

Overview

The Macintosh® II personal computer is the high-performance, open-architecture member of the Macintosh family. It provides advanced color and graphics capabilities, with a palette of over 16 million colors.

The Macintosh II is designed for advanced applications in business, desktop publishing, science, and engineering. It comes standard with a full 32-bit 68020 microprocessor and a 68881 floating-point coprocessor.

For maximum flexibility, the Macintosh II makes room for more memory—up to 8 megabytes of on-board RAM—and includes six built-in ports and six expansion slots that let you create virtually any system

configuration you need. Using hardware and software options from Apple and third parties, the Macintosh II can support other operating environments, including MS-DOS and AT&T UNIX®.

To go with the Macintosh II, you have a choice of monitors—including the AppleColor™ High-Resolution RGB Monitor—as well as keyboards and internal or external disk drives.

The Macintosh II is compatible with existing Macintosh software, and comes standard with 1 megabyte of RAM and a built-in 800-kilobyte floppy disk drive. It is available in two configurations: with or without an internal 40-megabyte hard disk drive.

Adding to the power and versatility of the Macintosh II is Apple's first-generation multitasking operating system, MultiFinder™. MultiFinder allows you to open multiple applications concurrently and perform background tasks—such as printing documents on laser printers—while you continue to work in an application.

In addition to the System software, the Macintosh II is packaged with Apple's exciting HyperCard® application. HyperCard is an information-management toolkit that lets you organize information on your computer the way you organize it in your mind—by association, and with unlimited cross-references.

Features

Benefits

▶ Full 32-bit, 68020 microprocessor operating at 15.7 megahertz

▶ Provides increased speed, power, and performance—up to four times greater than with Apple's previous 68000-based computers.

▶ 68881 floating-point coprocessor

▶ Performs arithmetic calculations up to 200 times faster than previous systems.

▶ 1 megabyte of on-board RAM, expandable to 8 megabytes

▶ Lets you run the most powerful, sophisticated software available.
▶ Accommodates extremely large models, documents, and databases.
▶ Provides the flexibility to grow as you need additional memory.
▶ With MultiFinder, allows you to use multiple applications simultaneously.

▶ 256K of ROM that includes:
—Hierarchical File System
—Drivers for Macintosh hard disk drives, NuBus™ expansion slots, Apple Desktop Bus™, 68881 floating-point coprocessor, SCSI, and AppleTalk® network
—Color QuickDraw

▶ The Hierarchical File System organizes storage for documents and allows easy access to files.
▶ The SCSI interface supports high-performance peripherals.
▶ QuickDraw provides the consistent graphics interface throughout the Macintosh family.
▶ Color QuickDraw provides a consistent interface for both black-and-white *and* color applications.

▶ Six NuBus expansion slots

▶ Makes it easy to add memory, communications, and coprocessor cards. (Cards are self-configuring—they require no DIP switches, and can be placed in any slot.)
▶ Lets you configure your system to meet your specific needs.
▶ Provides flexibility for expansion as requirements change and new technology becomes available.
▶ Lets you work within other operating environments.

▶ Advanced color graphics capabilities

▶ Allows you to create and display vivid, true-to-life graphics using over 16 million colors.

▶ Six built-in ports: two serial, two Apple Desktop Bus, one SCSI, one sound

▶ Lets you expand your system with popular peripherals without using expansion slots.
▶ Provides access to LocalTalk™ cabling-based networks, which allows you to connect your Macintosh II to other computers and to LaserWriter® II printers through the AppleTalk Network System.
▶ Provides connection for Apple Desktop Bus devices such as keyboards and mice.
▶ Supports up to seven high-speed SCSI peripherals.

