

Introducing the new 15-inch MacBook Pro.

New design. New features. New technologies. All engineered to standards that don't even exist yet.



Gallery



Precision aluminum unibody enclosure.

From one solid piece of aluminum comes a MacBook Pro that's thin and light, beautifully streamlined, and durable.

Ultrathin 15-inch LED-backlit display.

Seamless glass and instant full screen brightness make everything you see flat-out spectacular. Including the display itself.

High-performance NVIDIA graphics.

The GeForce 9600M GT delivers faster discrete graphics performance to high-end 3D games and pro applications.

All-new, smooth glass Multi-Touch trackpad.

It's redesigned with even more room for even more gestures. Now the entire glass trackpad is also the button, so it's clickable everywhere.





Redesigned. Reengineered. Re-everythinged.

To build something truly different, you need to work in a truly different way. Apple designers and engineers work together through every stage of product development. It's a partnership that makes innovation possible. And it's exactly how the new MacBook Pro was created. With its breakthrough unibody enclosure, industry-first features, and environmentally sound design, it's a revolution in the way notebooks are made.

Until now, all notebooks were designed the same way. By assembling multiple pieces to create a single enclosure. But once you include all the necessary parts, you add size, weight, complexity, and more opportunities for failure. Solving a problem like this required more than an incremental change. It required a breakthrough. To create the new MacBook Pro, the design and engineering teams devised a way to replace many parts with just one. That one part is called the unibody — a seamless enclosure carved from a single piece of aluminum.



Unibody Enclosure

The new MacBook Pro starts life as a single piece of aluminum.

Of course, building only one part creates its own set of challenges. When you have multiple parts that are fastened together, tolerances don't need to be perfect. You have wiggle room, both literally and figuratively. But when one part is responsible for many functions, it's critical to manufacture that part with absolute precision, down to the micron. Every time. Millions of times over. There was only one way to achieve this level of precision: mill the unibody from a solid block of aluminum using computer numerical control, or CNC, machines — the kind used by the aerospace industry to build mission-critical spacecraft components.

When you pick up a new MacBook Pro, you immediately notice the difference. The entire enclosure is thinner and lighter. It looks polished and refined. And it feels strong and durable — perfect for life inside (and outside) your briefcase or backpack.



Interactive Gallery

Explore all the design innovations of the new MacBook Pro. [View](#) ▶

The thickness of a notebook display depends on the technology inside. LCD displays typically use cold cathode fluorescent lamps, or CCFLs, to create light and project a picture onto a screen. But that poses two problems. First, these lamps require more space, so the display can be only so thin. Second, just like the fluorescent lights in your home or office, the ones inside a CCFL display take time to warm up before they reach full brightness. That's a lose-lose situation. And it's why Apple engineers chose LED backlight technology for the new MacBook Pro.

An LED backlight creates the same amount of brightness in less space. So you can make the structure that houses an LED display much thinner. And unlike fluorescent lamps, an LED backlight reaches maximum brightness instantly.



Look at the MacBook Pro display and you'll see another big difference. Glass. That edge-to-edge, uninterrupted glass display does more than look good. It also adds structure to the LED display beneath it. And there's no metal frame (another extraneous part) to distract you from what's onscreen.



Multi-Touch Trackpad

The spacious glass trackpad is also a button.

The new MacBook Pro trackpad has no button because it is the button. That means there's more room to track, more room to click — left, right, center, and everywhere in between — and one less part. Apple designers and engineers spent countless hours considering things like sensitivity (how much pressure triggers a click?), audio feedback (what does the click sound like?), and friction over the smooth glass surface (what does it feel like?).

And that's just the hardware. Apple software engineers had a large part to play in the development of the trackpad, too. They incorporated Multi-Touch gestures, including swipe, pinch, rotate, and the new four-finger swipe. The result is the largest, smartest, most ergonomic MacBook Pro trackpad ever. It's one of many details considered and reconsidered during the design process.

There's a story behind each part. Take the thumbscoop, for example. It's the indentation that allows you to open the display. If the scoop is too deep, you put too much pressure on the display to open it. If it's too shallow, you struggle to open the display. It may seem incidental, but if the thumbscoop is well designed, it makes the difference between a bad experience and a good one. The challenge of the thumbscoop was to create a crisply machined scoop that was still comfortable to use. The designers at Apple worked on hundreds of versions of the thumbscoop — even examining them under an electron microscope — to get it right.



Then there's the sleep indicator light. An indicator is functional only when it's indicating something. Look to the right of the thumbscoop. You see nothing. Until you close the display and your MacBook Pro goes to sleep. Then an LED glow appears from

inside the enclosure. How? During the CNC process, a machine first thins out the aluminum. Then a laser drill creates small perforations for the LED light to shine through. These holes are so tiny that the aluminum appears seamless when the light is off.

The marriage of electronics and mechanical design makes the new MacBook Pro as advanced on the inside as it is on the outside. The internal architecture has been reengineered from the silicon up. There's a new logic board. A new chipset. And a new graphics architecture — a feat of engineering in itself.

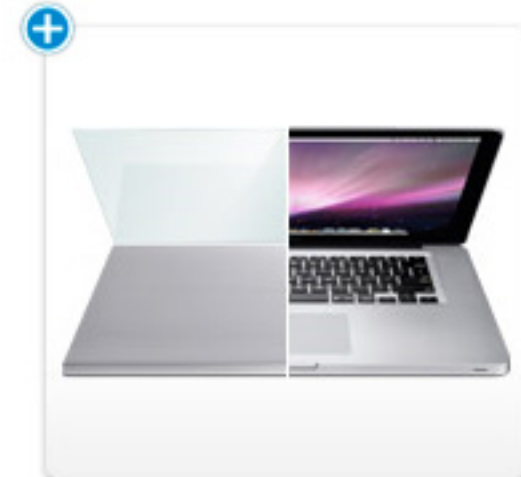
Many notebook computers sacrifice graphics performance in order to save battery life. The new MacBook Pro offers the best of both worlds, thanks to not one, but two separate graphics processors.

