USB CONNECTOR APPLICATION GUIDE

TE Connectivity USB Product Portfolio

Why TE USB Solutions?

Customer Needs	Why TE USB Solutions?
Scalability	Comprehensive Portfolio: TE offers a complete range of USB connectors — from Type-A and Type-B to Mini A, B, and AB, Micro A, B, and AB, and USB Type-C — supporting USB 2.0 through USB4 standards with full backward compatibility. This broad offering helps enable customers to scale across generations, data rates, and applications with a unified solution.
Reliability & Ruggedness	Reliable Design: Built to perform in demanding environments. IPX7/IPX8 waterproof and IPX4 splash-proof options help facilitate consistent performance under vibration, moisture, and temperature stress. EMI-shielded versions protect electronic equipment and systems from interference caused by electromagnetic fields.
Design Flexibility	Configurable Options: Multiple pin counts, orientations, and mount styles (top, mid, flag) simplify system integration and reduce redesign effort across legacy applications and new platforms.
High-Speed Data & Power Connectivity	Future-Ready Performance: Supports USB Power Delivery (PD) 3.1 (up to 240 W / 48 V) and USB4 (up to 40 Gbps) with alternate-mode video capabilities — delivering reliable, high-speed data transfer and efficient power delivery through a single, compact interface.
Supply Chain Assurance	Global Manufacturing Footprint: Global, diverse manufacturing locations help minimize supply chain risk.
Trusted Partnership	Global Engineering & Support: Backed by decades of interconnect experience and USB-IF membership, TE provides responsive application support and collaborative design expertise worldwide.

Designed for Diverse Markets

Market	USB Use Case	TE Solutions
Consumer Devices	High-speed charging & data	Up to 40 Gbps data transfer, up to PD 3.1charging
Industrial Automation	Harsh environments	Ruggedized design, sealed options
IoT & Smart Devices	Compact, scalable design	Low-profile and compact Mini-B, Micro-B, and USB Type-C
Computing & Peripherals	Legacy applications compatibility	Full backward compatibility with previous USB generations

TE's comprehensive USB portfolio serves a wide range of markets — enabling reliable, scalable connectivity from high-speed consumer devices to rugged industrial systems

USB Standards

From helping to pioneer the first USB 1.0 connectors in the mid-1990s to delivering cutting-edge USB4 Gen 3 solutions today, TE Connectivity has been at the forefront of every major USB evolution. As a founding member of the USB-IF, TE has consistently participated in the industry's transition to faster data transfer speeds and more powerful charge capabilities, while supporting innovations like reversible USB Type-C interfaces and enhanced power delivery capabilities up to 240 W. Our comprehensive portfolio - from standard Type-A and Type-B to ruggedized, waterproof USB-C connectors — empowers designers with strong reliability, scalability, and flexibility for applications spanning consumer electronics, industrial automation, and next-generation IoT ecosystems.

Standard Needs	USB 1.0 1996	USB 1.1 1998	USB 2.0 2001	USB 2.0 Revised	USB 3.0 2008	USB 3.1 2013	USB 3.2 2017	USB 4 2019
Maximum Transfer Rate	12 Mbps		480 Mbps		5 Gbps	10 Gbps	20 Gbps	40 Gbps
Type A Connector								
Type B Connector								
Type C Connector								
Mini - A Connector								
Mini - B Connector								
Mini - AB Connector								
Micro - A Connector								
Micro - B Connector								
Micro - AB Connector								

Application Categories

Category	Connector Types	Data / Power Range	Ideal Applications
Legacy USB	Type-A, Type-B	Up to 5 Gbps / 4.5 W	Computing, peripherals
Compact USB	Mini USB A, B, and AB, Micro USB A, B, and AB	Up to 5 Gbps / 9 W	IoT, portable, handheld
Next-Gen USB	USB Type-C	Up to 40 Gbps / 240 W (PD 3.1)	Consumer, industrial, future platforms

Data & Power Performance Comparison

Connector Type	USB 2.0 (480 Mbps)	USB 3.0 (5 Gbps)	USB 3.1 Gen 1 (5 Gbps)	USB 3.1 Gen 2 (10 Gbps)	USB 3.2 (20 Gbps)	USB4 (40 Gbps)	Max Power (PD)
Type-A	✓	✓	✓	✓	✓	-	4.5 W
Type-B	✓	✓	✓	✓	-	-	4.5 W
Mini-USB A, B, and AB	✓	-	-	-	-	-	2.5 W
Micro-USB A, B, and AB	✓	✓	✓	✓	-	-	9 W
USB Type-C	✓	✓	✓	✓	✓	✓	240 W
Rugged USB Type-C (IPX8)	✓	✓	✓	✓	✓	✓	240 W

