



# Macintosh PowerBook G3 Series

At first glance, you'll be struck by the style of these computers. On closer examination, you'll find their advanced features and outstanding flexibility even more striking. Most impressive of all, though, is their performance. These innovative notebook systems outperform comparable Pentium and Pentium II processor-based notebook and desktop systems.\* Simply put, the Apple Macintosh PowerBook G3 Series sets new standards for portable design, performance, and value.

The Macintosh PowerBook G3 Series truly offers "something for everyone"—from creative professionals to educators and students to business professionals. Built around the high-performance PowerPC G3 processor with performance-boosting backside level 2 cache—the same innovative chip that sparked the success of Apple's current line of desktop systems—these notebook systems provide the power to handle even the most demanding tasks.

To complement their power, the PowerBook G3 notebook systems incorporate the impressive multimedia capabilities that are a must for today's educators and business professionals. And since Apple understands that individual needs are just that—individual—these systems offer flexible configuration options. Each system includes either a high-speed CD-ROM drive or a DVD-ROM drive for the latest storage technology. And with the DVD-Video PC Card that comes with the DVD-ROM drive, you can play the latest DVD movies. PowerBook G3 systems also include built-in video output, as well as S-video output for connecting to a TV.

The innovative design of these computers is as functional as it is attractive, with features such as two hot-swappable expansion bays for multiple storage options and lithium-ion batteries, and a flip-up keyboard for fast, easy access to memory expansion and the removable hard disk drive.

The PowerBook G3 systems' communications offerings include built-in Ethernet—a requirement in most educational environments as well as in business. And an internal 56-Kbps modem lets you tap into your organizational network or the Internet\*\*\*

The Macintosh PowerBook G3 Series: Truly versatile portable systems that give you unmatched performance, style, and capabilities to meet your needs at a price you can afford.



## Features

### Astounding performance

- Features the PowerPC G3 processor, for the fastest performance ever in a notebook computer
- Incorporates performance-boosting backside level 2 cache
- Uses SDRAM and SGRAM for the fastest memory architecture available
- Supports two lithium-ion batteries for up to 7 hours of normal use
- Offers flexible configuration options to meet your needs and your budget

### Advanced multimedia

- Features a high-quality 12.1- or 14.1-inch (diagonal) active-matrix (TFT) display
- Includes up to 4MB of video memory, for displaying millions of colors on an external monitor
- Provides resolution scaling and outstanding 2D/3D graphics acceleration through the integrated ATI RAGE LT PRO graphics controller
- Includes a high-speed CD-ROM drive or a DVD-ROM drive and DVD-Video PC Card for the latest breakthrough in storage and video playback
- Allows you to connect an external monitor, video projector, or TV

### Striking style

- Features an award-winning design that combines aesthetics and functionality
- Includes two expansion bays for a variety of storage and battery options
- Provides easy access to memory expansion and the removable hard disk drive through its flip-up keyboard
- Accommodates CardBus cards and PC Cards for additional networking, storage, dual-monitor support, and DVD-Video playback capabilities

### Integrated communications

- Includes built-in 10BASE-T Ethernet
- Includes internal modem that supports K56flex and V.90 standard
- Comes with built-in 4-Mbps IrDA technology for easy, wireless LAN access and file sharing

### Macintosh PowerBook

#### Performance Comparisons

Based on MacBench Processor Scores\*\*

<b>G3 Series at 300</b> with 1MB level 2 cache	1052
<b>G3 Series at 266</b> with 1MB level 2 cache	941
<b>G3 Series at 233</b> with 512K level 2 cache	764
G3 Series at 233 without level 2 cache	445
3400c/240	333
1400c/166	155

\*Based on BYTEmark integer index.

\*\*Based on Apple internal testing using MacBench 4.0 processor performance scores. Actual performance on applications will vary. MacBench is a subsystem-level benchmark that measures the relative performance of Mac OS-based systems.

\*\*\*Data speeds up to 56 Kbps, fax speeds up to 14.4 Kbps. Actual download speeds vary with line conditions and your Internet service provider's modem capabilities. FCC regulations limit ISP transmission speeds to 53 Kbps in the U.S.