The GeForce 9600M GT processor is the discrete graphics powerhouse. The GeForce 9400M processor is the integrated power saver. And depending on how much performance or battery life you need, you can switch between them easily.

Because Apple designs both the hardware and the software for the new MacBook Pro, it's easier to improve things like energy efficiency. Software tells the hard drive to spin down when it's not in use. It tells the display and battery indicator lights to dim in low-light conditions. And it helps decide whether the CPU or the graphics processor would be best suited to the task at hand. That's the kind of smart, integrated design that sets MacBook Pro apart from other notebooks.

Top-to-bottom integration also makes MacBook Pro greener than other notebooks.

Complete control over how the new MacBook Pro is designed, how it's manufactured, and how it's packaged gives Apple an environmental edge. Take the MacBook Pro display, for instance. Conventional CCFL displays use mercury to create a backlight and arsenic to prevent irregularities in the glass. The LED-backlit display on the new MacBook Pro, on the other hand, is both mercury- and arsenic-free. LED backlight technology also conserves energy: This display requires 30 percent less power than a CCFL display.



A Greener Notebook

Made from recyclable aluminum and glass, the new MacBook Pro is greener than ever.

Mercury and arsenic aren't the only toxins absent from the new MacBook Pro. Many computer manufacturers have only pledged to eliminate polyvinyl chloride (PVC) and brominated flame retardants (BFRs) from their enclosures and circuit boards. Apple is removing not only PVC and BFRs, but all forms of bromine and chlorine throughout the entire MacBook Pro.

Just how green is the new MacBook Pro? It's ENERGY STAR compliant, which means it meets the government standard for energy efficiency. It's also earned EPEAT Gold status, the highest standard for environmental performance in the electronics industry. And every new MacBook Pro is shipped in packaging that's 37 percent smaller than any previous generation. That translates to fewer trees used for boxes and less fuel used to transport more MacBook Pros on fewer planes. And at the end of its long, productive life, you can recycle almost all of your MacBook Pro.

Only Apple could make a notebook like this. Hardware and software. Design and engineering. Production and manufacturing. They're all part of a single process at Apple. When you start using your new MacBook Pro, you'll discover what that means. The light and sturdy unibody protects the components inside. The LED-backlit display — along with the graphics processor that helps power it — gives you faster games and a brilliant canvas for your photos, movies, and more. The glass Multi-Touch trackpad feels as good as it functions. From the smallest detail to the biggest engineering breakthrough, the new MacBook Pro truly is the next generation of notebooks.

Precisions, precisions, precisions.

From the aluminum unibody to the LED-backlit display, MacBook Pro has been precision engineered down to the smallest detail.



Precision aluminum. The new gold standard.

Carved from a single block of aluminum, the new MacBook Pro unibody enclosure is slim and streamlined with a soft-brushed surface and stunning contours. But it's not all about beauty. The unibody also makes MacBook Pro more durable than ever. You can throw it in your briefcase or messenger bag and pull it out at an airport, in a hotel room, or on location without a second thought. So wherever you go, you have everything you need to edit, compose, design, and create.



Brilliant brilliance.

The moment you open your MacBook Pro you're greeted by glorious, full screen brightness. But that's only one gleaming quality of the glossy LED-backlit widescreen display. The picture is brilliant and sharp from corner to corner. And anything you view — including the ultrathin display itself — is a spectacular experience. The seamless glass enclosure makes this display stronger and more durable. It's more power efficient and mercury- and arsenic-free, so it's greener than ever.



Graphics in full force.

The new MacBook Pro reaches a new level of high-speed, high-end game-playing power. Not to mention pure performance for graphics-intensive applications like Aperture and Motion. Use the new NVIDIA GeForce 9400M integrated graphics processor for great everyday performance with up to five hours of battery life.¹ Or switch to the discrete NVIDIA 9600M GT graphics processor for the fastest, smoothest, clearest graphics yet.



Even the keyboard is advanced.


The rigid aluminum keyboard webbing has been cut precisely to hold the keys. And the keys are curved to perfectly fit fingers. The result? Pure typing bliss. The keyboard is also illuminated, so when you're in low-light settings, such as airplanes or conference rooms, you can always see what you're typing.

It all just clicks.

The first thing you might notice — or not notice — is the missing click button. Now the entire trackpad is the button, so you can click anywhere. Without a separate button, your hands have 39 percent more room to move on the large, silky glass surface. Use two fingers to scroll up and down a page. Pinch to zoom in and out. Rotate an image with your fingertips. Swipe with three fingers to flip through your photo libraries. Swipe with four fingers to show your desktop, view all open windows, or switch applications. If you're coming from a right-click world, you can right-click with two fingers or configure a right-click area on the trackpad. The more you use the Multi-Touch trackpad, the more you'll wonder what you ever did without it.



To stay smooth and pristine, the new Multi-Touch trackpad is made from wear-resistant etched glass.



All-new Multi-Touch trackpad

Multi-Touch comes to MacBook Pro in a spacious, silky-smooth trackpad that is also the button.

[Watch the video ▶](#)



Everything fits.

MacBook Pro has a hard drive up to 320GB² and up to 4GB of RAM. So there's plenty of room for your photo libraries, video projects, and files. With faster 1066MHz DDR3 memory, you can run more applications at once and instantly access even more of your stuff. Burn everything you watch, listen to, or create onto DVDs using the ultrafast 8x SuperDrive.



Ports with possibilities.

MacBook Pro is iPod, iPhone, digital camera, and external hard drive ready. If it has a cable, there's a place for it. You'll find two USB 2.0 ports and a FireWire 800 port for connecting faster peripherals. The Mini DisplayPort is a perfect fit for the new Apple LED Cinema Display. MacBook Pro even understands what you plug in, so you don't have to install new drivers.

