and ease of use to create computers that are both fun to own and fun to use. They sport a sleek contoured design that not only makes them easy to service, but also allows for personal customization through colorful interchangeable panels.

(Note: Configurations and availability may vary worldwide.)

Key features

Powerful technology

- Uses the PowerPC 603e processor

Innovative design

- Lets you flip the keyboard forward for easy access to the system's interior
- Features a sleek, contoured shape
- Comes with a variety of BookCover inserts that let you personalize its appearance

Expandability and flexibility

- Offers a memory expansion slot that allows "piggy-backing" of memory cards to protect your investment
- Provides an internal expansion slot for Ethernet or video-out cards

Bundled software

- Features Apple Location Manager software, which allows you to easily switch system settings that vary by location
- Includes software for remote access and cross-platform compatibility
- Comes with preinstalled productivity software, including ClarisWorks and Claris Organizer

Specifications

- **Processor**

- 133- or 166-MHz PowerPC 603e

- 128K level 2 cache

- **Memory**

- 16MB of RAM; supports up to 64MB

- Memory expansion slot that accommodates up to two memory cards

- **Storage**

- Expansion bay for floppy disk drive, CD-ROM drive, and third-party storage solutions

- Removable 1.4MB Apple SuperDrive floppy disk drive (located in expansion bay)

- Sleep-swappable 8x-speed (maximum) or 12x-speed (maximum) CD-ROM drive (for use in expansion bay)

- Internal 1.3GB or 2GB hard disk drive

- **Display**

- 11.3-in. (diagonal) dual-scan or active-matrix color SVGA display

- Support for thousands of colors at 800- by 600-pixel resolution

- **Communications and connectivity**

- PC Card slots for two Type II PC Cards or one Type III PC Card

- Expansion slot for video-output or Ethernet card

- ADB port

- Serial (RS-422) port
- SCSI port for connecting as many as six external devices
- Infrared technology port
- Power adapter port

- **Media support**

- 16-bit, CD-quality stereo input/output

- Built-in speaker and integrated microphone

- 16-bit audio line-in for recording

- **Battery**

- 30-watt-hour high-capacity nickel-metal-hydride (NiMH)

- Average life: 2 to 4 hours, depending on environmental usage pattern and configuration

- **Size and weight**

- 2.0 by 11.5 by 9.0 inches (5.2 by 29.2 by 22.5 cm)

- 6.7 lb. (3.0 kg) with floppy disk drive installed, or 7.0 lb. (3.15 kg) with CD-ROM module installed (PowerBook 1400cs); 6.6 lb. (3.0 kg) with floppy disk drive installed, or 6.9 lb. (3.1 kg) with CD-ROM module installed (PowerBook 1400c)

Other Macintosh PowerBook models to consider

If you want significantly more power in an ultralight system, take a look at the Macintosh PowerBook 2400 series, which features a 180- or 240-MHz processor, yet weighs only 4.4 pounds. You might also consider the full-featured PowerBook 3400 series systems, as well as Apple's current top-of-the-line portable: the Macintosh PowerBook G3.

Macintosh PowerBook 2400 Series



36

Heavy-duty performance in an ultralight system

The Macintosh PowerBook 2400 series packs a lot of power into an extremely compact package that weighs only 4.4 pounds. It's a great choice for people on the go—who want the highest possible performance at the lowest possible weight.

(Note: Configurations and availability may vary worldwide.)

Key features

Powerful technology

- Uses the PowerPC 603e processor

Lightweight design

- Packs desktop-level performance into an ultralight system

Expandability and flexibility

- Offers one RAM expansion slot for memory enhancement up to 80MB
- Features PC Card expansion slots for additional communications, storage, and other options

Bundled software

- Comes with productivity software, including ClarisWorks
- Includes Apple Internet Assistant software with Mac OS 8, for easy Internet access (requires Internet service account)

Specifications

- **Processor**

- 180- or 240-MHz PowerPC 603e with integrated math coprocessor
- 256K level 2 cache
- PCI-based architecture, with 33-MHz I/O bus and 40-MHz system bus

- **Memory**

- 16MB of RAM; supports up to 80MB
- Memory expansion slot

- **Storage**

- Internal 1.3GB hard disk drive
- Optional external 1.4MB Apple SuperDrive floppy disk drive

- **Display**

- 10.4-in. (diagonal) active-matrix color SVGA display
- Support for thousands of colors at 800- by 600-pixel resolution
- 1MB of VRAM for video output

- **Communications and connectivity**

- PC Card slots for two Type II PC Cards or one Type III PC Card
- ADB port
- Serial (RS-422) port
- SCSI port for connecting as many as six external devices
- Infrared technology port
- Power connector port
- Floppy disk drive connector

- **Media support**

- 16-bit, CD-quality stereo input/output
- Integrated microphone
- Hardware acceleration of scrolling and other graphics
- Support for Zoomed Video

- **Battery**

- Lithium ion
- Average life: 2 to 4 hours, depending on environmental usage pattern

- **Size and weight**

- 1.9 by 10.5 by 8.4 inches (4.7 by 26.7 by 21.3 cm)
- 4.4 lb. (2.0 kg)

Other Macintosh PowerBook models to consider

If you need advanced multimedia capabilities, you should consider the Macintosh PowerBook 3400 series, which features a larger display and outstanding sound, or the powerful new Macintosh PowerBook G3, which offers the highest performance ever available in a notebook system.

Macintosh PowerBook 3400 Series



Advanced multimedia goes mobile

38 The Macintosh PowerBook 3400 series brings the persuasive power of multimedia to the portable realm. These high-performance systems provide an ideal environment for creating and presenting even complex multimedia content, in the office or on the road.

(Note: Configurations and availability may vary worldwide.)

Key features

Powerful technology

- Uses the PowerPC 603e processor
- Features the industry-standard PCI architecture

Advanced multimedia

- Comes with 1MB of VRAM for viewing thousands of colors on external displays
- Includes a dedicated video controller for accelerated graphics
- Complements its video capabilities with an advanced four-speaker sound system

Integrated communications

- Comes with built-in 10BASE-T Ethernet networking and a 33.6-Kbps modem (most configurations)
- Makes Internet access simple and convenient, with top-of-the-line tools (requires Internet service account)
- Includes software for remote access, cross-platform compatibility, and file synchronization
- Offers infrared technology for easy, wireless networking and file sharing with similarly equipped systems

Bundled software

- Features Apple Location Manager software, which makes it easy to switch system settings that vary by location

Specifications

- **Processor**

- 180-, 200-, or 240-MHz PowerPC 603e
- 256K level 2 cache
- 40-MHz system bus

- **Memory**

- 16MB of RAM; supports up to 144MB

- Memory expansion slot

- **Storage**

- Expansion bay for floppy disk drive, CD-ROM drive, or third-party storage solutions
- Removable 1.4MB Apple SuperDrive floppy disk drive (located in expansion bay)
- 6x-speed (minimum) sleep-swappable CD-ROM drive (for use in expansion bay)
- Internal 1.3GB, 2GB, or 3GB hard disk drive

- **Display**

- 12.1-in. (diagonal) active-matrix color SVGA display
- Support for thousands of colors at 800- by 600-pixel resolution
- 1MB of VRAM supports 8-bit color video output to 21-inch monitor; supports thousands of colors on smaller monitors in SVGA mode

- **Communications and connectivity**

- PC Card slots for two Type II PC Cards or one Type III PC Card

- ADB port

- Serial (RS-422) port

- 10BASE-T Ethernet port and 33.6-Kbps modem (most configurations)
- 16-bit video-output port (VGA-style connector)

- SCSI port for connecting as many as six external devices

- Infrared technology port

- Power adapter port

- **Media support**

- 16-bit, CD-quality stereo input/output

- Four built-in speakers with active crossover for rich sound quality

- Hardware acceleration of scrolling and other graphics

- Support for Zoomed Video

- **Battery**

- 32-watt-hour lithium ion

- Average life: 2 to 4 hours, depending on environmental usage pattern and configuration

- Also supports nickel-metal-hydride (NiMH) battery technology (compatible with the batteries used in the PowerBook 190 and 5300 series)

- **Size and weight**

- 2.4 by 11.5 by 9.5 inches (6.1 by 29.2 by 24.1 cm)

- 7.2 lb. (3.2 kg) with floppy disk drive installed; 7.4 lb. (3.3 kg) with CD-ROM module installed; 6.9 lb (3.1 kg) with PC Card carrying case installed

Other Macintosh PowerBook models to consider

If you're looking for the highest possible performance from a portable system, look to the new Macintosh PowerBook G3, which features the PowerPC G3 processor and a host of other advanced features.

Macintosh PowerBook G3



The world's fastest notebook for creative professionals

40

The Macintosh PowerBook G3 couples breakthroughs in processor technology with Apple's latest system software, advanced multimedia features, and integrated communications. The result is a system that takes portable computing to new heights.

(Note: Configurations and availability may vary worldwide.)

Key features

Breakthrough performance

- Uses the 250-MHz PowerPC G3 processor and 512K backside level 2 cache to take mobile computing to a new level
- Introduces the first processor designed specifically to optimize the Mac OS

Advanced multimedia

- Comes with 2MB of VRAM for viewing millions of colors on external displays
- Includes a dedicated video controller for accelerated graphics
- Features Zoomed Video for outstanding video playback
- Complements its video capabilities with an advanced four-speaker sound system

Integrated communications

- Comes with built-in 10BASE-T Ethernet networking, a 33.6-Kbps modem, and infrared technology
- Makes Internet access simple and convenient, with top-of-the-line tools (requires Internet service account)

Bundled software

- Comes with Now Contact and Now Up-to-Date software
- Features Apple Location Manager software, which allows you to easily switch system settings that vary by location

Specifications

• Processor

- 250-MHz PowerPC G3
- 512K backside level 2 cache accessible at 100 MHz
- PCI-based architecture, with 33-MHz I/O bus and 50-MHz system bus

• Memory

- 32MB of DRAM, supports up to 160MB

• Storage

- Expansion bay for floppy disk drive, CD-ROM drive, and third-party storage solutions (supports devices used in the PowerBook 190, 3400, and 5300 series)
- Removable 1.4MB Apple SuperDrive floppy disk drive (located in expansion bay)
- Hot-swappable 20x-speed (maximum) CD-ROM drive (for use in expansion bay)
- Internal 5GB ATA IDE hard disk drive

• Display

- 12.1-in. (diagonal) active-matrix color SVGA display; 800- by 600-pixel resolution
- 2MB of VRAM supports up to 24-bit color (16 million colors) on external monitors and 18-bit color (256,000 colors) on TFT displays

• Communications and connectivity

- PC Card slots for two Type II PC Cards or one Type III PC Card

- ADB port
- Serial (RS-422) port
- 10BASE-T Ethernet and 33.6-Kbps modem
- 24-bit video-output (VGA-style connector)
- SCSI port for connecting as many as six external devices
- Infrared technology
- Power adapter port

• Media support

- 16-bit, CD-quality stereo input/output
- Four built-in speakers with active crossover for rich sound quality
- Chips and Technology 65554 PCI video controller supports hardware acceleration of scrolling and other graphics
- Zoomed Video support through PC Card slot for video input

• Battery

- 47-watt-hour lithium ion
- Average life: 2 to 4 hours, depending on usage pattern
- Also supports nickel-metal-hydride (NiMH) battery technology (compatible with the batteries used in the PowerBook 190 and 5300 series)

• Size and weight

- 2.4 by 11.5 by 9.5 inches (6.1 by 29.2 by 24.1 cm)
- 7.5 lb. (3.4 kg) with floppy disk drive installed; 7.7 lb. (3.5 kg) with CD-ROM module installed; 7.1 lb (3.2 kg) with PC Card carrying case installed

Visit our web site

Getting all the information you need about Apple products has never been easier. Visit us at www.apple.com to download and print any of Apple's product data sheets.

