



YDSAOC-48G-HDMI-DM-DM

48Gbps Active Fiber Optical Micro HDMI Type-D Extension Cable

Overview

YDSAOC-48G-HDMI-DM-DM is a high-performance Active Optical Cable (AOC) featuring **MICRO HDMI Type-D to MICRO HDMI Type-D** connectors. It is purpose-built for transmitting ultra-high-definition audio and video signals over extended distances — up to **200 meters** — without requiring external power.



Highlight Features

- ◆ **High-Resolution Support** — Delivers pristine visuals up to 8K (7680×4320p) 4:4:4 at 60Hz, with 4K at 120Hz for razor-sharp motion.
- ◆ **High Bandwidth** — 48Gbps capacity ensures smooth, uninterrupted signal transmission.
- ◆ **Lossless Long-Distance Transmission** — Active optical technology maintains signal integrity up to 200m with virtually zero signal loss.
- ◆ **Near-Zero Interference** — Low EMI/RFI profile for flawless, radiation-free performance.
- ◆ **Hybrid Fiber/Copper Design** — No external power supply required, with ultra-low power consumption.
- ◆ **Fast Refresh / Gaming Features** — Includes VRR for fluid gameplay with minimal lag, judder, and frame tearing.
- ◆ **Advanced Video & Audio** — Dynamic HDR, eARC, and high-bitrate audio up to 192kHz/24-bit, 5.1/7.1 uncompressed, Dolby lossless, and 32-channel audio.
- ◆ **Smart Protocols** — Supports EDID with self-detecting function, ALLM, QMS, and QFT; HDCP 2.3 ready.
- ◆ **Flexible Display Modes** — Supports both mirror and extend modes.
- ◆ **Durable Build** — Zinc-alloy housing with corrosion-resistant gold-plated connectors, suitable for pipe wiring.
- ◆ **Broad Compatibility** — Works with MacBook, iPad Pro, Dell XPS 15, and HDMI-enabled mobile devices; no driver required.
- ◆ **Customizable** — Custom lengths, logos, and packaging available.

Applications

- ◆ **Professional AV & Digital Signage** — Long-distance connections for media players, control systems, interactive displays, and LED video walls.
- ◆ **Medical Imaging & Healthcare** — Stable, EMI-free transmission for ultrasound, medical cameras, diagnostic workstations, and imaging devices.
- ◆ **Industrial & Machine Vision** — Factory automation, AI vision inspection, robotics, and industrial control systems.
- ◆ **Broadcasting & Live Streaming** — 4K capture devices, streaming workstations, PTZ cameras, and production systems.
- ◆ **VR/AR & Gaming** — Extended distances for high-speed VR headsets and immersive simulations.
- ◆ **HDMI Docking & Storage** — Reliable connectivity for docks, SSD enclosures, NAS, and editing workflows.
- ◆ **Home & Consumer Use** — Home theater, Blu-ray, 3D video, projectors, set-top boxes, and game consoles.
- ◆ **Other Environments** — Conference rooms, education, security monitoring, airports, stadiums, and on-board aircraft video systems.

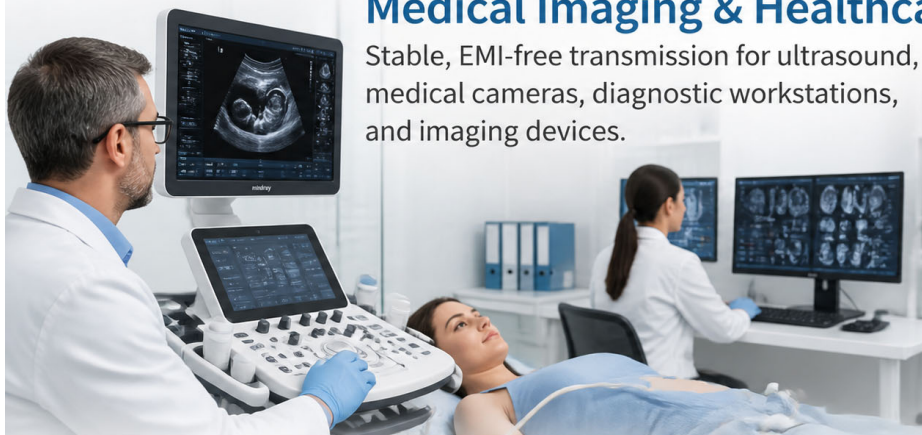
Best For

Environments demanding **extended transmission distances without on-site power** and high reliability in **electromagnetically complex conditions** — including medical surgery, live event rental, military, shipboard, and temporary staging applications.

YDSAOC

Medical Imaging & Healthcare —

Stable, EMI-free transmission for ultrasound, medical cameras, diagnostic workstations, and imaging devices.