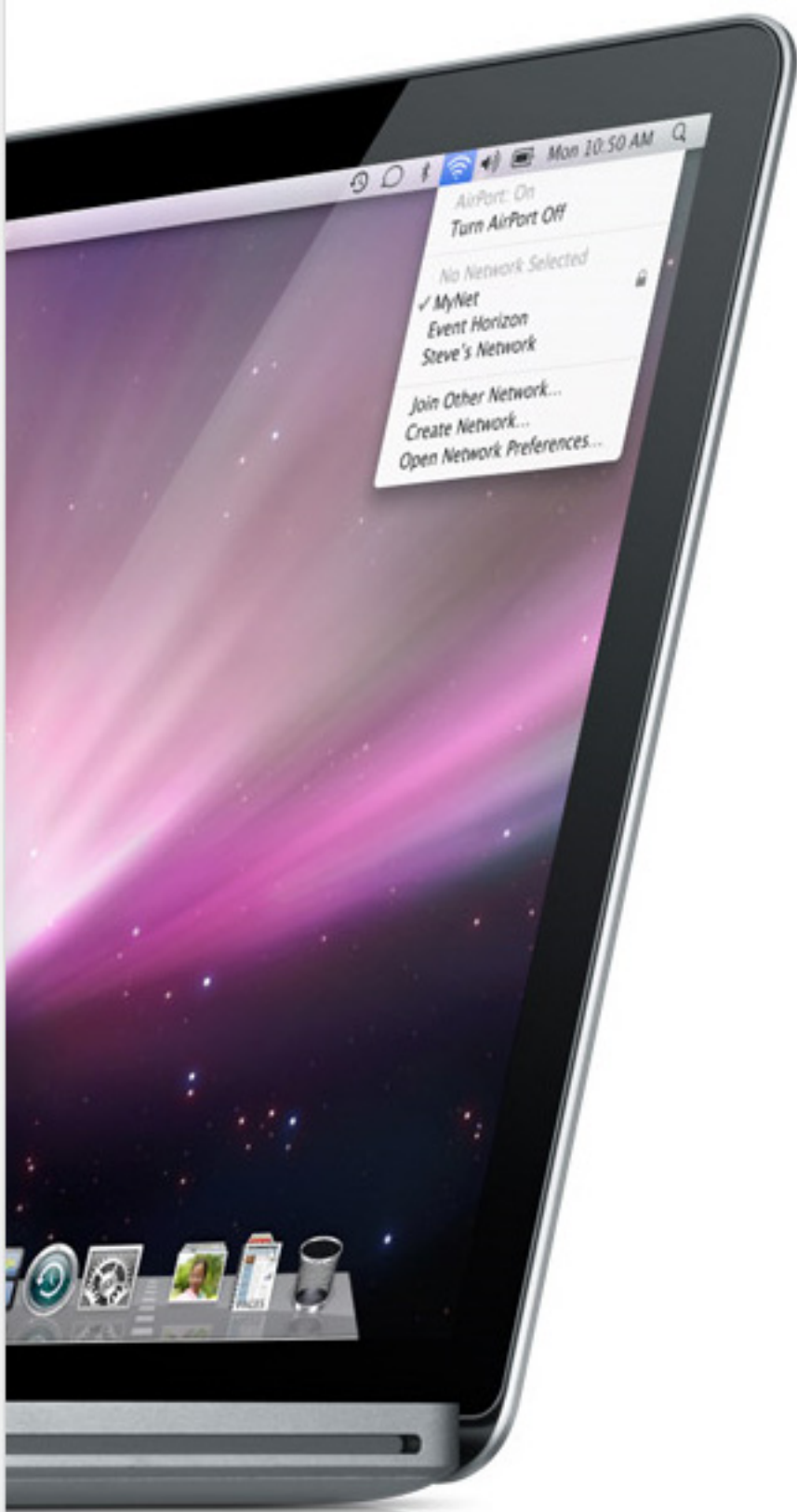


Think fast.

Inside the new MacBook Pro is the latest Intel Core 2 Duo processor running at speeds up to 2.8GHz. It's based on groundbreaking 45-nm process technology and advanced Core microarchitecture. With the 1066MHz frontside bus and up to 6MB of shared L2 cache, MacBook Pro runs applications faster and more efficiently than ever before.

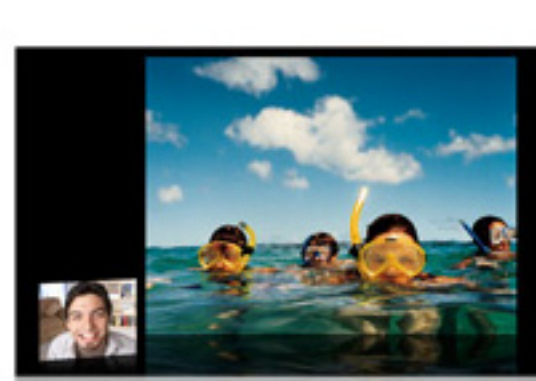


Gigabit Ethernet, FireWire 800, USB 2.0, Mini DisplayPort, Audio in, Audio out, ExpressCard/34, Battery indicator lights



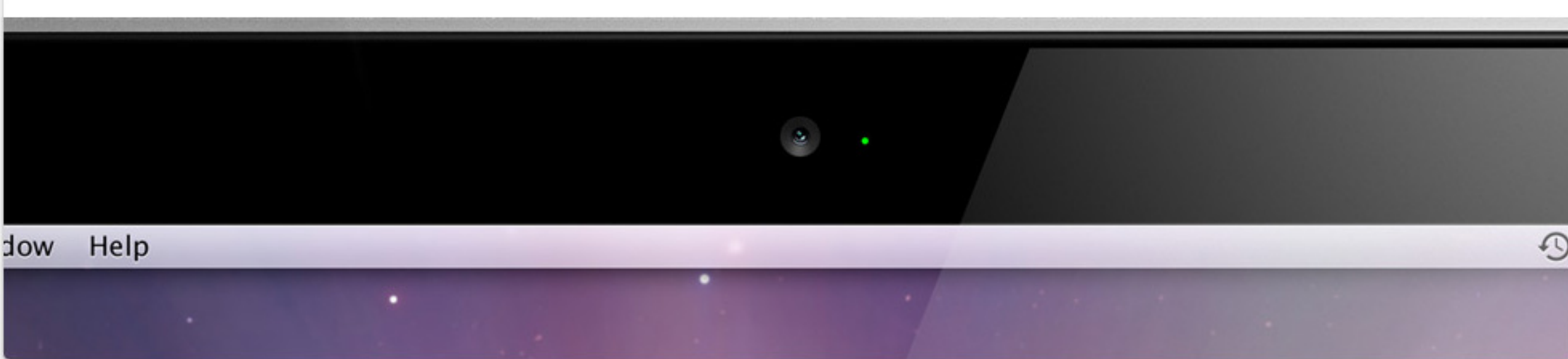
Your studio to go.