USB Portfolio Selection Guide

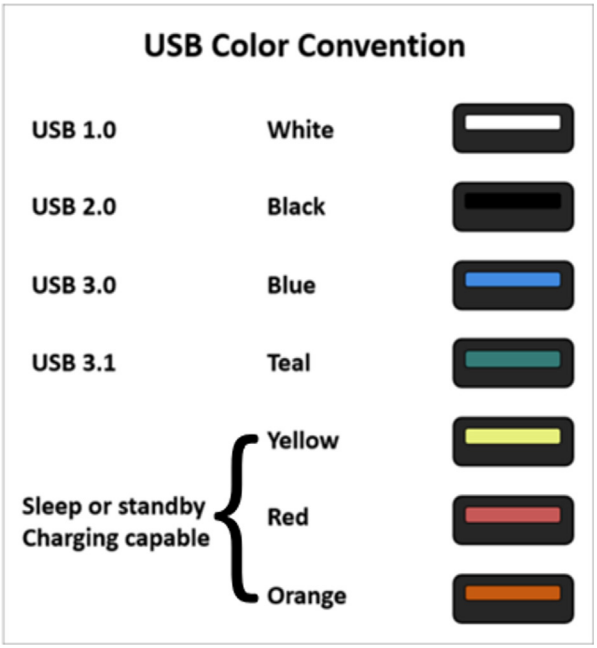
Design Need	Recommended Connector	Why Choose This Type
Compact, space-limited design	Micro-USB / USB Type-C	Low profile, supports power & data
Rugged / waterproof	USB Type-C IPX8 / Micro-USB IP68	Sealed & EMI-shielded
High power charging	USB Type-C PD 3.1	Up to 240 W
Backward compatibility	USB Type-A / USB Type-B	Legacy USB 1.1 – 3.2 support
Cost-sensitive / legacy system	USB Type-A / USB Type-B Mini/Micro-USB 2.0	Proven track record, cost-effective

USB Portfolio Selection Guide

Design Need	Why Choose This Type
USB Type-A The most recognizable USB connector, commonly used in host devices like computers and hubs. **Key Features:** • Data Rates: USB 1.1 (12 Mbps), USB 2.0 (480 Mbps), USB 3.0/3.1 Gen 1 (5 Gbps) • Form Factor: Rectangular, robust, single orientation • Use Cases: Keyboards, mice, printers, external drives, charging docks **Benefits:** • Broad compatibility and legacy support • Durable and widely adopted	**USB Type-B** Typically used in peripheral devices like printers and scanners. **Key Features:** • Data Rates: USB 2.0 (480 Mbps), USB 3.0 (5 Gbps) • Form Factor: Square with beveled corners • Use Cases: Printers, scanners, industrial control systems Benefits: • Secure connection for stationary devices • Supports high-current applications
Mini-USB Type A,B, and AB An older compact connector used in early portable electronics. **Key Features:** • Data Rates: USB 2.0 (480 Mbps) • Form Factor: Smaller than Type-B • Use Cases: Legacy cameras, MP3 players **Benefits:** • Compact for its time • Still found in legacy systems	**Micro-USB Type A,B, and AB** Widely used for charging or transferring data in mobile devices before USB-C adoption. **Key Features:** • Data Rates: USB 2.0 (480 Mbps), USB 3.0 (5 Gbps for Micro-B) • Form Factor: Ultra-compact • Use Cases: Smartphones, tablets, IoT devices **Benefits:** • Small footprint • Cost-effective
USB Type-AB Hybrid connector supporting both host and device roles, primarily in OTG (On-The-Go) applications. **Key Features:** • Data Rates: USB 2.0 (480 Mbps) • Form Factor: Combines Type-A and Type-B • Use Cases: Mobile devices with OTG support **Benefits:** • Enables dual-role functionality • Useful in embedded systems	**USB Type-C** The current standard for high-speed, high-power, and reversible connectivity. It marries power and data delivery with display connectivity. It has a small, oblong form factor that is reversible so the mating cable can be inserted in either orientation. **Key Features:** • Data Rates: USB 2.0 to USB4 (up to 40 Gbps) • Power Delivery: Up to 240W (USB PD 3.1) • Form Factor: Slim, reversible • Use Cases: Laptops, smartphones, docking stations, VR headsets, SSDs **Benefits:** • Reversible and compact • Supports alternate modes (DisplayPort, HDMI) • High-speed and high-power capabilities