Portable Computer Accessories

42

Macintosh PowerBook Computers

- Macintosh PowerBook Power Adapter for Macintosh PowerBook G3, 3400 series, and 1400 series
- Macintosh PowerBook Lithium-Ion Rechargeable Battery for Macintosh PowerBook G3
- Macintosh PowerBook 16MB Memory Expansion Card for Macintosh PowerBook G3 and 3400 series
- Apple HDI-30 SCSI Disk Adapter for SCSI disk mode
- Apple SCSI Peripheral Interface Cable for SCSI to SCSI connection
- Apple HDI-30 SCSI System Cable for PowerBook to SCSI connection
- Macintosh PowerBook 45-watt AC Adapter
- Macintosh PowerBook 36-watt AC Adapter
- Macintosh PowerBook 2400c External Floppy Disk Drive
- Macintosh PowerBook 8-bit Color Video-Output Card
- Macintosh PowerBook 8MB RAM Expansion Card

GSM Connection Kit for PowerBook

(Currently available in Germany, the United Kingdom, Sweden, Denmark, Norway, and Finland; subsequent adaptations for other markets in both European and non-European countries will depend on the availability and range of GSM data services.)

This kit lets you connect your notebook computer to the GSM and DCS 1800 networks via the Nokia 2110 and 2140 handsets and the Nokia Cellular Data Card. It also provides access to a full range of mobile communications services, including fax capabilities and connection to online services, as well as wireless connection to office networks via Apple Remote Access and gateways to networks such as ISDN and VideoText.

Servers

Workgroup Server 7350/180



An affordable and versatile midrange server

The Workgroup Server 7350/180 delivers the file and print, database, Internet, and applications server capabilities that meet the needs of medium-size workgroups in education, business, and publishing—especially those that wish to set up an exceptionally easy-to-use intranet.

44

(Note: Configurations and availability may vary worldwide.)

Key features

Expansion and storage

- Three PCI slots for expansion cards
- Internal 4GB hard disk drive
- One open expansion bay
- Internal 12x-speed (maximum) CD-ROM drive
- Two SCSI channels: one internal Fast SCSI-2 (10 MBps); one external SCSI-1

Networking

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

Processor and memory

- 180-MHz PowerPC 604e RISC processor with floating-point processor and 64K on-chip cache
- 256K level 2 cache
- 48MB of RAM; supports up to 512MB

Fast, easy setup

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

Specifications

- **Processor**

- 180-MHz PowerPC 604e with integrated floating-point unit and 64K on-chip cache
- 256K level 2 cache

- **Memory**

- 48MB of RAM; supports up to 512MB

- **Storage**

- Internal 1.4MB Apple SuperDrive floppy disk drive
- Internal 4GB hard disk drive (5,400 rpm)
- Internal 12x-speed (maximum) CD-ROM drive
- Expansion bay for additional storage devices

- **Display support**

- 2MB of VRAM; supports up to 4MB
- Support for most third-party displays as well as VGA and SVGA monitors

- **Communications and connectivity**

- Three PCI expansion slots
- Two DMA serial (RS-232/RS-422) ports compatible with LocalTalk
- Built-in 10BASE-T and AUI-15 Ethernet
- Support of TCP/IP networking software with Apple Open Transport
- Two SCSI channels: one internal Fast SCSI-2 (10 MBps); one external SCSI-1
- ADB port
- 16-bit stereo sound input and output ports
- DB-15 graphics port for display support

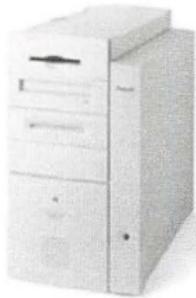
- **Size and weight**

- 6.5 by 14.37 by 16.93 inches (15.6 by 36.5 by 43.0 cm)
- 22.0 lb. (9.97 kg)—will vary based on internal devices installed

Visit our web site

Getting all the information you need about Apple products has never been easier. Visit us at www.apple.com to download and print any of Apple's product data sheets.

Workgroup Server 9650/350



Apple's top-of-the-line server

The Workgroup Server 9650/350 delivers the extensive file and print, database, Internet, and applications server capabilities needed by even highly demanding workgroups. It features an extremely powerful processor, a 24x-speed (maximum) CD-ROM drive, and an additional Ethernet networking option.

46

(Note: Configurations and availability may vary worldwide.)

Key features

Expansion and storage

- Six PCI slots for expansion cards
- Dual internal 4GB Ultra/Wide hard disk drives
- Internal 24x-speed (maximum) CD-ROM drive
- Three SCSI channels: one internal Ultra/Wide SCSI-3 (40 MBps); one internal Fast SCSI-2 (10 MBps); one external SCSI-1 (5 MBps)

Networking

- 10/100MBps Ethernet card
- Built-in Ethernet and LocalTalk capabilities
- Support for AppleTalk and TCP/IP networking protocols
- Support for other networking topologies such as Fast Ethernet and ATM (with PCI card)

Processor and memory

- 350-MHz PowerPC 604e RISC processor with floating-point processor and 64K on-chip cache
- 1MB Apple Inline Cache (level 2)
- 64MB of RAM; supports up to 768MB

Fast, easy setup

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

Specifications

- **Processor**

- 350-MHz PowerPC 604e with integrated floating-point unit and 64K on-chip cache
- 1MB Apple Inline Cache (level 2)

- **Memory**

- 64MB of RAM; supports up to 768MB

- **Storage**

- Internal 1.4MB Apple SuperDrive floppy disk drive
- Dual internal 4GB (7,200 rpm) Ultra/Wide hard disk drives
- Internal 24x-speed (maximum) CD-ROM drive

- **Display support**

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

- **Communications and connectivity**

- Six PCI expansion slots (three used by Ultra/Wide SCSI card, video card, and Fast Ethernet card)
- Two DMA serial (RS-232/RS-422) ports compatible with LocalTalk
- Built-in 10/100Mbps Ethernet with 10BASE-T and AUI using RJ-45 connector

- On-board 10Mbps Ethernet using either AUI or RJ-45
- Support of TCP/IP networking software with Apple Open Transport
- Three SCSI channels: one internal Ultra/Wide SCSI-3 (40 MBps) on PCI card; one internal Fast SCSI-2 (10 MBps); one external standard SCSI-1 (5 MBps)
- ADB port
- 16-bit stereo sound input and output ports
- DB-15 graphics port for display support on PCI card
- **Size and weight**
- 17.3 by 9.7 by 17.3 inches (43.9 by 24.6 by 44.0 cm)
- Weight: 35.0 lb. (15.9 kg)—will vary based on internal devices installed

Visit our web site

Getting all the information you need about Apple products has never been easier. Visit us at www.apple.com to download and print any of Apple's product data sheets.

Server Software Bundles



Workgroup Server Solutions

Workgroup Servers are available as part of a solutions bundle that provides thousands of dollars' worth of software, carefully selected to maximize productivity in your workgroup environment. With all of the Workgroup Servers, you get a solution that allows you to put your new server to work immediately. Following are three of the Workgroup Server solutions bundles.

48

AppleShare IP 5.0.2

The latest version of Apple's well-known AppleShare file, print, and applications sharing software, AppleShare IP 5.0.2 couples low cost of ownership and ease of use with support for the TCP/IP protocol central to Internet technology. It expands on the capabilities provided by previous versions by offering web, mail, and FTP services. Designed for small-business users or department- or workgroup-level enterprise customers, AppleShare IP 5.0.2 supports not only both TCP/IP and AppleTalk, but also Mac OS 8 and WebSTAR APIs, as well as bundling Maxum's NetCloak software.

The Apple Internet Server Solution for the World Wide Web

The Apple Internet Server Solution is an easy and affordable way to make your information available on the World Wide Web. It consists of a Workgroup Server and a CD-ROM that contains all of the software required to get started publishing on the Internet. It's the perfect solution for organizations in business, education, or publishing that want to make their information widely accessible on the Internet.

With the Apple Internet Server Solution, you get the following tools:

- WebSTAR/SSL from StarNine
- MacDNS from Apple
- NetCloak and Rumpus from Maxum Development
- FireSite Speed Booster and Virtual Domain Manager from ClearWay
- LogDoor from Open Door
- MacTCP Watcher from Stairways
- PageSentry from Maxum
- Adobe Acrobat Reader
- Netscape Navigator
- Butler SQL Server and Tango Enterprise from EveryWare
- BBEdit from Bare Bones Software
- Claris Home Page
- GoLive CyberStudio

49

Applications Server Solution

The Applications Server Solution includes the following software for reliability, productivity, and performance:

- Adobe Acrobat Reader
- Soft RAID
- Virex from Datawatch
- AppleShare Client for Windows
- 4-Sight FAX from 4-Sight
- Now Up-to-Date & Contact from Now Software
- Viper Instant-Access from IT Design
- Skyline/Satellite from AG Group

Visit our web site

Getting all the information you need about Apple products has never been easier. Visit us at www.apple.com to download and print any of Apple's product data sheets.

