



YDSAOC-40G-DP-M-M 40Gbps Active Fiber Optical DisplayPort 2.1 Extension Cable

Overview

YDSAOC-40G-DP-M-M is a high-performance **DisplayPort 2.1 to DisplayPort 2.1 Active Optical Cable (AOC)** that transmits ultra-high-definition video and audio signals over long distances using advanced fiber optic technology.

Supported Resolutions

8K @ 60Hz, 8K @ 30Hz, 4K @ 144Hz, 4K @ 60Hz, 4K @ 30Hz, 1080p, 1080i, and 720p.



Performance & Signal Quality

- ◆ **Lossless long-distance transmission** — delivers uncompressed 8K, VR, and 3D signals without degradation even over long runs
- ◆ **Practically zero EMI/RFI profile** — high resistance to electromagnetic interference for a safe, radiation-free environment; fiber provides extremely low signal attenuation
- ◆ **Dynamic HDR** — optimizes contrast, depth, brightness, and color gamut on a frame-by-frame basis; compatible with HLG, HDR-10, HDR-10+, Dolby Vision, and Perceptual Quantizer standards
- ◆ **HDCP ready** — future-proof design supports HDCP 2.3 content encryption

Audio Capabilities

- ◆ Supports eARC (Enhanced Audio Return Channel) audio standard
- ◆ High-bitrate audio up to 192kHz / 24-bit
- ◆ Uncompressed 5.1 and 7.1 channel audio
- ◆ Dolby lossless formats and 32-channel uncompressed audio

Gaming & Display Technologies

- ◆ **VRR (Variable Refresh Rate)** — fluid gameplay with minimal lag, judder, and frame tearing
- ◆ **ALLM, QMS, and QFT** support for improved gaming and display performance
- ◆ **EDID with self-detecting function** for automatic configuration
- ◆ **Design & Usability**
- ◆ **Plug-and-play** — no external power supply or driver installation required; ultra-low power consumption (hybrid fiber/copper design)
- ◆ **Detachable, reversible connectors** — attaches in either direction for flexible installation and easy cable management/storage
- ◆ **Durable construction** — corrosion-resistant gold-plated connectors and a strong zinc-alloy housing providing EMI shielding and improved robustness
- ◆ **Customizable** — custom lengths, branding (logo), and packaging available

Compatibility

Backward compatible with DisplayPort **2.1, 2.0, and 1.4** standards

Compatible with all DisplayPort 2.1, 1.4, and 1.2 devices

Works with MacBook, iPad Pro, Dell XPS 15, DisplayPort-enabled mobile phones, Blu-ray players, game consoles, and 4K/8K televisions

YDSAOC





Applications

Professional & Commercial:

- ◆ Digital signage and LED signboards (streets, stadiums, hospitals, malls)
- ◆ Conference rooms and video conferencing equipment
- ◆ Broadcasting and live streaming (4K capture devices, PTZ cameras, production systems)
- ◆ TV and radio broadcast stations
- ◆ Professional AV setups and media players

Industrial & Healthcare:

- ◆ Medical imaging equipment and diagnostic workstations
- ◆ Machine vision and industrial automation systems
- ◆ Security monitoring systems and access control

Consumer & Specialty:

- ◆ Home theater and entertainment systems (Blu-ray, 3D video, projectors, set-top boxes, DVR)
- ◆ Gaming PCs and gaming consoles
- ◆ VR/AR headsets and immersive simulation environments
- ◆ Airport boarding video information systems
- ◆ Airplane on-board video systems
- ◆ DisplayPort docking stations, SSD enclosures, and NAS systems

Best For

Environments requiring **extended data transmission distances without on-site power**, offering **high reliability in electromagnetically complex settings**. Copper cables typically struggle to transmit 4K@60Hz beyond 5 meters and require modular extenders; this fiber optic cable provides a single-cable solution ideal for future-proofing 8K upgrades in demanding scenarios such as medical surgeries, live event rentals, military applications, shipboard installations, and temporary staging.