# Macintosh PowerBook G3 Series

## Technical Specifications

---

### Processor and memory

- 233-, 266-, or 300-MHz PowerPC G3 processor
- Up to 1MB backside level 2 cache on processor module; 117-, 133-, or 150-MHz dedicated 64-bit backside bus
- 66-MHz system bus
- Integrated floating-point unit and 64K on-chip level 1 cache (32K data and 32K instruction)
- 32MB or 64MB of RAM (3.3-volt, unbuffered, 64-bit wide, 144-pin, running at more than 100 MHz, 10-nanosecond cycle time); two SO-DIMM slots support up to 192MB

### Storage

- Internal 2GB, 4GB, or 8GB IDE hard disk drive
- Two expansion bays for CD-ROM or DVD-ROM drive, optional floppy disk drive, and third-party storage solutions
- 20x-speed (maximum) CD-ROM drive for use in expansion bay\*
- 1.5x-speed (maximum) DVD-ROM drive for use in expansion bay; supports CD-ROM discs at up to 12x speed\*

### Interfaces

- Connectivity
  - Apple Desktop Bus (ADB) port
  - SCSI port for connecting as many as seven external devices
  - High-speed serial (RS-422) port compatible with LocalTalk cables
  - Power adapter port
- Communications
  - Built-in 10BASE-T Ethernet connector (10 Mbps)
  - RJ-11 modem port for K56flex and V.90 standard modem
  - Infrared technology port (4-Mbps IrDA)
- PC Card and CardBus expansion
  - Support for two Type I or Type II cards or one Type III card
  - Support for Zoomed Video PC Cards in the lower slot
- Video
  - S-video output port
  - 24-bit video output port (VGA-style connector)
- Sound
  - 16-bit CD-quality stereo input/output

### Video and graphics support

- 2MB or 4MB of SGRAM video memory supports millions of colors on up to 20-inch external displays
- Built-in 2D/3D graphics acceleration through an integrated ATI RAGE LT PRO graphics controller
- With Macintosh PowerBook DVD-Video PC Card (included with DVD-ROM drive), supports DVD-Video playback\*

### Display

- 12.1-inch (diagonal) built-in TFT SVGA active-matrix display; supports millions of colors at 800- by 600-pixel resolution; supports resolution scaling to 640- by 480-pixel resolution
- 14.1-inch (diagonal) built-in TFT XGA active-matrix display; supports millions of colors at 1,024- by 768-pixel resolution; supports resolution scaling to 640- by 480-pixel or 800- by 600-pixel resolution

### Sound

- Two built-in stereo speakers
- Internal omnidirectional microphone

### Battery

- 49-watt-hour lithium ion
- Provides up to 3.5 hours with one battery, and up to 7 hours with two batteries, based on normal use

### Security

- Kensington cable lock slot

### Keyboard

- Built-in full-size keyboard with 76 (U.S.) or 77 (ISO) keys, including 12 function keys, 4 arrow keys (inverted "T" arrangement), and embedded keypad

### Apple trackpad

- Solid-state Apple trackpad provides precise cursor control; supports tap, double-tap, and drag capabilities

### Electrical requirements

- Line voltage: 100 to 240 volts AC
- Frequency: 50 to 60 Hz

### Environmental requirements

- Operating temperature: 50° to 95° F (10° to 35° C)
- Storage temperature: -13° to 140° F (-25° to 60° C)
- Relative humidity: 20% to 80% noncondensing
- Operating altitude: 0 to 10,000 feet (0 to 3,048 m)
- Maximum storage altitude: 15,000 feet (4,572 m)

### Size and weight

- Width: 10.4 inches (26.4 cm)
- Height: 12.7 inches (32.3 cm)
- Depth: 2.0 inches (5.1 cm; 5.3 cm for the 14.1-inch model)
- Weight (varies by configuration; examples listed below include modem, battery, and CD-ROM module)
  - 12.1-inch model: 7.2 lb. (3.3 kg)
  - 14.1-inch model: 7.8 lb. (3.5 kg)

\*Available in some configurations; see Configurations chart for product details.



