

Technical Information

Main unit

Processor card

- The Power Macintosh 9600/300 processor card contains a 300 megahertz (MHz) PowerPC™ 604e processor (with a built-in floating-point unit) and a 1 megabyte (MB) Apple Inline Cache (level 2).
- The Power Macintosh 9600/350 processor card contains a 350 MHz PowerPC 604e processor (with a built-in floating-point unit) and a 1 MB Apple Inline Cache (level 2).
- 100 MHz cache bus
- 50 MHz system bus

Memory

- 64 MB of dynamic random-access memory (DRAM), supplied in removable Dual Inline Memory Modules (DIMMs), with capacity to support expansion to a maximum of 768 MB
- 8 MB of video RAM (VRAM) on the optional video card
- 4 MB of read-only memory (ROM)
- 8 kilobytes (KB) of nonvolatile parameter memory
- 1 MB of static random-access memory (SRAM) used as an Apple Inline Cache. (The cache size is not expandable because the RAM is soldered to the processor card.)

For more information and instructions on expanding your DRAM, see Chapter 8, “Installing PCI Expansion Cards and Additional Memory,” in your *Power Macintosh User’s Manual*.

Optional video card

You can use most multiple-scan (multisynchronous) monitors with the video card. The following Apple monitors are compatible:

- Apple Multiple Scan 14, 15, 15AV, 17, 1705, and 20 Displays
- AppleVision 850, 850AV, 1710, and 1710AV Displays
- Macintosh Color Display (14")

Note: On some monitors from manufacturers other than Apple, the connector pinout designates one pin for both green video and timing synchronization. These “sync on green” monitors are not compatible. If you’re not sure what type of monitor you have, check with your dealer.

You can use the Monitors & Sound control panel or the Control Strip to set a video mode that is supported by both your monitor and the video card. Refer to the manual that came with your monitor for a list of video modes that it supports. The video card supports the video modes listed in the table below.

Resolution	Color depths*	Vertical refresh rate (Hz)
512 x 384	256, Thousands, or Millions	60
640 x 480	256, Thousands, or Millions	60 or 67
640 x 870	256, Thousands, or Millions	75
800 x 600	256, Thousands, or Millions	60, 72, 75, or 85
832 x 624	256, Thousands, or Millions	75
1024 x 768	256, Thousands, or Millions	60, 70, 75, or 85
1152 x 870	256, Thousands, or Millions	75
1280 x 960	256, Thousands, or Millions	60, 75, or 85
1280 x 1024	256, Thousands, or Millions	60, 75, or 85
1600 x 1200	256, Thousands, or Millions	60, 65, or 75

* 256=8-bit color depth, thousands=16-bit color depth, millions=32-bit color depth

The video card includes 8 MB of VRAM; it cannot be expanded with more VRAM.



Internal disk drives

The following drives were installed in your computer at the factory:

- Apple SuperDrive 1.4 MB high-density floppy disk drive
- Apple SCSI hard disk drive (“Fast” SCSI-2)
- 24x-speed CD-ROM drive
- Optional Zip disk drive (removable media)

For more information about “Fast” SCSI-2, see “SCSI Interfaces” later in this booklet.

Clock/calendar

- CMOS custom circuitry with long-life battery



WARNING If the clock begins to lose accuracy, see an Apple-authorized dealer or service provider for a battery replacement. Do not attempt to replace the clock battery yourself.

Keyboard

- Supports all Apple Desktop Bus (ADB) keyboards

Mouse

- Supports all models of the ADB mouse

Interfaces

- One ADB port supports up to three ADB input devices (such as a keyboard, mouse, and trackball) daisy-chained through a low-speed, synchronous serial bus
- Monitor port supplied by the optional video card supports color and grayscale monitors of various sizes and resolutions. (See “Optional Video Card” earlier in this booklet.)
- Six internal expansion slots support peripheral component interconnect (PCI) expansion cards. Install only expansion cards that come with Macintosh drivers and are compliant with the PCI 2.0 standard. (If you have the optional video card installed, it is in one of your PCI slots.) NuBus™ cards cannot be used in these expansion slots.
- One printer port and one modem port. Both ports are RS-232/RS-422 serial ports, 230.4 Kbit per second maximum (up to 2.048 Mbit per second if clocked externally), and are compatible with GeoPort devices such as the GeoPort Telecom Adapter.
- One built-in 10Base-T Ethernet connector for direct connection to 10Base-T networks. (If both AAUI and 10Base-T connectors are plugged in, the computer uses the 10Base-T connector by default.)
- One built-in AAUI Ethernet connector for connecting to high-speed Ethernet networks. Requires the appropriate AAUI transceiver adapter (10Base-T, thin coaxial, or thick coaxial).
- One 3.5-mm sound output port for headphones or line-level devices
- One 3.5-mm sound input port for stereo sound input. The sound input port supports the Apple PlainTalk Microphone that comes with some Macintosh computers. The sound input port also supports a standard stereo (miniplug-to-RCA) cable adapter for connecting stereo equipment to your computer.