Wherever you go, wireless capabilities go with you. With the latest 802.11n wireless technology built into MacBook Pro, you're always seamlessly and effortlessly connected to the wireless world out there, at home, and at work.³ MacBook Pro automatically finds available networks and allows you to join them with just one click. Then surf the web, send email, video chat, print, stream your music, and more. Bluetooth capabilities are also built in, so brilliant accessories can become your wireless accomplices. And when a Wi-Fi network isn't available, you can connect to the Internet anywhere there's a cellular network using the ExpressCard/34 slot and a 3G wireless card. With up to 5 hours of battery life, do everything you need to do, wherever you need to do it.⁴



Be everywhere at once.

Cleverly integrated — almost hidden — at the top of the MacBook Pro display is an iSight camera. Use it with iChat, and you can be anywhere without actually being there. Video chat with a buddy, share a video with a colleague, or present to a client.⁵ Use iSight with Photo Booth for fun photo effects. And there's no need to waste valuable priming time installing software or configuring the camera. Like everything Mac, iSight just works.



Your own team of experts.

Every new MacBook Pro comes with professional advice, award-winning service and support, a world of Mac resources, and thousands more reasons to love your MacBook Pro.



AppleCare

Every MacBook Pro comes with 90 days of free telephone support and a one-year limited warranty. But if you purchase the AppleCare Protection Plan for your MacBook Pro, you can extend that coverage to three years from the original purchase date.



The Genius Bar

Have questions or need hands-on technical support? Get friendly, expert advice at the Genius Bar in any Apple Retail Store. Trained at Apple headquarters, Geniuses can answer all your technical questions, troubleshoot problems, and even make repairs.



Online tutorials

Everything you need to know about your MacBook Pro is online at Apple.com. Watch video tutorials on iLife, Mac OS X, Aperture, and more. Learn some new MacBook Pro tricks. Get MacBook Pro tips. And find out how to love your MacBook Pro even more.

1. Testing conducted by Apple in October 2008 using preproduction 2.53GHz Intel Core 2 Duo-based MacBook Pro units with NVIDIA GeForce 9600M GT and NVIDIA GeForce 9400M graphics. Higher Graphics Performance and Better Battery Life settings were used. MacBook Pro continuously monitors system thermal and power conditions, and may adjust processor speed as needed to maintain optimal system operation.
 2. 1 GB = 1 billion bytes; actual formatted capacity less.
 3. Based on an IEEE 802.11n draft specification. Wireless Internet access requires a base station or other wireless access point and Internet access; fees may apply. Some ISPs are not currently compatible with AirPort.
 4. Battery life depends on configuration and use. See www.apple.com/batteries for more information.
 5. Video chatting requires a broadband Internet connection; fees may apply.



So fast, you'll forget it's a notebook.

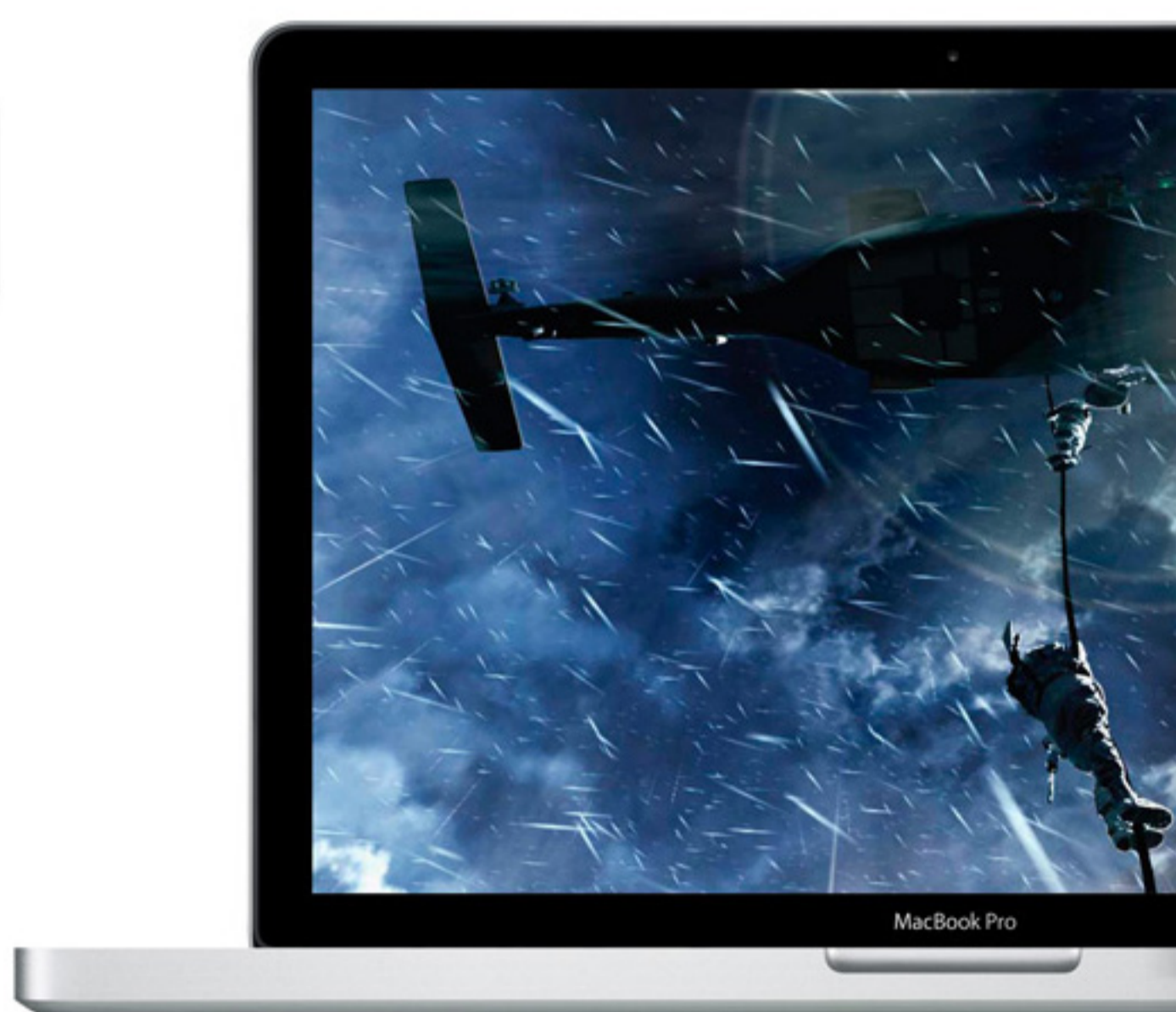
MacBook Pro puts desktop-class graphics in a portable package. That makes it the ultimate mobile solution for gamers, video editors, photographers, and design professionals.