# Macintosh PowerBook G3 Series

## Ordering Information

For detailed information about currently available configurations, see the chart below. All models also include a built-in keyboard and trackpad; all necessary cables, such as an Ethernet cable, modem cable, power adapter, S-video to composite adapter, and VGA-to-Macintosh adapter; Mac OS 8.1 (which includes Internet access software); third-party software (FAXstf, Now Contact & Up•to•Date, and WebWhacker); complete setup, learning, and reference documentation; and limited warranty.

### Build-to-order (BTO) options

You can order a 14.1-inch-based custom-configured PowerBook computer from the online Apple Store. This allows you to select the processor speed, amount of RAM, hard disk drive capacity, modem, and expansion bay modules such as a floppy disk drive and an additional lithium-ion battery.

### For more information

For more information about these products, or to find out where to buy Apple products, visit [www.apple.com](http://www.apple.com) on the World Wide Web or call 1-800-538-9696. To purchase these products from the Apple Store, go to [www.apple.com/store](http://www.apple.com/store).

## Configurations

Macintosh PowerBook G3 computers



Order no.	M7229LL/A	M7109LL/A		
<b>Display</b>	12.1-inch TFT	14.1-inch TFT		
<b>Processor speed</b>	233 MHz	233 MHz		
<b>Backside level 2 cache</b>	512K	512K		
<b>Backside bus speed</b>	117 MHz	117 MHz		
<b>Memory (SDRAM)</b>	32MB	32MB		
<b>Video memory (SGRAM)</b>	2MB	4MB		
<b>Graphics controller</b>	ATI RAGE LT PRO	ATI RAGE LT PRO		
<b>System bus speed</b>	66 MHz	66 MHz		
<b>Hard disk drive</b>	2GB IDE drive	2GB IDE drive		
<b>CD-ROM drive module</b>	Yes	Yes		
<b>DVD-ROM drive with DVD-Video playback</b>	—	—		
<b>Ethernet</b>	Built-in 10BASE-T	Built-in 10BASE-T		
<b>Modem (supports K56flex and V.90)</b>	Yes	Yes		
<b>S-video output</b>	Yes	Yes		
Order no.	M7110LL/A	M7310LL/A	M7111LL/A	
<b>Display</b>	14.1-inch TFT	14.1-inch TFT	14.1-inch TFT	
<b>Processor speed</b>	266 MHz	300 MHz	300 MHz	
<b>Backside level 2 cache</b>	1MB	1MB	1MB	
<b>Backside bus speed</b>	133 MHz	150 MHz	150 MHz	
<b>Memory (SDRAM)</b>	64MB	64MB	64MB	
<b>Video memory (SGRAM)</b>	4MB	4MB	4MB	
<b>Graphics controller</b>	ATI RAGE LT PRO	ATI RAGE LT PRO	ATI RAGE LT PRO	
<b>System bus speed</b>	66 MHz	66 MHz	66 MHz	
<b>Hard disk drive</b>	4GB IDE drive	8GB IDE drive	8GB IDE drive	
<b>CD-ROM drive module</b>	Yes	Yes	—	
<b>DVD-ROM drive with DVD-Video playback</b>	—	—	Yes	
<b>Ethernet</b>	Built-in 10BASE-T	Built-in 10BASE-T	Built-in 10BASE-T	
<b>Modem (supports K56flex and V.90)</b>	Yes	Yes	Yes	
<b>S-video output</b>	Yes	Yes	Yes	

## Accessories

	Order no.
PowerBook G3 Series Power Adapter	M6384LL/A
PowerBook G3 Series Power Adapter (for Europe and U.K.)	M6548G/A
PowerBook G3 Series Lithium-ion Rechargeable Battery	M6385G/A
PowerBook G3 Series Floppy Disk Drive Expansion Bay Module	M6396G/A
Apple HDI-30 SCSI Disk Adapter for SCSI disk mode	M2539LL/A
Apple SCSI Peripheral Interface Cable for SCSI-to-SCSI connection	M0207
Apple HDI-30 SCSI System Cable for PowerBook-to-SCSI connection	M2538LL/A



# Macintosh PowerBook DVD-Video Kit





# Macintosh PowerBook DVD-Video Kit

## Features

### Complete DVD solution

- DVD-ROM drive (CD compatible)
- DVD-Video PC Card
- DVD Player software

### Stunning playback of digital movies

- Provides superb digital video and audio
- Lets you view movies on an external monitor or television

