

# SuperSpeed USB



Driven by the technology industry's top consumer electronics, personal computer, semiconductor and software companies, SuperSpeed USB (USB 3.0) from the USB Implementers Forum is the next advancement in USB technology. As technology innovation marches forward, new kinds of devices, media formats, and large inexpensive storage are converging. Consumers today are using rich media and large digital files that need to be transferred quickly and easily between PCs and devices.

SuperSpeed USB brings significant performance enhancements to the ubiquitous USB standard, while remaining compatible with the billions of USB enabled devices currently deployed in the market. SuperSpeed USB delivers up to 10x the data transfer rate of Hi-Speed USB, as well as improved power efficiency.

- SuperSpeed USB has a 5 Gbps transfer rate offering up to a 10x performance increase over Hi-Speed USB
- SuperSpeed USB delivers fast sync-n-go technology that minimizes user wait-time
- SuperSpeed USB provides optimized power efficiency
- SuperSpeed USB is backwards compatible with USB 2.0

## The Background

SuperSpeed USB enables products from the PC, CE, and mobile industries to connect at speeds up to 5Gbps. This technology was created by the USB 3.0 Promoter Group – Hewlett Packard, Intel, Microsoft, NEC Electronics, ST-Ericsson, Texas Instruments – aided by more than 200 contributing companies. The group focused on ensuring backward compatibility, interoperability, security, and maintaining the guiding principles of ease-of-use and low cost which were pioneered by USB.

## The Benefits of SuperSpeed USB from the USB-IF

### **Speed**

SuperSpeed USB delivers speeds of up to 5 Gbps. That's 10 times the performance of Hi-Speed USB.

### **Power Efficiency**

SuperSpeed USB is designed to deliver maximum power efficiency. It uses one-third the power of USB 2.0 to transfer the same amount of data. In addition, SuperSpeed USB incorporates new features like additional lower power states when devices are idle, does not broadcast packets and does not perform device polling. These new features add to the power savings for both devices and hosts with SuperSpeed USB.

### **Fast Sync-N-Go**

SuperSpeed USB provides fast sync-n-go that minimizes user wait-time.

### **Ease-of-Use**

SuperSpeed USB delivers the same ease-of-use, plug-and-play capability as Hi-Speed USB, with additional convenience that comes with a super fast connection!

### **Backward Compatibility**

Applications built to the USB 2.0 specification will work seamlessly with SuperSpeed USB.

### **Logo Certification**

The USB-IF delivers compliance testing, provides trademark licensing and qualifies products to use the Certified SuperSpeed USB logo. When the Certified SuperSpeed USB logo appears on a product, consumers will know they are getting a product that has passed the standards set by the USB-IF.

# SUPERSPEED USB: “INFINITE POSSIBILITIES!”

## A Ready-Made Market

SuperSpeed USB from the USB-IF builds upon the existing industry investment in USB. With an install base of 6+ billion units and growing at 3+ billion units a year, USB is the most successful interface in the history of computing and has migrated into virtually 100% of the PC and peripheral categories. Every market segment will benefit from SuperSpeed USB.

### Consumer Electronics Segment

Eliminates slow data transfer in the digital home, delivers easy installation, and supports bandwidth headroom for Flash based products.

### Flash Segment

Flash-based peripherals, such as those listed below, require much higher data rates

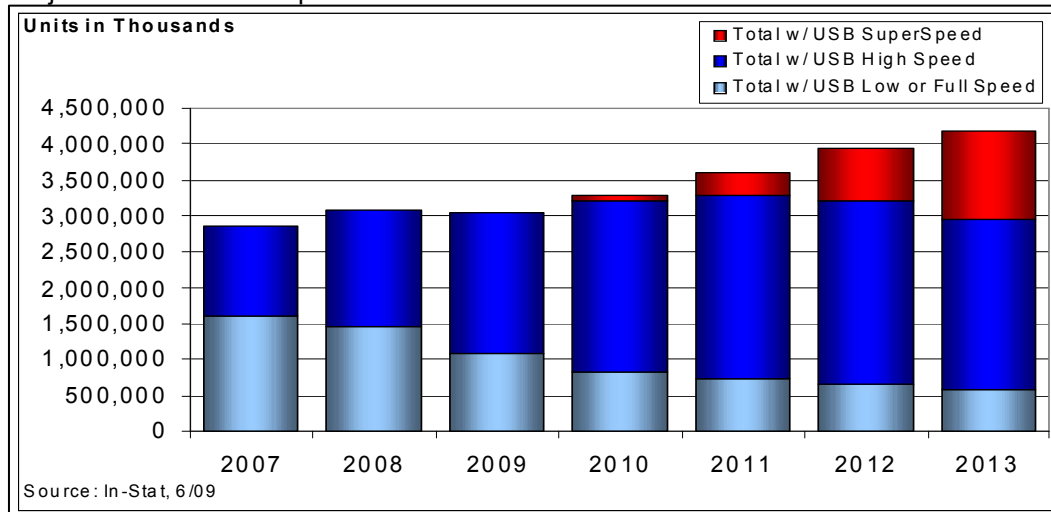
- Digital cameras and camcorders
- Flash memory drives (USB thumb sticks, and cards)
- Flash-based digital MP3 and video players
- PC, Mobile, Handheld PCs and smart phones (SSD's)

With SuperSpeed USB consumers can download a 25GB HD movie in just over a minute! This same task with Hi-Speed USB took almost 15 minutes.

		Song / Pic 4 MB	256 Flash 256 MB	USB Flash 1 GB	SD-Movie 6 GB	USB Flash 16 GB	HD-Movie 25 GB
Original	USB 1.0	5.3 sec	5.7 min	22 min	2.2 hr	5.9 hr	9.3 hr
Hi-Speed	USB 2.0	0.1 sec	8.5 sec	33 sec	3.3 min	8.9 min	13.9 min
SuperSpeed	USB 3.0	0.01 sec	0.8 sec	3.3 sec	20 sec	53.3 sec	70 sec

## Market Opportunity

Projected Worldwide Shipment of USB-enabled Devices



## When will certified SuperSpeed USB products be available?

SuperSpeed USB products have already started shipping and industry momentum is growing! Be sure to look for the Certified SuperSpeed USB logo.

## Where can I learn more?

For more information about SuperSpeed USB, visit [www.usb.org/developers/ssusb](http://www.usb.org/developers/ssusb).