USB Types - Speed Comparison

USB Type	Connector Types	Maximum Data Transfer Speed	Recommended Cable Length
USB 4.0	USB Type-C	40 Gbps	0.8m
USB 3.2	USB Type-C	20 Gbps	3m
USB 3.1 Gen 2	USB-A, B, USB Type-C, Micro B	10 Gbps	3m
USB 3.1 Gen 1	USB-A, B, USB Type-C, Micro B	5 Gbps	3m
USB 3.0	USB-A, B, USB Type-C, Micro B	5 Gbps	3m
USB 2.0	USB-A,B,C, Micro A, B, and AB, Mini A, B, and AB, Type-AB	480 Mbps	5m
USB 1.0	USB-A,B	12 Mbps	3m



USB For Power Delivery

High Power Levels

• Supports up to 240W (48V, 5A) enabling power-hungry devices like laptops and monitors.

Dynamic Voltage and Current Profiles

• Adjustable voltage (5V–20V) and current negotiation for optimized power transfer.

Bidirectional Power Flow

• Devices can act as power source or power sink, allowing flexible charging scenarios.

Smart Power Negotiation

• Uses a communication protocol over CC pins to negotiate power requirements safely.

Backward Compatibility

• Works with legacy USB standards while adding PD capabilities.

Integrated Data and Power

• Single connector for high-speed data transfer and power delivery, reducing cable clutter.

Enhanced Safety

• Built-in protections for over-voltage, over-current, and thermal events.

PD Specification	Maximum Power	Maximum Voltage	Maximum Current
USB 2.0	2.5 W	5 V	500 mA
USB 3.0 and 3.1	4.5 W	5 V	900 mA
USB BC 1.2	7.5 W	5 V	1.5 A
USB Type-C 1.2	15 W	5 V	3 A
USB PD 3.0	100 W	5/9/15/20 V	5 A
USB PD 3.1	240 W	28/36/48 V	5 A
USB4	240 W	48V	5 A

USB Portfolio Features

- Complete family of board mount receptacles, including various orientations and PCB mounting styles
- Consolidates serial parallel, keyboards, mice and game ports
- Compatible with asynchronous and isochronous data transfer methods
- Polarized for proper orientation
- Plug and Play capability
- Hot pluggable, permitting attaching or detaching peripherals without power down or reboot
- Allows for charging

USB Type-A Connectors

USB Type A connectors are the original and one of the most widely recognized USB connector types. Introduced in the mid-1990s with the USB 1.0 specification, they have become a universal standard for connecting devices to host systems like computers, TVs, and chargers.

Key Features

- **Shape:** Flat and rectangular
- **Orientation:** Non-reversible
- **Pin Count:**
  - 4 pins for USB 1.1 and 2.0
  - 9 pins for USB 3.0 and above (extra pins for faster data transfer)
- **Versions Supported:**
  - USB 1.1: 12 Mbps
  - USB 2.0: 480 Mbps
  - USB 3.x: Up to 20 Gbps (with USB 3.2 Gen 2x2)

Newer versions are all backward compatible with older USB versions

Advantages

- Universally supported across platforms
- Durable and simple design

Common Applications

- Data transfer between host and device
- Connecting peripherals:
  - Keyboards
  - Mice
  - Printers
  - Flash drives
  - External hard drives
  - Game controllers
- Charging and data transfer:
  - Smartphones
  - Tablets
  - Cameras

