



Technical Information

Specifications for
Macintosh PowerBook G3 Series computers

Main Unit

Processor

PowerPC™ G3 processor with a minimum of 233 megahertz (MHz). To find out the exact speed of your PowerPC G3 processor, use Apple System Profiler, available in the Apple (🍏) menu.

Memory

The computer comes with either 32 megabytes (MB) or 64 MB of Synchronous Dynamic Random-Access Memory (SDRAM) supplied in a removable Small Outline Dual Inline Memory Module (SO-DIMM) on the bottom portion of the system module (not accessible by the user). The top portion of the system module has one user-accessible expansion slot that can accept SDRAM modules in SO-DIMM format that meet the following specifications:

- 16, 32, 64, or 128 MB
- 144-pin

Note: Depending on the amount of memory that came with your PowerBook, the expansion slot may already be filled. To find out the amount of memory in your PowerBook, use Apple System Profiler, available in the Apple (🍏) menu.

Additional RAM cards are available from any Apple-authorized dealer. To increase your PowerBook memory to the maximum of 192 MB, a 128 MB DIMM needs to be installed in the user-accessible expansion slot and a 64 MB DIMM needs to be installed in the slot on the other side of the system module.

Important A DIMM in the slot on the bottom portion of the system module must be installed or removed by an Apple-authorized service provider.

Video Display and Video Memory

Built-in display with one of the following configurations:

Display size	Display type	Video memory	Maximum color depth (number of colors on screen)
12.1" diagonal	800 x 600 active matrix ¹	2 MB	24 bits per pixel (millions)
14.1" diagonal	1024 x 768 active matrix ²	4 MB	24 bits per pixel (millions)

¹ The 800 x 600 display also supports 640 x 480 in scaled resolution mode.

² The 1024 x 768 display also supports 800 x 600 or 640 x 480 in scaled resolution mode.

Note: You can increase the size of images on your built-in display by switching from the standard resolution to a scaled resolution. Scaled resolutions may not appear as sharp as the standard display resolution. For instructions on changing display resolutions, see the online help, available in the Help menu.

External Monitor Support

2 MB or 4 MB of video memory (SGRAM) for up to 24 bits per pixel (bpp) resolution on an external monitor.

The following chart shows the maximum number of colors that can be displayed on an external monitor, based on the amount of video memory and the monitor resolution selected. (Not all monitors are capable of displaying all of the resolutions listed in this table.)

Resolution	Maximum color depth (number of colors)	
	12.1" display 2 MB video memory	14.1" display 4 MB video memory
512 x 384	24 bpp (millions)	24 bpp (millions)
640 x 480	24 bpp (millions)	24 bpp (millions)
800 x 600 ¹	24 bpp (millions)	24 bpp (millions)
832 x 624	16 bpp (thousands)	24 bpp (millions)
1024 x 768 ²	16 bpp (thousands)	24 bpp (millions)
1152 x 870	8 bpp (256)	24 bpp (millions)
1280 x 960	8 bpp (256)	16 bpp (thousands)
1280 x 1024	8 bpp (256)	16 bpp (thousands)

¹ Simulscan ("video mirroring") for 800 x 600 active matrix displays.

² Simulscan ("video mirroring") for 1024 x 768 active matrix displays.

Important Video mirroring works only with the PowerBook display's standard resolution. For example, when the 12.1" display is set to its standard resolution (800 x 600) or the 14.1" display is set to its standard resolution (1024 x 768), the display can mirror the external monitor. However, if you switch the resolution to 640 x 480, the built-in display will go dark because scaled resolutions cannot be used for video mirroring.

TV Out Support

TV out for video display and recording using S-video or composite formats. (Composite video requires the composite to S-video adapter included with the computer.)

