

USB TYPE-C PORT-ON CONNECTORS

Adding: Slim upright version with spring TID.

NPI EXTENSION

JULY 2026



USB Type-C Port-On Connectors

Automotive, aerospace, medical, mobile devices, networking and industrial device makers need different heights of USB Type-C connectors with compact designs to optimize costly PCB real estate. The new slim-fit spring feature and flexible height design of the connectors helps save PCB space and meet customer's various height requirement with minimum investment.

Series

- 221455** USB4 TYPE-C Wire-to-Board Right-Angle Receptacles
- 204711** USB3.2 Type-C Wire-to-Board Vertical Receptacles
- 217179** USB2.0 TYPE-C Wire-to-Board Right-Angle Receptacles
- 228658** USB Type-C Wire-to-Board Right-Angle Receptacles



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Key Specifications	
Current (max.)	5.0A
Voltage (max.)	48V
Data Rate	40 Gbps/10 Gbps/480 Mbps
Durability (max.)	15 cycles
Mating Force	5 to 20N
Operating Temperatures	-40 to +105°C

Product Overview

USB Type-C Port-On Connectors

Trends and Challenges

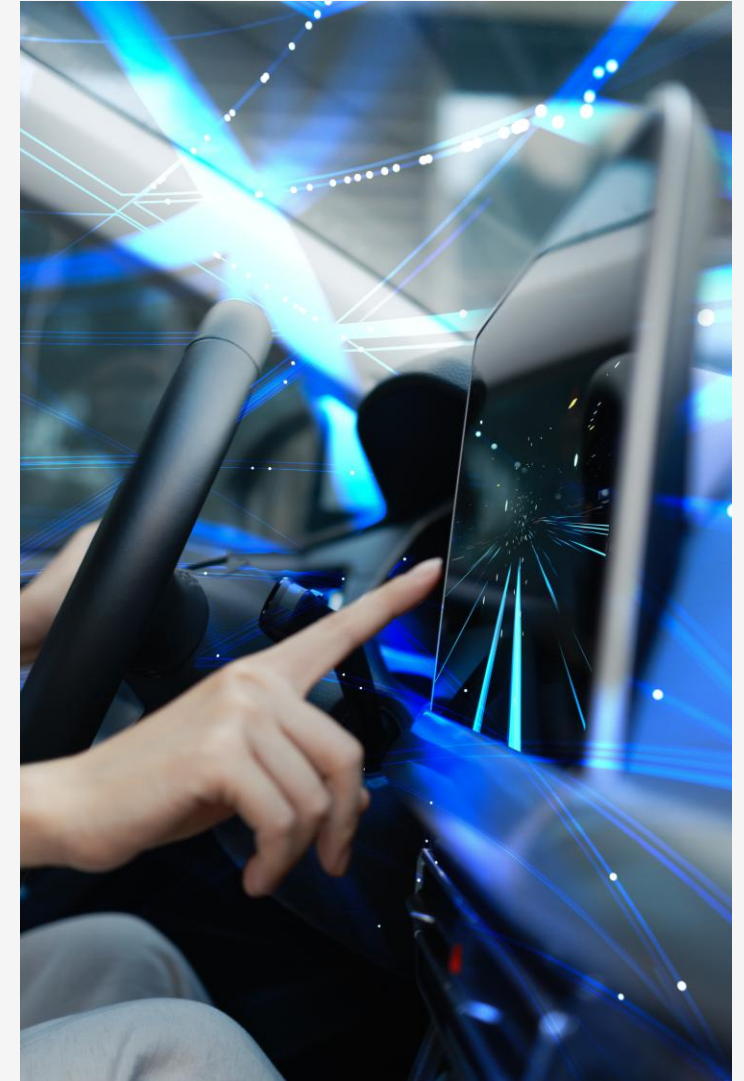
The automotive, mobility, medical and industrial device makers need different heights of type-c connectors. Makers of electronic devices using USB type-c connectors need compact designs to optimize costly PCB real estate. Customers are looking for USB type-c connectors that can support up to 5A of current and deliver up to 10 Gbps data speed.

Industry Needs

Automotive, aerospace, industrial, networking and mobile device makers need robust and easy to use type-c connectors in their equipment. There is a growing need for connectors with flexible height, which are compatible with high-speed and high-current applications.

Product Solutions

The flexible height and flexible tooling design of USB Type-C Connectors helps meet customer's various height requirements with minimum investment and changeover time. These connectors offer 0.50mm pitch with compact connector design and the slim-fit design helps save PCB real estate. The insert-molding processes, contact height above tongue surface and solder tail shell design of these connectors provide robust and easy to use products. These connectors offer excellent performance with 48V/5A power and up to 10 Gbps data speed.