USB Type-A Connectors Featured Items

Part Number	Detailed Description	USB Type	USB Version	Termination Method to PCB	Body Orientation	Number of Positions	Housing Color	Centerline (Pitch)	PCB Thickness Recommended	Packaging Method	Pictures
292303-1	USB TYPE A CONNECTOR, RIGHT ANGLE, T/H	A	2.0	Through Hole - Solder	Right Angle	4	Black	2 mm [.078 in]	1.57 mm [.062 in]	Box & Tube,Tube	
292303-4	USB TYPE A CONNECTOR, RIGHT ANGLE, T/H	A	2.0	Through Hole - Solder	Right Angle	4	Black	2 mm [.078 in]	1.57 mm [.062 in]	Box & Tube,Tube	
292303-9	USB TYPE A CONNECTOR, RIGHT ANGLE, SMT, OFFSET, NATURAL	A	2.0	Surface Mount	Right Angle	4	Natural	2 mm [.078 in]	1.2 mm [.047 in]	Box & Tray,Reel	
292336-1	USB TYPE A CONNECTOR, FLAG, T/H	A	2.0	Through Hole - Solder	Perpendicular Right Angle	4	Black	2 mm [.078 in]	1.57 mm [.062 in]	Box & Tube,Tube	
1-1734775-1	USB TYPE A CONNECTOR, FLAG, T/H, 1.8A	A	2.0	Through Hole - Solder	Perpendicular Right Angle	4	Black	2 mm [.078 in]	1.6 mm [.063 in]	Box & Tray,Tray	
1775690-2	USB TYPE A CONNECTOR, VERTICAL, T/H, 2.5A	A	2.0	Through Hole - Solder	Vertical	4	Black	2 mm [.078 in]	1.6 mm [.062 in]	Box & Tray,Tray	
1932258-1	USB 3.0 TYPE A CONNECTOR, RIGHT ANGLE, T/H	A	3.0	Through Hole - Solder	Right Angle	9	Blue	2 mm [.078 in]	1.6 mm [.063 in]	Box & Tray,Tray	
5353928-1	USB TYPE A CONNECTOR, RIGHT ANGLE, SMT, OFFSET, PANEL	A	2.0	Surface Mount	Right Angle	4	White	2 mm [.078 in]	1 mm [.039 in]	Tape & Reel	
5787617-1	USB TYPE A RECEPTACLE ASSEMBLY, RIGHT ANGLE, STACKED, T/H	A	2.0	Through Hole - Solder	Right Angle	8	Black	2 mm [.078 in]	1.57 mm [.062 in]	Box,Box & Tray	
5787745-1	USB TYPE A RECEPTACLE ASSEMBLY W/ SHIELD, RIGHT ANGLE, STACKED, T/H	A	2.0	Through Hole - Solder	Right Angle	8	Black	2 mm [.078 in]	1.57 mm [.062 in]	Box & Tray,Tray	
1734366-1	USB TYPE A CONNECTOR, VERTICAL, T/H	A	2.0	Through Hole - Solder	Vertical	4	Black	2 mm [.078 in]	1.6 mm [.063 in]	Box & Tray,Tray	

USB Portfolio Features

USB Type B is one of the original USB connector types, designed primarily for connecting peripheral devices to a host (like a computer). This connector style is most seen on devices like printers, scanners, and external hard drives.

Key Features

- **Shape:** Square with a slight bevel on the top corners
- **Pin Count:** 4 pins (USB 1.1/2.0), 9 pins (USB 3.0+)
- **Orientation:** Non-reversible
- **Speed Support:**
  - **USB 1.1:** 12 Mbps
  - **USB 2.0:** 480 Mbps
  - **USB 3.0+:** Up to 5 Gbps (with additional pins)

Advantages

- Durable and secure connection
- Designed for high-power peripherals
- Still used in professional and industrial equipment

Common Applications

- Printers and scanners
- Audio interfaces
- External hard drives
- Industrial and lab equipment
- USB hubs (device-side)

Variants

- Standard USB Type-B: For USB 1.1 and 2.0 devices
- USB 3.0 Type B: Larger, with extra pins for faster data transfer
- Powered-B: For devices that require more power

