
Fire Up with FireWire

FireWire (IEEE 1394) and USB are the new “standards” for connecting devices to your computing system. Unlike older parallel, RS-232C, SCSI (Small Computer System Interface) and Serial interfaces, FireWire and USB interfaces provide:

- A single connector that can interface with a large variety of devices
- A thin, rather than thick (like your old parallel printer) cable - allowing manufacturers to put more interfaces into a smaller space, and for you to connect more devices
- High speed data transfer (FireWire 400Mbps, FireWire 800 800Mbps - standard USB 1.1 12Mbps, USB 2.0 480Mbps)
- Plug and Play - just plug the device in, your system will recognize it and allow it to be attached without restarting your system
- The ability to chain devices together (up to 63 in FireWire environments, 127 for USB).

FireWire (Apple’s version) and iLINK (Sony’s version) of the standard were originally designed to attach digital cameras, digital video disks, digital video tapes, digital camcorders and audio players. Why? Two big reasons:

1. FireWire/IEEE 1394 is a peer-to-peer interface - so a camera or camcorder can interface with another camera or camcorder without a computer in between.
2. FireWire/IEEE 1394 provides two types of data transfer - standard asynchronous for load and store applications like writing to a hard drive or floppy disk and isochronous transfer that ensures data flows at a preset rate so multimedia applications can handle the data in a time way. This reduces the need for buffers and ensures a continuous, uninterrupted video or audio stream for the user.

There are also two levels of interface in FireWire IEEE 1394:

- A Backplane Bus level interface within a computer that supports 12.5, 25 or 50Mbps per second.
- A point-to-point interface between the device and computer on a serial cable. The cable interface supports 100, 200 or 400Mbps (or 800Mbps in FireWire 800).

FireWire requires that cables be no longer than 4.5 meters and has a maximum of 16 devices that can be attached in a single chain (theoretical maximum device distance is therefore 72 meters).

FireWire connectivity tends to cost a bit more than USB-based approaches, but newer FireWire 800 devices come close to doubling the speed of USB 2.0 products - and you get the multimedia benefits of isochronous data transfer as well. Make sure you’ve got plenty of these important

interfaces available on your system for connecting the peripherals you'll need to take your business multimedia.

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