The sound input port does not support the omnidirectional microphone (the round microphone shipped with some earlier models of Macintosh) or the attenuated RCA adapter provided with some Macintosh models.

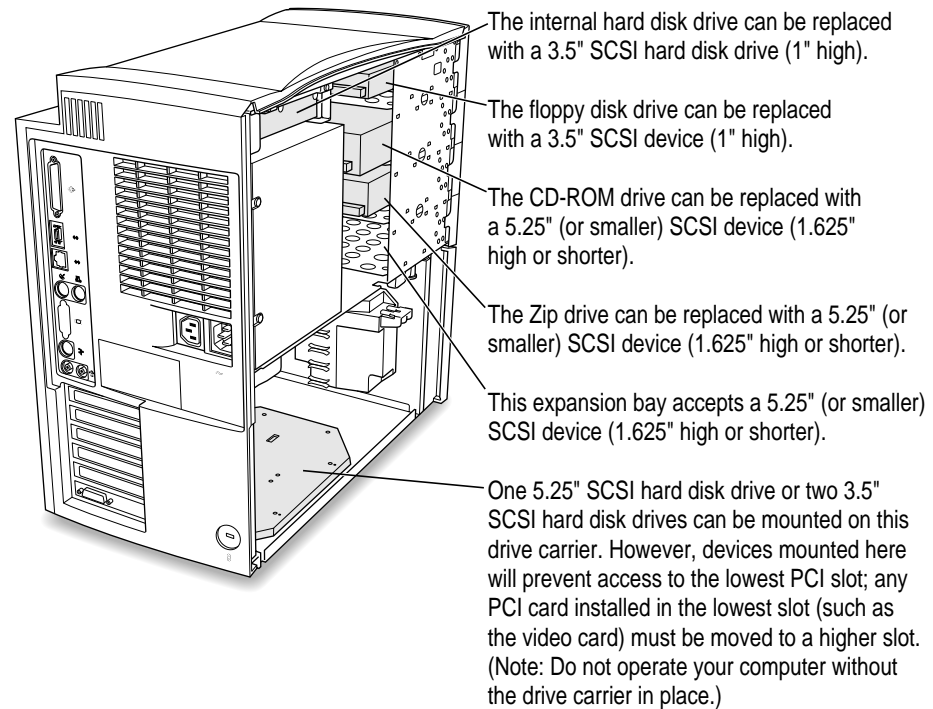
SCSI interfaces

Your computer has two SCSI interfaces:

- an external standard SCSI-2 chain
- an internal “Fast” SCSI-2 chain

The external SCSI chain supports up to seven external SCSI devices. For information on connecting external SCSI devices to your Macintosh, see your *Power Macintosh User’s Manual*.

The internal SCSI chain supports the internal hard disk, CD-ROM drive, and Zip drive. An Apple-authorized dealer or service provider can connect up to seven SCSI devices to the internal SCSI chain. The illustration below shows all of the internal expansion options.



The internal SCSI chain supports “Fast” SCSI-2, which can transfer data at up to 10 MB per second (twice the rate of the external standard SCSI-2 chain). If you obtain a SCSI device that supports “Fast” SCSI-2, you should receive faster performance if it is connected to the internal SCSI chain.

All devices on the same SCSI chain must have unique ID numbers, but devices on different SCSI chains may use the same SCSI ID number. (For example, you could have a CD-ROM drive with ID number 3 connected to the internal SCSI chain and a tape drive with ID number 3 connected to the external SCSI chain.)

The drives that were installed in your computer at the factory, as well as the computer itself, have already reserved certain SCSI ID numbers. Other ID numbers are available for assignment to SCSI devices that are added after you buy your computer, as described in the following table.