USB Type-B Connectors Featured Items

Part Number	Detailed Description	USB Type	USB Version	Termination Method to PCB	Body Orientation	Number of Positions	Housing Color	Centerline (Pitch)	PCB Thickness Recommended	Packaging Method	Pictures
292304-1	USB TYPE B CONNECTOR, R/A, T/H	B	2.0	Through Hole - Solder	Right Angle	4	Black	2.5 mm [.098 in]	1.57 mm [.062 in]	Box & Tray,Tray	
292304-2	USB TYPE B CONNECTOR, R/A, T/H	B	2.0	Through Hole - Solder	Right Angle	4	Black	2.5 mm [.098 in]	1.57 mm [.062 in]	Box & Tray,Tray	
292317-4	USB TYPE B CONNECTOR, R/A, T/H	B	2.0	Through Hole - Solder	Right Angle	4	Black	2.5 mm [.098 in]	1.57 mm [.062 in]	Box & Tray,Tray	
5787834-1	USB TYPE B CONNECTOR, VERTICAL, T/H	B	2.0	Through Hole - Solder	Vertical	4	Black	2.5 mm [.098 in]	1.57 mm [.062 in]	Box & Tray,Tray	
5788336-1	USB TYPE B CONNECTOR, VERTICAL, T/H	B	2.0	Through Hole - Solder	Vertical	4	Black	2.5 mm [.098 in]	1.57 mm [.062 in]	Box & Tray,Tray	
1734517-1	USB TYPE B CONNECTOR, VERTICAL, SMT, GROUND FINGER	B	2.0	Surface Mount	Vertical	4	Black	2.5 mm [.098 in]	1 mm [.039 in]	Tape & Reel	

Mini USB Type A,B, and AB Connectors

Mini USB (Mini Universal Serial Bus) is a smaller USB interface introduced in the early 2000s, primarily used for compact and portable electronic devices. It was part of the USB 2.0 standard and served as a predecessor to the Micro USB connector.

Key Features

- **Shape:** Trapezoidal, slightly larger than Micro USB
- **Pin Count:** 5 pins (including an ID pin for USB On-The-Go)
- **Versions:**
  - **Mini-A:** Rare, used for USB OTG hosts
  - **Mini-B:** Most common, used for peripherals
  - **Mini-AB:** Hybrid port supporting both Mini-A and Mini-B
- **Data Speed:** Up to 480 Mbps (USB 2.0)
- **Power Delivery:** Typically up to 2.5W

Common Applications

- Digital cameras
- MP3 players
- GPS devices
- External hard drives
- Game controllers
- Development boards

Advantages

- Compact and portable
- Supports both data transfer and charging

USB Type-B Connectors Featured Items

Part Number	Detailed Description	USB Type	USB Version	Termination Method to PCB	Body Orientation	Number of Positions	Housing Color	Centerline (Pitch)	PCB Thickness Recommended	Packaging Method	Pictures
1734035-2	MINI USB CONNECTOR, TYPE B, RIGHT ANGLE, SMT	B	2.0	Surface Mount	Right Angle	5	Black	2.5 mm [.098 in]	1.57 mm [.062 in]	Box & Tray,Tray	
1734205-1	MINI USB CONNECTOR, TYPE B, PLUG. CABLE-KIT	B	2.0	Not Available	Not Available	5	Black	2.5 mm [.098 in]	1.57 mm [.062 in]	Box & Tray,Tray	
1734327-2	MINI USB CONNECTOR, TYPE A, RIGHT ANGLE, SMT	A	2.0	Surface Mount	Right Angle	5	Black	2.5 mm [.098 in]	1.57 mm [.062 in]	Box & Tray,Tray	
1734328-2	MINI USB CONNECTOR AB RIGHT ANGLE, RECEPTACLE, SMT, T&R	AB	2.0	Surface Mount	Right Angle	5	Black	2.5 mm [.098 in]	1.57 mm [.062 in]	Tape & Reel	
1734510-1	MINI USB CONNECTOR, TYPE B, RIGHT ANGLE, T/H	B	2.0	Through Hole - Solder	Right Angle	5	Black	2.5 mm [.098 in]	1.57 mm [.062 in]	Box & Tray,Tray	
1734753-1	MINI USB CONNECTOR, TYPE B, VERTICAL, T/H	B	2.0	Through Hole - Solder	Vertical	5	Black	2.5 mm [.098 in]	1 mm [.039 in]	Tape & Reel	

Micro-USB Type A,B, and AB Connectors

Micro USB connectors are compact USB connectors introduced as part of the USB 2.0 specification. They were designed to replace Mini-USB Type A,B, and AB connectors, becoming the standard for many portable devices prior to the introduction of USB-C connectors.

