



YDSAOC-5G-USB3-AM-MBM-SW 5Gbps Active Fiber Optical USB 3.0 Extension Cable

Overview

YDSAOC-5G-USB3-AM-MBM-SW is a high-performance USB 3.0 Active Optical Cable (AOC) that combines fiber-optic technology with USB connectivity to overcome the distance and signal limitations of traditional copper cables. Adopting a hybrid copper-and-optical-fiber design, it converts USB electrical signals to optical signals, enabling extended and reliable high-bandwidth data transmission over long distances.



Connectors: USB 3.0 Type-A Male to USB 3.0 Micro Type-B Male (with screws)

Highlight Features

- ♦ **High bandwidth** — conforms to latest USB 3.0 standard with SuperSpeed performance up to 5Gbps
- ♦ **Long-distance transmission** — supports lossless signals over a maximum of 30m, exceeding copper cable limits
- ♦ **Backward compatible** — supports USB 3.0 and USB 2.0/1.1/1.0 within 5m
- ♦ **Remote device power** — supports up to 5V/900mA
- ♦ **Easy installation** — truly plug-and-play; no on-site power supply required
- ♦ **High EMI/RFI resistance** — nearly zero electromagnetic/radio-frequency interference for stable, safe, radiation-free operation in complex environments
- ♦ **OS compatibility** — supports Windows, Mac OS, and Linux
- ♦ **Scalability** — number of connected devices can be increased using additional hubs
- ♦ **Low power consumption** — integrated fully-featured optical transceiver (receiver + transmitter); designed for self-powered peripherals
- ♦ **Customizable** — custom lengths (up to 30m), logos, and packaging available

Applications

- ◆ Machine vision / Camera Link systems
- ◆ Home theater, Blu-ray, 3D video, projectors, set-top boxes, DVR, game console control and monitor connection
- ◆ Medical imaging equipment and device connectivity
- ◆ LED signboards & monitors
- ◆ Radio and TV broadcast stations
- ◆ Airplane on-board video systems
- ◆ Conference rooms and conference room cameras
- ◆ Digital signage
- ◆ Video conferencing equipment
- ◆ Security monitoring systems (web cameras, access control)
- ◆ Industrial control and medical machine control
- ◆ Home network integration
- ◆ KVM extension and remote desktop USB 3.0 connections
- ◆ USB 3.0 device sharing (print, scan, storage)
- ◆ Immersive AR/VR experiences

Ideal Use Case

Best suited for environments requiring extended data transmission distances **without on-site power supply**, and where high reliability is needed in electromagnetically complex environments — such as industrial, medical, and broadcast settings.

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DVR & Game Console Monitoring Connections



Key Specifications

YDSAOC Model Number	YDSAOC-5G-USB3-AM-MBM-SW
Order Part Numbers	YDSAOC-5G-USB3-AM-MBM-SW-1003 YDSAOC-5G-USB3-AM-MBM-SW-2006 YDSAOC-5G-USB3-AM-MBM-SW-50015 YDSAOC-5G-USB3-AM-MBM-SW-100030 YDSAOC-5G-USB3-AM-MBM-SW-200060
Length	1m(3ft), 2m(6ft), 5m(15ft), 10m(30t), 20m(60ft)
Maximum Support Length	up to 30m(90ft)
Maximum Data Speed	up to 5Gbps
Connector A	USB 3.0 Type-A Male
Connector B	USB 3.0 Micro Type-B Male with Screws
USB Protocols	USB 3.0, and USB 2.0, USB 1.1, USB 1.0 within 5m
Support Functions	Data Transfer, Power Transfer
Cable Diameter	4.8mm
Cable Jacket Type	PVC
Cable Color	Black
AOC Constructions	Hybrid, 2x Optical Fiber, 4x Copper Wire
Minimum Bending Radius	50mm
Operating Temperature	0°C to 70°C
Storage Temperature	-40°C to 85°C
Installation Direction	Bidirectional, No Check on Directions
Power Connect	No External Power is Required

YDSAOC



ACTIVE OPTICAL CABLES

your best fiber optics partner



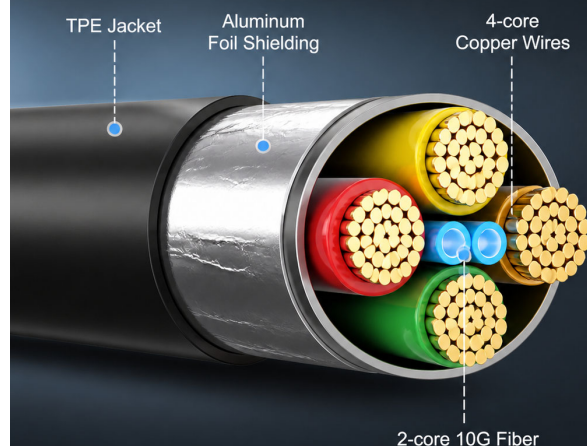
Rustproof & Durable

Rustproof, withstands repeated plugging.