Displays and Printer Products

Apple Multiple Scan 15AV Display



A high-quality, affordable half-page display

This is a high-quality, yet affordable, half-page color display that provides a larger viewing area than many other 15-inch monitors, with a high-quality screen and front-facing CD-quality speakers. It features a sleek design and offers a host of advanced features to complement the capabilities of your Power Macintosh or Macintosh PowerBook system.

Key features

Outstanding image quality

- Features a high-quality flat, square shadow mask screen for clear, sharp pictures with true colors and a larger viewing area than many 15-inch displays (13.75-inch diagonal viewable image size)
- Provides excellent brightness, contrast, convergence, focus, and white uniformity
- Decreases reflections and distortion through its antistatic, antiglare coating
- Includes front-panel digital controls and knobs that let you precisely adjust screen size, position, brightness, contrast, and speaker volume

52

Multimedia integration

- Includes front-facing, CD-quality stereo speakers
- Comes with a front-panel headphone jack
- Supports the advanced multimedia features of Power Macintosh computers

Advanced functionality

- Uses multiple-scan electronics that enable a high level of user flexibility
- Offers a range of resolution modes for Macintosh and IBM PC-compatible systems: 640 by 480 pixels to 1,024 by 768 pixels*
- Comes with mode-switching software for Macintosh to allow resolution changes without restarting

Specifications

- **Screen size**
 - 15 inches (diagonal)
- **Viewable image size**
 - 13.75 inches (diagonal)
- **Picture tube**
 - Flat, square shadow mask
- **Screen treatment**
 - Antistatic, antiglare coating
- **Dot pitch**
 - 0.28-mm dot pitch
- **Resolutions and screen refresh rates***
 - 640 by 480 pixels at up to 67 Hz
 - 800 by 600 pixels at up to 72 Hz
 - 832 by 624 pixels at 75 Hz
 - 1,024 by 768 pixels at up to 75 Hz
- **Scanning rates**
 - 30 to 56.5 kHz (horizontal)
 - 56 to 75 Hz (vertical)
- **User controls (hardware and software)**
 - Power on/off, brightness, contrast, horizontal size and centering, vertical size and centering, speaker volume
- **Degauss circuitry**
 - Automatic at power up

- **Connectors**

- Standard Apple DB-15 connector for Mac OS-based systems (adapter required for VGA connection to PCs)

- **Electrical requirements**

- Line voltage: 90 to 265 V AC
- Frequency: 43 to 63 Hz, single phase
- Power: 75 W (maximum) when operating; less than 8 W in energy-saver mode

- **Agency approvals**

- EPA Energy Star (U.S.A.) energy conservation; fully compliant with MPR II electrical and magnetic emissions standards

- **Size and weight**

- 15.3 by 14.8 by 15.8 inches (38.3 by 37.0 by 39.5 cm)
- 30.0 lb. (13.5 kg)

* Not all computer models and configurations are capable of driving this monitor to the highest display format it supports.

Apple Multiple Scan 720 Display



A high-quality, affordable full-page display

The Apple Multiple Scan 720 Display provides excellent large-screen performance at a competitive price. It features a flat, square shadow-mask picture tube that makes it a highly appropriate choice for tasks such as word processing, spreadsheets, and Internet browsing.

Key features

Outstanding image quality

- Features a flat, square shadow mask screen for sharp images
- Offers precise adjustment of screen parameters through an on-screen display manager
- Integrates Apple's ColorSync 2.0 profile maker for unparalleled consistency in color matching

54

Advanced technologies

- Uses multiple-scan electronics that enable a high level of user flexibility
- Comes with mode-switching software to allow resolution changes without restarting

Ergonomic design

- Includes antiglare, antireflective screen coating to minimize eyestrain
- Features a tilt-and-swivel base that adjusts easily for optimal viewing comfort

Compatibility

- Works with Mac OS-based computers with 68040 or later processors running Mac OS 7.1 or later
- Works with PCs running DOS or Windows using VGA (adapter required)

Specifications

- **Screen size**
 - 17 inches (diagonal)
- **Viewable image size**
 - 16 inches (diagonal)
- **Picture tube**
 - Flat, square shadow mask
- **Screen treatment**
 - Antistatic, antiglare coating
- **Dot/grille pitch**
 - 0.28-mm dot pitch
- **Resolutions and screen refresh rates***
 - 640 by 480 pixels at up to 85 Hz
 - 800 by 600 pixels at up to 85 Hz
 - 832 by 624 pixels at 75 Hz
 - 1,024 by 768 pixels at up to 85 Hz
 - 1,152 by 870 pixels at 75 Hz
 - 1,280 by 1,024 pixels at 60 Hz
- **Scanning rates**
 - 30 to 69 kHz (horizontal)
 - 48 to 160 Hz (vertical)
- **User controls (hardware and software)**
 - Power on/off, manual degauss using the on-screen display, on-screen display manager enter and select/adjust, brightness, and contrast (additional picture controls available via on-screen display)
- **Degauss circuitry**
 - Automatic at power up

- **Connectors**

- Standard Apple DB-15 connector (adapter required for VGA connection to PCs)

- **Electrical requirements**

- Line voltage: 90 to 134 V rms
- Frequency: 47 to 63 Hz, single phase
- Power: 120 W (maximum) when operating; less than 5 W during system sleep

- **Agency approvals**

- TCO 95 (worldwide) environmental certification; EPA Energy Star (U.S.A.) energy conservation; fully compliant with MPR II electrical and magnetic emissions standards

- **Size and weight**

- 17.0 by 16.2 by 16.9 inches (43.1 by 41.2 by 42.8 cm)
- 37.5 lb. (17.0 kg)

* Not all computer models and configurations are capable of driving this monitor to the highest display format it supports.

Apple ColorSync Display (17-inch Color Display)



A superior-quality large-screen display

The Apple ColorSync Display provides an outstanding 17-inch color display (16.1-inch diagonal viewable image size) that makes it an ideal fit for mainstream professional computer users. Its Sony Trinitron picture tube provides crisp, sharp images that are perfect for everything from desktop publishing to presentations.

Key features

Superior image quality

- Features Sony Trinitron technology for clear, sharp text and images and vivid color
- Takes advantage of Apple DigitalColor technology for unprecedented color stability and accuracy
- Integrates Apple's ColorSync 2.0 profile maker for unparalleled consistency in color matching

56

Advanced technologies

- Uses multiple-scan electronics that enable a high level of user flexibility
- Comes with mode-switching software to allow resolution changes without restarting
- Provides intuitive software control over all screen functions through superior software integration

Ergonomic design

- Includes antiglare, antireflective screen coating to minimize eyestrain
- Features a tilt-and-swivel base that adjusts easily for optimal viewing comfort
- Connects keyboard and mouse easily via ADB connectors integrated directly into its base

Compatibility

- Works with Mac OS-based computers with 68040 or later processors running Mac OS 7.1 or later
- Works with PCs running DOS or Windows using VGA (adapter included)

Specifications

- **Screen size**
 - 17 inches (diagonal)
- **Viewable image size**
 - 16.1 inches (diagonal)
- **Picture tube**
 - Sony Trinitron
- **Screen treatment**
 - Antistatic, antiglare coating
- **Dot/grille pitch**
 - 0.25-mm aperture grille pitch
- **Resolutions and screen refresh rates***
 - 640 by 480 pixels at up to 75 Hz
 - 800 by 600 pixels at up to 75 Hz
 - 832 by 624 pixels at 75 Hz
 - 1,024 by 768 pixels at up to 75 Hz
 - 1,152 by 870 pixels at 75 Hz
 - 1,280 by 1,024 pixels at 75 Hz
- **Scanning rates**
 - 30 to 82 kHz (horizontal)
 - 40 to 120 Hz (vertical)
- **Apple DigitalColor technology**
 - Internal calibration to original factory measurements
 - Adjustment for ambient lighting
 - Adjustment for CRT phosphor aging

- **User controls (hardware and software)**
 - Power on/off, brightness, contrast, horizontal size and centering, vertical size and centering, convergence, rotation, pincushion, keystone, parallelogram, Gamma curve, variable white-point selection
- **Degauss circuitry**
 - Automatic at power up
- **Connectors**
 - Standard Apple DB-15 connector for Mac OS-based systems
 - DB-15 VGA mini-adapter for PCs
- **Electrical requirements**
 - Line voltage: 90 to 264 V AC
 - Frequency: 47 to 63 Hz, single phase
 - Power: 125 W (maximum) when operating; less than 60 W in standby mode; 0 W in energy-saver mode
- **Agency approvals**
 - TCO 95 (worldwide) environmental certification; EPA Energy Star (U.S.A.) energy conservation; fully compliant with MPR II electrical and magnetic emissions standards
- **Size and weight**
 - 16.8 by 16.2 by 17.6 inches (42.7 by 41.1 by 44.7 cm)
 - 49.0 lb. (23.0 kg)

* Not all computer models and configurations are capable of driving this monitor to the highest display format it supports.

Apple ColorSync Display (20-inch Color Display)



Apple's top-of-the-line two-page display

The Apple ColorSync Display was designed to meet the needs of even the most demanding users—including professional desktop publishers. Its 20-inch color screen (19-inch diagonal viewable image size), superior image quality, and outstanding color accuracy make this display highly appealing to anyone who values excellence in on-screen representation.

