

YDSAOC-4G-DVI-D-M-M 4.455Gbps Active Fiber Optical DVI-D Extension Cable

Overview

YDSAOC-4G-DVI-D-M-M is a high-speed **DVI-D Active Optical Cable (AOC)** that integrates fiber optic technology with DVI connectivity to overcome the distance and interference limitations of traditional copper cables. Also referred to as a Fiber Optic DVI Cable, Optical DVI Cable, or Hybrid DVI AOC, it delivers lossless, plug-and-play high-bandwidth connections at up to **4.455Gbps** over distances of up to **200 meters**.



Key Features

- ♦ **High Bandwidth:** Compliant with the latest DVI-D standards, supporting super-speed data transfer up to 4.455Gbps.
- ♦ **Extended Distance:** Delivers lossless signal transmission up to 200 meters (600 feet), far exceeding copper cable limits.
- ♦ **Easy Installation:** Plug-and-play on both ends with a unidirectional design—no configuration required.
- ♦ **No External Power Needed:** Powered by the DVI source via DDC 5V, eliminating the need for AC adapters or USB power.
- ♦ **Excellent EMI/RFI Resistance:** Nearly zero electromagnetic/radio-frequency interference profile, ensuring stable, radiation-free operation in complex environments.
- ♦ **Hybrid Fiber/Copper Design:** Combines optical fibers with copper wiring for a thinner, lighter, and more flexible cable (50mm bend radius) compared to conventional copper cables.
- ♦ **Customizable Options:** Available in custom lengths (up to 200m), logos, and packaging.
- ♦ **Broad Compatibility:** Supports DVI 1.0 and HDCP 1.4; works with Windows, Mac OS, and Linux.
- ♦ **Lossless Transmission:** Transmits WUXGA (1920x1200) at 60Hz or 1080p/4K30Hz signals without scaling or compression.
- ♦ **Certifications:** Meets FCC/CE standards for EMI/RFI emissions.



Technical Specifications

- ♦ **Interface:** DVI-D Male to DVI-D Male (locked screws on connectors)
- ♦ **Data Rate:** Up to 1.485 Gbps per lane / 4.455 Gbps total
- ♦ **Maximum Length:** 200 meters
- ♦ **Power:** Supports 5V / 900mA max, sourced directly from the DVI port
- ♦ **Signal Compliance:** DVI 1.0, HDCP 1.4, EDID, DDC communications

Applications

The cable is well-suited for environments requiring extended distances, no on-site power, and high reliability in electromagnetically complex settings:

Machine vision and Camera Link systems

Medical imaging equipment

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

LED signboards and stadium displays

Radio and TV broadcast stations

Airplane on-board video systems

Conference rooms and video conferencing equipment

Digital signage and security monitoring

Industrial control and device sharing (print, scan, storage)

KVM extension and remote desktop connections

Best Use Cases

Ideal for environments demanding **long-distance data transmission without on-site power**, combined with **high reliability in electromagnetically noisy surroundings**—particularly machine vision, medical imaging, digital signage, and broadcast applications.



ACTIVE OPTICAL CABLES

your best fiber optics partner

Key Specifications

YDSAOC Model Number	YDSAOC-4G-DVI-D-M-M
Order Part Numbers	YDSAOC-4G-DVI-D-M-M-SW1003 YDSAOC-4G-DVI-D-M-M-SW50015 YDSAOC-4G-DVI-D-M-M-SW100030 YDSAOC-4G-DVI-D-M-M-SW5000150 YDSAOC-4G-DVI-D-M-M-SW10000300
Length	1m(3ft), 5m(15ft), 10m(30t), 50m(150ft), 100m(300ft)
Maximum Support Length	up to 200m(600ft)
Maximum Data Speed	up to 4.455Gbps (1.485Gbps per channel)
Full Feature AV Functions	EDID
Maximum Resolutions	1080p, 1080i, 720p
Connector A (Source)	DVI-D Male with Screws
Connector B (Display)	DVI-D Male with Screws
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. DVI-D (Source) to DVI-D (Display)
Power Connect	Additional Power Supply Required for Long Distance

YDSAOC

Reliable Connectivity for Broadcast Excellence

High-performance DVI cable assembly solutions designed for professional broadcast environments.

- High Definition**
Crystal-clear signal transmission
- Reliable Performance**
Stable connectivity for 24/7 operation
- Professional Grade**
Built for broadcast and media applications
- Easy Integration**
Plug-and-play compatibility



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

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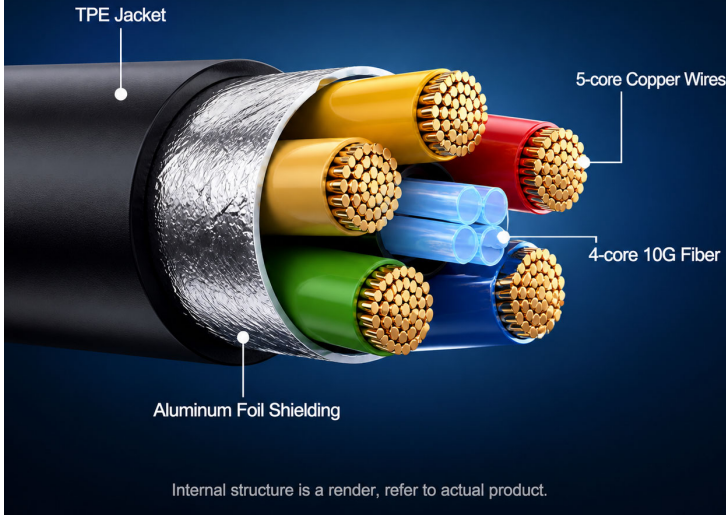