10G Fiber: Zero Radiation Anti-Interference

Hybrid fiber-copper design for stable, interference-free signals.



Note: Internal structure is a render, refer to actual product.

www.YDSAOC.com sales@ydsaoc.com Phone (WhatsApp, WeChat): +86-166 0302 9616

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Applications

Ideal for security cameras, home theater expansion, data storage, DVD/set-top boxes, and automotive data transmission.



Security Camera



Digital Home Theater



Expanded Data Storage



DVD / Set-Top Box



Automotive Data Transmission

Compatible with a Wide Range of Devices

Ideal for connecting to hosts, cabinets, and industrial cameras with this interface.



Blackfl



Hikvision



JAL



IDS



BASLER



Daheng

Important Notice

Device port must be Micro USB 3.0 Type-B.
Check your port before ordering to avoid mistakes.



Micro USB 3.0
(Supported)



Mini USB 3.0
(Not Supported)





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your best fiber optics partner



Zinc Alloy Shell



Sturdy Connector



Tinned Copper Core



Flexible Cable Body

Tear-Resistant & Durable



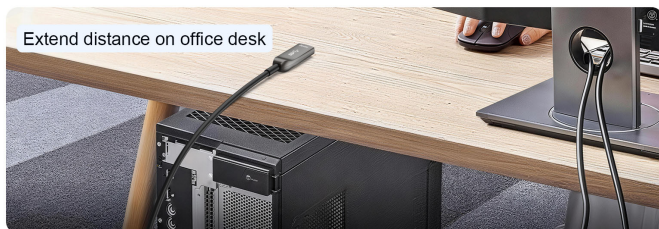
Connect to printer



Connect to camera



Extend distance for digital devices



Extend distance on office desk

Touch Control Pass-Through

Touch-enabled interactive display,
not just a secondary screen.



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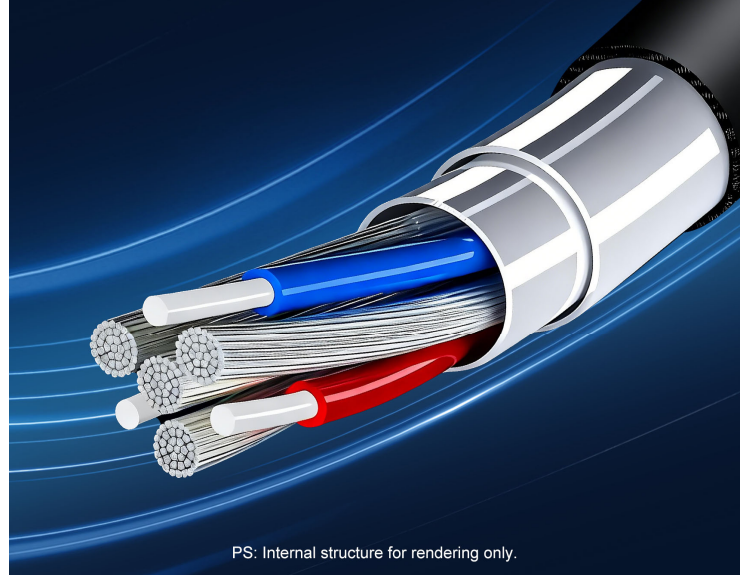
1GB File Transfer in Seconds

Zero signal latency, no signal attenuation, no compression, and excellent anti-interference performance.



Fiber Optic, Interference-Free

Superior EMI Resistance



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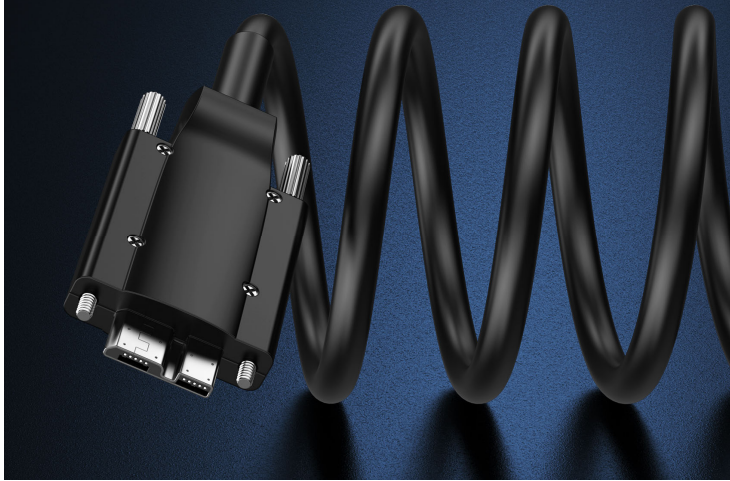