Key features

Superior image quality

- Features Sony Trinitron technology for clear, sharp text and images and vivid color
- Takes advantage of Apple DigitalColor technology for unprecedented color stability and accuracy
- Integrates Apple's ColorSync 2.0 profile maker for unparalleled consistency in color matching

58

Advanced technologies

- Uses multiple-scan electronics that enable a high level of user flexibility
- Comes with mode-switching software to allow resolution changes without restarting
- Provides intuitive software control over all screen functions through superior software integration

Ergonomic design

- Includes antiglare, antireflective screen coating to minimize eyestrain
- Features a tilt-and-swivel base that adjusts easily for optimal viewing comfort
- Connects keyboard and mouse easily via ADB connectors integrated directly into its base

Compatibility

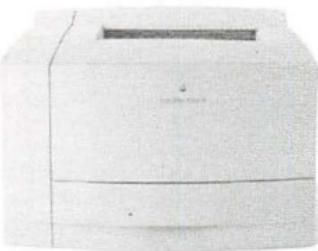
- Works with Mac OS-based computers with 68040 or later processors running Mac OS 7.1 or later
- Is Windows 95 Plug and Play certified (adapter included)

Specifications

- **Screen size**
 - 20 inches (diagonal)
- **Viewable image size**
 - 19 inches (diagonal)
- **Picture tube**
 - Sony Trinitron
- **Screen treatment**
 - Antistatic, antiglare coating
- **Dot/grille pitch**
 - 0.25-mm aperture grille pitch
- **Resolutions and screen refresh rates***
 - 640 by 480 pixels at up to 55 Hz
 - 800 by 600 pixels at up to 55 Hz
 - 832 by 624 pixels at 75 Hz
 - 1,024 by 768 pixels at up to 85 Hz
 - 1,152 by 870 pixels at 75 Hz
 - 1,280 by 1,024 pixels at up to 85 Hz
 - 1,600 by 1,200 pixels at 75 Hz
- **Scanning rates**
 - 30 to 94 kHz (horizontal)
 - 48 to 120 Hz (vertical)
- **Apple DigitalColor technology**
 - Internal calibration to original factory measurements
 - Adjustment for ambient lighting
 - Adjustment for CRT phosphor aging
- **User controls**
(hardware and software)
 - Power on/off, brightness, contrast, horizontal size and centering, vertical size and centering, convergence, rotation, pincushion, keystone, parallelogram, Gamma curve, variable white-point selection
- **Degauss circuitry**
 - Automatic at power up
- **Connectors**
 - Standard Apple DB-15 connector for Mac OS-based systems
 - DB-15 VGA mini-adapter for PCs
- **Electrical requirements**
 - Line voltage: 90 to 264 V AC
 - Frequency: 47 to 63 Hz, single phase
 - Power: 150 W (maximum) when operating; less than 30 W in standby mode; less than 5 W in energy-saver mode
- **Agency approvals**
 - TCO 95 (worldwide) environmental certification; EPA Energy Star (U.S.A.) energy conservation; fully compliant with MPR II electrical and magnetic emissions standards
- **Size and weight**
 - 18.7 by 19.1 by 20.2 inches (47.5 by 48.5 by 51.3 cm)
 - 67.4 lb. (30.6 kg)

* Not all computer models and configurations are capable of driving this monitor to the highest display format it supports.

Apple LaserWriter 12/640 PS



A high-quality, fast, and flexible laser printer for workgroups

The Apple LaserWriter 12/640 PS provides outstanding results and incorporates impressive paper-handling capabilities, as well as offering additional options that include double-sided printing. It's a convenient, cost-effective printing solution for fielding the demands of large workgroups or bulk print jobs.

Key features

High performance and excellent image quality

- Prints at up to a fast 12 pages per minute
- Offers 600- by 600-dpi resolution for sharp, clear printing
- Includes Apple's FinePrint and PhotoGrade technologies for enhanced text and graphics quality*
- Provides a choice of 64 scalable TrueType fonts for printing in any size and in a wide variety of styles

60

Flexible paper-handling options

- Offers an optional duplex printing unit for professional-quality double-sided output
- Can be configured with additional cassettes and feeders to accommodate the needs of larger workgroups or to facilitate the handling of bulk jobs (830-sheet total capacity)

Outstanding compatibility and connectivity

- Works with Mac OS, Windows 3.1, Windows 95, Windows NT, and UNIX software
- Supports AppleTalk, EtherTalk, Novell NetWare, and TCP/IP networking protocols
- Includes the Adobe PostScript Level 2 and PCL 5 page-description languages for compatibility with your applications

* Requires a minimum of 24MB of RAM for simultaneous use of duplex printing and PhotoGrade technology

Specifications

- **Resolution**
— 600 dpi with FinePrint; PhotoGrade
- **Printing speed**
— Up to 12 pages per minute; 8 pages per minute with optional duplex printing
- **Processor**
— 30-megahertz AMD 29040 RISC
- **Memory**
— 12MB; supports up to 48MB
- **Supported languages**
— Adobe PostScript Level 2, PCL 5; autoemulation switching between PostScript and PCL 5
- **Fonts**
— 64 scalable TrueType and 35 PostScript
- **Paper handling**
— 250-sheet universal (letter/A4) cassette and 80-sheet multipurpose tray (can hold envelopes). For available options, see "Accessories and Supplies" in the next column.
- **Connectivity and networking**
— Ethernet port supports EtherTalk, TCP/IP, and Novell NetWare IPX protocols; LocalTalk port supports AppleTalk protocol; bidirectional parallel port
- **Size and weight**
— 9.3 by 15.9 by 16.7 inches (23.5 by 40.5 by 42.3 cm)
— 26.5 lb. (12.0 kg)

Accessories and Supplies

- **LaserWriter 12/640 PS Duplex Printing Unit**
- **LaserWriter 12/640 PS 500-Sheet Cassette and Feeder**
- **LaserWriter 12/640 PS Envelope Cassette**
- **LaserWriter 12/640 PS Face-up Output Tray**
- **LaserWriter 12/640 PS Toner Cartridge**

Apple LaserWriter 8500



A professional-quality printer for print professionals

The LaserWriter 8500 is Apple's premier workgroup printing solution. The fastest LaserWriter ever, it's the ideal choice for anyone who wants to print high volumes or complex documents quickly and with superior quality.

Key features

Groundbreaking new capabilities

- Is one of the first printers based on Adobe PostScript 3
- Offers full-bleed printing on paper sizes up to ledger/A3
- Allows you to easily print to the LaserWriter 8500 from remote locations using the LaserWriter 8.5 IP printing software feature

62

High-speed, high-volume printing

- Prints up to a rapid 20 pages per minute
- Features an optional upgrade kit for the ultimate in high-volume printing convenience
- Handles up to 1,650 sheets (using additional paper feeders)
- Supports an optional Duplex Printing Unit
- Uses a high-capacity, long-life toner cartridge

Outstanding compatibility and connectivity

- Works with Mac OS, Windows 3.1, Windows 95, Windows NT, and UNIX software
- Supports AppleTalk, EtherTalk, Novell NetWare, and TCP/IP networking protocols
- Includes driver software that streamlines both local and remote printing
- Supports Windows Plug and Play for easy PC connection

Specifications

- **Resolution**
 - 600 dpi with enhanced PhotoGrade (up to 150 lines per inch), and FinePrint
- **Printing speed**
 - Up to 20 pages per minute
- **Processor**
 - 60/30-megahertz AMD 29040 RISC
- **Memory**
 - 16MB; supports up to 48MB
- **Supported languages**
 - Adobe PostScript Level 3
- **Fonts**
 - 136 PostScript 3 fonts (TrueType and Type 1)
- **Paper handling**
 - 500-sheet universal (letter/A4) cassette and 150-sheet multipurpose tray (can hold envelopes); duplex printing option allows for double-sided printing; additional paper trays hold up to 1,650 sheets. For available options, see "Accessories and Supplies" in the next column.
- **Connectivity and networking**
 - Ethernet port supports EtherTalk, TCP/IP, and Novell NetWare IPX protocols; LocalTalk port supports AppleTalk protocol; IEEE 1284 bidirectional parallel port; external SCSI port for hard disk storage
- **Size and weight**
 - 16.2 by 23.2 by 17.9 inches (41.2 by 59.0 by 45.5 cm)
 - 70.4 lb. (32.0 kg), including toner cartridge

Accessories and Supplies

- **LaserWriter 8500 Upgrade Kit**
 - Includes 500-sheet Ledger/A3 Cassette and Feeder, Duplex Printing Unit, and an additional 8MB of RAM
- **LaserWriter 8500 Duplex Printing Unit**
- **LaserWriter 8500 500-Sheet Ledger/A3 Cassette and Feeder**
 - (the printer can accommodate up to two of these units)
- **LaserWriter 8500 500-Sheet Ledger/A4 Cassette and Feeder**
- **LaserWriter 8500 Envelope Cassette**
- **High-Capacity Toner Cartridge**

Newton Mobile Products

MessagePad 2100



Big-time power and Internet access in a tiny package

The Apple MessagePad 2100 packs exceptional power and memory into a small, convenient form factor. The result is a readily portable device that lets you store detailed contact information and data and provides new levels of performance—including the ability to multitask.

Key features

Included software

- Includes business software programs: word processor, Internet e-mail client, World Wide Web browser, and spreadsheet
- Allows freeform notes, outlines, lists, and phone logs via digital ink or handwriting recognition
- Helps you plan activities using the calendar, and manage priorities using the To Do List

Built-in communications

66

- Includes Internet and intranet access capabilities via Ethernet, LocalTalk, or modem
- Imports and exports data, installs software, and backs up files with your personal computer using the included Newton Connection Utilities
- Can send and receive faxes and electronic mail using an optional wired or wireless modem
- Prints formatted letters and notes using Apple printers, IrDA printers, and serial printers

Expandable functions

- Contains two slots for PC Card peripherals such as cellular, radio, or landline modems
- Includes a serial port for connecting to personal computers, printers, the Newton Keyboard, or external modems
- Supports a variety of third-party productivity, finance, time and billing, and information management software

Specifications

- **Newton hardware architecture**
 - StrongARM SA-110 RISC processor at 162 MHz
 - 8MB of RAM (4MB of DRAM, 4MB of Flash RAM)
 - 8MB of mask ROM
 - Low-power, transreflective 4.9-in. by 3.3-in. (129.8mm by 83.2mm) liquid crystal display (480 by 320 pixels at 100 dpi, with 16-level gray scale and EL backlight)
 - Two Type II PC Card slots (3 V and 5 V cards)
 - Newton InterConnect external port supporting serial connections or LocalTalk, serial modem interface, power in and out, audio in and out (line level), autodock (requires Newton Serial Adapter)
 - Dual-mode infrared transceiver for wireless data transfer at up to 115 Kbps (IrDA mode) and 38.4 Kbps (ASK mode) within 3.28 ft. (1 m)
 - Built-in speaker and microphone
- **Communications capabilities**
 - Communicates via e-mail or taps into the Internet or an intranet with an optional wired or wireless modem card and included software
 - Faxes using optional fax modem (automatic cover-page generation, post-formatting)
 - Supports serial, IrDA, and network printers
 - Receives and stores wireless messages and pages using optional messaging cards
 - Beams notes, name cards, appointments, and packages using high-speed infrared technology

- Connects to cellular or GSM phones for wireless data and fax communications with optional PC modem card
- **Computer connectivity requirements**
 - Works with PC-compatible computers with 80486 or later processors running Windows 3.1 or later; at least 8MB of RAM
 - Works with Mac OS-based computers with 68030 or later processors and system software version 7.1 or later; at least 8MB of RAM with 4MB available (12MB recommended for a PowerPC processor-based computer); requires Newton Serial Adapter and Newton Serial Cable for Mac OS-based computers
 - Requires CD-ROM drive for accessing electronic documentation and software
- **Printer support**
 - Offers built-in printer support for Apple LaserWriter Plus (and other PostScript-equipped LaserWriter printers), Personal LaserWriter LS, and Personal LaserWriter 300, as well as StyleWriter printers and Hewlett-Packard DeskWriter printers (requires Newton Serial Adapter and Serial Cable)
 - Works with the Hewlett-Packard LaserJet 6MP and DeskJet 340 through IrDA
- **Size and weight**
 - 1.1 by 4.7 by 8.3 inches (27.5 by 118.7 by 210.3 mm)
 - 1.4 lb. (0.64 kg) with alkaline batteries

Apple eMate 300



Affordable, practical—and practically irresistible

The Apple eMate 300 is a small computer that can make a big difference in your family's life. With its uniquely appealing design, versatile capabilities, and flexible connectivity to desktop systems, it's ideal for today's families on the go—and, in particular, for the educational uses that sparked its creation.

