

USB Type C Connector and Cable Assembly

COMPACT, BLIND MATING, SUPER SPEED UP TO 40GB/S

Amphenol FCI USB Type-C connector is a compact, reversible interface that enables high-speed data transfer and power delivery. Ensures quick and seamless file transfers and multimedia streaming. It can be plugged in either way, eliminating the hassle of trying to align the connector correctly. It supports scalable power delivery up to 240W and speed up to 40Gb/s.

- Small form factor
- Reversible plug orientation
- Supports super speed up to 40Gb/s
- Scalable with various I/O connectors
- Up to 10,000 mating cycle



TARGET MARKETS



FEATURES

- Small form factor
- Reversible plug orientation
- Support super speed 40Gb/s
- Scalable with various I/O connectors
- Up to 10,000 mating cycle
- Better EMI (Electromagnetic Interference) shielding design
- RoHS compliant and lead-free

BENEFITS

- Save the space of chassis, perfectly fit to portable devices
- Ensures quick and easy connection whichever way it is inserted
- Minimize the user waiting time
- One interface but compatible with HDMI/DP/RJ45/VGA through conversion hub
- Perfectly fit for long term use of frequently plugged consumer products
- Protects against EMI and ESD (Electromagnetic Discharge)
- Meets environmental, health, and safety requirements

TECHNICAL INFORMATION – CONNECTOR

MATERIAL

- Housing: High temperature thermoplastic
- Terminal Base Material: Copper Alloy
- Plating: Gold flash on contact area

MECHANICAL PERFORMANCE

- Durability: 10,000 cycles
- Insertion Force: 5–20N
- Withdraw Force: 8–20N

ELECTRICAL PERFORMANCE

- Current Rating: 3.0A continuous
- LLCr: 40mΩ max. initial, $\Delta R \leq 10\text{m}\Omega$ after reliability test
- Insulation Resistance: 100MΩ
- Voltage Rating: 100VAC/VDC
- Withstanding Voltage: 500VAC RMS 60Hz
- Current Rating:
 - 5.0A for VBUS and GND
 - 1.25A for Vconn and GND
 - 0.25A for all other contacts

PACKAGING

- Receptacle: Tape and Reel
- Plug: Tray

SPECIFICATIONS

- Product Specification: GS-12-1351

ENVIRONMENTAL

- Operating Temperature Range: –25°C to +85°C

TARGET MARKETS/APPLICATIONS



Infotainment



Phone
Smart Devices
Gaming Box
Portable HDD



Laptop
Desktop

PART NUMBERS – CONNECTORS

Part Description	USB Version	Data Speed	Pin Count	Part Numbers
USB C Receptacle R/A 6P G/F	Power Only	N/A	6	10164359-00011LF
USB C Receptacle Vertical 6P G/F 6.5mm height	Power Only	N/A	6	10173568-00011LF
USB C Receptacle R/A 6P G/F IPX5	Power Only	N/A	6	10165429-00011LF
USB C Receptacle R/A 6P G/F Sink 0.8mm	Power Only	N/A	6	10174819-00011LF
USB C Receptacle R/A SMT 16P G/F 7.35mm length	USB 2.0	480M	16	10155435-00011LF
USB C Receptacle R/A SMT 16P G/F 6.5mm length	USB 2.0	480M	16	10171746-00021LF
USB C Receptacle R/A SMT Highrise 16P G/F CH5.9	USB 2.0	480M	16	10171167-01111LF
USB C Receptacle R/A SMT 16P G/F Sink 0.8mm	USB 2.0	480M	16	10174570-00A11LF
USB C Receptacle R/A SMT 16P G/F Sink 1.0mm	USB 2.0	480M	16	10174570-00B11LF
USB C Receptacle R/A SMT 16P G/F Sink 1.6mm	USB 2.0	480M	16	10174570-00C11LF
USB C Receptacle R/A SMT 16P G/F Sink 2.1mm	USB 2.0	480M	16	10172013-00011LF
USB C Receptacle Vertical 16P G/F 6.4mm height	USB 2.0	480M	16	10168207-00011LF
USB C Receptacle Upright Through Hole 14P G/F	USB 2.0	480M	14	10151348-00011LF
USB C Receptacle R/A SMT 24P G/F CH1.65mm	USB 3.2 Gen 2	20G	24	10163749-00012LF
USB C Receptacle R/A SMT 24P G/F CH1.68mm	USB 3.2 Gen 2	20G	24	10152803-00011LF
USB C Receptacle R/A Hybrid 24P G/F	USB 3.2 Gen 2	20G	24	10159872-00011LF
USB C Receptacle R/A High rise 24P G/F CH3.4mm	USB 3.2 Gen 2	20G	24	10163259-00011LF
USB C Receptacle R/A Hybrid 24P G/F IP67	USB 3.2 Gen 1	10G	24	10164986-00011LF
USB C Receptacle Vertical 24P G/F	USB 3.2 Gen 2	20G	24	10157529-00111LF
USB C Receptacle Upright 24P G/F	USB 3.2 Gen 2	20G	24	10167129-00011LF
USB C Receptacle Stacked R/A SMT 48P G/F	USB 3.2 Gen 2	20G	48	10174471-00011LF
USB C Receptacle R/A SMT 24P G/F Sink	USB 4	40G	24	10137064-00011LF
USB C Plug Straddle 24P 30µin	USB 3.2 Gen 1	10G	24	10133475-10001LF
USB C Plug Vertical 24P G/F	USB 3.2 Gen 1	10G	24	10160261-00011LF