Get the best of both worlds.

The new MacBook Pro combines the efficiency of an integrated graphics processor with the desktop-class performance of a discrete graphics processor. That's because it has both. Out of the box, it runs the integrated NVIDIA GeForce 9400M processor, which provides plenty of performance for everyday use with up to 5 hours of battery life.* But when you need turbocharged performance for the most graphically intensive tasks, the discrete NVIDIA GeForce 9600M GT processor delivers. And thanks to a new graphics architecture, it's easy to switch between these two processors.

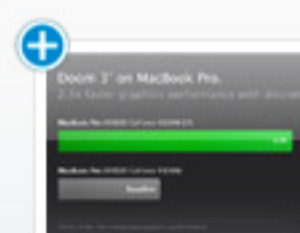


GPU	Battery life
NVIDIA 9400M	5 hrs
NVIDIA 9600M GT	4 hrs



Play faster.

With faster performance and higher frame rates for graphically demanding 3D games like Quake, Call of Duty, and Spore, MacBook Pro plays like a console — an extremely portable one.



Graphics Performance

Get up to 2.3x faster performance with discrete graphics over integrated graphics.



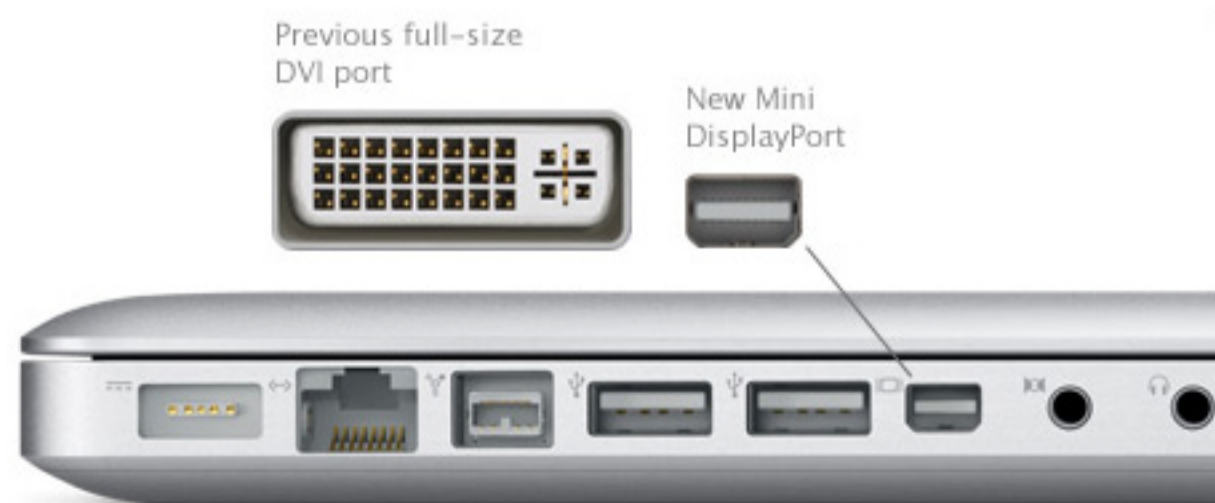
Organize faster.

Whether you're a professional photographer or a casual photographer who takes professional-quality pictures, MacBook Pro and Aperture make quick work of even the largest RAW files. With even more powerful graphics performance, search through thousands of photos more efficiently. Examine images closely, make final selects, and enhance — all on location.



Mini DisplayPort.

The new MacBook Pro has a small port that makes a big difference. The Mini DisplayPort is part of a brand-new industry standard. It delivers a pure digital connection to external displays — even large 30-inch displays — quickly and without a glitch. No more multiple-pin connectors with unwieldy screws; the ultracompact Mini DisplayPort gives you plug-and-play performance with the new Apple LED Cinema Display. And it supports VGA and DVI connections, too.



Get the (really) big picture.

With a MacBook Pro, you can work or play anywhere. But there are times when great graphics performance positively begs for more pixels. Introducing the Apple LED Cinema Display: the first display designed specifically for the new MacBook Pro.

The new 24-inch Apple LED Cinema Display transforms your MacBook Pro into a desktop computer in seconds. Plug in three simple connectors — Mini DisplayPort, USB, and MagSafe — and suddenly you have more room to work and play, plenty of space for peripherals, and an automatic charge for your MacBook Pro. You don't even need to take the power adapter out of your bag. And instantly, everything you see is bigger, brighter, and even more brilliant.





Software. Integrated.

Every MacBook Pro comes with software designed to let all your photos, videos, and content work together.