Key features

Affordability and durability

- Is far more affordable than a full-featured notebook system
- Features a rugged design that has already stood up to the demanding usage of thousands of students

Mobility

- Supports flexible portability through a unique design that's compact and lightweight as well as visually appealing
- Provides excellent battery life, making even long trips practical
- Complements your busy lifestyle by going where you go

68

Compatibility and connectivity

- Connects easily to your desktop computer (even if it's a PC running Windows)
- Provides dial-up computing capabilities through easy connection to external modems
- Includes built-in TCP/IP capability—so you can access the Internet (requires software)
- Supports a variety of printers

Flexible capabilities

- Comes with a core set of productivity software (word processor, spreadsheet, drawing, graphing, calculator, and more)
- Can take advantage of hundreds of available Newton applications

Specifications

- **Processor**
 - 25-MHz ARM 710a RISC
- **Memory and storage**
 - 3MB of RAM (1MB of DRAM and 2MB of flash memory)
- **Display**
 - 480- by 320-pixel gray-scale LCD with backlighting
 - Displays up to 16 shades of gray
- **Communications and connectivity**
 - Serial port for connecting to printers, AppleTalk networks, and Mac OS—or Windows-based computers
 - Newton InterConnect serial port for LocalTalk and RS-232-compatible serial connections, modem, power input/output, and sound input/output
- **Media support**
 - Built-in speaker and sound output ports
- **Battery**
 - Up to 24 hours of continuous use without recharging
- **Expansion capabilities**
 - Internal slots for upgrading software, operating system, and memory
 - PC Card slot for Type I, Type II, or Type III PC Cards
- **Size and weight**
 - 2.1 by 11.4 by 12.0 inches (5.3 by 29.0 by 30.5 cm)
 - 4.0 lb. (1.8 kg)

Visit our web site

Getting all the information you need about Apple products has never been easier. Visit us at www.apple.com to download and print any of Apple's product data sheets.

Newton Mobile Products and eMate Accessories

MessagePad 130, 2000, and 2100, and eMate 300

- MessagePad 2000 Pen
- eMate 300 Pen
- eMate Replacement Pens
- MessagePad Rechargeable Battery Pack
- eMate Rechargeable Battery Pack
- MessagePad Carrying Case
- MessagePad and Newton Keyboard Leather Carrying Case
- MessagePad and Newton Keyboard Nylon Carrying Case
- MessagePad Wireless Communications Case

Newton Platform

- Newton Keyboard
- Newton 4MB Flash Storage Card
- Newton Serial Adapter
- Newton 9W Power Adapter
- Newton Adapter Plug Pack
- Newton Serial Cable for Mac OS-Based Computers
- Newton Serial Cable for Windows-Based Computers

Apple Software and Technologies

Mac OS 8

Mac OS 8 is the latest version of the popular Mac OS, the Macintosh operating system, already renowned for making complex technology reliable and easy to use—widely known as making the Macintosh “the computer for the rest of us.” Imitated but never equaled, the Mac OS provides an exceptionally easy-to-use graphical user interface, outstanding Internet access, state-of-the-art multimedia capabilities, and unrivaled support for working with both PC and Macintosh files. With Mac OS 8, Apple has built on these existing strengths to reassert our position as the industry leader in providing innovative, useful, and reliable system software. Mac OS 8 highlights include:

- *The industry's best user experience.* Mac OS 8 will increase your productivity and efficiency by translating today's new levels of computing power into features that make a real—and positive—difference in the way you work:
- Fully PowerPC-native Finder environment. This feature dramatically improves user productivity, with multitasking for all Finder operations, such as copying files, updating a window, emptying the Trash, and so on. In addition to performing multiple tasks concurrently, the new Finder is also faster and more responsive, leaving you in constant control of the system. Other major enhancements include dozens of efficient new menu and keyboard shortcuts—not to mention our unique “spring-loaded folders” and “pop-up windows,” which provide faster, easier-than-ever access to files and folders.
- Scalable user-interface views and capabilities. The Mac OS 8 user interface is specifically designed to scale across a broad range of users, offering everything from a super-simplified desktop view for the very young or anyone relatively inexperienced with computer use to vastly more detailed viewing options and functionality geared toward power users' sophisticated needs. And everyone will enjoy the updated, modern visual appearance of Mac OS 8, with its 3-D look and options such as Desktop Pictures, which allows users to customize the look of their desktops.

- *The easiest and most complete way to connect, explore, and publish on the Internet and World Wide Web.* Mac OS 8 is designed to make the Internet as simple and enjoyable to use as a Macintosh. Both easier to use and more useful than ever, the Internet services in Mac OS 8 support a range of users and activities:
- Easiest setup and connection. Mac OS 8 provides an online Internet Assistant that dramatically simplifies Internet installation, setup, and configuration. From there, the online assistance and Internet Installer offer guidance at every step of the way—even automating the process of selecting and registering with an appropriate Internet service provider. With Mac OS 8, you're up and running with e-mail and web access in just a few quick clicks.
- Explore with your choice of high-quality Internet tools. Mac OS 8 includes Netscape Navigator, Microsoft's Internet Explorer, America Online, Claris Emailer Lite, and the new push technologies from PointCast and Marimba. This broad range of access, browsing, and communications tools meets the needs of virtually every user. In addition, the new Connect To command in the Apple menu makes these tools easily accessible from the desktop.
- Become an Internet publisher in your own right. Apple Personal Web Sharing is built into Mac OS 8, giving users the ability to set up a personal web site in just a few easy steps. Useful for both ad hoc home pages and file serving, Personal Web Sharing uses the standard Internet networking protocol—TCP/IP—that is also an integral part of the Mac OS.

A smooth transition into the future

With its focus on providing the industry's most productive user experience and Internet services, Mac OS 8 offers significant advantages over previous and competitive system software offerings. It also continues Apple's outstanding record of backward compatibility, by supporting earlier Mac OS versions and applications. Mac OS 8 is compatible with most PowerPC and 68040 processor-based Mac OS computers with at least 12MB of RAM, protecting users' existing investments in hardware and applications software.

As the year 2000 approaches, Apple is hard at work developing a “next-generation” operating system to take our users into the next century. Code-named Rhapsody, this software will build on technologies developed by both Apple and the former NeXT Software (now a part of Apple) to provide a fully modern operating system with “industrial-strength” power and reliability. The first Rhapsody users will probably be in the areas of print publishing and new media—activities that demand increased performance and improved reliability on a frequent and ongoing basis. However, because Rhapsody will further improve the user experience and provide compatibility for Mac OS applications, we expect that most Apple customers will eventually choose to move to this new platform. Since Rhapsody is targeted for PowerPC processor-based systems and builds in support for the Mac OS, the smooth transition to Rhapsody will give customers increased productivity without disruption.

Macintosh Application Environment 3.0

Macintosh Application Environment (MAE) 3.0—the virtual Macintosh for UNIX-based systems—is an innovative software product that provides a complete Macintosh environment in an X window, allowing you to run Macintosh 680x0 applications right on your workstation. It effectively brings the functionality and ease of use of the Macintosh computer to Sun Microsystems SPARCstations running the Solaris operating system, as well as to Hewlett-Packard Series 700 workstations running HP-UX—providing easy networking, access to Mac OS-based applications, and smooth integration with the UNIX environment.

At Ease 3.0: For sharing your family Macintosh

With At Ease 3.0 software, you can manage your shared Macintosh and make it even easier to use. It's perfect for home use, offices, classrooms, and training centers. At Ease offers a choice of two interfaces that you can easily customize for every age and level of computer experience: the simple At Ease desktop, which features large buttons and folders; and the familiar Macintosh Finder interface. Whichever interface you choose, the security features of At Ease protect your files and applications.

Apple Media Products

QuickTime

QuickTime is Apple Computer's software architecture for creating, editing, and publishing digital media. It is the foundation for the industry's leading multimedia products, including creation tools, multimedia CDs, digital video, and web pages. QuickTime provides the high level of performance, compatibility, and quality that software developers and multimedia authors and producers require to deliver their products. Video editing tools such as Adobe Premiere, Adobe After Effects, Avid Cinema, Radius Edit, and Macromedia Final Cut all incorporate QuickTime technology. They rely on its ability to capture video, compress huge files, and synchronize text, graphics, audio, and video.

- *Efficient development.* QuickTime provides a standard means of working with multimedia data, which enables an author or producer to use applications from different vendors within a single project. QuickTime technology also provides a means of working with any compression/decompression standard, as well as with all the most common file formats used in producing materials for broadcast, digital video, and Internet publication. Encompassing much more than just audio and video, QuickTime allows for the creation and control of text tracks, music/MIDI tracks, MPEG tracks, QuickTime VR objects, 3D objects, 3D sprites, and animation tracks, giving content creators access to a wide array of media options.
- *Cross-platform capability.* QuickTime provides the most reliable and efficient way to deliver multimedia software to both the Mac OS and Windows platforms. The majority of CD-ROM publishers—including such well-known names as Broderbund, Voyager, Cyan, Microsoft, Disney, and CNN—use tools based on QuickTime to create their multimedia CDs.
- *A de facto Internet media standard.* Its high performance, outstanding image quality, and robust reliability have also made QuickTime the standard for multimedia on the Internet.