Key Features

- **Shape:** Smaller and flatter than Mini USB, with a trapezoidal profile
- **Pin Count:** 5 pins (including an ID pin for USB On-The-Go)
- **Versions:**
  - Micro-A
  - Micro-B
  - Micro-AB
- **Speed:** Up to 480 Mbps (USB 2.0), 5 Gbps (USB 3.0 Micro-B)
- **Power Delivery:** Up to 9W (USB 2.0), higher with USB battery charging spec

Common Applications

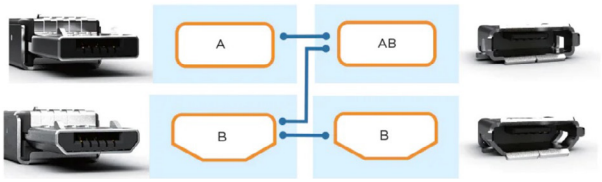
- Smartphones and tablets (especially Android devices prior to USB Type-C)
- Power banks, headphones and speakers
- Digital cameras
- External hard drives
- Development boards

Advantages

- Compact and lightweight
- Widely adopted across many device categories
- Supports both data transfer and charging
- USB On-The-Go (OTG) support for host-device switching

MATING TYPE

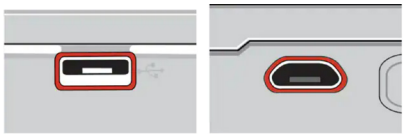
- **Type A** plugs are typically used for connection to “master” devices.
- **Type B** plugs are used for connections to “slave” devices.
- **Type AB Receptacle:** The device itself either features a receptacle that can accept only Type B (slave) plugs or both Type A and Type B plugs (device can function as master or slave).



MOUNT TYPE

SEALING

FLANGE



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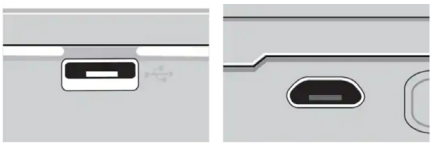

Micro-USB Type A,B, and AB Connectors Featured Items

Part Number	Detailed Description	USB Type	USB Version	Termination Method to PCB	Body Orientation	Number of Positions	Housing Color	Centerline (Pitch)	PCB Thickness Recommended	Packaging Method	Pictures
1932788-1	MICRO USB CONNECTOR, TYPE B, REVERSE	B	2.0	Surface Mount	Reverse Right Angle	5	Black	.65 mm [.025 in]	Hold-Down	Tape & Reel	
1981568-1	MICRO USB CONNECTOR, TYPE B	B	2.0	Surface Mount	Right Angle	5	Black	.65 mm [.025 in]	SMT Hold-Down	Tape & Reel	
2108877-1	MICRO USB CONNECTOR, TYPE B, IP68	B	2.0	Surface Mount	Right Angle	5	Black	.65 mm [.025 in]	Hold-Down	Tape & Reel	
2134536-2	MICRO USB CONNECTOR, TYPE A/B, GRAY	AB	2.0	Surface Mount	Right Angle	5	Gray	.65 mm [.025 in]	Straight Leg	Tape & Reel	
2174507-2	MICRO USB CONNECTOR, TYPE B	B	2.0	Surface Mount	Right Angle	5	Black	.65 mm [.025 in]	SMT Hold-Down	Tape & Reel	
2013499-1	MICRO USB CONNECTOR, TYPE B	B	2.0	Surface Mount	Right Angle	5	Black	.65 mm [.025 in]	Straight Leg	Tape & Reel	
1981584-1	MICRO USB CONNECTOR, TYPE A/B, GRAY	AB	2.0	Surface Mount	Right Angle	5	Gray	.65 mm [.025 in]	SMT Hold-Down	Tape & Reel	

USB Type-C Connectors

USB Type-C connectors, often referred to simply as USB-C, is the latest and most versatile USB connector standard, combining power and data delivery with display connectivity. It has rapidly become the universal connector for modern electronics due to its compact design, high-speed capabilities, and reversible plug orientation.

Key Features

- **Shape:** Small, oval, and symmetrical
- **Orientation:** Reversible (can be plugged in either way)
- **Pin Count:** 6/16/24 pins
- **Speed Support:**
  - USB 2.0: 480 Mbps
  - USB 3.2: Up to 20 Gbps
  - USB 4.0: Up to 40 Gbps
- **Power Delivery:** Up to 240W (48V, 5A)
- **Video Output:** Supports DisplayPort, HDMI, and Thunderbolt protocols

Advantages

- Reversible design for ease of use
- High-speed data transfer
- High power delivery for fast charging and for powering laptops
- Universal compatibility across many device types
- Supports alternate modes like video output and Thunderbolt

Common Applications

High speed signal version

- Laptops & ultrabooks
- External SSDs & NVMe drives
- 4K/8K monitors & docking stations
- VR/AR headsets & gaming consoles
- High-performance industrial automation