The following resolutions are supported:

- 512 x 384, 60 hertz (Hz) (NTSC)
- 640 x 480, 60 Hz (NTSC)
- 800 x 600, 60 Hz (NTSC)
- 512 x 384, 50 Hz (PAL)
- 640 x 480, 50 Hz (PAL)
- 800 x 600, 50 Hz (PAL)
- 832 x 624, 50 Hz (PAL)

Note: The preferred resolutions for video display on most devices are 640 x 480, 60 Hz for NTSC systems and 640 x 480, 50 Hz for PAL systems.

Internal Hard Disk

- 2 gigabyte (GB) or larger internal hard disk drive
Some models come with larger hard disks. To find out the size of your hard disk, use Apple System Profiler, available in the Apple (🍏) menu.

Removable Expansion Bay Modules

- CD-ROM drive expansion bay module (included with some models)
 - 20x speed (maximum)
 - for use in the right expansion bay only
- DVD-ROM drive expansion bay module (included with some models)
 - 1.5x speed when reading DVD-ROM discs
 - 12x speed (maximum) when reading CD-ROM discs
 - for use in the right expansion bay only
- Optional 1.44 MB floppy disk drive expansion bay module reads and writes Macintosh 800K and 1.4 MB floppy disks, as well as Windows, DOS, and OS/2 720K and 1.44 MB floppy disks.

Battery

Rechargeable 49 watt-hour lithium ion (LiIon) battery provides 2–4 hours of operation, depending on battery-saving features used and PowerBook configuration.

Backup Battery

- 180 milliampere-hour (mAh) rechargeable lithium coin cell for calendar/clock maintenance (also backs up the contents of RAM while you quickly change batteries when your Macintosh PowerBook is in sleep mode).

Sound

- 16-bit stereo sound in and out, supporting 44.1 kilohertz (kHz) (CD quality sound), 22 kHz, and 11 kHz sample rates
- Two built-in stereo speakers at the top of the keyboard

Interfaces

- Two PC Card (PCMCIA and CardBus cards) slots support two Type I or Type II cards, or one Type III card. The lower slot also supports zoomed video cards.
- Two dual-function expansion bays accept removable expansion bay modules (1.44 MB floppy disk drive, CD-ROM drive, DVD-ROM drive, or other modules) or a PowerBook G3 Series battery.

Note: Larger 5.25-inch expansion bay modules such as the CD-ROM or DVD-ROM drive can only be placed in the right expansion bay. Smaller 3.5-inch expansion bay modules and PowerBook G3 Series batteries can be placed in either expansion bay.

- Built-in infrared support for two types of transmission—230 kilobit-per-second IRTalk and up to 4 megabit-per-second (Mbit) IrDA
- Ethernet port for connection to a standard (10 Mbit) Ethernet network
- Internal communications slot may be filled with an optional modem card.
- Apple Desktop Bus (ADB) port for keyboard, mouse, or other input devices using a low-speed, synchronous serial bus
- Serial port (RS-422) for printer, modem, LocalTalk network, or other Macintosh serial devices
- SCSI port (HDI-30 connector) for hard disk drives, scanners, printers, and other devices; also supports PowerBook SCSI disk mode
- Sound output port for external audio amplifier/powered speakers, stereo minijack, standard 3.5 mm stereo miniplug
- Sound input port for stereo sound input (line level), stereo minijack, standard 3.5 mm stereo miniplug. An Apple PlainTalk microphone can also be connected to the sound input port.
- Video port for up to 24-bit (millions of colors) video output to most Apple monitors (with the supplied adapter) and VGA monitors
- TV out support (S-video or composite) for video display and recording on NTSC and PAL compatible devices

Power Adapter

- *Input:* AC 100–240 volts (V), 50/60 hertz (Hz)
- *Output:* DC 24 V, 1.875 A nominally

Trackpad

- Integrated, solid-state trackpad provides precise cursor movement.

Weight

- Macintosh PowerBook G3 Series with a 12.1-inch display, battery, internal modem, and CD-ROM expansion bay module: 3.27 kg (7.2 lb.)
- Macintosh PowerBook G3 Series with a 14.1-inch display, battery, internal modem, and CD-ROM expansion bay module: 3.54 kg (7.8 lb.)