ACTIVE OPTICAL CABLES

your best fiber optics partner

High-Flex PVC Cable | Flexible Tensile & Bend-Resistant

Superior bend & lateral pressure
resistance, easy cabling, cost-effective.



Eliminates Loose Connections and Disconnections



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Product Specifications

Product Name: USB3.0 to micro-B Optical Fiber Cable

Interface: Nickel-plated

Jacket: Eco-friendly PVC

Core: Optical Fiber

Speed: 5Gbps

Color: Black

Features: High flex resistance, shielding against interference

Compatible Models: Basler, Dalsa, Hikvision, JAIFLIR

Product Weight with Box: 780g

Package Dimensions: 16.5*16*6cm

Length: 20m

Supported Protocols: USB3.0, USB2.0 (copper wire)



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YDSAOC-5G-USB3-AM-MBM-SW

5Gbps Active Fiber Optical USB 3.0 Extension Cable

KEY SPECIFICATIONS



SPEED

Up to 5Gbps
(USB 3.0 SuperSpeed)



MAX LENGTH

Up to 30 meters,
lossless signal
transmission



POWER

5V / 900mA
max support



BEND RADIUS

Only 50mm
(patented hybrid-
cable design)

HIGHLIGHT FEATURES



High bandwidth — conforms to latest USB 3.0 standard with SuperSpeed performance up to 5Gbps



Long-distance transmission — supports lossless signals over 30m, exceeding copper cable limits



Backward compatible — supports USB 3.0/2.0/1.1/1.0



Remote device power — supports up to 5V/900mA



High EMI/RFI resistance — nearly zero electromagnetic/radio-frequency interference



OS compatibility — supports Windows, Mac OS, and Linux



Scalability — additional hubs can increase connected devices



Low power consumption — integrated optical transceiver



APPLICATIONS



Machine Vision



Home Theater



Medical Imaging



LED Signboards



Video Conferencing



Digital Signage



Industrial Control



Security Systems



KVM Extension



AR/VR

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USB 3.0 Device Sharing

Connect and share multiple USB devices with ease and speed.



Print



Scan



Storage

Row 1 - Legacy/USB 2.0 Connectors



USB Type A



USB Type B



USB Mini A



USB Mini B



USB Micro A



USB Micro B

Row 2 - Modern Connectors



USB Type C



USB Micro B 3.0



USB 3.0 Type A



USB 3.0 Type B



USB 3.0 Micro B

Applications of Active Optical Cable (AOC)

High-speed, long-distance connectivity across diverse industries.



1 Traffic Monitoring

Uninterrupted connectivity for real-time traffic data, safety and efficiency.



2 Security & Surveillance

HD/4K/8K video support, effective monitoring without downtime.



3 Control Rooms

Ultra-high bandwidth for instantaneous data and video switching.



4 Healthcare

EMI/RFI immunity ensures reliable transmission in medical environments.



5 Education

Connectivity in large lecture halls, overcoming copper cable limits.



6 Digital Signage

High-quality displays with consistent transmission of information.



7 Conference Rooms

Plug-and-play design makes connectivity easy for presenters.



8 Government Campuses

Thinner and more flexible than copper, reducing cable clutter.



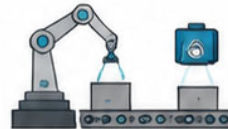
9 USB4 Applications

Extends reach while maintaining power and signal integrity.



10 Audio Visual Entertainment

Superior signal quality for home theaters and gaming.



11 Industrial & Machine Vision

Durable, high-performance for automated inspection.



12 Broadcast Systems

High bandwidth and low latency for seamless content delivery.



13 Simulation Systems

Real-time transmission for realistic training.



14 Data Centers & HPC

Pivotal for high-performance computing and extensive configurations.



15 Consumer Electronics & IT

High-res displays, VR devices, and high-bandwidth apps.



16 Aerospace, Defense & Automotive

High-speed, robust connectivity for critical sectors.

Core Benefits



Reliability



Long Distance



EMI Immunity



High Bandwidth



Flexible Installation



Power Delivery



Plug-and-Play