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10G Fiber: Zero Radiation Anti-Interference

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



Touch Control Pass-Through

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



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8K Ultra HD Screen Mirroring

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



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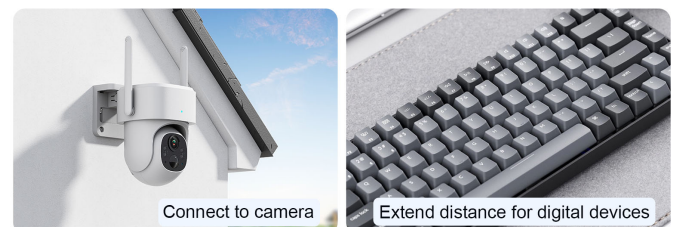
Zinc Alloy Shell

Sturdy Connector

Tinned Copper Core

Flexible Cable Body

Tear-Resistant & Durable



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YDSAOC

AIRPLANE ON-BOARD VIDEO SYSTEMS



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KVM Extension

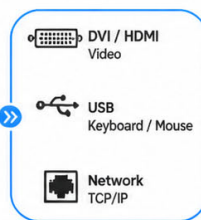
Remote Desktop Connection

Extended Reach

YDSAOC



Computer / Server



KVM Extender



Remote Desktop



TCP/IP Network



Extended Reach
Transmit KVM signals over long distances via TCP/IP network



High Performance
Support up to 1080P high-definition video transmission



KVM Control
Keyboard, mouse and video control over the network



Stable & Reliable
Low latency, stable connection for mission-critical applications

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Applications

Reliable high-speed connectivity for demanding environments



Well-suited for extended distances, no on-site power, and high reliability in electromagnetically complex settings.



Machine vision and Camera Link systems



Medical imaging equipment



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



LED signboards and stadium displays



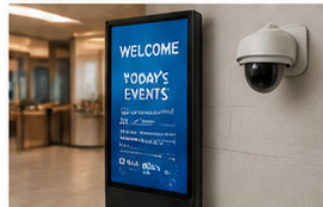
Radio and TV broadcast stations



Airplane on-board video systems



Conference rooms and video conferencing equipment



Digital signage and security monitoring



Industrial control and device sharing (print, scan, storage)



KVM extension and remote desktop connections



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PRODUCT OVERVIEW

YDSAOC-4G-DVI-D-M-M is a high-speed DVI-D Active Optical Cable that integrates fiber optic technology with DVI connectivity. Delivers lossless, plug-and-play connections at up to 4.455Gbps over distances of up to 200 meters.



KEY FEATURES



High Bandwidth
Up to 4.455Gbps data transfer



Extended Distance
200 meters lossless transmission



Installation
Plug-and-play, no configuration



No External Power
Powered directly by DVI source via 5V DDC



EMI/RFI Resistant
Zero electromagnetic interference



Hybrid Design
Thinner, lighter, flexible (50mm bend radius)



Customizable
Available in custom lengths and packaging



Broad Compatibility
DVI 1.0, HDCP 1.4, Windows/Mac/Linux



TECHNICAL SPECIFICATIONS

	Interface:	DVI-D Male to DVI-D Male
	Data Rate:	4.455 Gbps total
	Maximum Length:	200 meters
	Power:	5V / 900mA max from DVI port
	Signal Compliance:	DVI 1.0, HDCP 1.4, EDID, DDC



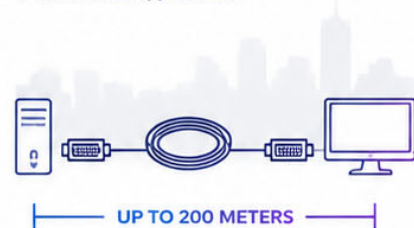
APPLICATIONS

- Machine vision
- Medical imaging
- Home theater
- LED displays
- Broadcast
- Airplane systems
- Video conferencing
- Digital signage
- Security monitoring
- Industrial control



BEST USE CASES

Ideal for long-distance transmission without on-site power in electromagnetically complex environments—particularly machine vision, medical imaging, digital signage, and broadcast applications.



Lossless Transmission
High-quality, uncompressed video at up to 4.455Gbps



Lightweight & Flexible
Hybrid fiber design for easy routing and installation



Reliable & Durable
Built for demanding environments



Global Compatibility
Works across major platforms and systems

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.



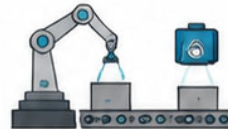
9 USB4 Applications

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