Mac OS X

Leopard, the latest release of Mac OS X, is loaded with features that let you do more.



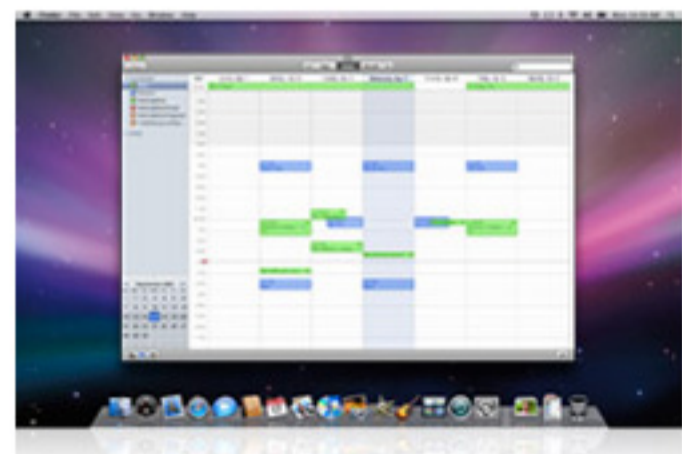
Safari

The world's fastest web browser includes security features to enhance your online experience.



Mail

Mail simplifies email with smart organizational tools. It also incorporates convenient notes and to-do features.



Address Book and iCal

iCal, the streamlined calendar program, and Address Book are integrated with Mail for easy and seamless day planning.



Time Machine

Backing up your files has just gotten a lot easier. See how your system looked on a given day and restore files with a click.



iChat

Video chat with up to three people, deliver presentations with iChat Theater, and of course, send instant messages.



Boot Camp

For those times when you need to use a Windows application, Boot Camp lets you start up your Mac in Windows.

iLife

Discover new ways to enjoy and share photos and movie clips, create websites, and more.



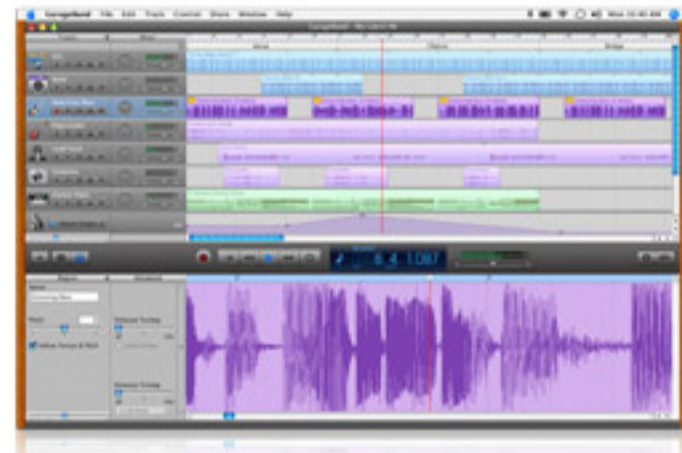
iPhoto

iPhoto organizes your digital photos and makes it easy for you to browse, edit, and share them with the world.



iMovie

iMovie makes viewing, enjoying, and sharing your video intuitive. Publishing to the Internet has never been easier.



GarageBand

Whether you're a first-time musician or a seasoned pro, GarageBand is your personal recording studio.

Get even more out of your Mac



iWork

Streamlined word processing, stunning presentations, and now spreadsheets. Work wonders, without the work.



Adobe Creative Suite 4

The ultimate way to create for the graphic design and interactive world.



Office

Made for the Mac, Microsoft Office lets you use Word, PowerPoint, and Excel without compatibility issues.



Aperture 2

Now it's even easier to enhance images, manage massive libraries, and deliver stunning photos.



Final Cut Studio

Editing, motion graphics, audio mixing, and post-production capabilities in one powerful package.



Logic Studio

Everything you need to create, perform, and record your music. Logic Studio is the ultimate box set.

The greenest MacBook Pro ever.

Highly recyclable and even more energy efficient, the new MacBook Pro is designed with the environment in mind.



Environmental Status Report



The new 15-inch MacBook Pro embodies Apple's continuing environmental commitment. It is designed with the following features to reduce its environmental impact:

- Arsenic-free glass
- Brominated flame retardant-free
- Mercury-free
- PVC-free
- 37% smaller packaging
- Highly recyclable aluminum and glass enclosures

Apple is most proud of what isn't in MacBook Pro.

What's common in other notebooks is missing in the new MacBook Pro. Take, for example, mercury used in CCFL backlights and arsenic contained in the glass of traditional LCD displays. Apple engineers have said no to both. They've chosen LED technology and arsenic-free glass. They've also said no to brominated flame retardants (BFRs) in logic boards and PVC in cables and connectors. In fact, Apple has done more than remove these toxins from the new MacBook Pro. They've done the same for the rest of the new MacBook family, the Apple LED Cinema Display, every iPod, and iPhone 3G. Sometimes saying no is a good thing.

Fewer parts. Greener parts.

The new MacBook Pro is built with significantly fewer parts. And the parts that remain are significantly greener. Take the unibody, the foundation of the notebook itself. It's a single piece of solid, recyclable aluminum that replaces dozens of extraneous pieces once destined for landfill.



Small volume speaks volumes.

Made from recycled material, the new MacBook Pro packaging is 37 percent smaller than the previous generation. And that's huge. It means less paper used for smaller boxes. It also means Apple can use fewer planes to transport the same number of products.



A more energy-efficient notebook.

Because Apple makes its own hardware and software, it's able to create smarter products that use less electricity. To reduce energy consumption, the hard drive spins down automatically when it's inactive. To be more efficient, the display dims when you enter a darkened room. The processor even throttles down to save power between keystrokes as you type. MacBook Pro also decides which processor — CPU or GPU — is best suited to efficiently perform a task. All these little adjustments add up. When it's turned on, the new MacBook Pro uses one third the power of a single lightbulb.

The new MacBook Pro LED-backlit display is another environmental breakthrough. LED technology uses 30 percent less power than conventional LCD displays. The LED-backlit display is mercury-free, highly recyclable, and encased in arsenic-free glass.