SCSI chain	SCSI ID number	Device
Internal	0	Factory-installed hard disk (terminated)
	1	Available
	2	Available
	3	Factory-installed CD-ROM drive
	4	Available
	5	Factory-installed Zip drive
	6	Available
	7	Power Macintosh computer (terminated)
External	0	Available
	1	Available
	2	Available
	3	Available
	4	Available
	5	Available
	6	Available
	7	Power Macintosh computer (terminated)

IMPORTANT The factory-installed internal hard disk and the Power Macintosh computer are both terminated. Other SCSI devices attached to the internal SCSI interface must not be terminated. If you attach a terminated device to the internal SCSI interface, damage to the computer's main logic board can occur.

IMPORTANT Some older SCSI devices may require updated drivers. (A “driver” is special software that is installed in your System Folder.) Contact the device manufacturer for information on obtaining driver software.

Audio system

- Custom sound circuitry, including a stereo generator (digital-to-analog converter, or DAC)—capable of driving stereo miniplug headphones or audio equipment—and stereo sampling hardware (analog-to-digital converter, or ADC) for recording stereo sound
- 16-bit stereo input and output
- Sample rates of 44.1 and 22.05 kilohertz (kHz)

Typical specifications

- Sound input connector line level: 2.8 volts peak-to-peak (V_{pp}) nominal, into 6.5-kilohm (k Ω) impedance
- Sound output connector line level: 3.0 V_{pp} nominal, into 1-k Ω impedance
- Sound input signal-to-noise ratio (SNR): greater than (>) 74 decibels (dB) non-weighted
- Sound output SNR: > 82 dB non-weighted
- Frequency response: 20 hertz (Hz) to 17 kHz (+/- 0.8 dB) at 44.100-kHz sample rate; 20 Hz to 19 kHz (+/- 2.0 dB) at 44.100-kHz sample rate
- Total harmonic distortion plus noise (THD + N): Less than (<) 0.05 %; measured 20 Hz to 20 kHz with a 2.5-V_{pp} sine wave input

AC line input

- Line voltage: 100–120 volts (V) and 220–240 V alternating current (AC), RMS single phase
- Frequency: 50–60 Hz
- Power: 461 watts (W) maximum continuous; 572 W peak input

AC line output

- Output receptacle: 100–120 V, 3 amperes (A) AC, 220–240 V, 1.5 A AC RMS (determined by actual input voltage); 3 A maximum at 100 V

DC power

- Continuous output power: 300 W
- Peak output power (for 12 seconds at startup): 389 W

Output voltage	Maximum output current*
+5 V	31 A [†]
+3.3 V	32 A [†]
+12 V	2 A
-12 V	0.85 A
+5 V (trickle)	0.1 A
.....	
+5 V (drives)	5.5 A
+12 V (drives)	6.7 A

*Total power output cannot exceed 300 W continuous.

[†]Total combined current in 5 V and 3.3 V outputs cannot exceed 36.5 A.



Power requirements for devices you can connect

Apple Desktop Bus (ADB)

- The mouse draws up to 10 milliamperes (mA).
- The keyboard draws 25–80 mA (varies with keyboard model used).
- The maximum current available for all ADB devices: 500 mA.

Note: The ADB port can support up to three daisy-chained ADB devices.

Audio and telecommunications devices

The following table shows power allowances for external devices connected to input ports.

Device	Voltage	Current	Power
Microphone	+5 V	20 mA	100 mW
A device connected to the printer port or modem port*	+5 V	500 mA	2.5 W

*Such as the GeoPort Telecom Adapter

Expansion cards and other internal devices

If you add an expansion card, a 5.25-inch storage device, or a 3.5-inch storage device to your computer, make sure the component's power requirements don't exceed the maximum power allowances allocated to it by the computer.

The maximum power allowances for expansion cards in your computer can accommodate six 15-watt or four 25-watt cards. Detailed guidelines are presented in the following table.

Device	Voltage	Current	Power
Expansion card (15 watts)*	+5 V	3 A	15 W
	+12 V	0.500 A	6 W
	-12 V	0.100 A	1.2 W
	+3.3 V	2 A	6.6 W
Expansion card (25 watts) [†]	+5 V	5 A	25 W
	+12 V	0.500 A	6 W
	-12 V	0.100 A	1.2 W
	+3.3 V	2 A	6.6 W
Storage device (such as a hard disk)	+5 V	9 A	45 W
	+12 V	3 A	36 W
	+12 V	7.5 A peak [‡]	—

*15-watt expansion cards should not consume more than 15 watts of total power.

