

Everything You Wanted to Know About Storage

In the modern world of computers and the internet there is nothing more important than knowing how to properly store and manage important data - especially in public places like your library.

Floppy Disks are an antiquated way to manage data. They require a floppy drive in order to read and access files. Most computers that are made today do not have floppy drives installed. Floppy disks have limited capacities (1.44 MB), the cases are flimsy, and the surface area of the data is easy to scratch and break.

CD-R/RW DVD-R/RWs are an option for storage. The data surface area is exposed and can scratch easily. Most require 3rd party software in order to Burn data to the disc. Once a file is saved to a CD or DVD you cannot alter it because data saved to a CD or DVD is Read-Only. The transfer speeds listed below are the speed at which a computer can read the data, the writing speeds are slower. Because of the counterintuitive nature of saving data to a CD or DVD, this storage option is not advised.

	Floppy	CD-R/RW	DVD-R/RW
Data Transfer Rate (megabytes per second)	< 1 MBbps	52x: 64Mbps	20x: 27 Mbps
Capacity Range	1.44 MB	650-700 MB	Up to 4.4 GB
Read/Write or Read-Only	Read/Write	Read-Only	Read-Only

USB Flash Drives are the best solution for data storage because they have sturdy, durable cases, are easy to use, and highly compatible with all computers via USB connection. They are also high capacity so most people will only need one flash drive. They also have very fast transfer speeds, and are far superior to floppy disks in storage capacity and speed. Convenient as well, because they are small and some are even designed to attach to a keychain.

USB/FireWire External Hard Drives are the easiest way to add a large amount of storage to a computer. They are Plug-and-Play, meaning it requires little or no configuration to set up. Some are small and highly portable because they don't require plugging into a power outlet. The more inexpensive models may be bulkier or require plugging into a power outlet, but are not bad if you do not plan on transporting your hard drive from place to place.

The key difference between FireWire and USB is that FireWire is intended for devices working with a lot more data like digital camcorders, DVD players, and digital audio equipment. FireWire and USB share similar data-management characteristics but differ drastically in data-transfer speeds.

	USB		FireWire	
	Version 1.1	Version 2.0	400	800
Data Transfer Rate (megabytes per second)	12 Mbps	480 Mbps	400 Mbps	800 Mbps

Free Extras

Portable Applications are free software programs that can be downloaded from <http://portableapps.com/> and installed directly to portable media. The benefits include portability of customized software-settings and the freedom to use specific software on any computer. Though it is a convenience, installation of portable application may take up to 2-3 hours. There is also a performance slowdown when running software from removable media.

True Crypt is for more tech-savvy users. This encryption software that can be downloaded for free from <http://www.truecrypt.org/>. Not a portable application, so it must be installed on the computer that will access and create encrypted folders. The benefit is the password-protection of sensitive information should the removable storage media be lost or stolen. For proper installation and use, read the manual and installation instructions thoroughly.

Storage Glossary and Reference

1024 KB = 1MB	KB = Kilobyte
1024 MB = 1GB	MB = Megabyte
1024 GB = 1TB	GB = Gigabyte
	TB = Terabyte

Firewire: FireWire is one of the fastest peripheral standards ever developed, which makes it great for use with multimedia peripherals such as digital video cameras and other high-speed devices like the latest hard disk drives and printers.

HDD: Hard Disk Drive. Storage that can be saved inside the physical computer case or connected externally.

Plug and Play: A feature that allows the addition of a new device, storage or otherwise, without difficult configuration or software installation.

Portable/External Storage Media/Device: A flash drive, external hard drive, card reader, memory card, iPod or MP3 player, anything with storage that is portable and can be connected to a computer via USB or FireWire connection.

Read-Only: A data setting that allows a file to be read or copied, but not changed or saved.

USB: Universal Serial Bus. Modern computers have a USB connection in the front of the computer terminal for easy access.

What You Can Expect To Pay

Size	Connection	Approx Price Range	google.com search for:
1 GB Flash Drive	USB	\$7-18	1gb flash drive
2 GB Flash Drive	USB	\$5-13	2gb flash drive
4 GB Flash Drive	USB	\$7-20	4gb flash drive
8 GB Flash Drive	USB	\$19-55	8gb flash drive
16 GB Flash Drive	USB	\$56-96	16gb flash drive
30 GB Hard Drive	USB	\$59-94	30gb external usb hdd
60 GB Hard Drive	Firewire	\$66-128	60gb external firewire hdd
60 GB Hard Drive	USB	\$120-170	60gb external USB hdd
120 GB Hard Drive	USB	\$120-212	120gb external firewire hdd
120 GB Hard Drive	Firewire	\$88-179	120gb external firewire hdd
500 GB Hard Drive	USB	\$80-171	500gb external usb hdd
500 GB Hard Drive	Firewire	\$90-253	500gb external firewire hdd