### Access to popular DVD and CD formats

- Lets you use CD-ROM, audio CD, Photo CD, CD-R, and CD-i discs in addition to DVD-ROM and DVD-Video discs
- Accesses CD-ROM discs at up to 12x speed and DVD discs at up to 1.5x speed

### Easy-to-use video control software

- Provides easy access to all DVD movie functions
- Lets you quickly select different audio tracks, movie formats, subtitles, or captions (when subtitles and captions are provided on the disc)
- Permits slow-motion, high-speed, and freeze-frame playback
- Supports the Motion Picture Association of America (MPAA) rating system for controlling access to viewing movies

Vivid digital video. Crystal-clear digital audio. Massive storage capacity for data and multimedia. The world is moving to DVD technology, and you can catch the excitement with the Macintosh PowerBook DVD-Video Kit.

Unlike consumer DVD players, this complete PowerBook-based solution retains your access to current CDs while adding DVD-ROM and DVD-Video capability. So you can enjoy today's hottest movies as well as multimedia titles, educational materials, games, and your other favorite discs.

The Macintosh PowerBook DVD-Video Kit contains a PowerBook G3 Series DVD-ROM Expansion Bay Module, a Macintosh PowerBook DVD-Video PC Card, and Apple DVD Player software. The DVD-ROM expansion bay module is an extremely versatile drive that can play CD-ROMs, audio CDs, and other types of CDs in addition to DVD discs. The PC Card adds the ability to play DVD movies (discs formatted to the DVD-Video specification). And the software provides an intuitive interface for easily controlling DVD movies.

Because the DVD-Video Kit is designed especially for Macintosh PowerBook G3 Series computers, you can enjoy the benefits of DVD and CD access wherever you are—such as on long airplane flights. If you're near a larger computer monitor or a TV, you can even view discs on one of those devices instead of on the built-in PowerBook display. Similarly, you can listen to movies on the stereo speakers built into your PowerBook, or connect the computer to an external stereo or Dolby Pro Logic surround sound system for an enhanced audio experience.

### A superior CD and DVD solution for every user

The Macintosh PowerBook DVD-Video Kit offers solid benefits for business, education, and home users.

The huge capacity of DVD discs makes them ideal for distributing massive amounts of business-related information. Comprehensive sales information including text, graphics, and videos of products in action could be put on a DVD disc for use by mobile personnel, giving them instant access to vital sales information wherever they are. For service and support organizations, a single DVD disc could potentially contain all relevant manuals with animations and videos of maintenance, diagnostic, and repair procedures. And because the Apple DVD drive can also play CDs, you'll retain access to your commercial and custom CD-based materials.

In education, the DVD-Video Kit will allow students and faculty to continue to enjoy CDs while adding exciting new capabilities, such as putting an entire curriculum on a single disc.



## Specification Sheet

### Macintosh PowerBook DVD-Video Kit

Home users will enjoy the superb video and audio of the movies now being released on DVD-Video discs. And as more educational and entertainment titles become available on DVD discs, you and your children will be able to view more exciting multimedia adventures than ever before.

#### **About DVD technology**

Whether you need the benefits of high-capacity DVD-ROM storage or want to enjoy your favorite DVD movies wherever you are, the Macintosh PowerBook DVD-Video Kit brings you the best of the exciting new DVD technology.

DVD (which stands for “digital video disc” or “digital versatile disc”) technology offers a dramatic increase in storage capacity over CD technology. In fact, a single DVD disc can hold the same amount of data that would fill as many as 25 CD-ROMs.

DVD-Video is the exciting offspring of the laserdisc format long favored by movie buffs, educators, and multimedia professionals. It makes it possible to put outstanding video and audio on discs the size of standard CD-ROMs. DVD-Video discs feature state-of-the-art MPEG-2–encoded video and Dolby Digital audio.

A DVD-Video disc not only can play back movies as a VCR does, but can also provide advanced features such as subtitles, captions, audio tracks in different languages, a director’s narration, multiple viewing angles, and scene preview functions. And different locations on a DVD movie disc can be accessed immediately, unlike with videotape.