Low speed signal version

- Smartphones & tablets
- Printers & scanners
- IoT devices & sensors
- Basic industrial control systems

Charge-Only version

- Wireless earbuds & accessories
- Power banks & charging docks
- Hubs and Adapters
- Portable medical devices

USB Type-C Connectors Featured Items

Part Number	Detailed Description	USB Type	USB Version	Termination Method to PCB	Body Orientation	Number of Positions	Housing Color	PCB Mount Location	PCB Mount Retention Type	Packaging Method	Pictures
2129691-2	USB3.1 TYPE-C RECEPTACLE MID-MOUNT 0.485 HYBRID	C	3.1 Gen 1	Surface Mount, Through Hole-Solder	Right Angle	16	Black	Mid Mount	Straight Legs	Tape & Reel	
2295018-2	SPLASH PROOF USB TYPE C RECEPTACLE, DUAL SMT	C	3.1 Gen 1	Surface Mount	Right Angle	24	Black	Mid Mount	SMT + Through Hole	Tape & Reel	
2305018-2	USB TYPE C, RECEPTACLE IPX8 ON BOARD DUAL SMT	C	3.1 Gen 2	Surface Mount	Right Angle	16	Black	Top Mount	SMT + Through Hole	Reel	
2329418-2	USB TYPE C,REC IPX8 ON BOARD WITH COVER	C	3.1 Gen 2	Surface Mount	Right Angle	16	Black	Top Mount	SMT + Through Hole	Reel	
2337857-1	VERTICAL USB TYPE-C RECEPTACLE	C	3.1 Gen 1	Surface Mount	Vertical	16	Black	Top Mount	SMT + Through Hole	Tape & Reel	
2345986-1	USB TYPE C 3.1 TOP MOUNT DUAL SMT 1.63CH	C	3.1 Gen 2	Surface Mount	Right Angle	24	Black	Top Mount	Guide Post	Reel	
2366738-1	USB TYPE C CONNECTOR	C	3.1 Gen 2	Surface Mount	Perpendicular Right Angle	24	Black	Top Mount	Guide Post	Reel & Box	
2340901-1	USB Type C 2.0 RECEPTACLE Mid-Mount One Row	C	2.0	Surface Mount	Right Angle	24	Black	Mid Mount	Straight Leg	Reel	
2479774-1	USB C Charge-only,6 Pin, Top, 1u GF	C	2.0	Through Hole - Solder	Right Angle	6	Black	Top Mount	Solder Peg	Reel	
2480790-1	USB C Charge-only,6 Pin, Vertical, Long	C	2.0	Through Hole - Solder	Vertical	6	Black	Top Mount	Solder Peg	Reel	
2495154-1	USB TYPE C 6P WATERPROOF DIP+SMT CONN	C	2.0	Surface Mount	Perpendicular Right Angle	6	Black	Top Mount	Guide Post	Tape & Reel	
2495155-1	USB TYPE C RECEPTACLE 16P WATERPROOF DIP	C	2.0	Surface Mount	Perpendicular Right Angle	16	Black	Top Mount	Guide Post	Tape & Reel	
2495698-1	USB TYPE C PLUG SMT MIDDLE MOUNT RIGHT ANGLE	C	2.0	Surface Mount	Perpendicular Right Angle	24	Black	Top Mount	Plug	Piece/Reel	
2495699-1	USB TYPE C PLUG 24P SMT VERTICAL MOUNT	C	2.0	Surface Mount	Perpendicular Right Angle	24	Black	Top Mount	Plug	Piece/Reel	
2495701-1	USB TYPE C PLUG 24P VERTICAL MOUNT	C	2.0	Surface Mount	Perpendicular Right Angle	24	Black	Top Mount	Plug	Piece/Reel	
2495709-1	USB TYPE C RECEPTACLE 24P IPX7	C	3.0	Surface Mount	Perpendicular Right Angle	24	Black	Top Mount	Guide Post	Piece/Reel	
2495712-1	USB TYPE C RECEPTACLE 24P IPX7	C	3.0	Surface Mount	Perpendicular Right Angle	24	Black	Top Mount	Guide Post	Piece/Reel	
2498754-1	USB FLAG TYPE C RECEPTACLE 16P	C	2.0	Surface Mount	Perpendicular Right Angle	16	Black	Top Mount	Guide Post	Tape & Reel	

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