Currently, more than 20,000 web sites and approximately 50 percent of the video content available on the World Wide Web makes use of QuickTime. In addition, the QuickTime Browser plug-in enables users of all the most popular web browsers to view QuickTime, QuickTime VR, and myriad other multimedia content types. And the QuickTime Fast Start feature enables content to be viewed as it is downloaded, eliminating the delay previously associated with viewing large multimedia files across low-bandwidth connections.

- *MPEG support.* The QuickTime MPEG extension allows full-screen software-only playback of popular MPEG-1 and VideoCD audio/video files on PowerPC processor-based systems running the Mac OS. It works with the QuickTime plug-in for Netscape Navigator and Microsoft Internet Explorer, enabling real-time MPEG playback within these browsers. This extension requires QuickTime 2.5 or later, and is available to be downloaded from the QuickTime web site (www.quicktime.apple.com).

QuickTime VR

QuickTime VR is Apple's software architecture for the creation and viewing of 3D panoramas and real-world objects. This virtual-reality technology supports three types of interactive user experiences: a panoramic view that lets users explore 360° scenes, an interaction technology that lets users view objects from any perspective, and multinode experiences that combine multiple scenes and objects.

QuickTime VR Authoring Studio

QuickTime VR Authoring Studio software is a suite of five tools that cover every step involved in creating an interactive virtual-reality environment, from controlling camera positions while taking the original photographs to blending images to optimizing the results for delivery on CD-ROM or via the World Wide Web. Both objects and panoramas can be fully interactive, with zooming, animation, and links to other multimedia objects. A powerful one-stop solution for producing all kinds of QuickTime VR content, the QuickTime VR Authoring Studio turns a previously complex operation into a matter of point-and-click simplicity.

QuickDraw 3D

QuickDraw 3D is Apple's software architecture for the creation, editing, and publishing of 3D graphics. This technology combines workstation-class performance and features with an extraordinary level of ease of use that brings sophisticated 3D capabilities into the computing mainstream. The QuickDraw 3D toolkit provides a complete set of geometries, a shading and rendering architecture, a multiplatform file format, a hardware abstraction layer, an input device architecture, and a set of user-interface guidelines.

The best tools for digital media

The PowerPC processor, coupled with Apple's advanced multi-media capabilities, offers you the power to take on even the most demanding digital media projects. So if your plans include video integration, 3D animation, virtual reality, music composition, or use of other digital media, Apple provides the best environment for both authoring and playback of these elements—whether you're working with the Mac OS or Windows, distributing the results via CD-ROM or the Internet.

Macintosh Multimedia Kits

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

- *Apple Video System.* This multimedia solution comes with a user-installable video card and software that lets you easily add still video images to the documents and presentations you create on your Macintosh computer. The video card allows you to connect a VCR, a camcorder, a laserdisc player, or other video source to your computer with a single cable.
- *Apple TV/FM Radio System.* This kit builds on the capabilities of the Apple Video System to provide access to FM radio as well as to television. It even allows simultaneous access to both—all while you're working on your Macintosh. The Apple TV/FM Radio System comes with a plug-in card with TV and FM radio tuners, along with easy-to-use control software.

HyperCard 2.3.5

HyperCard is an easy-to-use development tool for creating a wide range of custom software solutions. With it, you can organize information into "stacks" of "cards," through which you can easily navigate in search of specific material. By simply clicking a button, you can view—or integrate—text, graphics, and QuickTime movies, as well as listen to music and even the spoken word. Simple enough for nonprogrammers, HyperCard also provides a robust prototyping and development environment for professional developers.

Apple Internet Products

AppleShare IP 5.0.2

The latest version of Apple's well-known AppleShare file, print, and applications sharing software, AppleShare IP 5.0.2 couples low cost of ownership and ease of use with support for the TCP/IP protocol central to Internet technology. It expands on the capabilities provided by previous versions by offering web, mail, and FTP services. Designed for small-business users or department- or workgroup-level enterprise customers, AppleShare IP 5.0.2 supports not only both TCP/IP and AppleTalk, but also Mac OS 8 and WebSTAR APIs, as well as bundling Maxum's NetCloak software.

The Apple Internet Server Solution for the World Wide Web

The Apple Internet Server Solution is an easy and affordable way to make your information available on the World Wide Web. It consists of a Workgroup Server and a CD-ROM that contains all of the software required to get started publishing on the Internet. It's the perfect solution for organizations in business, education, or publishing that want to make their information widely accessible on the Internet.

With the Apple Internet Server Solution, you get the following tools:

- WebSTAR/SSL from StarNine
- MacDNS from Apple
- NetCloak and Rumpus from Maxum Development
- FireSite Speed Booster and Virtual Domain Manager from ClearWay
- LogDoor from Open Door
- MacTCP Watcher from Stairways
- PageSentry from Maxum
- Adobe Acrobat Reader
- Netscape Navigator
- Butler SQL Server and Tango Enterprise from EveryWare
- BBEdit from Bare Bones Software
- Claris Home Page
- GoLive CyberStudio

Applications Server Solution

The Applications Server Solution includes the following software for reliability, productivity, and performance:

- Adobe Acrobat Reader
- Soft RAID
- Virex from Datawatch
- AppleShare Client for Windows
- 4-Sight FAX from 4-Sight
- Now Up-to-Date & Contact from Now Software
- Viper Instant-Access from IT Design
- Skyline/Satellite from AG Group

Cyberdog 2.0

Cyberdog is a unique suite of Internet tools that lets you create dynamic Internet documents that embed live web links and windows. For example, using the Cyberdog DocBuilder, you can create documents that include not only text and graphics, but also active Internet e-mail links or World Wide Web views, simply by dragging and dropping in those items.

Apple Personal Web Sharing

Built into Mac OS 8, and also available by downloading from Apple's web site, Personal Web Sharing lets you share documents via the World Wide Web without having to write any HTML code. All you need to do is designate a folder for web sharing, and drop in the documents you wish to share. Although Personal Web Sharing is not suitable for hosting a high-traffic web site, it is ideal for sharing materials within a small group. Since Personal Web Sharing works with any web browser, it supports cross-platform sharing with users working on systems using Windows NT and 95, UNIX, and OS/2.

WebObjects

WebObjects is software for Windows NT and UNIX that allows organizations to build dynamic, high-capacity web-based applications. A proven and reliable technology that connects your corporate data and applications directly to a web server, WebObjects creates HTML pages automatically. With it, you can use the web to accelerate your business; for example, you can automate purchase orders and inventory tracking, attract and qualify new customers, shorten the sales cycle, or deliver 24-hour, 7-day-a-week customer service via the web. WebObjects can transform your static web site into a dynamic site that delivers customized content based on your customers' interests.

OPENSTEP Enterprise

This uniquely flexible development environment is designed to help organizations improve productivity and gain a competitive edge. Featuring an efficient object-oriented approach, OPENSTEP Enterprise makes it easy to create dynamic new business applications that make the best possible use of existing enterprise applications and data resources. And it supports the deployment of these applications across entire enterprises, on a variety of platforms.

Networks and Communications

Open Transport

Apple Open Transport is a set of integrated software tools designed to help users configure, and organizations manage, multiprotocol networking on the Macintosh. It supports AppleTalk and TCP/IP networking, as well as serial data communications. Apple Open Transport features new, easy-to-use control panels and offers a choice of three levels of user control: Basic, Advanced, and Administrator. It provides a superset of the functionality of the previous TCP/IP Connection for Macintosh and AppleTalk Connection for Macintosh, adding support for dynamic and static protocol addressing in AppleTalk, as well as TCP/IP support for IP multicast for Internet multimedia applications and the Dynamic Host Configuration Protocol (DHCP) for easier network management. Open Transport is a built-in feature of Mac OS 7.5.3 and later.

MacX: Apple's high-performance X Window System solution for the Mac OS

MacX 2.0 software makes it easy to access network-based X applications from your Macintosh or Power Macintosh computer. Accelerated for Power Macintosh and supporting the latest X Window System industry standard—X11 Release 6—MacX 2.0 lets you run X applications side by side with your favorite software for the Mac OS. You can even cut and paste text and graphics between the two environments. And users in multivendor environments will appreciate the MacX support for standard networking protocols. Simple to set up and use, MacX is the easiest way to connect your Macintosh to the X Window System.

Apple Remote Access

Apple Remote Access (ARA) lets you use a modem or ISDN connection and telephone lines to connect a remote Macintosh or PowerBook computer to another Macintosh computer or to an entire AppleTalk or TCP/IP network, including the Internet. The Apple Remote Access product family provides an easy-to-use, cost-effective, and secure solution for individuals, workgroups, and even large organizations.

- *Apple Remote Access Client for Mac OS.* This software allows any Mac OS-based computer to easily dial into a remote network and use its AppleTalk or TCP/IP network services concurrently. For example, you can browse Internet sites while you are sending a presentation to a printer at your office. You can also use the software to connect to a Mac OS-based computer running ARA Personal Server or ARA MultiPort Server, or to call the Internet via your Internet service provider (ISP). It is compatible with Apple Remote Access Protocol (ARAP) v2.0 servers, including the ARA 2.1 family of products from Apple and third-party servers that support ARAP. It is also compatible with third-party Point-to-Point Protocol (PPP) servers that support AppleTalk (ATCP), TCP/IP (IPCP), or both.
- *Apple Remote Access Personal Server.* Ideal for individuals or small organizations, this product enables users to access their Mac OS-based computer and any AppleTalk and TCP/IP network resources from a remote location. It's easy to install and use. New with version 3.0 is built-in PPP support. Enabling PPP makes TCP/IP services available to clients running on any operating system. Third-party software allows remote PCs to access AppleTalk network resources via PPP. Easy-to-use administrative features give you complete control over network access. Included with the ARA 3.0 Personal Server software is the ARA 3.0 Client Software.

MacSNMP

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

MacSNMP requires an older Macintosh model configured to use classic networking. It cannot be installed on a system using Open Transport.

Apple Network Administrator Toolkit

The Apple Network Administrator Toolkit provides powerful, yet easy-to-use management software for controlling and managing all of the systems on your network from a single point. Designed for network managers in every setting from education to business, this software lets you protect applications, documents, CDs, and system settings with At Ease for Workgroups, Apple's popular security and access management tool. It also helps you to keep track of whether everyone on your network is using the right version of each application, as well as to update those who aren't—easily and efficiently. You can also restart or shut down multiple systems simply, restore a hard disk to a known configuration, provide personal assistance to users across the network through a special screen-sharing function, and more.