TECHNICAL INFORMATION – CABLE ASSEMBLY

MATERIAL

- Housing: High temperature thermoplastic
- Shell: Stainless Steel
- Terminal: Copper Alloy
- Inner-mold: LD-PE transparent
- Over-mold: TPE or PVC

MECHANICAL PERFORMANCE

- Mating Force:
 - 35N max. (Type A plug)
 - 5N–20N (Type C plug)
- Un-mating Force:
 - 10N min. (Type A plug)
 - Initial 8N–20N; after 10k cycle: 6N–20N (Type C plug)
- Durability: 10000 mating cycles
- Bending: 1000 cycles

ELECTRICAL PERFORMANCE

- Current Rating: 2/3/5A
- Voltage Rating: 5/24/48V
- Conductor Resistance: 5Ω max.
- Insulation Resistance: $\geq 10\text{M}\Omega/\text{KM}$
- Dielectric Strength for 1 min.: 300VDC

PACKAGING

- Receptacle: Bag and Carton

SPECIFICATIONS

- Product Specification: GS-12-1577

ENVIRONMENTAL

- Operating Temperature Range: + 5°C to + 40°C

TARGET MARKETS/APPLICATIONS



Infotainment



Phone
Smart Devices
Gaming Box
Portable HDD



HMI

PART NUMBERS – CABLE ASSEMBLY

Part Description	USB Version	Length	Color	PN
USB Cable Assembly A to C 0.3M White	USB2.0	0.3M	White	10165793-Z0030YWLF
USB Cable Assembly A to C 0.5M White	USB2.0	0.5M	White	10165793-Z0050YWLF
USB Cable Assembly A to C 1.0M White	USB2.0	1.0M	White	10165793-Z0100YWLF
USB Cable Assembly A to C 0.3M Black	USB2.0	0.3M	Black	10165793-Z0030YBLF
USB Cable Assembly A to C 0.5M Black	USB2.0	0.5M	Black	10165793-Z0050YBLF
USB Cable Assembly A to C 1.0M Black	USB2.0	1.0M	Black	10165793-Z0100YBLF
USB Cable Assembly C to C 0.3M White	USB2.0	0.3M	White	10165794-Z0030YWLF
USB Cable Assembly C to C 0.5M White	USB2.0	0.5M	White	10165794-Z0050YWLF
USB Cable Assembly C to C 1.0M White	USB2.0	1.0M	White	10165794-Z0100YWLF
USB Cable Assembly C to C 0.3M Black	USB2.0	0.3M	Black	10165794-Z0030YBLF
USB Cable Assembly C to C 0.5M Black	USB2.0	0.5M	Black	10165794-Z0050YBLF
USB Cable Assembly C to C 1.0M Black	USB2.0	1.0M	Black	10165794-Z0100YBLF
USB 240W Cable Assembly C to C 0.3M Black	USB3.2 Gen2	0.3M	Black	10174198-Z0030YYLF
USB 240W Cable Assembly C to C 0.5M Black	USB3.2 Gen2	0.5M	Black	10174198-Z0050YYLF
USB 240W Cable Assembly C to C 1.0M Black	USB3.2 Gen2	1.0M	Black	10174198-Z0100YYLF