MacBook Pro meets the stringent low power requirements set by the EPA and the U.S. Department of Energy, giving it ENERGY STAR certification.

EPEAT Gold.

Because MacBook Pro is environmentally innovative, it has earned the highest rating of EPEAT Gold. The Electronic Product Environmental Assessment Tool, or EPEAT, evaluates the environmental impact of a product based on how recyclable it is, how much energy it uses, and how it's designed and manufactured. Few products achieve EPEAT Gold status — and even fewer notebooks.



Useful today. And tomorrow.

After its long and productive life, your MacBook Pro is almost entirely recyclable. MacBook Pro is made from materials like aluminum and glass, making it highly desirable to recyclers. And highly unlikely that its parts will end up in a landfill. This also makes it possible for the raw materials in MacBook Pro to be used again later in other types of products. And Apple offers recycling services in nearly all countries where Apple products are sold.



A commitment that starts with products.

When it comes to being environmentally friendly, Apple approaches the challenge differently — through products like the new MacBook Pro. Unlike other companies, Apple controls every aspect of the production of its computers. So Apple designers and engineers can minimize their carbon footprint in ways others can't. They design them with fewer parts. They build them using recyclable materials. They even create software that makes them more energy efficient. The result is a new standard for green design.

Technical Specifications

Size and weight

Height:	0.95 inch (2.41 cm)
Width:	14.35 inches (36.4 cm)
Depth:	9.82 inches (24.9 cm)
Weight:	5.5 pounds (2.49 kg) ¹



Connections and expansion



- MagSafe power port
- Gigabit Ethernet port
- One FireWire 800 port (up to 800 Mbps)
- Two USB 2.0 ports (up to 480 Mbps)
- Mini DisplayPort
- Audio line in
- Audio line out
- ExpressCard/34 slot
- Kensington lock slot

Communications

- Built-in AirPort Extreme Wi-Fi wireless networking² (based on IEEE 802.11n draft specification); IEEE 802.11a/b/g compatible
- Built-in Bluetooth 2.1 + EDR (Enhanced Data Rate)
- Built-in 10/100/1000BASE-T Gigabit Ethernet (RJ-45 connector)

802.11n

Bluetooth

Audio

- Built-in stereo speakers
- Built-in omnidirectional microphone (located under left speaker grille)
- Combined optical digital input/analog line in (minijack)
- Combined optical digital output/analog line out (minijack)
- Supports Apple Stereo Headset with microphone

Environmental Status Report



MacBook Pro is designed with the following features to reduce its environmental impact:

- Highly recyclable aluminum and glass enclosure
- Mercury-free LED-backlit display
- Arsenic-free glass
- BFR-free internal components
- PVC-free internal cables
- Meets ENERGY STAR requirements
- EPEAT Gold rating

Display



- 15.4-inch (diagonal) LED-backlit glossy widescreen display with support for millions of colors
- Supported resolutions:** 1440 by 900 (native), 1280 by 800, 1152 by 720, 1024 by 640, and 800 by 500 pixels at 16:10 aspect ratio; 1024 by 768, 800 by 600, and 640 by 480 pixels at 4:3 aspect ratio; 1024 by 768, 800 by 600, and 640 by 480 pixels at 4:3 aspect ratio stretched; 720 by 480 pixels at 3:2 aspect ratio; 720 by 480 pixels at 3:2 aspect ratio stretched

Graphics and video support

- NVIDIA GeForce 9600M GT graphics processor with dual-link DVI support; 256MB of GDDR3 memory on 2.4GHz configuration; 512MB of GDDR3 memory on 2.53GHz and 2.8GHz configurations
- NVIDIA GeForce 9400M graphics processor with 256MB of DDR3 SDRAM shared with main memory³
- Dual display and video mirroring: Simultaneously supports full native resolution on the built-in display and up to 2560 by 1600 pixels on an external display, both at millions of colors



- Built-in iSight camera
- Mini DisplayPort



Video output options

DVI output using Mini DisplayPort to DVI Adapter (optional)

VGA output using Mini DisplayPort to VGA Adapter (optional)

Dual-link DVI output using Mini DisplayPort to Dual-Link DVI Adapter (optional)

Input



- Built-in full-size backlit keyboard with 78 (U.S.) or 79 (ISO) keys, including 12 function keys and 4 arrow keys (inverted "T" arrangement)
- Multi-Touch trackpad for precise cursor control; supports two-finger scrolling, pinch, rotate, three-finger swipe, four-finger swipe, tap, double-tap, and drag capabilities

Processor and memory

- 2.4GHz Intel Core 2 Duo processor with 3MB on-chip shared L2 cache running 1:1 with processor speed; or 2.53GHz or 2.8GHz Intel Core 2 Duo processor with 6MB shared L2 cache
- 1066MHz frontside bus
- 2GB (two 1GB SO-DIMMs) or 4GB (two 2GB SO-DIMMs) of 1066MHz DDR3 SDRAM; two SO-DIMM slots support up to 4GB



Standard Configurations

2.4GHz or 2.53GHz

Optional

2.8GHz

Storage

- 250GB or 320GB 5400-rpm Serial ATA hard drive⁴
- Optional 250GB or 320GB 7200-rpm hard drive⁴
- Optional 128GB solid-state drive⁴



Optical drive

- 8x slot-loading SuperDrive (DVD±R DL/DVD±RW/CD-RW)
- Maximum write: 8x DVD-R, DVD+R; 4x DVD-R DL (double layer), DVD+R DL (double layer), DVD-RW, DVD+RW; 24x CD-R; 10x CD-RW

Maximum read: 8x DVD-R, DVD+R, DVD-ROM; 6x DVD-ROM (double layer DVD-9), DVD-R DL (double layer), DVD+R DL (double layer), DVD-RW, DVD+RW; 24x CD



Battery and power⁵

- 50-watt-hour lithium-polymer battery
- 85W MagSafe Power Adapter with cable management system
- MagSafe power port