EMI-free
Transmission



High-Resolution
Support



Medical-Grade
Reliability



Stable &
Durable



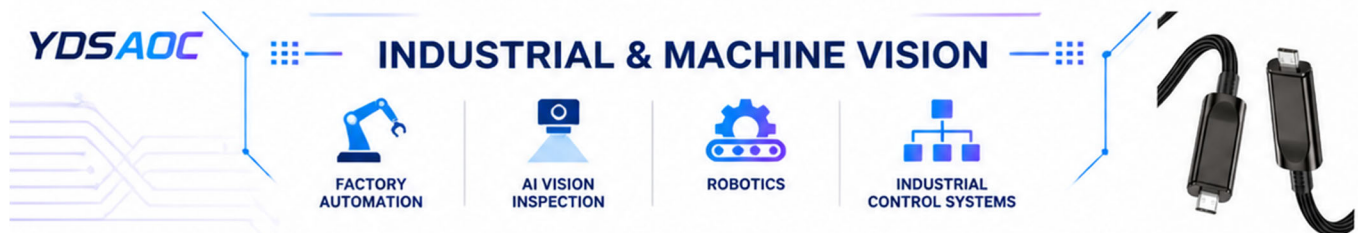


ACTIVE OPTICAL CABLES

your best fiber optics partner

Key Specifications

YDSAOC Model Number	YDSAOC-48G-HDMI-DM-DM
Order Part Numbers	YDSAOC-48G-HDMI-DM-DM-1003 YDSAOC-48G-HDMI-DM-DM-50015 YDSAOC-48G-HDMI-DM-DM-100030 YDSAOC-48G-HDMI-DM-DM-5000150 YDSAOC-48G-HDMI-DM-DM-10000300
Length	1m(3ft), 5m(15ft), 10m(30t), 50m(150ft), 100m(300ft)
Maximum Support Length	up to 200m(600ft)
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)	Micro HDMI2.1 Type-D Male
Connector B (Display)	Micro HDMI2.1 Type-D Male
HDMI Protocols	HDMI2.1, HDMI2.0, HDMI1.4
Cable Diameter	4.8mm
Cable Jacket Type	PVC
Cable Color	Black
AOC Constructions	Hybrid, 4x Optical Fiber, 7x 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. HDMI (Source) to HDMI (Display)
Power Connect	Additional Power Supply Required for Long Distance
OEM/ODM Design	Customize on CEC, EDID, eARC within 30m(90ft)

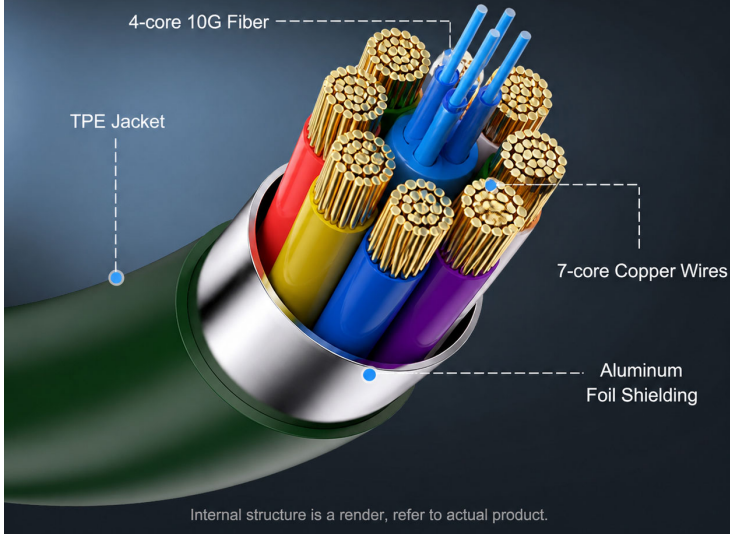


www.YDSAOC.com sales@ydsaoc.com Phone (WhatsApp, WeChat): +86-166 0302 9616

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10G Fiber: Zero Radiation Anti-Interference

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





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8K Ultra HD Screen Mirroring

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



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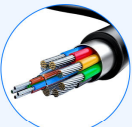




Zinc Alloy Shell



Sturdy Connector



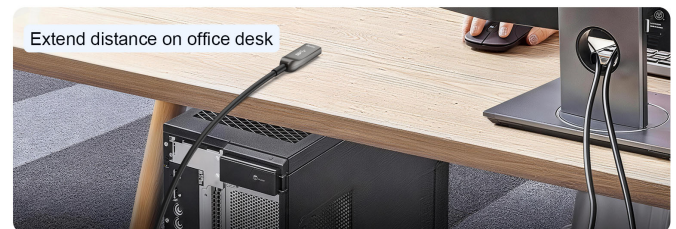
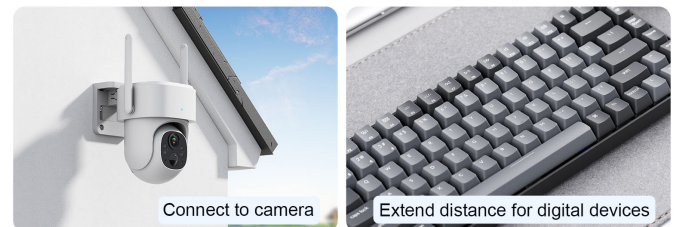
Tinned Copper Core