Language Kits

Apple Language Kits

Apple Language Kits provide an easy way to create, edit, and print documents in a variety of languages. You can install all the kits on one computer and even mix languages in a single document. The included TrueType fonts allow you to display and print text in any type size. Use the language kits to access foreign web pages using a World Wide Web browser such as Netscape Navigator or Microsoft Internet Explorer. Where appropriate, the kit includes a choice of input methods and a set of transparent labels to attach to the surface of the existing keyboard. Language kits available:

- *Arabic*—Arabic and Farsi
- *Chinese*—Simplified and Traditional Chinese
- *Cyrillic*—Bulgarian, Russian, and Ukrainian
- *Hebrew*—Hebrew and Yiddish
- *Indian*—Hindi, Sanskrit, Gujarati, Marathi, Punjabi, and Nepalese
- *Japanese*—Japanese
- *Korean*—Korean

QuickCharts

Desktop Computers

Model	Processor	Memory
Power Macintosh 5400 Series	180- or 200-MHz PowerPC 603e with math coprocessor; 32K on-chip cache; 256K level 2 cache (some configurations)	16MB; supports up to 136MB
Power Macintosh 5500 Series	225- or 250-MHz PowerPC 603e with math coprocessor; 32K on-chip cache; 256K level 2 cache	16MB or 32MB; supports up to 128MB
Power Macintosh 6500 Series	225-, 250-, 275-, or 300-MHz PowerPC 603e with math coprocessor; 32K on-chip cache; 256K or 512K level 2 cache	32MB, 48MB, or 64MB; supports up to 128MB
Power Macintosh 8600 Series	250- or 300-MHz enhanced PowerPC 604e with math coprocessor; 32K on-chip data and instruction caches; 1MB of Apple Inline Cache (level 2) on processor card	32MB; supports up to 512MB
Power Macintosh G3 Series	233- or 266-MHz PowerPC G3 processor; 32K on-chip data and instruction caches; 512K backside level 2 cache; 117- or 133-MHz dedicated 64-bit backside bus; 66-MHz system bus	32MB; supports up to 192MB or 384MB; 4MB of ROM; 64-bit memory bus

Storage	Key features
1.2GB or 1.6GB; built-in tray-loading CD-ROM drive	Fast PowerPC performance in an innovative all-in-one design; unique multimedia expansion options; PCI expansion slot; Ethernet port; Energy Star compliant
2GB; 12x- or 24x-speed (max.) CD-ROM drive	Faster PowerPC performance in an innovative all-in-one design; hardware acceleration of graphics and video; unique multimedia features; PCI expansion slot; Ethernet port (some configurations); energy-saving sleep mode
3GB, 4GB, or 6GB; 12x- or 24x-speed (max.) CD-ROM drive; 100MB Zip drive (some models)	Faster PowerPC performance in an innovative minitower design; many multimedia features; two PCI expansion slots; built-in Ethernet or modem; energy-saving sleep mode; software included with Home, Small Business, and Creative Studio models
4GB; 24x-speed (max.) CD-ROM drive; 100MB Zip drive; additional storage devices accommodated	Powerful, feature-rich system; enhanced PowerPC 604e performance; directly accessible Apple Inline Cache; three PCI expansion slots; digital video input/output; Ethernet ports
4GB or 6GB; 24x-speed (max.) CD-ROM drive; 100MB Zip drive (some models); additional storage devices accommodated	Next-generation PowerPC technology with the PowerPC G3; innovative backside cache architecture; new logic board design increases efficiency and flexibility; multimedia accelerator chip; three PCI expansion slots; built-in Ethernet

(continued on next page)

Desktop Computers

Model	Processor	Memory
Power Macintosh 9600/300	300-MHz enhanced PowerPC 604e with math coprocessor; 32K on-chip data and instruction caches; 1MB of Apple Inline Cache (level 2) on processor card	64MB; supports up to 768MB
The Twentieth Anniversary Macintosh	250-MHz PowerPC 603e with math coprocessor; 32K on-chip data and instruction caches; 256K level 2 cache	32MB; supports up to 128MB; 4MB of ROM; 64-bit memory bus

Storage	Key features
4GB; 24x-speed (max.) CD-ROM drive; 100MB Zip drive; additional storage devices accommodated	High-performance, expandable Power Macintosh computer; tower design for easy access; fastest PowerPC performance; six PCI expansion slots; Ethernet ports
2GB; custom vertical-mount CD-ROM drive	Special, limited-edition Macintosh with many multimedia capabilities in an all-in-one design; Bose Acoustimass sound system; built-in Apple TV/FM Radio System; high-speed modem; PCI expansion slot; custom keyboard

Portable Computers

Model	Processor	Memory
Macintosh PowerBook 1400 Series	133- or 166-MHz PowerPC 603e; 128K level 2 cache	16MB; supports up to 64MB
Macintosh PowerBook 2400 Series	180- or 240-MHz PowerPC 603e with math coprocessor; 256K level 2 cache	16MB; supports up to 80MB
Macintosh PowerBook 3400 Series	180-, 200-, or 240-MHz PowerPC 603e; 256K level 2 cache	16MB; supports up to 144MB
Macintosh PowerBook G3	250-MHz PowerPC G3; 512K backside level 2 cache; 50-MHz system bus	32MB; supports up to 160MB

QuickChart

Storage	Key features
1.3GB or 2GB; 8x- or 12x-speed (max.) CD-ROM drive	PowerPC performance; innovative design; dual-scan or active-matrix color display; PC Card slots and expansion bay; preinstalled software; IR technology; Energy Star compliant
1.3GB	Smallest, lightest PowerBook; PowerPC performance; active-matrix color display; PC Card slots; preinstalled software; IR technology; Energy Star compliant
1.3GB, 2GB, or 3GB; 6x-speed (min.) CD-ROM drive	Faster PowerPC performance; active-matrix color display; PC Card slots and expansion bay; preinstalled software; IR technology; built-in Ethernet and modem (most configurations); Energy Star compliant
5GB; 20x-speed (max.) CD-ROM drive	Fastest PowerPC performance in a PowerBook computer; active-matrix color display; PC Card slots and expansion bay; preinstalled software; IR technology; built-in Ethernet and modem; Energy Star compliant

Apple Servers

Model	Processor	Memory
Workgroup Server 7350/180	180-MHz PowerPC 604e with math coprocessor; 64K on-chip cache; 256K level 2 cache	48MB; supports up to 512MB
Workgroup Server 9650/350	350-MHz PowerPC 604e with math coprocessor; 64K on-chip cache; 1MB Apple Inline Cache (level 2)	64MB; supports up to 768MB

QuickChart

Storage	Key features
4GB (5,400 rpm); 12x-speed (max.) CD-ROM drive; additional storage devices accommodated	Fast PowerPC performance in a versatile midrange server; three PCI expansion slots; built-in Ethernet; Soft RAID Software; choice of three high-value software bundles (Applications Server Solution, AppleShare Server Solution, or Apple Internet Server Solution)
Dual 4GB (7,200 rpm) Ultra/Wide hard disk drives; 24x-speed (max.) CD-ROM drive; additional storage devices accommodated	Fastest PowerPC performance in an advanced server for highly demanding workgroups; six PCI expansion slots (three are dedicated to SCSI, video, and Ethernet); three SCSI buses (one is Ultra/Wide); built-in Ethernet (including 100BASE-T support); Soft RAID Software and Mac OS 8; choice of three high-value software bundles (Applications Server Solution, AppleShare Server Solution, or Apple Internet Server Solution)

Apple Displays

Model	Screen size	Screen refresh rate
Apple Multiple Scan 15AV Display	15-inch (diagonal); 13.75-inch (diagonal viewable image size); flat, square screen; shadow mask tube	Up to 75 hertz (varies by resolution)
Apple Multiple Scan 720 Display	17-inch (diagonal); 16-inch (diagonal viewable image size); flat, square screen; shadow mask tube	Up to 85 hertz (varies by resolution)
Apple ColorSync Display (17-inch Color Display)	17-inch (diagonal); 16.1-inch (diagonal viewable image size); Sony Trinitron tube	Up to 75 hertz (varies by resolution)
Apple ColorSync Display (20-inch Color Display)	20-inch (diagonal); 19-inch (diagonal viewable image size); Sony Trinitron tube	Up to 85 hertz (varies by resolution)

QuickChart

Display format	Dimensions (HWD) and weight	Key features
Selectable from 640 by 480 pixels to 1,024 by 768 pixels (Mac OS)	15.3 by 14.8 by 15.8 in.; 30.0 lb.	Flat screen for sharp image; multiple-scan technology for user-adjustable resolution settings; works with Macintosh computers and PCs running Windows; Integrated stereo speakers and headphone jack; Energy Star and MPR II compliant
Selectable from 640 by 480 pixels to 1,280 by 1,024 pixels (Mac OS)	17.0 by 16.2 by 16.9 in.; 37.5 lb.	Flat screen for sharp image; multiple-scan technology for user-adjustable resolution settings; works with Macintosh computers and PCs running Windows; Energy Star and MPR II compliant
Selectable from 640 by 480 pixels to 1,280 by 1,024 pixels (Mac OS)	16.8 by 16.2 by 17.6 in.; 49.0 lb.	Sony Trinitron tube; multiple-scan technology for user-adjustable resolution settings; works with Macintosh computers and PCs running Windows; Energy Star and MPR II compliant
Selectable from 640 by 480 pixels to 1,600 by 1,200 pixels (Mac OS)	18.7 by 19.1 by 20.2 in.; 67.4 lb.	Sony Trinitron tube; multiple-scan technology for user-adjustable resolution settings; works with Macintosh computers and PCs running Windows; Plug and Play; Energy Star and MPR II compliant

Apple Printers

Model	Resolution (dots per inch)	Printing speed (pages per minute)
LaserWriter 12/640 PS	600 dpi with PhotoGrade and FinePrint	Up to 12 ppm
LaserWriter 8500	600 dpi with enhanced PhotoGrade (up to 150 lpi) and FinePrint	Up to 20 ppm

QuickChart

Recommended number of users	Fonts	Key features
3–20 users	64 TrueType and 35 PostScript fonts	Flexible paper handling; cross-platform support; duplex printing option
10 or more users	136 PostScript 3 fonts (TrueType and Type 1)	High-performance workgroup printer; Adobe PostScript 3 and cross-platform support; flexible paper-handling options; full-bleed ledger/A3 paper and duplex printing (optional)

