

DL-PLUSB3.1AA-***M Technical Specifications

Plenum USB 3.x Gen2 10Gbps Active Optical Cable

Rev. 180914

The DL-PLUSB3.1AA-***M extends USB 2.0, 3.x signals via a plenum rated, Active Optical hybrid cable assembly. Utilizing active circuitry in the permanent USB connectors, USB signals can be transmitted on fixed length cables ranging from 3 meters up to 50 meters. The cables can deliver power up to 1.5W to 15m. The cable is a USB 3.2 Generation 2 cable for data transfer up to 10Gbps.

As a hybrid fiber optic cable, the DL-PLUSB3.1AA is immune to electromagnetic (EM) and radio frequency (RF) interference, which could degrade signal performance, the signals on the cable will not interfere with other sensitive electronic equipment.

The USB A male to A male format is not a standard USB approved format. A to A is used to extend from Host to a coupler/junction and then a USB A-B or A-C cable is used on the Client side to associate the correct connector. This cable is Bi-directional and can be installed in either direction. Once installed it will function in the normal USB Host to Client Mode. For best practices the connecting cable used on the Client side coupler should be 1 meter or less in length. This Length can be 2 meters if supporting USB 2.0 signals.

Key Features:

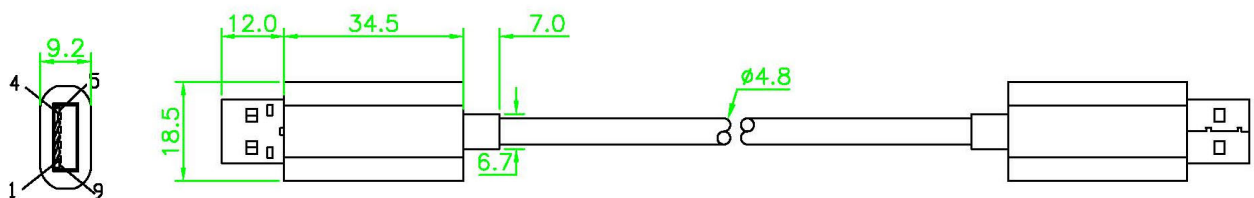
- Supports USB 2.0, 3.x signals
- USB 3.x Gen 2 10Gbps
- Immunity to EMI/RFI
- Plenum rated small diameter
- No external power needed

Key Applications:

- USB Extension and Routing
- USB peripheral control
- Video over USB
- Boardroom, Collaboration
- Education

Pin Out and Signal Map

Pin#	Signal	Pin#	Signal
1	VBUS	6	StdA_SSRX+
2	-Data	7	GND-DRAIN
3	+Data	8	StdA_SSTX-
4	GND	9	StdA_SSTX+
5	StdA_SSRX-		



Handling and Care:

1. When plugging or unplugging from a receptacle, do not pull on the cable. Pull the connector by its housing to mate/de-mate.
2. Do not remove the connector housing or cut into the cable.
3. Discard cables with mechanically damaged housings or jackets properly

Safety Considerations:

1. Optical energy is contained within cable and the end housings there are no optical emissions exposed to the user
2. CAUTION: Do not cut optical cable Viewing the cut fiber ends, especially with certain optical instruments (for example, eye loupes, magnifiers, and microscopes) may pose an eye hazard

Laser Information:

This product is classified as a Class 1 Laser product in accordance with IEC 60825 1 1993 +A 1 +A 2 and complies with 21 CFR 1040 10 and 1040 11 except for deviations pursuant to laser notice N 0 50 dated 24 Jun 2007 Use or modification of this device other than those specified herein may result in hazardous radiation To meet laser safety requirements the cable shall be used within environmental specifications Tampering with or modifying the device will result in voiding of the product warranty.

INVISIBLE LASER RADIATION
CLASS 1 LASER PRODUCT
840-860nm, 700µW

Technical Specifications	
I/O Connections	
USB	Male USB Type A connector, Gold Plated contacts
Supported Signals	
USB	USB 3.2 Gen 2 10Gbps, backwards compatible to USB 2.0 Full Speed
Formats Supported	Enumeration, Interrupt, Bulk, Isochronous
Power	Up to 15m supports 1.5W (5V 300mA), no support over 15m
HEAC Support	No Ethernet, does support Audio Return Channel (ARC)
CEC Support	Yes
Maximum Bandwidth	18.0 Gbps
Cable Construction	
USB Hood Material	Molded ABS
USB Hood Dimensions	34.5mm x 18.5mm x 9.20mm. Strain relief is 7.0mm
Fiber Jacket Material	Fluoropolymer (FEP)
Cable Construction	Hybrid GOF (Glass Optical Fiber) and Copper
Overall Cable Diameter	4.8 mm (0.189-inch)
Minimum Bend Radius	Unloaded: 48 mm (1.89"), Loaded: 96mm (3.78")
Maximum Tensile Load	20 kg (44 lbs.)
Environmental Requirements	
Operating Temperature	0° to 50° C (+32° to +122° F)
Operating Humidity	20% to 85%, Non-condensing
Storage Temperature	-30° to 75° C (-22° to +122° F)
Storage Humidity	20% to 85%, Non-condensing
Power and Regulatory	
Power Supply	USB BUS power supplied by Host/Client
Power Consumption	<0.50W both sides
Regulatory	NEC® rated CMP-OF, CEC rated CMP FT6, RoHS Compliant, CE
EMI/EMC	FCC Class B, CISPR32
Laser	Class 1 840-860nm, 700µW
Other	
Warranty	3 years

Product Listing

Part Numbers	Part Description	Cable Length
DL-PLUSB3.1AA-003M	USB 3.2 GEN2 AOC AM-AM CMP 3M	3 meters / 10 feet
DL-PLUSB3.1AA-005M	USB 3.2 GEN2 AOC AM-AM CMP 5M	5 meters / 16 feet
DL-PLUSB3.1AA-008M	USB 3.2 GEN2 AOC AM-AM CMP 8M	8 meters / 25 feet
DL-PLUSB3.1AA-010M	USB 3.2 GEN2 AOC AM-AM CMP 10M	10 meters / 33 feet
DL-PLUSB3.1AA-015M	USB 3.2 GEN2 AOC AM-AM CMP 15M	15 meters / 50 feet
DL-PLUSB3.1AA-023M	USB 3.2 GEN2 AOC AM-AM CMP 23M	23 meters / 75 feet
DL-PLUSB3.1AA-030M	USB 3.2 GEN2 AOC AM-AM CMP 30M	30 meters / 100 feet
DL-PLUSB3.1AA-040M	USB 3.2 GEN2 AOC AM-AM CMP 40M	40 meters / 131 feet
DL-PLUSB3.1AA-050M	USB 3.2 GEN2 AOC AM-AM CMP 50M	50 meters / 164 feet

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