Dimensions

- 323 mm x 265 mm x 51 mm (12.7 in. x 10.4 in. x 2.0 in.)

Laser Information

DVD-ROM Drive (Some Models)

When reading DVD-ROM discs

- *Type:* Semiconductor laser GaAs
- *Wavelength:* 658 micrometers (μm)
- *Output power:* 6 milliwatts (mW)
- *Beam divergence:* 8.5° (horizontal) 27° (vertical)

When reading CD-ROM discs

- *Type:* Semiconductor laser GaAlAs
- *Wavelength:* 790 micrometers (μm)
- *Output power:* 3.3 milliwatts (mW)
- *Beam divergence:* 12° (horizontal) 35° (vertical)

CD-ROM Drive (Some Models)

- *Type:* Semiconductor laser GaAlAs
- *Wavelength:* 785 micrometers (μm)
- *Output power:* 4 milliwatts (mW)
- *Beam divergence:* 11° (horizontal) 37° (vertical)

Apple Desktop Bus (ADB) Power Requirements

- Maximum current draw for all ADB devices is 200 mA.

Note: The maximum number of ADB devices recommended in a daisy chain connected to the ADB port is three.

Microphone/Sound

- Omnidirectional internal microphone
- An external audio source that generates line-level output may be used with this PowerBook. To input sound from audio equipment with line-level output, you need the appropriate adapters, which are available from most electronics stores.
- The Apple PlainTalk microphone may be used with PowerBook G3 Series computers.
- The Apple Omni microphone is not compatible with this computer.

Environment

- *Operating temperature:* 10°C to 35°C (50°F to 95°F)
- *Storage temperature:* -25°C to 60°C (-13°F to 140°F)
- *Relative humidity:* 20% to 80% noncondensing
- *Operating altitude:* 3048 m (10,000 ft.) maximum
- *Shipping (non-operating) altitude:* 4572 m (15,000 ft.) maximum

Options and Accessories

The following are available as options and accessories for your Macintosh PowerBook computer. (Part numbers have additional letters at the end to indicate international versions; asterisks are placeholders for those letters.)

Important Always use the part number when ordering options or accessories for your PowerBook G3 Series computer. Options and accessories designed for other PowerBook computers with similar names may not be compatible with your computer.

Item	Part Number
PowerBook G3 Series Power Adapter	M6384**/A
PowerBook G3 Series Lithium-Ion Rechargeable Battery	M6385**/A
PowerBook G3 Series Floppy Disk Drive Expansion Bay Module	M6396**/A
Apple HDI-30 SCSI Disk Adapter for SCSI disk mode	M2539**/A
Apple SCSI Peripheral Interface Cable for SCSI to SCSI connection	M0207
Apple HDI-30 SCSI System Cable for PowerBook to SCSI connection	M2538**/A
DVD-Video Kit for the PowerBook G3 Series	M7164**/A

Internal Modem (Some Models)

The following specifications are for the optional PowerBook G3 Series internal modem.

Data communications standards	
56,000 bps	K56Flex V.90
33,600, 28,800, 26,400, 24,000, 21,600, 19,200, 16,800 bps	ITU V.34/V.FC
9600, 4800 bps	ITU V.32
2400 bps	ITU V.22 bis
1200 bps	Bell 212A
1200 bps	ITU V.22
1200/75 bps	ITU V.23
300 bps	ITU V.21
300 bps	Bell 103

Group 3 fax communication standards¹	
14,400, 12,000 bps	ITU V.17
9600, 7200 bps	ITU V.29
4800 bps	ITU V.27 ter
2400	ITU V.21

¹ EIA-578 Class 1 command interface for fax data transmission and reception

Miscellaneous specifications

AT command set	Extended Hayes AT command set
Error control	ITU V.42 (LAP-M) MNP Classes 2–4
Data compression	ITU V.42 bis
Data transmission and format	Full- or half-duplex operation Synchronous or asynchronous modes
Dialing capability	Tone or pulse dialing

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