

Re: Building your own flash drive

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"Joel Koltner" <JKolstad71HatesSpam@xxxxxxxx> wrote in message
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"Jim Yanik" <jyanik@xxxxxxxx> wrote in message
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I wonder if one of the photo mass storage modules would work better than USB flashdrives?

If you're "rolling your own" interface and code, compact flash looks just like an IDE hard drive. A USB memory stick, however, only looks like a hard drive after you get the USB stack and correct protocol all implemented. I.e., much more software to write.

SD cards are a little weird, AFAIK -- they complete interface at the "wire" level is not fully available without NDAs and whatnot, although the SD card readers use an IC that makes the SD card appear, again, as an IDE hard drive on the far side of a USB link. Hence only the guy who made the USB<-->SD interface IC needed to sign all those NDAs...

I suspect that the add-on reader/writers for these are just simple connections to the USB cable.

No, not at all; the interface ICs for SD cards or USB memory sticks are plenty complex.

There are SD cards ([http://www.sandisk.com/Products/Catalog\(1096\)-SanDisk_Ultra_II_SD_Plus_Cards.aspx](http://www.sandisk.com/Products/Catalog(1096)-SanDisk_Ultra_II_SD_Plus_Cards.aspx)) and even CompactFlash cards where they've put that "controller" IC into the memory card into, and thus the SD card can plug directly into a USB port as well (and the CompactFlash card reader really was little more than "wires"), but these are very much the exception rather than the norm. (It never really made sense for CompactFlash cards either, since unlike the SD card shown at the link above you still need the mechanical adapter... the idea originally was apparently that, say, 128MB CF card w/internal USB

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bridge & mechanical adapter might be, say, \$120 whereas a regular 128MB CF card was, say, \$100 and a full-fledged reader was \$80.)

Just add a socket on the PCB. I suppose you could solder them in, too.

Indeed -- this is a good idea. It's amazing how cheap flash memory is these days... It was only something like 5 years ago that we were paying something like \$10 a 2MB flash IC, and today you can get something around a gigabyte for that much in the form of an SD card or USB memory stick.

---Joel

Those are some good thoughts. I need to store a lot of data on a flash disk (of any type) that can be read either by a USB 2.0 link or a wireless USB link. The desire is to have the embedded system write files to the NTFS file system and have a windows notebook just plugin and read the files off at high speed when the job is done. We're talking a full 2 - 8 GB of data so the high speed is needed. The box won't be opened to read the data so just removing the chips isn't an option unfortunately. Also I'd like to solder the chips in so the connector doesn't give problems with age moisture and vibration.

the SD cards look like an interesting option. I was thinking that there were some reference designs by the IC manufacturers that made their USB chip with a flash port on it look like a USB drive. No firmware needed just glue on the chips and away you go. Nothing like this available?

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