

## Back in a Flash!!

With names like Pivot, Swivel, Smart, Thumb, Jump and Vault, one would think we're talking about the U.S. Olympic Speed Skating or Gymnastics Team. However, though we are talking about something fast, compact and capable, it is not a human but a portable storage device for data. Commonly referred to as Flash or Jump drives, these technological wonders can store vast amounts of digital content in a secure, easy access portable drive. You can store, carry and transfer digital photos, presentations, documents, accounting information and more. Finding the perfect balance of performance, cost, size, weight, and features is the key to portable storage success.

Since their invention between 1998 and 2000, these devices have morphed several times but the essential store-and-transport characteristics have not changed. Flash drives typically have capacities from 256MB to 4GB. That is megabytes and gigabytes, which translates into this: one gigabyte of data is approximately equal to the text in over 1,000 books. These devices consist of a small printed circuit board in a plastic or metal casing and a USB connector which draws its power from USB hubs built into most computer keyboards and monitors. Typical overall file transfer speeds are about 3Mbytes/second.

As a sidenote, Flash drives come in various shapes and sizes. One Japanese model sports a housing that looks like sushi, however, they are bulky and can easily become disconnected from the USB port. Some have recently been stylized or integrated into watches or pens.



Fun but not edible or practical!

Common uses include:

- Personal data transport such as documents, pictures and video, medical alert information for use in emergencies and for disaster preparation.
- Computer repair: A means to transfer recovery and antivirus software to infected PCs, allowing a portion of the host machine's data to be archived in case of emergency.
- System administration: Particularly popular among system and network administrators, who load them with configuration information and software for system maintenance, troubleshooting, and recovery.
- Application carriers: Used to carry applications that run on the host computer without requiring installation. The Mozilla Firefox browser has a configuration for flash drives.
- Audio players: As in small solid state digital audio players like Apple Computer's iPod shuffle, and the Creative Labs MuVo.
- To boot operating systems.
- In arcades games: Flash drives are used to transfer high scores, shots and more.
- Windows Vista ReadyBoost: Windows Vista ReadyBoost feature allows the use of a flash drive to augment system memory.

Strengths and Weaknesses

- While floppy disks and compact discs are susceptible to scratches and dust, flash drives are not because of their durable solid-state design. Plus, USB support on modern computers means that such a drive will work in most places. A drawback to the small size is that they are easy to misplace or lose.
- Flash drives are also a relatively dense form of storage, where even the cheapest will store dozens of floppy disks worth of data. But, like all flash memory devices, flash drives can sustain only a limited number of write and erase cycles before failure. Under normal conditions, mid-range flash drives will support several hundred thousand cycles, although write operations will gradually slow as the device ages.

- Most USB flash drives do not include a write-protect mechanism.
- While sturdy, flash drives can be damaged or have data corrupted by severe physical impacts. Improperly wired USB ports can also destroy the circuitry of a flash drive.
- Most new computers do not include floppy drives, and do include USB ports. Floppy disks are still in use because of their low cost and floppy drives can be added to new systems either internally or externally.
- While CDs/DVDs are a good way to record lots of information cheaply, they are not good for making ongoing small changes to a large collection of information; the flash drives' ability to do this is a major advantage.

## Security

- Some flash drives feature encryption of the data stored on them, preventing unauthorized access of the stored data. The disadvantage is that the drive is accessible only in the minority of computers which have compatible encryption software.
- All forms of data protection security involve an increased risk of loss of access to the data by the legitimate owner/user.
- Flash drives can present a security challenge for any company as their small size and ease of use allows unsupervised visitors or dishonest employees to smuggle confidential data without detection. Some organizations forbid the use of flash drives, and some computers are configured to disable the mounting of USB mass storage devices by ordinary users, a feature introduced in Windows XP Service Pack 2.

No matter what, with careful use the advantages of Flash or Jump Drives are just that...advantageous. In Walker's "Big Boy" Catalog (2007 Office Products Catalog), a selection of Portable Storage solutions begins on Page 1093.