Product Advantages and Features

USB Type-C Port-On Connectors

Provides protection against water ingress

With IPX5 and IPX8 ratings, USB connectors are durable in harsh environments.

Supports 5.0A/240W power and up to 10 Gbps data rates

Automotive, medical and industrial device manufacturers need USB Type C connectors that provide fast charging and high-speed data transfer.

Provides significant space savings

The slim fit design with a pitch of 0.50mm helps save PCB real estate.

Offers EMI protection during mating

The connectors use high-temperature plastic and three-tier insert-molding process to ensure strong mating durability.

Provides validation for customers who require proof of IEC conformance

The connectors are available with a TID number and have USB-IF certification, which allows customers to trust that the product will perform as intended.

Offers strong PCB connections for reliable performance

The robust tab with various length options helps prevent connector failures due to vibrations or harsh conditions.

Allows alignment for devices that need lower center line positions

The flexible height design helps facilitate better alignment in a confined space.



Markets and Applications

USB Type-C Port-On Connectors



In-flight Entertainment Systems



Televisions



Navigation Equipment

AEROSPACE

- In-flight entertainment systems

APPLIANCES

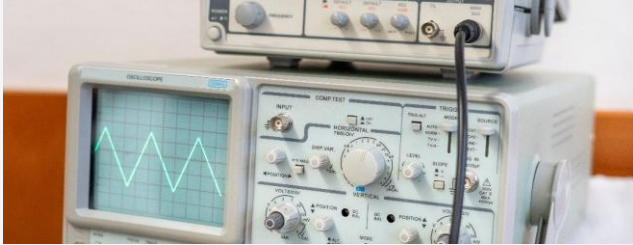
- PCs
- Televisions

AUTOMOTIVE

- Navigation equipment
- Vehicle infotainment

Markets and Applications

USB Type-C Port-On Connectors



Oscilloscopes



Glucometers



Smartphones

INDUSTRIAL

- Identity door-locking systems
- Oscilloscopes
- Point-of-sale registers
- Projectors

MEDTECH

- Electronic inhalers
- Glucometers

MOBILE DEVICES

- Graphics cards
- Laptops
- Power banks
- Smartphones
- Video games
- Wireless chargers

Markets and Applications

USB Type-C Port-On Connectors



AR/VR Devices

WEARABLES

- AR/VR devices
- Electronic watches

Frequently Asked Questions

USB Type-C Port-On Connectors

What are USB Type-C Connectors?

Using the latest USB technology, USB Type-C Connectors provide solutions for applications requiring fast data transfer, charging and video outputs. These connectors are reversible, support standards from USB 2.0 to 4.0 and deliver speeds up to 40Gbps.

What makes this product different from the competition?

USB Type-C Port-On input/output (I/O) connectors of Molex use high-temperature plastic as housing material and a 3-tier insert-molding process to help ensure mating durability. The mating tongue design protects the interconnects from possible damage caused by mishandling or shipment or assembly processes.

How does this product create value for our customers?

The spring TID feature acts as a verification that the device has been tested and meets the USB4 Spec standard, allowing users to trust its compatibility and functionality. Customers often face space constraints in the PCB real estate. The Slim fit spring feature saves PCB real estate assuring the USB standards are met.

Product Specifications

USB Type-C Port-On Connectors

Reference Information

Packaging: Tape and reel
UL File No.: NA
CSA File No.: NA
Mates With: Series 218847* or 105444*
Terminal Used: Copper alloy
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes

Electrical

Voltage (max.): 48V DC
Current (max.): 3.0/5.0A
Contact Resistance (max.)
 40 milliohms (initial)
 50 milliohms (after test)
Dielectric Withstanding Voltage: 100V
AC Insulation Resistance (min.):
 1,000 Megohms (initial)
 100 Megohms (after test)

Mechanical

Contact Retention to Housing: Insert molded type
Insertion Force to PCB: Zero Insertion Force
Mating Force: 5 to 20N
Un-mating Force:
 8 to 20N (1 to 30 cycles);
 6 to 20N (after 10,000 cycles).
Durability (min.): 10,000 cycles

Physical

Housing: Nylon/LCP/stainless steel
Contact: Copper Alloy
Plating: Gold(Au)/nickel(Ni)
Operating Temperature: -40 to +105°C



Additional Resources	
Web Overview Page	
Datasheet	
Global Product Manager	