DATA SHEET

USB 3.2 Gen 2x1 Active Optical Cable
USC-CC32

Contents

■ Description

USB 3.2 Gen 2x1 Type C Active Optical Cable, USC-CC32 transmits SuperSpeed USB 10Gbps data up to 15m (50ft). This cable delivers 100W of power at 10m (33ft) or 60W at 15m (50ft) to charge or supply power on webcams, laptops, and many other devices. It's also compatible with USB standard 2.0 and 1.1 standards, enabling the use a variety of devices with one cable.

It supports DisplayPort Alt mode 4K@60Hz on two DisplayPort lanes. With DisplayPort Alt mode, it can be used for a wide variety of uses such as VR, Laptop, 4K displays and also video systems.

USC-CC32 connection terminal, featuring curved design, ensures no interference when plugged into devices such as monitors. Also, the locking accessory can make robust connection since it prevents the unplugging from source and display.

This USC-CC32 is designed to support all features simultaneously, including USB 3.2 data transfer at 10Gbps, power delivery of 100W, DP Alt mode and backward compatibility with USB 2.0 and 1.1.

■ Features

- USB Type C Male to C Male Connector
- Supports SuperSpeed USB 3.2 Gen 2x1(10Gbps) data up to 15m (50ft)
- Backward compatible to USB 2.0 and 1.1
- Provides power delivery 100W at 10m (33ft) or 60W at 15m (50ft)
- DisplayPort Alt mode supports up to 4K@60Hz(2 DisplayPort lanes, 8.1Gbps/lane)
- Plug and Play
- Designed to prevent ESD, EMI, and RFI
- No external power is required

■ Applications

- Laptop, VR
- Broadcast/Audio system
- Meeting room
- Conference room
- Education
- Security

■ Absolute Maximum Ratings

Stresses in excess of the absolute maximum ratings can cause permanent damage to the device. These are absolute stress ratings only. Functional operation of the device is not implied at these of any other conditions in excess of those given in the operational sections of the datasheet. Exposure to absolute maximum ratings for extended periods can adversely affect device reliability.

Parameter	Symbol	Min	Typ	Max	Unit
Storage Temperature[1]	T_{ST}	-10		70	°C
Operating Voltage	V_{CC}	4.8	20	24	V
Relative Humidity[2]	RH	10		90	%

Note:
1)Stresses listed may be applied without causing damage. Functionality at or above the values listed is not implied. Exposure to these values for extended periods may affect reliability.
2) Non-condensing environment.

■ Recommended Operating Conditions

Parameter	Symbol	Minimum	Typical	Maximum	Units
USB3.x Bit rate	UB_1	-	10	-	Gbps
USB2.0(1.1)	UB_2		480		Mbps
DP ALT Bit rate	DB	-	8.1	-	Gbps
Operation Temperature Range	To	-10	-	60	℃
Operating Voltage	Vcc	5	5 to 20	20	V
Operating Current	Icc	-	-	200	mA
Differential Impedance	R	-	90	-	Ohm

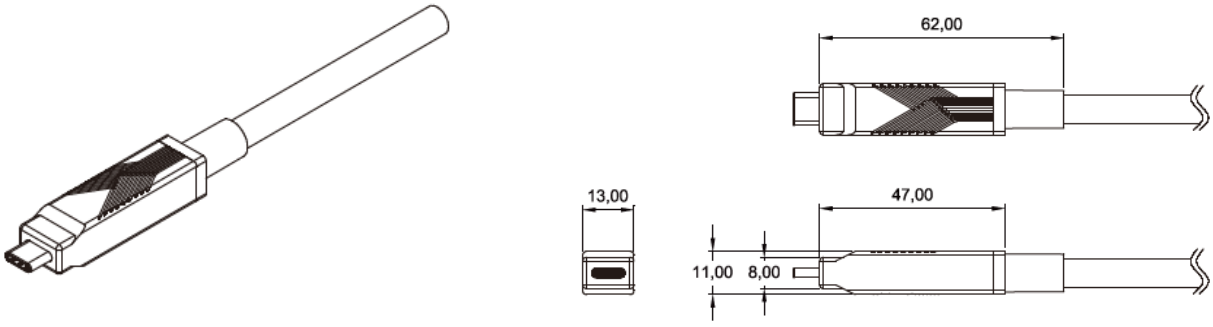
■ Physical Characteristics

Parameter	Description
Cable Type	Hybrid Cable (4 OM3 fiber + 8 copper wire)
Cable Jacket	PVC
Dimensions(WLH)	13 x 47 x 11 mm
Cable	7.3Φ ±0.3
Pull Strength	20Kgf
Minimum Bend Radius	112.5mm

■ Pin Description

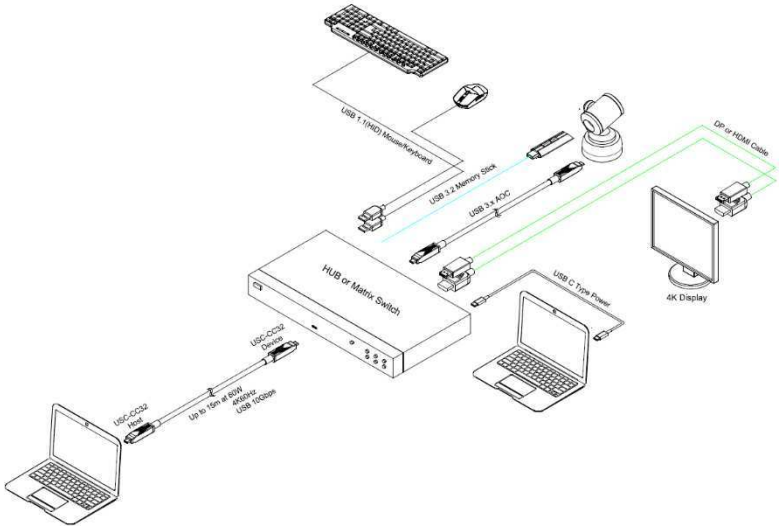
USB AOC C-C MM Cable Structure				
Type C Side(Source)		**Wire**	**Type C Side(Display)**	
Pin Number	Signal Name	Wire Type	Pin Number	Signal Name
A1,B1,A12,B12	GND	Copper	A1,B1,A12,B12	GND
A4,B4,A9,B9	VBUS		A4,B4,A9,B9	VBUS
A5	CC		A5	CC
B5	VCONN		B5	VCONN
A6	DP1		A6	DP1
A7	DN1		A7	DN1
A2	SSTXP1	Fiber 1	B11	SSRXP1
A3	SSTXN1		B10	SSRXN1
B11	SSRXP1	Fiber 2	A2	SSTXP1
B10	SSRXN1		A3	SSTXN1
A11	DP_Lane0P	Fiber 3	B2	DP_Lane0P
A10	DP_Lane0N		B3	DP_Lane0N
B2	DP_Lane1P	Fiber 4	A11	DP_Lane1P
B3	DP_Lane1N		A10	DP_Lane1N
A8	SBU1	Copper	B8	SBU2
B8	SBU2		A8	SBU1
Shell	Shield	Braid Layer	Shell	Shield

■ Dimensions



Dimensions (WxLxH): 13 x 47 x 11 mm

■ Connection Diagram



 June 2024

■ Revision History

Version	date	History
0.9	2023-12	Preliminary revision made
1.0	2024-06	Version 1.0 released

