

# USB Type-C Connectors >

Our next-generation solution for current and future USB applications features a comprehensive family of type-C connectors that now includes 6, 14, 16 and 24 circuit receptacles.

## MARKETS

- Consumer electronics
- Industrial equipment
- Connected home
- Commercial aviation
- Medical
- Automotive

## APPLICATIONS

- Watches
- Fast chargers
- AR/VR devices
- PCs/laptops
- Point-of-sale registers
- Oscilloscopes
- Projectors
- Smart home systems
- Glucometers
- Electronic inhalers
- Auto infotainment
- In-flight entertainment



Our easy-to-use, rugged USB type-C connectors support up to 5.0A current and 40 Gbps speeds. They offer waterproof, reliable electric connectivity for consumer, industrial, medical and other high-speed I/O applications. Molex USB type-C connectors deliver the quality, reliability and performance essential for these mission-critical applications.

## KEY ADVANTAGES

1. The insert-molded plastic housing provides superior coplanarity of terminals during and after reflow processing. The metal plate inside the tongue enhances mechanical robustness and withstands repeated mating and unmating, up to 10,000 cycles.
2. The IPX8-rated receptacle features liquid silicon rubber (LSR) molding that provides superior bonding to the USB type-C main body and seals devices from water ingress.
3. Expanded product family supports compact design, low profile, limited space and fast-charging applications.

## USB TYPE-C CONNECTORS

**Pitch:** 0.50mm

**Current:** 5.0A, 3.0A

**Data Speed:** Up to 40 Gbps



USB4 Type-C Receptacle



USB 3.2 Type-C Receptacle

USB4 Type-C Receptacle

USB 3.1 Type-C Plugs and Receptacles

USB 3.2 Type-C Receptacle

USB 2.0 Type-C Receptacle

USB 2.0 Type-C Waterproof Receptacle



USB 2.0 Type-C Receptacle



USB 2.0 Type-C Waterproof Receptacle

Industry Need	Industry Challenge	Molex Solution	Anticipated Results
<b>Electrical Reliability and Physical Robustness</b>	USB type-C connectors and cables that do not comply with the required USB specifications have been known to cause electrical issues for computers, smartphones, tablets and other mission-critical devices. Such damage can be costly in terms of hardware, time, productivity and safety.	Molex's USB type-C connectors use high-temperature Nylon/LCP as housing material and a 3-tier insert-molding process to help ensure high-mating durability and electrical reliability of the connector. The connector's mating tongue design protects the interconnect from possible damage caused by mishandling, shipment or assembly processes.	Customers will realize high-speed connections without compromising reliability as well as better durability and cost savings due to reduced errors and improved productivity.
<b>Maximum PCB Space Savings</b>	Makers of electronic devices using USB type-C connectors need compact designs to optimize costly PCB real estate.	Molex's short-body USB type-C connector designs with short mating depth provide space-saving solutions.	The compact design will provide space savings and design flexibility.
<b>Flexible Height</b>	Automotive, medical and industrial device makers need type-C connectors in different heights.	Molex's vertical type-C connectors offer flexible height and tooling designs to meet customers' various height requirements.	Customers will have connectors of different heights with minimum investment and changeover time.
<b>Simplified SMT Verification</b>	Testing and supplementary soldering after SMT process is challenging with small size connectors.	Molex's waterproof USB type-C connectors' single-row SMT pin design enables easy testing and supplementary soldering with improved yield rate.	Simplified SMT verification will improve production with minimized errors.

[www.molex.com/molex/products/family/usb](http://www.molex.com/molex/products/family/usb)