



Demystifying Memory Cards in a Flash! 2005 Guide to Flash Media

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Pick a Card!

As the digital world advances, so does the desire to retain the information that is gathered. That is no exception for products such as digital cameras, cell phones and MP3 players that appear to get smaller in size and greater in file saving capacity. We all want more music, pictures, contact lists, etc. to take on the road wherever we go in a device as small and lightweight as possible. A huge element that facilitates the need to save media files are flash memory cards. Some devices come with a preset storage capacity while others can extend their amount of storage with the inclusion of a flash memory card. Currently there are over a dozen flash media cards available with some new ones ready to debut in the near future. Such is the impact that many PCs and notebooks are including media readers in their systems to provide a simple method of extracting and writing files to the cards. Now, which card to utilize is dependent on the device you own or are looking to buy, where it is recommended to check the device manufacturer's documentation or web site for reference and compatibility. Below is a brief assessment of the current types of flash media cards in the market.

Secure Digital Card (SD)

Initially created to hold and prevent duplication of copyright music files, these cards have grown immensely popular with photographers due to their low power consumption and small size. There are now a few types of SD cards, offering transfer rates of varying degrees, that are slowly pushing CompactFlash cards (too bulky for many new cameras on the market) out of the camera accessory business.



MiniSD Card

Essentially identical in function to its big brother, the only difference of the miniSD is that it is almost half the size and used with cell phones, MP3 players and digital cameras requiring a much smaller card. An adapter is available for use with devices requiring a standard size SD card.



MultiMediaCard (MMC)

These cards are identical to the SD cards on the outside but work differently on the inside. They were interchangeable in some devices but not most and the SD tends to be favored for its fast speed in comparison to the lagging MMC.



CompactFlash I (CFI)

About the size of a matchbook, CompactFlash cards were one of the first to become standard in the digital camera market, ranging from 8MB to 8GB capacity. Containing both memory chips and a controller, these cards have made quite an impact to become a popular digital mass-storage device.



CompactFlash II (CFII)

CFII cards are identical to CFI with some minor differences. For one, CF II Cards are 1.7mm thicker than its counterpart and, secondly, those devices that contain CFII slots are backwards compatible with CFI Cards (doesn't work vice-versa). As with above, these cards are sold in capacity of up to 1GB (2GB and above only work with devices that utilize the FAT-32 file system)



Smart Media (SM)

This memory only card (no controller onboard but required on the device to be used) is used with digital devices pre-2001 and max out at 128MB. Not being so convenient to the advancement of technology, these cards are still available but taking a back seat to all the others out there, especially the xD-Picture cards (see below).



xD-Picture Card (xD)

The "new kid on the block" was developed jointly by Olympus and Fuji to replace the close to extinct SM Cards (previously favored by both companies). About the size of a postage stamp, this tiny giant can hold upto 8GB of data, knocking the wimpy 128MB max SM card out of the ballpark. As this card is fairly new, adapters are available to assist in using with your device/computer.



Memory Stick (MS)

Sony developed the Memory Stick in 1999 to create brand loyalty for their digital cameras and camcorders. Sometimes they are included with the camera or device in question. Most Sony notebooks do include a Memory Stick reader so users can remain within the spectrum of the brand and know their products will work with each other without fail.



Memory Stick PRO (MS PRO)

The PRO card was developed to provide even more capacity than MS (upto 4GB in comparison to the 128MB MS) and greater transfer speed. Most devices pre-2003 will not be compatible as will be certain card readers, with no adapter in sight.



Memory Stick DUO (MS DUO)

The DUO is exactly the same as the MS only half the size. Sony developed some products to utilize the compact card but an adapter is required for media readers to access the data.



Memory Stick PRO DUO (MS PRO DUO)

The PRO DUO is essentially the combination of the above four cards, being a perfect combination of compact size, high speed transfer rates and great capacity.



TransFlash Card

The exceptionally small size of TransFlash cards (11mm x 15mm x1mm) allows mobile phone manufacturers to incorporate significant amounts of removable storage capacity into their smaller handsets without changing the physical size of the phone. TransFlash is designed to store personal content such as digital images, MP3 music files, video games and other applications, phone settings and personal data.



SPY REPORT

PLUS SD Card: All-in-One Flash Memory Card and USB Flash Drive
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At last month's Annual Consumer Electronics Show in Las Vegas, SanDisk unveiled the new Plus SD Card. Just a little over the size of a dime, this tiny new flash card not only offers the storage capabilities of its older brothers but also has built-in USB connectivity. Just plug the Plus SD card into any SD card slot, such as is used in most digital cameras, and then plug it into any USB port on your computer without needing an SD card reader to transfer data, images, audio or video. This eliminates the need to purchase a reader/writer as chances are your home PC and/or notebook has a USB port available. The device also has an LCD light that blinks when data is transferring to and from the card. The convenience of such a device is immeasurable as this new integrated device is fully SD and USB 2.0 compliant.



SanDisk plans to release the Plus SD card with a capacity of up to 1GB in Q1 of 2005 (roughly March). This is one integrated device to keep an eye out for as technology seems to be getting smaller and more versatile with time. With the popularity of SD cards in the flash media market, SD cards are sure to become the dominant form factor in most digital devices and computers