Features

Benefits

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| <ul style="list-style-type: none">▶ Internal SCSI connector | <ul style="list-style-type: none">▶ Permits connection of internal hard disks. |
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| <ul style="list-style-type: none">▶ SCSI transfer rate up to 1 megabyte per second | <ul style="list-style-type: none">▶ Allows fast loading and saving of applications and documents. |
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| <ul style="list-style-type: none">▶ Two standard configurations:<ul style="list-style-type: none">—800K built-in disk drive—800K drive, plus internal 40-megabyte hard disk drive—A second internal 800K drive can be added to both configurations | <ul style="list-style-type: none">▶ Gives you multiple storage options.▶ Uses standard 800K 3.5-inch disks.▶ Requires no desk space for disk drives.▶ Lets you add storage capacity as your requirements expand. |
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| <ul style="list-style-type: none">▶ Macintosh user interface: mouse, icons, windows, and pull-down menus | <ul style="list-style-type: none">▶ Makes applications easy to learn and intuitive.▶ Provides a consistent interface across applications.▶ Reduces training and support costs in a corporate environment. |
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| <ul style="list-style-type: none">▶ MultiFinder multitasking operating system | <ul style="list-style-type: none">▶ Enables you to use multiple applications simultaneously and easily transfer data among them by cutting and pasting.▶ Allows you to continue working with applications while performing background tasks such as laser printing. |
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| <ul style="list-style-type: none">▶ Macintosh software compatibility | <ul style="list-style-type: none">▶ Runs existing Macintosh software. |
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| <ul style="list-style-type: none">▶ Apple stereo sound chip | <ul style="list-style-type: none">▶ Provides high-quality digital sound.▶ Is compatible with most applications that use Macintosh sound. |
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| <ul style="list-style-type: none">▶ Optional 68851 PMMU memory management upgrade | <ul style="list-style-type: none">▶ Provides memory management necessary to run multitasking, multi-user operating systems such as A/UX®, Apple's implementation of AT&T UNIX®. |
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| <ul style="list-style-type: none">▶ Choice of keyboards (sold separately):<ul style="list-style-type: none">—Apple Keyboard—Apple Extended Keyboard | <ul style="list-style-type: none">▶ Apple Keyboard includes numeric keypad and cursor keys for efficient operations.▶ Apple Extended Keyboard also includes 15 function keys, letting you work effectively with alternate operating systems, terminal emulation programs, and other data communications applications. |
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| <ul style="list-style-type: none">▶ Choice of monitors (sold separately):<ul style="list-style-type: none">—Apple High-Resolution Monochrome Monitor—AppleColor High-Resolution RGB Monitor | <ul style="list-style-type: none">▶ Lets you choose the monitor that best fits your needs. |

Product Details

System configuration

- ▶ Two configurations are available:
 - The Macintosh II CPU, which includes the CPU, 68881 floating-point coprocessor, 1 megabyte of RAM, one 800K 3.5-inch floppy disk drive, and mouse.
 - The Macintosh II Hard Disk 40 CPU, which includes the Macintosh II CPU plus an internal 40-megabyte SCSI hard disk drive.
- ▶ Keyboard, monitors, and other peripheral devices are packaged and sold separately.

NuBus expansion slots

- ▶ NuBus provides a 32-bit single address bus and data bus on a 96-pin connector.
- ▶ NuBus is self-configuring. Cards can be plugged into any slot and the system will automatically identify and configure each card, without any DIP switches or jumper wires.

68020 processor

- ▶ The Macintosh II is equipped with the 32-bit 68020 processor running at 15.7 megahertz. Overall, the performance of the Macintosh II is at least four times faster than that of Apple's 68000-based systems.

- ▶ The 32-bit address bus provides a total addressable space of 4 gigabytes.

RAM

- ▶ RAM can be upgraded on the motherboard to 2 megabytes with the 1MB RAM Expansion Kit; it can be upgraded to 4, 5, or 8 megabytes with 2MB RAM Expansion Kits.

68881 floating-point math coprocessor

- ▶ Macintosh programs that utilize the Standard Apple Numerics Environment (SANE[®]) will have floating-point computations accelerated by 3 to 30 times.
- ▶ Programs that make direct use of the 68881 will have floating-point computations accelerated by up to 200 times.

Stereo sound

- ▶ The Apple Sound Chip supports stereo sound at a sampling rate of up to 44.1 kilohertz.

