

YDSAOC-48G-USB-CM-HDMI-AM**USB 3.2 Type-C to HDMI 2.1 48Gbps Active Fiber Optical Extension Cable****Overview**

YDSAOC-48G-USB-CM-HDMI-AM is a specialized active fiber optical cable (AOC) designed to transmit high-definition audio and video signals from USB-C devices to HDMI displays. It enables extending signals up to 30 meters (90 feet) without any external power supply, making it a convenient plug-and-play solution for connecting laptops, tablets, phones, and other USB-C enabled devices to monitors, projectors, and TVs.

**Key Technical Specifications**

- ♦ **High Resolution Support:** Delivers video resolutions up to 8K@60Hz and 4K@60Hz (3840×2160), along with 4K@30Hz, 1080p, 1080i, and 720p
- ♦ **High Data Rate:** Provides a full 48Gbps bandwidth
- ♦ **Reversible Connector:** USB-C plugs attach in either direction for easy use
- ♦ **Both Mirror and Extend Modes:** Supports flexible multi-display configurations

Core Features & Benefits

- ♦ **Hybrid Fiber/Copper Design:** Eliminates the need for external power while minimizing signal loss
- ♦ **Superior Signal Quality:** Provides extremely low signal attenuation and high resistance to electromagnetic (EMI) and radio-frequency (RFI) interference for flawless, radiation-free performance
- ♦ **Plug-and-Play:** No driver installation required, with ultra-low power consumption
- ♦ **Broad Compatibility:** Compliant with USB-C DisplayPort Alternate Mode, compatible with all DisplayPort 1.2 standard devices.
- ♦ **Robust Build:** Zinc alloy shell provides anti-electromagnetic interference protection and enhanced durability, suitable for pipe wiring
- ♦ **Customizable:** Available in custom lengths up to 30m, with custom logo and packaging options



ACTIVE OPTICAL CABLES

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Applications The cable is suited for a wide range of professional and consumer environments, including:

- ◆ **Video Conferencing:** Compatible with Logitech Rally Bar, Yealink MeetingBar, Poly Studio X, Bose Videobar, and Crestron systems
- ◆ **Professional AV & Digital Signage:** For media players, interactive displays, and LED video walls
- ◆ **Medical Imaging & Healthcare:** Stable, EMI-free transmission for ultrasound systems, medical cameras, and diagnostic workstations
- ◆ **Industrial & Machine Vision:** Reliable for factory automation, AI inspection, and robotics
- ◆ **Broadcasting & Live Streaming:** For 4K capture devices, PTZ cameras, and production systems
- ◆ **VR/AR & Gaming:** Enables longer extension distances for VR headsets without signal degradation
- ◆ **Home Entertainment:** Home theater, gaming PCs, projectors, and set-top boxes
- ◆ **Security & Monitoring:** Security camera systems and DVR connections

Best For Environments that require extended data transmission distances without on-site power, offering high reliability in electromagnetically complex settings.

YDSAOC

BROADCASTING & LIVE STREAMING

Professional Solutions for Every Production



8K Capture
Ultra HD Quality



4K PTZ Cameras
Smooth. Precise. Reliable.



Production Systems
Powerful. Flexible. Scalable.



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Key Specifications

YDSAOC Model Number	YDSAOC-48G-USB-CM-HDMI-AM
Order Part Numbers	YDSAOC-48G-USB-CM-HDMI-AM-1003 YDSAOC-48G-USB-CM-HDMI-AM-50015 YDSAOC-48G-USB-CM-HDMI-AM-100030 YDSAOC-48G-USB-CM-HDMI-AM-150045 YDSAOC-48G-USB-CM-HDMI-AM-200060
Length	1m(3ft), 5m(15ft), 10m(30t), 15m(45ft). 20m(60ft)
Maximum Support Length	up to 30m(90ft)
Maximum Data Speed	up to 48Gbps (12Gbps per channel)
Full Feature AV Functions	HPD, HDCP, HDR
Maximum Resolutions	8K 60Hz, 4K 60Hz, 4K 30Hz, 1080p, 1080i, 720p
Connector A (Source)	USB 3.2 Type-C Male
Connector B (Display)	HDMI2.1 Type-A Male
USB Protocols	USB Type-C Conversion to DP ALT Mode
Support Functions	DP: HBR3, HDMI2.1: 48Gbps
Cable Diameter	4.8mm
Cable Jacket Type	PVC
Cable Color	Black
AOC Constructions	Hybrid, 4x Optical Fiber, 5x Copper Wire
Minimum Bending Radius	50mm
Operating Temperature	0°C to 70°C
Storage Temperature	-40°C to 85°C
Installation Direction	One Way Direction. USB (Source) to HDMI (Display)
Power Connect	No External Power is Required



Digital Signage



LED Signboards



Projector



Home Theater / Blu-ray / 3D Video



Broadcast Stations
(Radio & TV)

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Why Choose Fiber Optic USB-C Cable

