

SPECIFICATIONS



MC-USB3.0ABXXOP USB 3.0 AM-BM AOC

Descriptions

The Microconnect MC-USB3.0ABXXOP Series USB3.0 AM to BM Active Optical Cable (AOC) is a USB 3.0 electrical to optical conversion module. This product can translate signals between USB 3.0 electrical and optical signals. AOC is a cabling technology that accepts the same electrical inputs as a traditional copper cable but uses optical fiber "between the connectors". Ordinary USB3.0 active fiber cable' s defect that cannot supply power to device. AOC offer a quick solution to supply longer cable for USB3.0 application. The USB fiber cable length can be up to 50m with USB 3.0 version and downward compatible with USB 2.0 at USB Type B Side. Chip technology can realize mutual conversion between USB3.0 and USB2.0 protocols on remote side device, so as to enable USB2.0 equipment to share the super speed bandwidth (10Gbps) of USB3.0.

Key Features

- ◆ Meet USB 3.1 Gen2 Standard , bandwidth can reach to 10Gbps super speed;
- ◆ Extends USB 3.0 & USB 2.0 super speed devices up to 50 m.(Custom length is available);
- ◆ Support 5V 900mA max;
- ◆ Support downward compatible with USB2.0, don't support USB1.1;
- ◆ Supports all major operating systems including Windows, Mac OS, and Linux
- ◆ USB Power cable at device is optional
- ◆ No RF interference , working stable in complex environments;
- ◆ Ideal for a wide variety of USB devices, from printer, scanners, meeting cameras and other USB B type devices

Applications

- ◆ Industrial Control
- ◆ Digital Signage
- ◆ Home Network Integration
- ◆ Medical Device Connectivity
- ◆ KVM Extension
- ◆ Remote Desktop USB 3.0 Connections
- ◆ Security: camera, access control
- ◆ USB 3.0 Device Sharing: print, scan, storage

Specifications

Product Name	SUAB-3250Series
Description	USB 3.0 Hybrid Active Optical Cable A Male to B Male downward compatible version
Connector	USB 3.0 Standard-AMale to B male plug
Max. data rate	10Gbps
Range	164ft(50 m) over multimode optical fiber
Optical Transceiver	850 nm VCSEL (multimode)
Cable diameter	4.5 mm
Operating Temperature	0°C to 50°C (32°F to 122°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F).
Humidity	5% to 90% (non-condensing)

Absolute Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Units
Supply Voltage	VCC	-0.5	5.5	V
Operating Temperature	Top	0	70	°C
Storage Temperature	Ts	-40	85	°C
Storage Relative Humidity	Hs	10	85	%RH

Recommended Operating Conditions

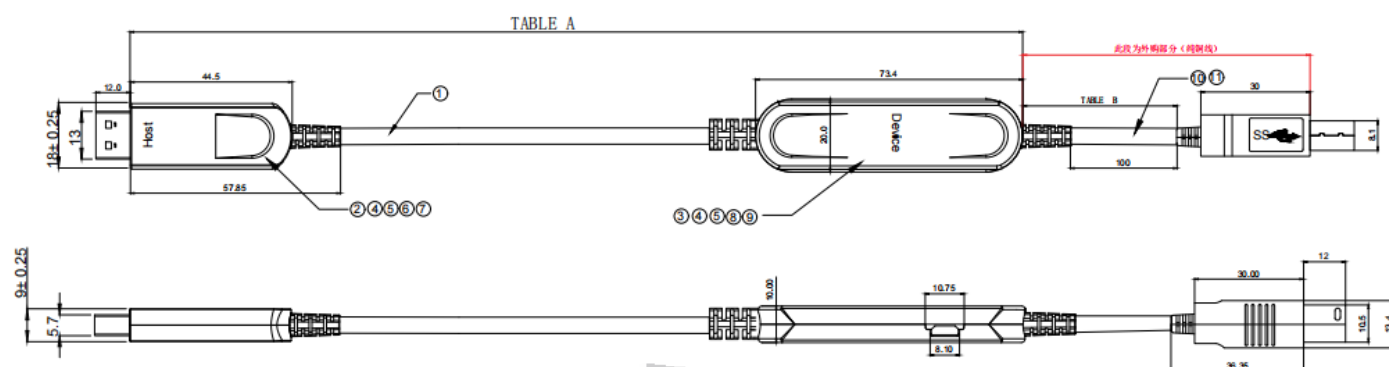
Parameter	Symbol	Minimum	Typical	Maximum	Units
Supply Voltage	VCC	4.75	5	5.25	V
Operating Temperature	Top	0		50	°C

Characteristics

Parameter	Description	Minimum	Typical	Maximum	Units
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VCC	Supply Voltage	4.75	5	5.25	V
I _{BUS}	Current at USB Bus Power	49.5	55	60.5	mA
R _{DIFF}	Differential impedance		90		Ω
USB3.0 AOC TX Characteristic					
P _{TX}	Optical TX output power	0			dBm
R _j	Random jitter			3	ps
D _j	Deterministic jitter			60	ps
T _j	Total jitter at a 10-12 BER			100	ps
USB3.0 AOC RX Characteristic					
S _{RX}	RX sensitivity	-7.5			dBm
C _{AC-COUPLING}	AC coupling capacitor on RXOUT	75	100	200	nF

Drawings



Ordering Information

Part Number	Description
MC-USB3.0AB200P	USB 3.0 AOC AM-BM, Downward compatible with USB 2.0, 10Gbps, Length 20m
MC-USB3.0AB250P	USB 3.0 AOC AM-BM, Downward compatible with USB 2.0, 10Gbps, Length 25m
MC-USB3.0AB300P	USB 3.0 AOC AM-BM, Downward compatible with USB 2.0, 10Gbps, Length 30m