

Model : ATZ AOC-USB3AMAF-5M

Description: USB 3.2 Type A-Male to Type A-Female, Downward compatible with USB2.0/1.1, 10Gbps, 5V/900mA.
(Length: 5M/8M/10M/12M/15M/20M/25M/30M/35M/40M/45M/50M)



ATZ Type A-Male to A-Female Active Optical Cable (AOC) is a USB 3.2 Gen 2x1 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 for signal transmission. AOC offer a quick solution to support cable connections for USB3.2 application. This hybrid USB fiber cable length can support up to 50m max, with USB 3.2 version and also downward compatible with USB 2.0/1.1 (for $\geq 20\text{m}$, downward compatible to USB2.0 only). Chip technology is capable of realizing mutual conversion between USB3.0 and USB2.0 protocols on remote side device, so as to enable USB2.0/1.1 equipment to share the Super speed bandwidth (10Gbps) of USB3.2

Features:

- Extends USB 3.2 Gen 2x1, 10Gbps and lengths up to 50m
- Support all USB 3.2 devices, downward compatible with USB 2.0/1.1 (for $\geq 20\text{m}$, downward compatible to USB2.0 only)
- Support all major operating systems: Windows, Mac OS, Linux
- Cable OD: 4.5mm (4 Fiber + 4 Copper wire)

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- Hybrid copper and fiber cable, anti-interference, no radiation, strong resistance to EMI
- Plug and Play, requires no external power supply.
- Ideal for a wide variety of USB devices, from printer, scanners, hard drives, and audio devices, to touch screens, web cams, and game controllers

Applications

- Industrial Control
- Digital Signage
- Home Network Integration
- Medical Device Connectivity
- KVM Extension
- Remote Desktop USB 3.0 and USB2.0 Connections
- Security: web camera, access control
- USB 3.2 & USB2.0/11 Device Sharing: print, scan, storage

Specifications:

Description	USB3.2 Hybrid Active Optical Cable A Male to A Female downward compatible version
Connector	USB 3.0 Standard-A Male to A Female plug
Max. data rate	10Gbps
Range	50m 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)

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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

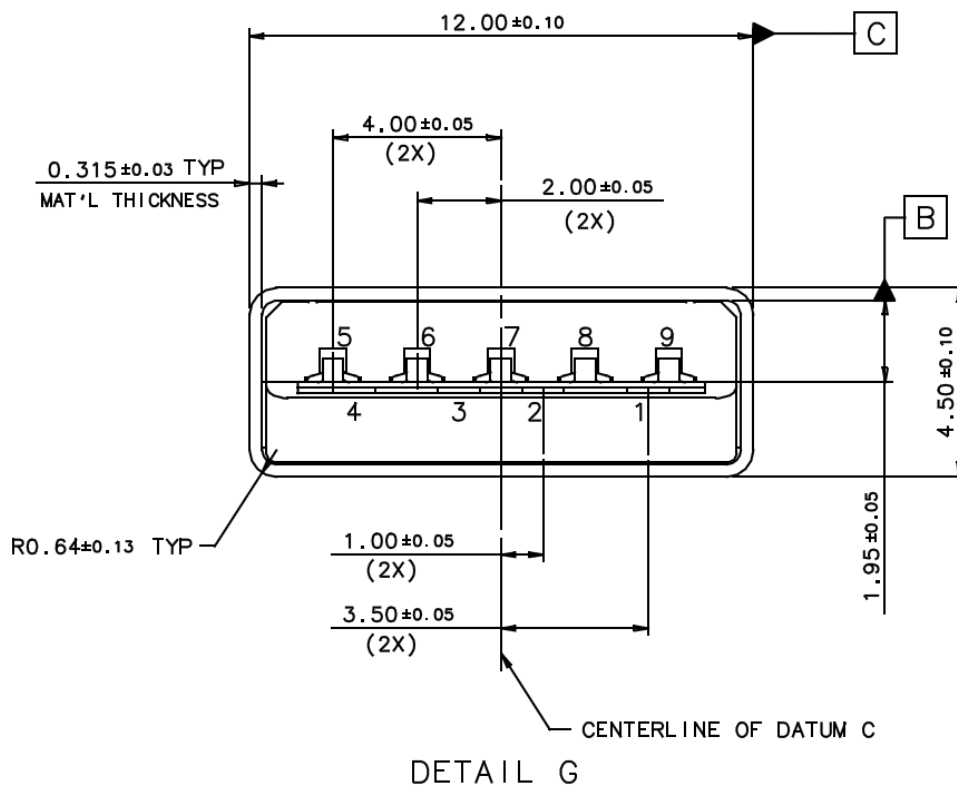
Characteristics

Parameter	Description	Minimum	Typical	Maximum	Units
VCC	Supply Voltage	4.75	5	5.25	V
IBUS	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
CAC-COUPLING	AC coupling capacitor on RXOUT	75	100	200	nF

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USB 3.0 Standard-A Plug Pin Assignment



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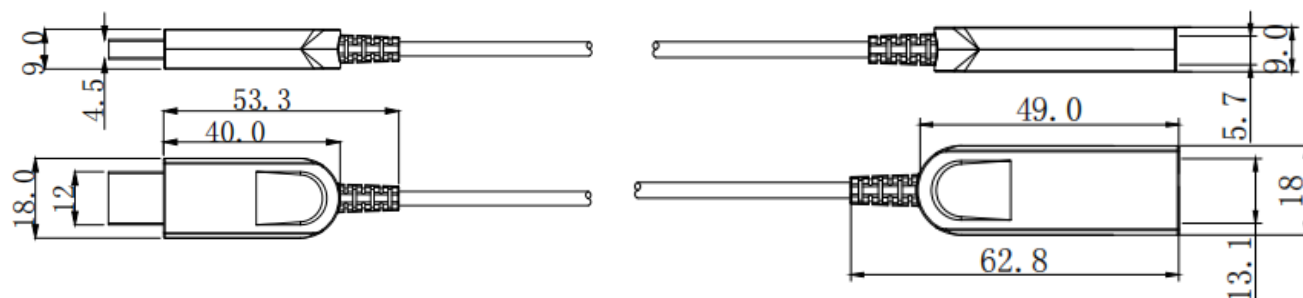
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Pin number	Signal Name	Description
1	VBUS	Power
2	D-	USB 2.0 differential pair
3	D+	
4	GND	Ground for power return
5	SSTX-	SuperSpeed transmitter differential pair
6	SSTX+	
7	GND	Ground for signal return
8	SSRX-	SuperSpeed receiver differential pair
9	SSRX+	
Shell	Shield	Shield

Product Diagram:

Drawings



Warranty: 2 Years

Warranty is effective from the date of original delivery.

This warranty shall be void if a serial number has been removed from the product.