

# Waterproof USB Type C

## SCALABLE, SUPERSPEED CONNECTOR SYSTEM

Waterproof USB Type C Connectors are expected to be widely used as a next-generation interface. They support a variety of protocols such as USB 2.0, USB 3.1 Gen 1, Gen 2 and meet SuperSpeed communication 10Gb/s, 5A and 20V power supply.

The usability for USB 3.1 Type C connector is enhanced also by its low profile and reversible product design. It is ideal for emerging product designs.

- Reversible plug and cable orientation
- Meets USB 3.1/3.0/2.0 speed performance
- Supports high speed transmission up to 10Gb/s
- Extended 5A current rating for USB Power delivery
- Right angle stand-off and straddle mount configurations and waterproof type available



### TARGET MARKETS



## FEATURES

- Tailored for emerging product designs
- Similar size as Micro USB
- Supports high speed transmission up to 10Gb/s
- Excellent copper alloy material for terminals design
- 24 pin assignment for different kinds of protocol requirements
- Up to 10,000 mating cycles
- Waterproof glue, O-ring added and liquid insert-mold implemented in the front end of the shell

## BENEFITS

- Reversible plug and cable orientation for better user experience
- Smaller connector size saves space
- Meets USB 3.1 Gen 1 and Gen 2 specifications
- Backward compatible with USB 2.0
- Extended 5A current rating for USB Power delivery
- Supports audio and video signal output with alternate mode
- Enhanced durability
- Meets IPX2 to IPX8 ratings

### TECHNICAL INFORMATION

#### MATERIAL

- Housing: High Temperature Polymer, UL94V-0, Black
- Contact: Copper Alloy
- Shell: Stainless Steel

#### MECHANICAL PERFORMANCE

- Insertion Force: 5N to 20N
- Extraction Force: 8N to 20N
- Extraction Force (after durability): 6N to 20N
- Durability: 10,000 mating cycles

#### ELECTRICAL PERFORMANCE

- Contact Resistance: 40mΩ max. initial for VBUS, GND and all other contacts
- Insulation Resistance: 100mΩ min. initial
- Dielectric Withstanding Voltage: 100V AC

#### PACKAGING

- Tray/Tape and Reel available upon request

#### SPECIFICATION

- Amphenol Specification: USB Type-C Receptacle

#### APPROVALS AND CERTIFICATIONS

- RoHS

#### ENVIRONMENTAL

- Humidity: 40±2°C, 90 to 95% (RH), for 96 hours
- Temperature Life: 105±2°C for 120 hours

#### TARGET MARKETS/APPLICATIONS



Charger  
Car Media Player/Hub



Connector Hub  
Flash Disk  
Mobile Phone/Tablet  
VR Camera



Hard Disk Drives  
Solid State Drives



Industrial Computer  
POS System



Medical

## PART NUMBERS

USB Version	Data Rate	No. of Contacts	Orientation	Level of Liquid Ingress Protection	Center Height	Shell Feature	Termination Type	Part Numbers
USB 3.1 Gen 2	10Gb/s	24	Top	IPX4	1.58	DIP	Dual Row SMT	124019362112A
USB 3.1 Gen 1	5Gb/s	24	Middle	IPX8	0.40	DIP	Dual Row SMT	124018312112A
USB 3.1 Gen 2	10Gb/s	24	Top	IPX4	1.50	DIP	Dual Row SMT	124019372112A
USB 3.1 Gen 2	10Gb/s	24	Top	IPX8	1.50	DIP	Dual Row SMT	124018612112A
USB 3.1 Gen 2	10Gb/s	24	Middle	IPX4	0.37	Screw Hole Plate	Dual Row SMT	124019322112A
USB 3.1 Gen 2	10Gb/s	24	Top	IPX8	1.50	Screw Hole Plate	Dual Row SMT	124018792112A
USB 3.1 Gen 2	10Gb/s	24	Top	IPX8	1.50	DIP	Dual Row SMT	124018802112A
USB 3.1 Gen 2	10Gb/s	24	Top	IPX8	1.53	Screw Hole Plate	Dual Row SMT	124019282112A
USB 3.1 Gen 2	10Gb/s	24	Top	IPX2	1.75	DIP	Dual Row SMT	12401899E412A
USB 3.1 Gen 2	10Gb/s	24	Top, Short Body	IPX2	1.58	DIP	Dual Row SMT	12401945E212A
USB 3.1 Gen 1	5Gb/s	24	Middle, Short Body	IPX5	0.40	DIP	Dual Row SMT	124019032112A
USB 3.1 Gen 1	5Gb/s	24	Middle	IPX8	0.40	DIP	Dual Row SMT	124018392112A
USB 3.1 Gen 2	10Gb/s	24	Middle, Short Body	IPX8	0.40	DIP	Dual Row SMT	124018312112A
USB 3.1 Gen 2	10Gb/s	24	Top / Short Body	IPX4	1.50	Straight	Dual Row SMT	124019372112A
USB 3.1 Gen 2	10Gb/s	24	Middle / Short Body	IPX4	0.37	Straight & Screw Hole Plate	Dual Row SMT	124019322112A
USB 3.1 Gen 2	10Gb/s	24	Middle / Short Body	IPX8	-	Straight & Screw Hole Plate	Dual Row SMT	124019282112A