Apple Printer Supplies

Printer model	Apple printer supplies	Reorder number
ImageWriter I	Black Ribbon	A2M0077
ImageWriter II	Black Ribbon	A2M0077
	Color Ribbon	A9G0331
ImageWriter LQ	Black Ribbon	A9G0335
	Color Ribbon	A9G0336
Scribe	Black Scribe Ribbon	A9G0328
StyleWriter I	StyleWriter Ink Cartridge	M8041G/C
StyleWriter II	StyleWriter Ink Cartridge	M8041G/C
StyleWriter 1200	StyleWriter Ink Cartridge	M8041G/C
Portable StyleWriter	StyleWriter Ink Cartridge	M8041G/C
Apple Color Printer	Cyan Ink Cartridge	M6904G/A
	Magenta Ink Cartridge	M6903G/A
	Yellow Ink Cartridge	M6902G/A
	Black Ink Cartridge	M6901G/A
	Apple Color Printer A3 Paper, 200 pk.	T0547G/A
Color StyleWriter Pro	Cyan Ink Cartridge	M1949G/A
	Magenta Ink Cartridge	M1950G/A
	Yellow Ink Cartridge	M1951G/A
	High-Capacity Black Ink Cartridge	M3822G/A
Color StyleWriter 1500	Color StyleWriter Ink Cartridge (C-M-Y)	M4609G/A
	StyleWriter Ink Cartridge (Black)	M8041G/C
Color StyleWriter 2200	Black Ink Cartridge (including High-Capacity Black Tank)	M3909G/A
	Color Ink Cartridge (including Color and Black Ink Tanks)	M3908G/A
	Black Ink Tank (for Color Ink Cartridge), 3-pack	M3912G/A
	Color Ink Tank (for Color Ink Cartridge), 3-pack	M3911G/A
	High-Capacity Black Ink Tank (for Black Ink Cartridge), 3-pack	M3910G/A

QuickChart

Printer model	Apple printer supplies	Reorder number
Color StyleWriter 2400	Color Ink Cartridge (including color and black ink tank) Color Ink Tank (for use with Color Ink Cartridge only) Black Ink Tank (for use with Color Ink Cartridge only) High-Performance Black Ink Cartridge	M3328G/A M3329G/A M3330G/A M3240G/A
Color StyleWriter 2500	Color Ink Cartridge (including color and black ink tank) Color Ink Tank (for use with Color Ink Cartridge only) Black Ink Tank (for use with Color Ink Cartridge only) High-Performance Black Ink Cartridge Apple Color Ink-Jet Premium Plus Coated Paper, LTR 200 pk. Apple Color Ink-Jet Premium Plus Coated Paper, A4 200 pk. Color PhotoGrade Print Kit Color PhotoGrade Ink Cartridge* Color PhotoGrade Paper, LTR 60 pk.* Color PhotoGrade Paper, A4*	M3328G/A M3329G/A M3330G/A M3240G/A M4792G/A M4791G/A M5577LL/A M5579G/A M5578G/A M5581G/A
Color StyleWriter 4100 and 4500	Color Ink Cartridge Black Ink Cartridge Color Ink-Jet Greeting Card Kit, LTR (20 envelopes, 20 sheets) Color Ink-Jet Greeting Card Kit, A4 (20 envelopes, 20 sheets)	M5694G/A M5693G/A M5965G/A M5966G/A
Color StyleWriter 4500	Color PhotoGrade Ink Cartridge Color Ink-Jet Color PhotoGrade Paper, LTR 20 pk. Color Ink-Jet Color PhotoGrade Paper, A4 20 pk. Color Ink-Jet Banner Paper, LTR 100 pk. Color Ink-Jet Banner Paper, A4 100 pk.	M5692G/A M5961G/A M5962G/A M5963G/A M5964G/A

* For use only with Color PhotoGrade supplies.

Apple Printer Supplies

Printer model	Apple printer supplies	Reorder number
Color StyleWriter 6500	Color Ink Cartridge Black Ink Cartridge Color Ink-Jet Greeting Card Kit, LTR (20 envelopes, 20 sheets) Color Ink-Jet Greeting Card Kit, A4 (20 envelopes, 20 sheets)	M5659G/A M5658G/A M5965G/A M5966G/A
All Apple color ink-jet printers	Apple Color Ink-Jet Premium Coated Paper, A4 200 pk. Apple Color Ink-Jet Premium Coated Paper, LTR 200 pk. Apple Color Ink-Jet Premium Plus Coated Paper, A4 200 pk. Apple Color Ink-Jet Premium Plus Coated Paper, LTR 200 pk. Apple Color Ink-Jet Glossy Paper, LTR 50 pk. Apple Color Ink-Jet Glossy Paper, A4 50 pk. Apple Color Ink-Jet Back-Print Film, LTR 20 pk. Apple Color Ink-Jet Back-Print Film, A4 20 pk. Apple Color Ink-Jet Transparency Film, LTR 20 pk. Apple Color Ink-Jet Transparency Film, A4 20 pk.	M2951G/A M2952G/A M4791G/A M4792G/A M3655G/A M3656G/A M2953G/A M2954G/A M2658G/A M1959G/A
LaserWriter and LaserWriter Plus	LaserWriter Toner Cartridge	M0180
LaserWriter IIsc, IIINT, IIINTX, IIIf, IIg	LaserWriter II Toner Cartridge	M6002
Personal LaserWriter LS, SC, NT, NTR	Personal LaserWriter Toner Cartridge	M0089LL/A
Personal LaserWriter 300 and 320; LaserWriter 4/600 PS	Personal LaserWriter 300 Series Toner Cartridge	M2045G/A

QuickChart

Printer model	Apple printer supplies	Reorder number
LaserWriter Select 300, 310, 360	LaserWriter Select Toner Cartridge	M1960G/A
LaserWriter Pro 600 and 630; LaserWriter 16/600 PS	LaserWriter Pro Toner Cartridge	M2473G/A
LaserWriter Pro 810	Extended Capacity Cartridge Kit	M3602G/A
LaserWriter 12/640 PS and 12/640 PS Plus	Duplex Printing Unit 500-Sheet Cassette and Feeder Envelope Cassette Face-up Output Tray Toner Cartridge	M4697G/A M4682G/A M4680G/A M4698G/A M4683G/A
LaserWriter 8500	LaserWriter 8500 <i>Plus</i> Upgrade Kit Duplex Printing Unit Hard Disk Kit 500-Sheet Ledger/A3 Cassette and Feeder 500-Sheet Ledger/A4 Cassette and Feeder Envelope Cassette High-Capacity Toner Cartridge	M6102G/A M5896G/A M5898G/A M5894G/A M5895G/A M5897G/A M5893G/A
Color LaserWriter 12/600 PS and 12/660 PS	Color LaserWriter Toner Cartridge, Cyan Color LaserWriter Toner Cartridge, Magenta Color LaserWriter Toner Cartridge, Yellow Color LaserWriter Toner Cartridge, Black Color LaserWriter Photoconductor Replacement Kit* Color LaserWriter Fuser Oil Color LaserWriter Fuser Replacement Kit 110V Color LaserWriter Fuser Replacement Kit 220V Color LaserWriter Transparencies, LTR 50 pk. Color LaserWriter Transparencies, A4 50 pk.	M3757G/A M3760G/A M3758G/A M3756G/A M3761G/A M3755G/A M3867G/A M4234G/A M3876G/A M3877G/A

* Note: Photoconductor prints 5,000 to 25,000 pages, depending on use of color per page.

About *AppleFacts*

Customers can order copies of *AppleFacts* by calling 1-800-825-2145 (in the United States) or (303) 297-8070 (international calls), and using a credit card. Apple resellers, employees, and other affiliates can order *AppleFacts* by calling the same numbers. To obtain additional Apple product literature via fax, call AppleFAX at 1-800-462-4396 or (415) 598-4329.

If you have suggestions or corrections, please contact us: *AppleFacts*, Apple Computer, Inc., 1 Infinite Loop, M/S 303-4AM, Cupertino, California 95014.

© 1998 Apple Computer, Inc. All rights reserved. Apple, the Apple logo, AppleDesign, AppleShare, Apple SuperDrive, AppleTalk, ColorSync, EtherTalk, GeoPort, HyperCard, ImageWriter, LaserWriter, LaserWriter Select, LocalTalk, Mac, MacDNS, Macintosh, MacTCP, MacX, MessagePad, Newton, Performa, PowerBook, Power Macintosh, ProDOS, QuickDraw, QuickTime, StyleWriter, and TrueType are trademarks of Apple Computer, Inc., registered in the U.S.A. and other countries. At Ease, BookCover, Cyberdog, eMate, Finder, and MacSNMP are trademarks of Apple Computer, Inc. Acrobat, Adobe, and PostScript are trademarks of Adobe Systems Incorporated. Claris, Claris Organizer, and ClarisWorks are trademarks of Claris Corporation, registered in the U.S. and other countries, and Claris Emailer and Claris Home Page are trademarks of Claris Corporation. Netscape Navigator is a trademark of Netscape Communications Corporation. NuBus is a trademark of Texas Instruments. PowerPC is a trademark of International Business Machines Corporation, used under license therefrom. The word SRS is a registered trademark of SRS Labs, Inc. Trinitron is a trademark of Sony Corporation, registered in the U.S. and other countries. UNIX is a registered trademark in the United States and other countries, licensed exclusively through X/Open Company, Ltd. X Window System is a trademark of the Massachusetts Institute of Technology.

Every effort has been made to ensure the accuracy of information in this book. However, Apple assumes no responsibility for the accuracy of the information. Product information is subject to change without notice. Mention of non-Apple products or services is for informational purposes only, and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the selection, performance, or use of these products. All understandings, agreements, or warranties, if any, take place directly between the vendors and the prospective users.

Get More Information Online

Getting all the information you need about Apple products has never been easier. Visit us at www.apple.com to download and print any of Apple's product data sheets.

To order additional copies of *AppleFacts 1.98*,
call **1-800-825-2145** (United States only).
Or visit your local Apple reseller or distributor.



Apple Computer, Inc. 1 Infinite Loop Cupertino, California 95014
Printed in U.S.A. 1/98 F&S/B&W 125K L00327M Printed on recycled paper.