Flexible Cable Body

Tear-Resistant & Durable





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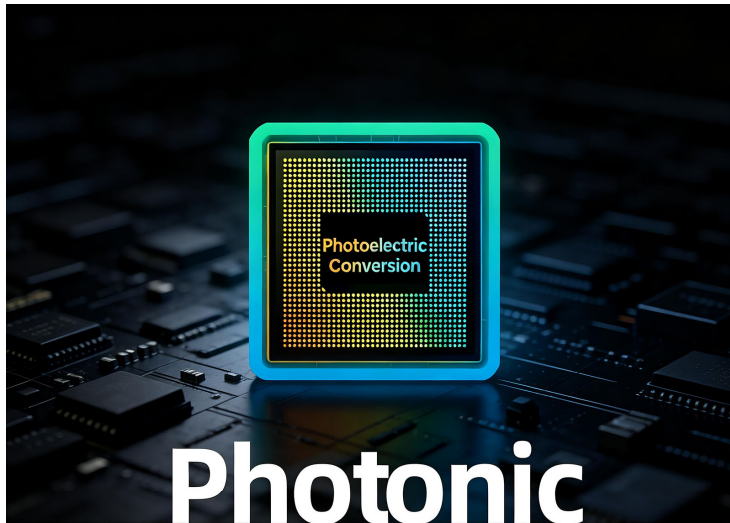
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Photonic

Mature Long-life Laser & Chip

Opto-electronic chip design, near-zero signal loss, reliable long-distance transmission.



Flexible Cable One-piece Design

One-piece molded connector & strain relief for durable, break-resistant cable.

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WIDE APPLICATIONS

Designed for long-distance, high-performance HDMI connections in every professional and everyday scenario.

1



Professional AV & Digital Signage

Long-distance connections for media players, control systems, interactive displays, and LED video walls.



2



Medical Imaging & Healthcare

Stable, EMI-free transmission for ultrasound, medical cameras, diagnostic workstations, and imaging devices.



3



Industrial & Machine Vision

Factory automation, AI vision inspection, robotics, and industrial control systems.



4



Broadcasting & Live Streaming

4K capture devices, streaming workstations, PTZ cameras, and production systems.



5



VR/AR & Gaming

Extended distances for high-speed VR headsets and immersive simulations.



6



HDMI Docking & Storage

Reliable connectivity for docks, SSD enclosures, NAS, and editing workflows.



7



Home & Consumer Use

Home theater, Blu-ray, 3D video, projectors, set-top boxes, and game consoles.



8



Other Environments

Conference rooms, education, security monitoring, airports, stadiums, and on-board aircraft video systems.





YDSAOC-48G-HDMI-DM-DM Active Optical Cable



OVERVIEW

High-performance Active Optical Cable (AOC) featuring MICRO HDMI Type-D to MICRO HDMI Type-D connectors, transmitting ultra-high-definition audio and video signals over extended distances up to 200 meters without requiring external power.

KEY FEATURES

**High-Resolution Support**

8K (7680x4320p) 4:4:4 at 60Hz,
4K at 120Hz

**High Bandwidth**

48Gbps capacity

**Lossless Long-Distance Transmission**

Active optical technology up to 200m

**Near-Zero Interference**

Low EMI/RFI profile

**Hybrid Fiber/Copper Design**

No external power, ultra-low consumption

**Fast Refresh/Gaming Features**

VRR support

**Advanced Video & Audio**

Dynamic HDR, eARC,
up to 192kHz/24-bit audio

**Smart Protocols**

EDID, ALLM, QMS, QFT, HDCP 2.3

**Flexible Display Modes**

Mirror and extend modes

**Durable Build**

Zinc-alloy, gold-plated connectors

**Broad Compatibility**

MacBook, iPad Pro,
Dell XPS 15, mobile devices

**Customizable**

Custom lengths, logos, packaging

APPLICATIONS



Professional AV &
Digital Signage



Medical Imaging &
Healthcare



Industrial &
Machine Vision



Broadcasting &
Live Streaming



VR/AR & Gaming



HDMI Docking &
Storage



Home &
Consumer Use



Conference rooms
and Other Environments

**BEST FOR**

Environments demanding extended transmission distances without on-site power and high reliability in electromagnetically complex conditions including medical surgery, live event rental, military, shipboard, and temporary staging applications.

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



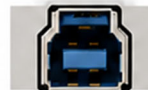
USB Type C



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.



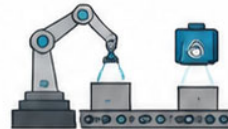
9 USB4 Applications

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