

BUYER'S **guide**

External Hard Drives

It's a truism in the computer industry. You can never have too much hard drive storage space. With the ever increasing complexity and size of rich media files, even what were considered large hard drives just a year ago are considered mid-size now. Fortunately, even if you're working on a laptop with a standard 40 or 80 GB drive, it has never been easier or more affordable to add storage.

Adding an internal hard drive to some desktop systems, especially older or less expensive systems, can be difficult, impractical, or even impossible because of new interface standards, power requirements, or space. The situation is worse for laptop users. Fortunately, high-speed external hard drives with massive storage capacity are extremely easy to install and surprisingly inexpensive.

Data storage advances have kept pace with the explosion of multimedia file sizes. A typical large drive of just a few years ago was about 200 GB. Current consumer drives can hold as much as 1 TB (Terabyte = 1,000 GB) data. The sweet spot for large-capacity external hard drives is a whopping 500 GB.

Of course, 500 GB from one company is no more or less than 500 GB from another. At least that's true now that virtually all manufacturers agree that a GB = 1,000 MB, not the 1,024 MB that computer scientists insist must be in a GB. All the drives here come in 500 GB versions, some are available in other sizes, 750 GB or even 1 TB (1000 GB). Perhaps the most important differentiation among external drive models is the interface. Modern external drives use one of three interface—or cabling types—USB, FireWire, or SATA. Many offer ports for multiple interfaces.

USB drives typically adhere to the 2.0 standard (but will work with older USB 1.1 systems). Virtually all computers sold

in the past five years have at least basic USB—most have USB 2.0. External USB drives are therefore extremely compatible, a consideration if you plan on using the drive with multiple computers. The downside to USB is that even at 2.0 speeds, the interface is limited to 480 MB/second, making them somewhat slower than most built-in hard drives.

FireWire, like USB, now comes in regular (400) and fast (800) versions. If your computer has a standard FireWire port, you can plug a drive in and get near USB 2.0 speeds at 400 MB/second. As the name suggests, a FireWire 800 port paired with a similarly configured drive will provide 800 MB/second maximum data rate, approaching the speed of many internal drives. FireWire 400/800 is common on Macintosh systems, somewhat less common on PCs, although its popularity as a video camera interface has made it nearly standard on multimedia systems.

eSATA (external Serial) is easily the fastest interface at 3 GB/second, the same as the fastest internal drives common today. It is also the least common port. Exceeding few laptops can use eSATA and only the newest desktop systems are likely to have the interface port standard. Many manufacturers include an add-on card that can be installed in a PC to provide the port. Although the interface is almost 4X faster than the fastest FireWire, it does exceed the capacity of today's hard drives. In ideal conditions, the interface will deliver twice the speed for certain tasks. eSATA is currently the most expensive of the three drive types.

Once you've settled on an interface and size, options become much more subjective. Is it attractive, sturdy, and quiet? Does it come with software? Can I add more capacity later? Does it do something special? Can I fit it into my tight budget?

Vendor/URL	Product
Hitachi http://www.hitachigst.com	The Easy Hard Drive
Hewlett-Packard http://www.hp.com	Personal Media Drive
Iomega http://www.iomega.com	Silver Desktop
LaCie http://www.lacie.com/us/	F.A. Porsche Design
	Brick
	D2 Quadra
Maxtor http://www.maxtor.com	Basics 3200
	One Touch III
	One Touch 4 Plus
Seagate http://www.seagate.com	eSATA External
	FreeAgent
Western Digital http://www.westerndigital.com	My Book Premium II
	WD Elements

Capacity	Interface	Rotation speed (RPM)	Price	OS Support	Dimensions (Inches)	Warranty	Notes
500 GB, 1 TB	USB 2.0	7,200	\$149.99, \$419.99	XP/Vista, Mac OS X	2.5 x 4.75 x 6.75	1 year	One button backup software.
500 GB	USB 2.0	7,200	\$199.99	ME/XP/Vista	1.5 x 4.6 x 8	1 year	Sonic backup software
500 GB	eSATA 3, USB 2.0	7,200	\$170.95	XP/Vista, Mac OS X 10.2	1.375 x 4.75 x 8.75	1 year	EMC Retrospect backup software
500 GB	USB 2.0, FireWire 400/USB 2.0	7,200	\$119.99, \$169.99	98SE/Me/XP/Vista, Mac OS 9/X	1.4 x 4.4 x 7.4	1 year	LaCie One Click backup
500 GB	USB 2.0	7,200	\$169.99	98SE/Me/XP/Vista, Mac OS 9/X	4.4 x 7.4 x 1.7	1 year	LaCie One Click backup
500 GB, 750 GB, 1 TB	eSATA 1.5, FireWire 400/800, USB 2.0	7,200	\$219.95, \$289.99, \$549.99	XP/Vista, Mac OS 10.2.8	1.7 x 6.3 x 6.8	2 year	LaCie One Click backup, EMC Retrospect
500 GB	USB 2.0	7,200	\$169.99	XP/Vista, Mac OS 10.2.8	1.75 x 6.0 x 8.75	1 year	
500 GB, 750 GB	FireWire 400/800, USB 2.0	7,200	\$229.99, \$329.99	XP/Vista, Mac OS 10.2.8	5.4 x 2.6 x 8.5	1 year	
500 GB, 750 GB, 1 TB	FireWire 400, USB 2.0	7,200	\$199.99, \$289.99, \$359.99	XP/Vista, Mac OS 10.4.7	2.5 x 6.0 x 6.75	5 year	Prepares, reboots, and recovers your PC's entire internal drive contents in case of system failure or virus/spyware infection.
500 GB	eSATA	7,200	\$309.99	XP, Mac OS 10.4	2.52 w x 4.72 l	1 year	Includes eSATA PCI adapter card
500 GB	USB 2.0	7,200	\$169.99	XP/Vista, Mac OS 10.3.9	7.5 x 1.6 x 6.4	5 year	Preformatted for PC, Mac users will need to reformat
1 TB (dual 500 GB)	FireWire 400/800, USB 2.0	7,200	\$399.99	XP/Vista, Mac OS 10.3	6.870 x 6.270 x 4.09	1 year	Capacity gauge, WD backup software, RAID 0,1 options, available in 2 TB version
500 GB	USB 2.0	7,200	\$139.99	XP/Vista, Mac OS 10.3	8.02 x 1.42 x 4.90		