Some DVD-Video discs even contain versions of the movie in both pan-and-scan (full screen) and letterbox (original theatrical aspect ratio) viewing formats. Some have a director’s cut version with footage not contained in the original theatrical release. On discs that support MPAA rating codes, parents and teachers can limit access to films at or below a certain rating.

#### **Apple DVD Player software**

Apple DVD Player software, based on Apple’s award-winning QuickTime 3 technology, gives you easy access to basic functions like start, stop, and play, in addition to advanced features such as progressive slow motion, step frame, language preferences, subtitles, and multiple-angle viewing. You can access these features via an intuitive, orb-shaped on-screen controller, menu commands, or keyboard shortcuts.

The Apple DVD Player also allows you to pick up right where you have left off in a movie if you need to take a break. Simply put your PowerBook into sleep mode or select Stop and then Quit from the DVD Player menu. You can even shut your system down. When you start the DVD Player later, just select Play and you’re right back at the scene where you left off.



## Specification Sheet

### Macintosh PowerBook DVD-Video Kit

## Technical Specifications

### PowerBook G3 Series DVD-ROM Expansion Bay Module

- Disc formats supported: DVD-ROM, DVD-Video, ISO-9660, CD-ROM, audio CD, Photo CD, CD-R, and CD-i
- Access speeds: CD-ROM discs at up to 12x speed, DVD discs at up to 1.5x speed

### Macintosh PowerBook DVD-Video PC Card

- Interface: 16-bit Type II Zoomed Video PC Card (placed in the lower PC Card slot)
- Power: 1.5W maximum, 3.3V
- Video decoding standard: MPEG-2
- Video format: NTSC or PAL interlaced
- Display output resolution: 720 by 480 pixels at 30 Hz
- Frame rate: 30 frames per second
- DVD compatibility: Universal Data Format (UDF) and ISO-9660
- Audio format: Dolby Digital 5.1 (AC-3) mixed to two-channel Dolby Pro Logic surround sound
- Audio output channels: Two

### Apple DVD Player software

- Information display options: Status, title number, chapter number, elapsed time, remaining time
- Forward playback speeds: 1/8, 1/4, 1/2, 1x, 2x, 8x, and freeze frame
- Backward playback speeds: 2x, 8x
- Disc access controls: Based on MPAA ratings (G, PG, PG-13, R, and NC-17)
- Copy protection controls: Content Scrambling System (CSS) disc authentication and Macrovision support
- DVD-Video disc region compatibility: Player's code is set to the region code of the first CSS-protected disc played; allows four code resets

### System requirements

To use the Macintosh PowerBook DVD-Video Kit, you need:

- A Macintosh PowerBook G3 Series computer
- At least 32MB of RAM
- Mac OS 8.1 or later
- QuickTime 3 software (automatically installed with Apple DVD Player software)
- One of the following display options:
  - PowerBook with built-in active-matrix TFT display\*
  - Monitor connected to the PowerBook VGA video output connector
  - NTSC- or PAL-compatible television with composite or S-video input. Connection to the PowerBook system is through the S-video output port on most models.

\*If you have a PowerBook G3 Series computer with a passive-matrix (STN) display, we recommend that you view DVD-Video discs on an external monitor.

## Ordering Information

### Macintosh PowerBook DVD-Video Kit

Order No. M7164LL/B

- PowerBook G3 Series DVD-ROM Expansion Bay Module
- Macintosh PowerBook DVD-Video PC Card for the PowerBook G3 Series
- Apple DVD Player software

## For More Information

For more information about this product, or to find out where to buy Apple products, visit [www.apple.com](http://www.apple.com) on the World Wide Web or call 1-800-538-9696. To purchase this product from the Apple Store, go to [www.apple.com/store](http://www.apple.com/store).

Apple stands behind its products with world-class service and support. Offering quality parts, extended hardware service options, phone support, and support via the Internet, we provide you with support choices that meet your needs. For more information, visit [www.apple.com/support](http://www.apple.com/support).

Apple Computer, Inc.

1 Infinite Loop  
Cupertino, CA 95014  
(408) 996-1010  
[www.apple.com](http://www.apple.com)