[†]25-watt expansion cards should not consume more than 25 watts of total power.

[‡]Peak power is for startup only and must not occur in normal operation.



Size and weight

Weight	Height	Width	Depth
Main unit			
15.9 kg*	439 mm	246 mm	440 mm
35 lb.*	17.3 in.	9.7 in.	17.3 in.
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Mouse			
0.11 kg	33 mm	61 mm	107 mm
4 oz.	1.3 in.	2.4 in.	4.2 in.

*Weight varies depending on type of hard disk and may be greater if optional devices are installed.

Environment

Operating temperature

- 10° C to 40° C (50° F to 104° F)

Storage temperature

- -40° C to 47° C (-40° F to 116.6° F)

Relative humidity

- 5% to 95% (noncondensing)

Altitude

- 0 to 3048 m (0 to 10,000 ft.)

CD-ROM drive

Disc speed

- 24x (twenty-four times) maximum speed (constant 5135 RPM)

Disc diameters supported

- 120 mm (4.7 inches)
- 80 mm (3.2 inches)

Data capacity

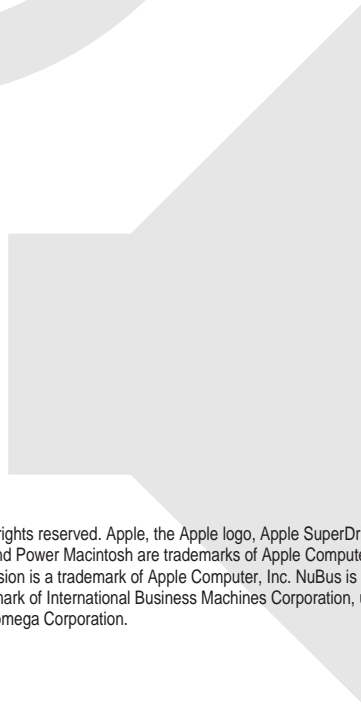
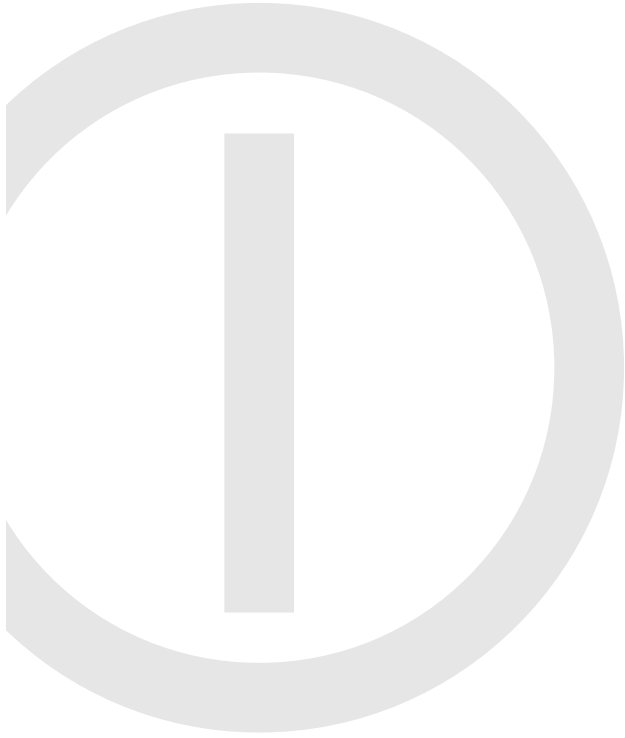
- 656 MB, Mode 1
- 748 MB, Mode 2

Modes supported

- Audio CD
- CD-ROM: Modes 1 and 2
- CD-ROM XA: Mode 2, Forms 1 and 2
- CD-I: Mode 2, Forms 1 and 2
- Photo CD: Single-session and multisession
- Video CD

Laser

- Type: Semiconductor GaAlAs laser
- Wavelength: 795 ± 25 nanometers
- Output power: 0.2 to 0.6 milliwatts
- Beam divergence: 55°



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The background features several large, light gray, abstract geometric shapes. On the left, a large shape resembles a stylized letter 'E' or a house-like structure. To its right, there are various curved and angular lines and shapes, including a horizontal bar with rounded ends, a wavy line, and a complex shape with rounded corners and a circular element, all contributing to a modern, technical aesthetic.

Technical Information

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Specifications for Power Macintosh 9600 series computers