



# Macintosh PowerBook Peripheral Products

## Technical Specifications: Macintosh PowerBook Fax/Data Modem

Fax compatibility  
> Group 3

Data communications standards  
> 110 to 300 bps      Bell 103  
> 1200 bps            Bell 212A  
> 1200 bps            CCITT V.22  
> 2400 bps            CCITT V.22bis  
> 110 to 300 bps      CCITT V.21

Fax communication standards  
> 2400 to 4800 bps    CCITT V.27ter  
> 7200 to 9600 bps    CCITT V.29

Error control  
> MNP Class 4  
> CCITT V.42

Data compression  
> MNP Class 5  
> CCITT V.42bis

Transmission speeds  
> 2400 bps, 1200 bps, 300 bps

Dialing capability  
> Tone/pulse dialing

Operating modes  
> Auto or manual dial  
> Auto or manual answer

Data format  
> Protocol: Serial, binary, asynchronous  
> Character length: 7 or 8 bits; 1 or 2 stop bits  
> Parity: Odd, even, mark, space, or no parity

Data transmission mode  
> Full duplex  
> Asynchronous

Fax transmission mode  
> Half duplex

Command set  
> Extended Hayes AT command set

Electrical requirements  
> Line voltage: 110 to 220 volts  
> Frequency: 50 to 60 hertz

Environmental requirements  
> Operating temperature: -58° F to 50° F  
(-50° C to 10° C)  
> Relative humidity: 95% maximum, non-condensing; optimal humidity range is 0 to 75%.

## Technical Specifications: Macintosh HDI-20 External 1.4MB Floppy Disk Drive

Recording media  
> Disk diameter: 3.5 in. (9.0 cm)  
> Recording surfaces: 2  
> Tracks per inch: 135 (5.31 tracks per millimeter)

Capacity  
> Formatted data capacity: 1.4 MB (MFM), 800 KB (GCR), 720 KB (MFMM)  
> Unformatted data capacity: 1 or 2 megabytes

Drive characteristics  
> Seek time (track to track): 3 milliseconds  
> Settle time: 18 milliseconds  
> Drive start-up time: 800 milliseconds maximum

Head position accuracy  
> ±30 micrometers

Interfaces  
> Connects directly to the Macintosh PowerBook 100 via the HDI-20 floppy disk drive port.

Environmental requirements  
> Operating temperature: 50° F to 122° F  
(10° C to 50° C)  
> Storage temperature: -40° F to 140° F  
(-40° C to 60° C) non-condensing  
> Relative humidity: 5% to 90% (with a maximum wet bulb temperature of 82° F/29° C)



# Macintosh PowerBook Peripheral Products

Apple Macintosh PowerBook peripheral products offer several important ways to enhance the performance and flexibility of your PowerBook system.

Macintosh PowerBook memory expansion kits give you a convenient way to increase system memory so you can work with advanced Macintosh applications or large spreadsheets, scanned images, and soundfiles.

The Macintosh PowerBook Fax/Data Modem is an excellent enhancement for Macintosh PowerBook personal computer users who want to exchange information with other computers as well as send facsimile transmissions.

The Macintosh HDI-20 External 1.4 MB Floppy Disk Drive gives users of Macintosh PowerBook 100 personal computers convenient, affordable access to high-capacity disk storage.

The Apple HDI-30 SCSI Disk Adapter allows you to use a Macintosh PowerBook 100 personal computer as an external hard disk with another Macintosh system.

Add several power supply products--such as Macintosh PowerBook batteries, battery rechargers, and an AC adapter--and you have a complete notebook solution for all your computing needs.

## Product Description & Ordering Information

Macintosh PowerBook  
2MB and 4MB Memory Expansion Kits  
Expand any Macintosh PowerBook personal computer to a system with up to 6 megabytes of RAM. Dealer installation is required.

Macintosh PowerBook  
2MB Memory Expansion Kit  
Order No. M1032LL/A

Macintosh PowerBook  
4MB Memory Expansion Kit  
Order No. M1033LL/A

Macintosh HDI-20 External  
1.4 MB Floppy Disk Drive  
This specially designed, low-power external disk drive gives users of Macintosh PowerBook 100 personal computers direct access to 400K, 800K, and 1.4-megabyte Macintosh and DOS-formatted disks. It plugs directly into the floppy disk drive port of the computer.  
Order No. M8061LL/A

Macintosh PowerBook 140/170  
Battery Recharger  
Recharge one or two nickel-cadmium batteries for the PowerBook 140 or PowerBook 170 personal computer to full power in just a few hours. An AC adapter (M1058LL/A) is required.  
Order No. M1027LL/A

Macintosh PowerBook 100  
Battery Recharger  
Reuse the sealed lead-acid battery in your Macintosh PowerBook 100 personal computer by recharging it to full power in a few hours. Charge two batteries at once. An AC Adapter (M1058LL/A) is required.  
Order No. M5130LL/A

Macintosh PowerBook 140/170  
Rechargeable Battery  
This nickel-cadmium battery provides 2 to 3 hours of usage for the PowerBook 140 and PowerBook 170 notebook computers before it needs recharging, and it can be recharged hundreds of times before it needs replacing.  
Order No. M5545LL/A

Macintosh PowerBook 100  
Rechargeable Battery  
This sealed lead-acid battery provides 2 to 4 hours of usage for the PowerBook 100 notebook computer and can be fully recharged hundreds of times before it needs replacing.  
Order No. M1183LL/A

Macintosh PowerBook AC Adapter  
Use the AC Adapter to recharge batteries without having to unplug and remove the computer's adapter. Additional adapters also make it easy to use a PowerBook computer at different locations. Can be used in any country without transformers; needs just a simple plug adapter.  
Order No. M1058LL/A

Macintosh PowerBook  
Fax/Data Modem  
Communicate with any standard data modem operating at 2400, 1200, or 300 baud, and send faxes at 9600 baud. This special, low-power modem fits inside the PowerBook 100, 140, and 170, and can operate unattended so you can receive files even while away from the computer. Two versions are available: one for use in the U.S., Canada, and Japan, and one for use in Europe, Australia, and some South American countries. Dealer installation is required.

Macintosh PowerBook Fax/Data Modem  
(U.S., Canada, Japan)  
Order No. M0970LL/A

Macintosh PowerBook Fax/Data Modem  
(Europe, Australia, some South American countries)  
Order No. M0980\*\*/A

Apple HDI-30 SCSI Disk Adapter  
Use your PowerBook 100 personal computer as the external hard disk with another Macintosh system, for high-speed file transfer or system recovery.  
Order No. M2539LL/A

Apple HDI-30 SCSI System Cable  
Use the HDI-30 SCSI System Cable to connect a PowerBook 100, 140, or 170 to any SCSI peripheral device, such as a CD-ROM drive, scanner, tape backup, or hard disk. Up to 5 SCSI devices can be connected to the PowerBook at once, allowing a total of seven devices on the SCSI chain.  
Order No. M2538LL/A