

## New USB 3.1 Connectors



Since the introduction of the USB interface (Universal Serial Bus) in 1996, this I/O connection has become an essential part of everyday life, industry, and many other technology-supported applications.

Over the years, the USB series has continually been upgraded with specification updates like USB 2.0, USB 3.0, and various micro and mini versions. Since 2014, the new specification in town has been 3.1.

Probably the most important general feature of the new version is the increase in transmission rate from 5 Gbps to 10 Gbps. The number of plug cycles has also been increased, from 5,000 to 10,000.

The particular novelty is a new plug form, the USB type "C". Although to date only types A and B have been used, with a defined upper and lower side, version C is truly something new. The upper and lower sides are identical, so there is no need to pay attention to the orientation of the plug in the connection. The size of the connection has also been reduced, roughly to the dimensions of a Micro-USB type B. Type C also supports charging of batteries and the like with power levels up to 100 watts.

Yamaichi Electronics is expanding its already extensive portfolio of USB 2.0 and USB 3.0 products with the new USB series 3.1. A standard line of types A and C are offered, both in plug and socket variants. Cable assemblies in various variants and combinations are also available.

The 9-pin version A is initially available in the TH variant. It is upwards compatible with older USB versions.

Type C is available in a combination of SMT and TH pins. This is due to the high number of contacts, with 24 pins. Since version C is not compatible with legacy USB products, Yamaichi Electronics also offers adapters from type C to type A. These adapters are also available in the form of short cable assemblies to ensure greater flexibility.

In general, Yamaichi Electronics has a broad offering of assembled cables, for example from type C to type C with 15 strands for high-speed data transmission, but also for applications from type C to USB 2.0 with only 5 strands.

All cables can be fabricated with a wide variety of connectors, as needed by the customer. The high-quality processing and the injection moulding of the plugs is of course a given. For customers who would like to assemble their own cables, of course, the plug side is also available as a component with solder contacts. All USB 3.1 connectors and cable assemblies are plated with nickel-palladium and gold to ensure high transmission quality and guarantee the required number of plug cycles. Depending on the type, board connectors are packaged in reels or trays.

Datasheets and additional information can be found on [www.yamaichi.eu](http://www.yamaichi.eu)