

FLASH MEMORY, FLASH BASED GADGETS

1. Fill in the gaps with appropriate words.

The differences between RAM memory and flash memory

Flash memory is a type of _____ memory that can be electronically erased and reprogrammed. Its name was invented by Toshiba to express how much faster it could be erased - ‘in a flash’, which means ‘very quickly.’

Unlike RAM, which is **volatile**, flash memory retains the information stored in the chip when the power is turned off. This makes it ideal for use in digital cameras, laptops, network switches, video game cards, mobile phones, and portable multimedia players. In addition, it offers fast read access times (although not as fast as RAM), with _____ of 12MB per second. Unlike ROM chips, flash memory chips are _____, so you can update programs via software.

Cells

Inside the chip, data is stored in several floating gate transistors, called _____. Each cell traditionally stores one bit of data (1=erased and 0=programmed). New devices have a multi-level cell structure so they can store more than one bit per cell.

Use of flash memory

- Many PC's have their BIOS (basic input/output system) stored on a flash memory chip so it can be updated if necessary.
- Modems use flash memory because it allows the manufacturer to support new protocols.
- USB _____ are used to save and move MP3s and other data files between computers. They are more easily transported than external hard drives because they use _____ technology, meaning that they do not have fragile moving parts that can break if dropped. However, USB flash drives have less storage capacity than hard drives.
- New _____ **smart drives** allow users to store both applications and data. They have two drive partitions and can carry applications that run on the host computer without requiring installation.
- **Flash memory cards** are used to store images on cameras, to back up data on PDAs, to transfer games in video consoles, to record voice and music on MP3 players or to store movies on MP4 players. They are as small as a stamp, and capacity can range

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from 8MB to several gigabytes. The only limitation is that flash cards are often not interchangeable between devices.

The photos stored in a digital camera can be offloaded to a computer via cable or wirelessly. Another option is to have a **flash card** _____ permanently connected to your PC; you simply eject the card from the camera and put it into the reader instead of having to plug the camera in.

Solution:

Non-volatile, transfer rates, rewritable, cells, flash drives, solid-state, U3, reader