5 hrs wireless productivity

Electrical and operating requirements

- Line voltage: 100V to 240V AC
- Frequency: 50Hz to 60Hz
- Operating temperature: 50° to 95° F (10° to 35° C)
- Storage temperature: -13° to 113° F (-24° to 45° C)
- Relative humidity: 0% to 90% noncondensing
- Maximum operating altitude: 10,000 feet
- Maximum storage altitude: 15,000 feet
- Maximum shipping altitude: 35,000 feet

What's in the box

- MacBook Pro
- Display cleaning cloth
- 85W MagSafe Power Adapter, AC wall plug, and power cord
- Lithium-polymer battery
- Install/restore DVDs
- Printed and electronic documentation



Installed software

- Mac OS X v10.5 Leopard (includes Time Machine, Quick Look, Spaces, Spotlight, Dashboard, Mail, iChat, Safari, Address Book, QuickTime, iCal, DVD Player, Photo Booth, Front Row, Xcode Developer Tools)
- iLife '08 (includes iTunes, iPhoto, iMovie, iDVD, iWeb, GarageBand)

Configurations

	2.4GHz MacBook Pro (MB470LL/A)	2.53GHz MacBook Pro (MB471LL/A)
Enclosure	Precision aluminum unibody	
Processor	2.4GHz Intel Core 2 Duo	2.53GHz Intel Core 2 Duo
L2 cache	3MB shared	6MB shared
System bus	1066MHz	
Memory	2GB (two 1GB SO-DIMMs) of 1066MHz DDR3 SDRAM; supports up to 4GB	4GB (two 2GB SO-DIMMs) of 1066MHz DDR3 SDRAM; supports up to 4GB
Hard drive⁴	250GB Serial ATA; 5400 rpm	320GB Serial ATA; 5400 rpm
Slot-loading optical drive	8x SuperDrive (DVD±R DL/DVD±RW/CD-RW)	
Graphics	NVIDIA GeForce 9600M GT graphics processor; and NVIDIA GeForce 9400M graphics processor with 256MB of DDR3 SDRAM shared with main memory ³	
Graphics memory	256MB GDDR3	512MB GDDR3
Video	Built-in iSight camera; Mini DisplayPort output port with support for DVI, VGA, and dual-link DVI (requires adapters, sold separately)	
Display	15.4-inch (diagonal) LED-backlit glossy widescreen display, 1440-by-900 resolution	
USB	Two USB 2.0 ports (up to 480 Mbps)	
Audio	Built-in stereo speakers, built-in omnidirectional microphone, combined optical digital input/analog line in, combined optical digital output/analog line out	
Networking	Built-in 10/100/1000BASE-T (Gigabit) Ethernet	
Wireless	Built-in AirPort Extreme Wi-Fi (based on IEEE 802.11n draft specification) ² ; built-in Bluetooth 2.1 + EDR (Enhanced Data Rate) module	
Hardware accessories	85W MagSafe Power Adapter, AC wall plug, power cord, lithium-polymer battery	
Limited warranty and service	Your MacBook Pro comes with 90 days of free telephone support and a one-year limited warranty. Purchase the AppleCare Protection Plan to extend your service and support to three years from your computer's purchase date. Only the AppleCare Protection Plan provides you with direct telephone support from Apple technical experts and the assurance that repairs will be handled by Apple-authorized technicians using genuine Apple parts. For more information, visit Apple support or call 800-823-2775.	
Apple and the global environment	Learn more about Apple's dedication to reducing the environmental impact of our products and processes. The Apple Product Environmental Specification details the environmental attributes of our products.	
Recycling	Apple takes a holistic view of materials management and waste minimization. Learn more about how to recycle your Mac.	

Options



Time Capsule

Time Capsule is a full-featured AirPort Extreme base station with a built-in hard drive. Back up wirelessly and create a Wi-Fi network with one device.

- 500GB or 1TB server-grade hard drive
- Wi-Fi Certified for 802.11n draft 2.0
- USB port for connecting a USB printer or USB external hard drive

Configure to order

- 250GB (7200-rpm) hard drive
- 320GB (5400-rpm) hard drive
- 320GB (7200-rpm) hard drive
- 128GB solid-state drive
- Up to 4GB of 1066MHz DDR3 SDRAM
- Apple Remote (MA128G/B)
- Apple USB Modem (MA034Z/A)
- Apple Mini DisplayPort to DVI Adapter (MB570)
- Apple Mini DisplayPort to Dual-Link DVI Adapter (MB571)
- Apple Mini DisplayPort to VGA Adapter (MB572)
- MagSafe Airline Adapter (MB441Z/A)
- AppleCare Protection Plan (MB588LL/A)
- Aperture 2 (MB673Z/A)
- Final Cut Express (MB278Z/A)
- Logic Express (MA806LL/A)
- iWork '08 (MB624Z/A)

Accessories

- Apple LED Cinema Display (MB382LL/A)
- AirPort Extreme Base Station (MB053LL/A)
- AirPort Express Base Station (MB321LL/A)
- Apple Wireless Keyboard (MB167LL/A)
- Apple Wireless Mighty Mouse (MB111LL/A)
- Apple Keyboard (MB110LL/A)
- Apple wired Mighty Mouse (MB112LL/A)
- Rechargeable Battery for MacBook Pro (MB772)

1. Actual weight varies by configuration and manufacturing process.

2. Wireless Internet access requires a base station or other wireless access point and Internet access; fees may apply. Some ISPs are not currently compatible with AirPort.

3. Memory available to Mac OS X may vary depending on graphics needs. Minimum graphics memory usage is 256MB. An additional 16MB is required when using an external display.

4. 1GB=1 billion bytes; actual formatted capacity less.

5. Testing conducted by Apple, October 2008 using production 2.4GHz Intel Core 2 Duo-based MacBook Pro models with a Better Battery Life setting. Battery life depends on configuration and use. See [www.apple.com/batteries](#) for more information. The wireless productivity test measures battery life by wirelessly browsing various websites and editing text in a word processing document with display brightness set to 50%.