SCSI (Small Computer Systems Interface)

- ▶ SCSI is a high-performance interface for connecting the computer to hard disks and other mass-storage peripherals. Up to seven SCSI peripherals (including internal hard disk) can be connected to the Macintosh II.
- ▶ SCSI performance on the Macintosh II is rated at up to 1 megabyte per second (up to four times faster than on a Macintosh Plus).

Network support

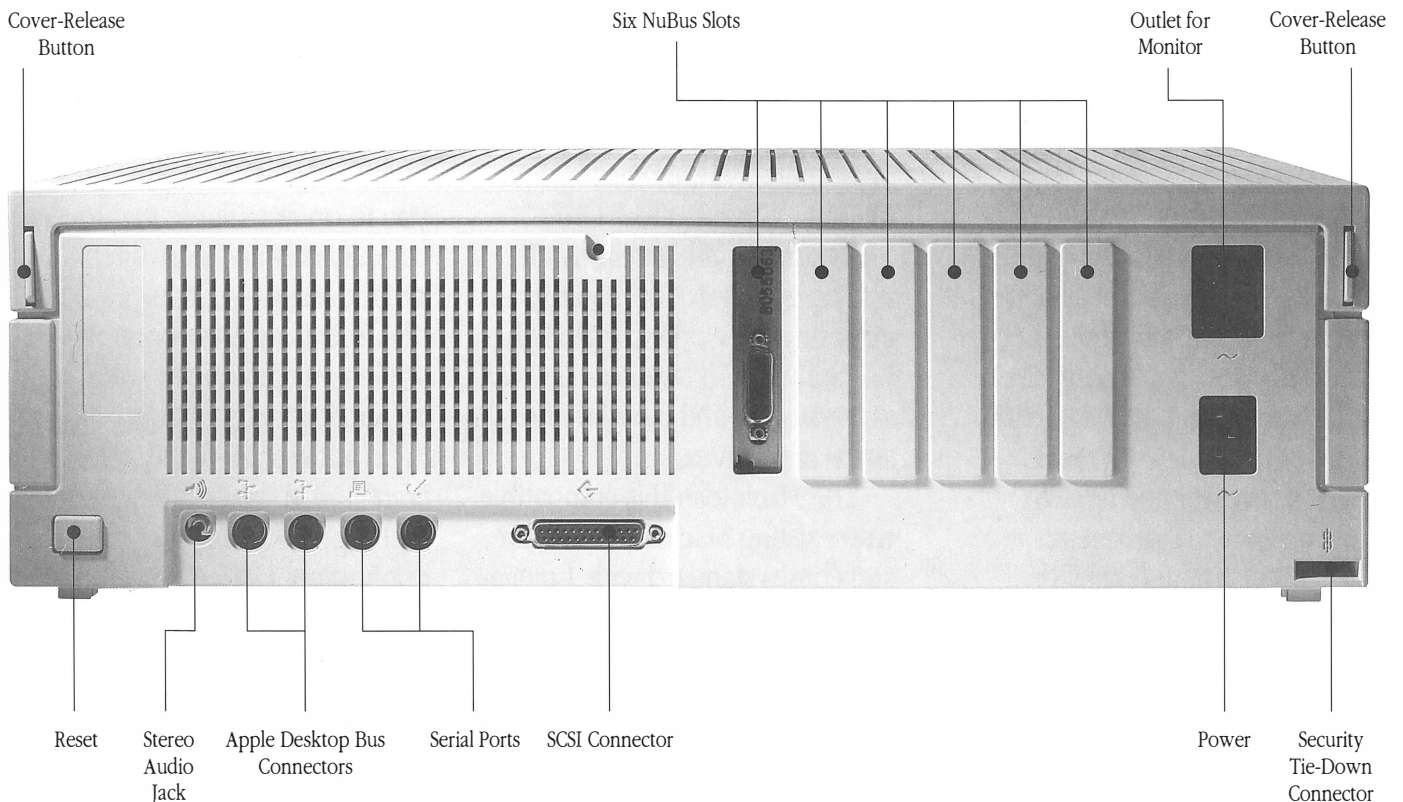
- ▶ The Macintosh II serial ports include full support for AppleTalk network connections.

