

USB Flash Drives - Full Story

USB flash drives vs. other storage

USB flash drives have maximum capacities ranging from 256 MB to 32 GB (new technology keeps increasing the maximum storage capacity). Prices generally correspond directly to storage capacities. In terms of functionality, flash drives have replaced floppy disks and data CDs and DVDs, and they are easier to use. CDs only hold 700 MB of data, while DVDs can store 4.7 GB. Flash drives transfer data faster than CD-RW or DVD-RW discs and they are more easily portable, as you can carry one in your pocket. Many USB drives have password security or data encryption capabilities, so if you lose your drive, at least the data is protected.

USB flash drives do not have enough capacity to back up all the work and play files on most people's computers, even if you use several of them. For that you'll need an external hard drive. External hard drives have radically greater storage capacities, and cost considerably less per megabyte. Flash drives are more convenient for transferring files between computers in a home or office, or taking work to and from your office. They are also great for taking files to and from someone else's computer.

The "flash" in flash memory is an electronic signal sent to the memory circuit that says "remember this." Once data has been flashed into memory, the power supply can be removed and the data remains. Data transfer speeds are expressed as a multiple of CD transfer speeds. An 80X USB drive can transfer data at up to 12 Mbps, for example. A 150X drive can transfer data at up to 22.5 Mbps. All connect via a USB port. If you have a USB 2.0 port on your computer, you'll get transfer speeds of about 30 Mbps. USB drives are also compatible with older USB 1.1 ports, but speeds are much slower. Current operating systems recognize USB drives without needing any special drivers. The simplest USB flash drives show up as a drive letter on your computer and you can simply drag and drop files to the drive. Depending on your auto start settings, plugging in the drive can automatically open a drag-and-drop window.

More sophisticated USB drives have password protection and/or data encryption. Some USB flash drives let you load and run compatible software right from the drive. You can run a program from your flash drive that isn't installed on another computer. When the thumb drive is unplugged, your data goes with you. The software must be optimized for U3 or Creedo technologies, however. You can download programs like Firefox, Skype and a U3 version of OpenOffice (a Linux-based word processing and spreadsheet program) from the U3 website, but some come preloaded on the drives themselves. If you only plan to store data on your USB drive, you might want to skip the U3 capability. Some users express frustration that the U3 software boots up each time they plug in the drive. Though you can reconfigure the drive or uninstall the U3 functionality, this is an extra step.

Practical Uses

The most common use of a flash drive is to transport and store personal files such as documents, pictures and videos.

Storage of medical alert information on Medical Tag flash drives for use in emergencies and for disaster preparation. In addition to storage of home inventory data and photos for insurance purposes in event of a disaster.

Use an inexpensive password encrypted flash drive. When you travel, the drive can contain scanned images of your passport, driver's license, medical insurance card, travelers checks, all credit cards (both sides), and of course flight and lodging information. Right when you check in, the flash drive is usually hidden in your belongings or locked in a safe upon my arrival. It is the ultimate backup for everything. The information that it contains is absolutely priceless when you most need it.

Storage of important computer data archived on a flash drive during antivirus and system recovery on an infected machine.

Maintaining personal information on flash drives when a computer is shared by multiple individuals.

Another handy idea is a current list of phone numbers. This may sound a bit too simple but if you own a cell phone as most people do, most people program numbers in and never actually dial them anymore. If your phone was lost or stolen, how many numbers do you remember?

Basic USB flash drives

The vast majority of flash drives reviewed in the past year and a half have value-added features that will be useful for some people and of no interest to others. Those features include rugged construction, encryption and other security software and the ability to run programs off your USB flash drive. These higher-end drives are also faster and more expensive than blank drives. However, basic and budget drives get a fair amount of user feedback. As some of these drives have been available for quite some time, older professional reviews can provide some guidance as well.

According to reviewers, manufacturers don't make or publish performance claims for basic drives. That doesn't guarantee they are all the same. Name-brand drives are faster than generic drives in most tests. They also are likely to have better warranties. Corsair, OCZ, Lexar, SanDisk and Kingston are all brands commonly respected by reviewers.