

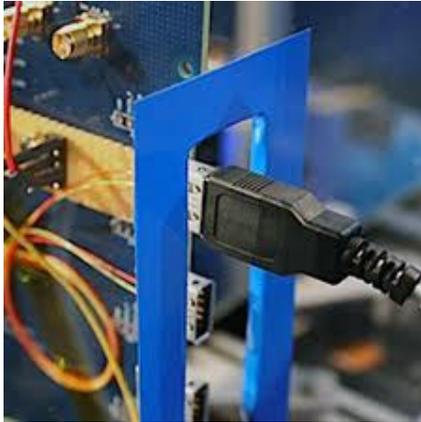
Light peak



THUNDERBOLT TECHNOLOGY (Light Peak)

With the 10 Gbps performance of Thunderbolt products in next step.....

Intel removed the expensive optical for cheaper copper, and released Light Peak as Thunderbolt with a DisplayPort connector. Sony took a different path, opting to stick with the optical technology and the USB form factor with what it's officially calling a "Power Media Dock Port." Yes, it supports USB 2 and 3, but it's not a USB port. And it sure isn't a Thunderbolt port.



Light Peak uses fiber optics to achieve data transmission speeds really high for what we're used to seeing today, in fact, have announced rates of 10 gigabits per second left far behind the 4.8 Gbps of handling the maximum rate USB 3.0, and is performed simultaneously in both ascent and descent of information with a theoretical potential to be at speeds of 100 Gbps to 10 years here, allowing to carry out the transfer of information under any protocol. Although it was announced that the claim is that both standards

can co-exist, the reality may lead to Light Peak end up gradually replace not only the USB but also other "buses" as FireWire and HDMI. Suffice it to a couple of examples: one cable of optical fiber 50 could replace the copper wires that are now required to broadcast only example of a 3D scene or how it could transmit a Blu-ray video a flow of data from a high definition camera, and also the mirror image of the output of computer video on another screen, all at the same time and smoothly. For years we have compatible computer with FireWire port, but this time I have not used even one device that makes use of this type of port to communicate with the computer.

This does not mean that the port is bad or anything, just that we tend to choose other options when buying our periphery: either by being cheaper

The port is getting out much competition. The USB3.0 full speed improvement and offering the most powerful FireWire (5 GB / s USB, up to 1.6GB / s FireWire) and the port being developed is still faster than

USB3.0. Given this scenario it seems that things are getting complicated is the FireWire.

The organization behind the port believe that 2011 will continue to grow, albeit more slowly. Hopefully so, you should still be a few years, but as it is possible to improve the specifications that will gradually disappearing from computers as has happened with other technologies.

From the company with the fastest processors comes the fastest way to get information in and out of your PC and peripheral devices.‡ At 10



Gbps, Thunderbolt™ technology gives you great responsiveness with high-speed data and display transfers in each direction—at the same time.‡ With a single cable, connecting a PC to multiple devices is simple, making it easy to get and see what you want, when you want it. Thunderbolt technology gives you incredible flexibility; high performance expansion is just a cable away for new and novel uses, now and in the future.



With the 10 Gbps performance of Thunderbolt products we can

- Transfer a full-length HD movie in less than 30 seconds
- Backup 1 year of continuous MP3 playback in just over 10 minutes

What is Thunderbolt technology and how does it work

Developed by Intel (under the code name **Light Peak**), and brought to market with technical collaboration from Apple. Thunderbolt technology is a new, high-speed, dual-protocol I/O technology designed for performance, simplicity, and flexibility. This high-speed data transfer technology features the following:

- Dual-channel 10 Gbps per port
- Bi-directional
- Dual-protocol (PCI Express* and DisplayPort*)
- Compatible with existing DisplayPort devices
- Daisy-chained devices
- Electrical or optical cables
- Low latency with highly accurate time synchronization
- Uses native protocol software drivers
- Power over cable for bus-powered devices

Intel's Thunderbolt controllers interconnect a PC and other devices, transmitting and receiving packetized traffic for both PCIe and DisplayPort protocols. Thunderbolt technology works on data streams in both directions, at the same time, so users get the benefit of full bandwidth in both directions, over a single cable. With the two independent channels, a full 10 Gbps of bandwidth can be provided for the first device, as well as additional downstream device sand all Thunderbolt devices share a common connector, allowing users to daisy chain devices one after another with interoperable cables.

