

Engelking Elektronik GmbH Albstr. 16 · D-78609 Tuningen · Germany Tel. +49 (0)7464-9865-0 · +49 (0)7464-9865-71 info@engelking.de · www.engelking.de

Responsible Editor

Samuel Engelking

EDAC USB 3.0 EDAC introduces "SuperSpeed" USB 3.0

A major new feature of USB 3.0 is the "SuperSpeed" bus, which provides a fourth transfer mode at 5.0 Gigabit/s. The raw throughput is 4 Gigabit/s, and the specification considers it reasonable to achieve 3.2 Gigabit/s (0.4 Gigabyte or 400 Megabytes), or more, after protocol overhead. This table identifies the differences between the 2.0 and new 3.0 technologies.



| | SuperSpeed USB 3.0 | USB 2.0 |
|------------------|-----------------------------|--------------------------------|
| Signalling | Dual-simplex four wire | Half-duplex two wire |
| | differential signalling | differential signalling |
| Data Flows | Simultaneous bi-directional | Unidirectional plus negotiated |
| | | directional bus transitions |
| Traffic Flow | Asynchronous | Polled |
| Packet Traffic | Explicitly routed | Broadcast to all devices |
| Power Management | Multi-level, which supports | Port-level that has two levels |
| | idle, sleep, and suspend | of entry/exit latency |
| Bus Power | 50% more than USB 2.0 | |

80% more with configured power

Edac USB 3.0 is available in Type A, Type B and Micro. The USB connector on your PC is a Type A connector. So when you have a Type A plug (such as your mouse, PDA connector, digital camera connector, etc) you can directly plug it into the computer.

However, many larger USB peripherals (such as printers, scanners etc) have a USB Type B connector and hence require a Type B plug. In order to connect a USB Type B peripheral to you computer, you will need to purchase a USB Type A to B Cable. The Micro version is used in mobile devices like cell phones, PDA's and Smartphone the number of mate cycles will be significantly higher.

There are many applications for the USB 3.0 connectors. They range from Consumer to Automotive.

The Series 690 USB connectors from EDAC, Inc. are fully compliant with the USB 2.0 and 3.0 specifications, providing a significant leap forward in transfer speeds (5 Gbps signalling rate) and a 10x performance increase over hi-speed USB capabilities while maintaining backwards compatibility with USB 2.0 devices. The USB 3.0 specification will accommodate next generation peripherals that require more power and improved interaction between devices and the host computer by providing more power when needed and less power when not needed.

The German distributor for the EDAC USB 3.0 and other components is the Engelking Elektronik GmbH, known for its large range of switches and connectors