Operating system software

- ▶ Macintosh System software includes:
 - MultiFinder
 - Utilities such as the Hard Disk Backup

HyperCard

- ▶ HyperCard software included.



Technical Specifications

Processor

MC68020, 32-bit internal architecture, 15.7-megahertz clock speed

Math coprocessor

- ▶ 68881 floating-point device (IEEE standard)

Memory

- ▶ 1 megabyte of RAM, expandable to 8 megabytes on board
- ▶ 256K of ROM standard

Memory management

- ▶ Optional 68851 PMMU

Disk storage

- ▶ Two standard configurations
 - One built-in 800K disk drive
 - One built-in 800K disk drive and an internal 40-megabyte SCSI hard disk drive
- ▶ Options include 20-, 40-, and 80-megabyte internal SCSI hard disk drives

Monitor options (sold separately)

- ▶ Apple High-Resolution Monochrome Monitor: an analog monitor with a 12-inch diagonal screen, 640 by 480 pixels
- ▶ AppleColor High-Resolution RGB Monitor: an analog RGB monitor with 13-inch diagonal screen, 640 by 480 pixels

Color capabilities

- ▶ Palette of over 16 million colors
- ▶ Color QuickDraw built into ROM

Keyboard options (sold separately)

Detachable keyboard options:

- ▶ Apple Keyboard: 81 keys, including numeric keypad and cursor keys
- ▶ Apple Extended Keyboard: 105 keys, including 15 function keys, separate cursor pad, 10-key numeric keypad, and Apple Desktop Bus connectors

Mouse (included)

- ▶ Mechanical tracking: optical shaft encoding at 3.54 pulses per mm (90 pulses per inch) of travel

Interfaces

- ▶ Two mini-8 serial (RS-232/RS-422) ports
- ▶ SCSI interface; uses a 50-pin connector (internal) and a DB-25 connector (external)
- ▶ Two Apple Desktop Bus (ADB) ports
- ▶ Six NuBus internal slots supporting full 32-bit address and data buses

Sound generator

- ▶ Apple custom digital sound chip (ASC), including four-voice wave-table synthesis, stereo sampling generator. Capable of driving stereo headphones or other stereo equipment.

Electrical requirements

- ▶ Line voltage: 90 to 140 volts AC; 170 to 270 volts AC, automatically configured
- ▶ Frequency: 48 to 62 Hz
- ▶ Maximum power: 230 watts, not including monitor power

Size and weight

Main unit

- ▶ Height: 5.51 in. (14.0 cm)
- ▶ Width: 18.66 in. (47.4 cm)
- ▶ Depth: 14.37 in. (36.5 cm)
- ▶ Weight: 24 lbs. to 26 lbs. (10.9 kg to 11.8 kg)*

Mouse

- ▶ Height: 1.11 in. (2.8 cm)
- ▶ Width: 2.1 in. (5.3 cm)
- ▶ Depth: 3.8 in. (9.7 cm)
- ▶ Weight: 6 oz. (.17 kg)

* Weight varies depending on whether optional hard disk or second floppy disk has been installed.



Macintosh II

Ordering Information**Macintosh II CPU**

Order No. M5333

With your order, you'll receive:

- ▶ Macintosh II personal computer with a built-in 800K disk drive
- ▶ Mouse
- ▶ Owner's guide
- ▶ System software
- ▶ Training disks (2)
- ▶ Limited warranty statement

**Macintosh II
Hard Disk 40 CPU**

Order No. M5430

With your order, you'll receive:

- ▶ Macintosh II personal computer with a built-in 800K disk drive and an internal 40-mega-byte SCSI hard disk drive
- ▶ Mouse
- ▶ Owner's guide
- ▶ System software
- ▶ Training disks (2)
- ▶ Limited warranty statement