



# Tech Info Library

## Power Macintosh 8500/120: Technical Specifications (9/96)

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Security: Everyone

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TOPIC -----

This article contains a list of technical specifications for the Power Macintosh 8500/120 computer.

DISCUSSION -----

### Upgradable Microprocessor

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- PowerPC 604 microprocessor running at 120 MHz, upgradable to 250 MHz processor when available
- Integrated floating-point unit, 32K cache, and three integer units
- High-speed system bus (up to 50 MHz)

### Memory

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- RAM: 16 MB of RAM, expandable to 512 MB via 8 DIMM sockets  
(Note: There is no RAM soldered to the logic board. The DIMM sizes installed at the factory will vary according to availability; there will be either two 8 MB DIMMs or one 16 MB DIMM. If you are installing more RAM, the DIMMs should be 64-bit-wide, 168-pin fast-paged mode, with 70-ns RAM access times or faster.)
- Standard Level 2 (L2) Cache: 256K L2 cache on a 160-pin DIMM  
(Theoretical support for up to 4 MB of L2 cache.)
- VRAM: DIMMs must be 32-bit-wide, 112-pin fast-paged mode with 70ns RAM access time or faster. Do not use the 256 K or 512 K VRAM SIMMs used in older Macintosh computers
- 4 MB of ROM

### Disk Drives

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- Internal 1 GB or 2 GB Fast SCSI hard disk
- Internal Apple SuperDrive floppy disk drive

- Accepts high-density 1.4 MB disks and 800K disks
- Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- Internal AppleCD 600i quadruple-speed CD-ROM drive
- Expansion bay for additional 3.5-inch hard disk

#### Interfaces

- Three PCI expansion slots compatible with PCI 2.0-compliant cards (Note: These slots are not NuBus-compatible)
- Two high-speed DMA serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables
- 10Base-T and AAUI-15 Ethernet connectors
- Internal Fast SCSI bus (up to 10 MB/s)
- External SCSI bus (up to 5 MB/s)
- Apple Desktop Bus (ADB) expansion port
- RCA phono jacks for line-level stereo audio input and output
- Mini jacks for stereo audio input and output
- All sound ports support 16-bit audio and up to 44.1-kHz sampling rate
- DB-15 connector for monitor
- Composite connectors (RCA phono jacks) for composite video input and output
- S-video input and output connectors
- Internal digital audio/video (DAV) connector for video compression/decompression cards

#### Audio System

- Custom sound circuitry, including 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)
- Sound input connector line level: 2.8 volts peak-to-peak (Vpp) nominal, into 3.0-kilohm (k ) impedance (minimum)
- RCA-type input connector line level: 2.4 Vpp nominal, into 13.5-k impedance (minimum)
- Sound output connector line level: 2.7 Vpp nominal, into 32-k impedance
- RCA-type output connector level: 2.9 Vpp nominal into 2-k impedance (minimum)
- Sound input signal-to-noise ratio (SNR): >83 decibels (dB) A-weighted with no audible discrete tones
- RCA-type input SNR: >77 dB A-weighted with no audible discrete tones
- Sound output SNR: >84 dB A-weighted with no audible discrete tones
- RCA-type output SNR: >84 dB A-weighted with no audible discrete tones
- Bandwidth: 10 Hz to 18 kHz (+0.1 dB, -3.0 dB) at 44.1-kHz sample rate
- RCA-type input total harmonic distortion plus noise (THD + N): less than 0.018 percent A-weighted; measured 10 Hz to 30 kHz with a 2.4-Vpp sine wave input

#### Video Input/Output Subsystem

- 24-bit video input

- Real-time video playthrough of up to 640 by 480 pixels with NTSC;  
768 by 576 pixels with PAL and SECAM
- Up to 320- by 240-pixel capture at 25 frames per second with  
NTSC (with 2 GB drive)
- Maximum capture size of 640 by 480 pixels with NTSC
- 24-bit video output
  - Support for NTSC and PAL
  - Convolution for flicker reduction at all bit depths

#### Graphics Support

- 2 MB of VRAM, expandable to 4 MB
- Fast 64-bit data path to VRAM
- Support for display resolutions of up to 1,280 by 1,024 pixels
- 24-bit color up to 1,152- by 870-pixel resolution
- Refresh rate of up to 75 Hz

#### GeoPort Telephony\*

- 14.4-Kbit/s modem support
- V.17 fax support
- GeoPort Fax and GeoPort Telephony software included
- Speakerphone and answering-machine capability

\* Note: Requires GeoPort Telecom Adapter

#### Clock/Calendar

- Custom integrated circuit with long-life battery

#### Keyboard And Mouse

- Supports ADB keyboards with numeric keypads
- Comes with an ADB Mouse II

#### Electrical Requirements And Compliance

- Line voltage: 100 to 240 V AC, RMS single phase, automatically configured
- Frequency: 50 to 60 Hz, single phase
- Power: 225 W maximum, not including display

#### ADB Power Requirements

- Maximum current draw for all devices: 500 mA  
(a maximum of three ADB devices is recommended)
- Mouse draws 10 mA
- Keyboard draws 25 to 80 mA (varies with keyboard used)

#### Size And Weight

- Height: 14 in. (35.6 cm)
- Width: 7.7 in. (19.6 cm)
- Depth: 15.75 in. (40.0 cm)

- Weight: 25 lb. (11.3 kg)

#### Operating Environment

- Operating temperature: 50 degrees to 104 degrees F  
(10 degrees to 40 degrees C)
- Storage temperature: -40 degrees to 116 degrees F  
(-40 degrees to 47 degrees C)
- Relative humidity: 5% to 95% noncondensing
- Maximum altitude: 10,000 ft. (3,048 m)

#### Article Change History:

- 18 Sep 1996 - Updated speed of processor card support.
- 17 Sep 1996 - Clarified energy information.
- 12 Jul 1996 - Modified title.

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