Long Range

Fiber optic for stable long-distance signal transmission

Full-Featured USB-C Active Optical Cable

15m

Full-Featured USB-C Copper Cable

2m

Full-Featured USB-C Copper Cable

5m

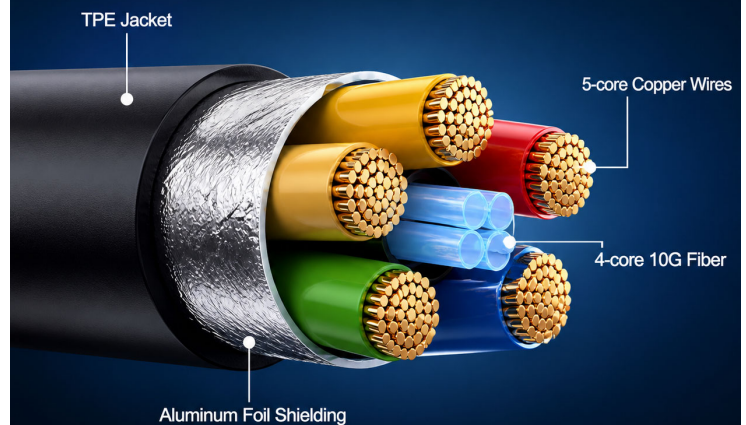
Power-Only USB-C Copper Cable

2m



10G Fiber: Zero Radiation Anti-Interference

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



Internal structure is a render, refer to actual product.

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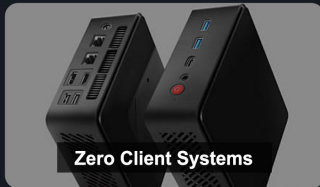


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Widely Compatible with USB-C Devices



8K Ultra HD Screen Mirroring

Up to 8K@60Hz, 4K@144Hz/120Hz Resolution



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Faster Scanning, Modeling & Tracking for Depth Cameras

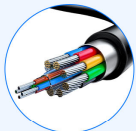
Supports depth cameras, stereo cameras, and is widely compatible with Intel, Microsoft, ZED and other major depth cameras.



Zinc Alloy Shell



Sturdy Connector



Tinned Copper Core



Flexible Cable Body

Tear-Resistant & Durable



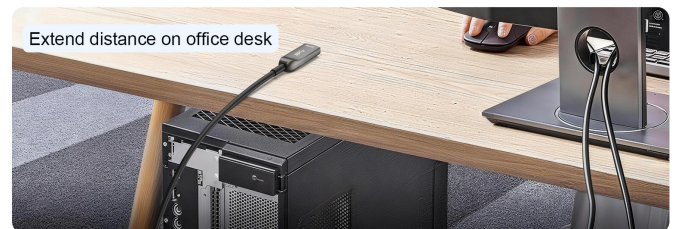
Connect to printer



Connect to camera



Extend distance for digital devices



Extend distance on office desk



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YDSAOC

Broadcasting & Live Streaming



4K Capture



PTZ Cameras



Streaming Workstations



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Professional AV & Digital Signage



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YDSAOC 48Gbps Active Fiber Optical USB-C to HDMI 2.1 Extension Cable

The YDSAOC USB-C to HDMI 2.1 Active Fiber Optical Extension Cable delivers ultra-high definition video, immersive audio, and reliable performance over long distances with zero compression. Built for professionals who demand the best.



KEY TECHNICAL SPECIFICATIONS



High Resolution Support
8K@60Hz and 4K@60Hz (3840×2160),
4K@30Hz, 1080p, 1080i, 720p



High Data Rate
Full 48Gbps bandwidth



Reversible Connector
USB-C plugs attach in either direction



Multi-Display
Supports Mirror and Extend Modes



CORE FEATURES & BENEFITS



Hybrid Fiber/Copper Design
No external power required for convenient, clutter-free installation.



Superior Signal Quality
Low attenuation and excellent EMI/RFI resistance ensure stable, high-fidelity transmission.



Plug-and-Play
No driver installation needed. Simple and seamless setup.



Broad Compatibility
USB-C with DisplayPort Alt Mode compliant with laptops, tablets, smartphones, and more.



Robust Build
Premium zinc alloy shell provides excellent durability, corrosion resistance, and heat dissipation.



Customizable
Available up to 30m with custom length options to meet your specific needs.

APPLICATIONS



Video
Conferencing



Professional
AV



Medical
Imaging



Industrial
Vision



Broadcasting



VR/AR
Gaming



Home
Entertainment



Security
Monitoring

8K
60Hz

4K
60Hz

48
Gbps

HDMI
2.1

USB-C

FC

CE

RoHS
COMPLIANT

1. DisplayPort 1.4



2. Mini DisplayPort



3. HDMI 2.1



4. Mini HDMI (Type C)



5. Micro HDMI (Type D)



6. DVI-D



7. VGA



8. USB-C



9. Thunderbolt 4
(USB-C form factor,
40 Gbps) ⚡



10. Toslink



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



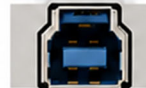
USB Type C



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.



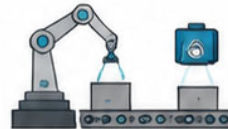
9 USB4 Applications

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