ACTIVE OPTICAL CABLES

your best fiber optics partner

Key Specifications

YDSAOC Model Number	YDSAOC-40G-DP-M-M
Order Part Numbers	YDSAOC-40G-DP-M-M-1003 YDSAOC-40G-DP-M-M-50015 YDSAOC-40G-DP-M-M-100030 YDSAOC-40G-DP-M-M-5000150 YDSAOC-40G-DP-M-M-10000300
Length	1m(3ft), 5m(15ft), 10m(30t), 50m(150ft), 100m(300ft)
Maximum Support Length	up to 200m(600ft)
Maximum Data Speed	up to 40Gbps (10Gbps per channel)
Full Feature AV Functions	HPD, HDCP2.2, HDCP, HDR
Maximum Resolutions	8K 60Hz, 4K 60Hz, 4K 30Hz, 1080p, 1080i, 720p
Connector A (Source)	DisplayPort 2.1 Type-A Male
Connector B (Display)	DisplayPort 2.1 Type-A Male
DisplayPort Protocols	DP2.1 (UHBR10), DP1.4, DP1.2
Cable Diameter	4.8mm
Cable Jacket Type	PVC
Cable Color	Black
AOC Constructions	Hybrid, 4x Optical Fiber, 6x 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. DP 2.1 (Source) to DP 2.1 (Display)
Power Connect	Additional Power Supply Required for Long Distance

YDSAOC
Connect Everything. Experience More.



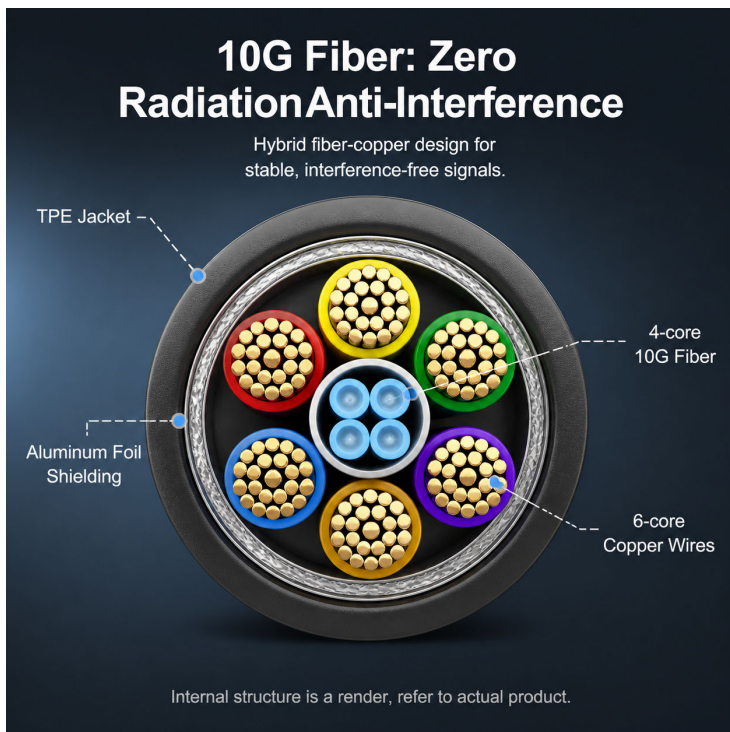
www.YDSAOC.com sales@ydsaoc.com Phone (WhatsApp, WeChat): +86-166 0302 9616

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8K Ultra HD Screen Mirroring

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



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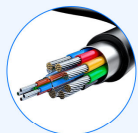
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Zinc Alloy Shell



Sturdy Connector



Tinned Copper Core



Flexible Cable Body

Tear-Resistant & Durable



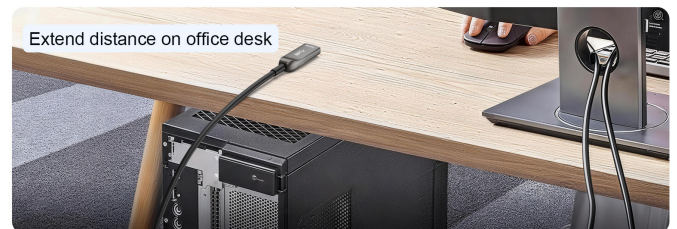
Connect to printer



Connect to camera



Extend distance for digital devices



Extend distance on office desk

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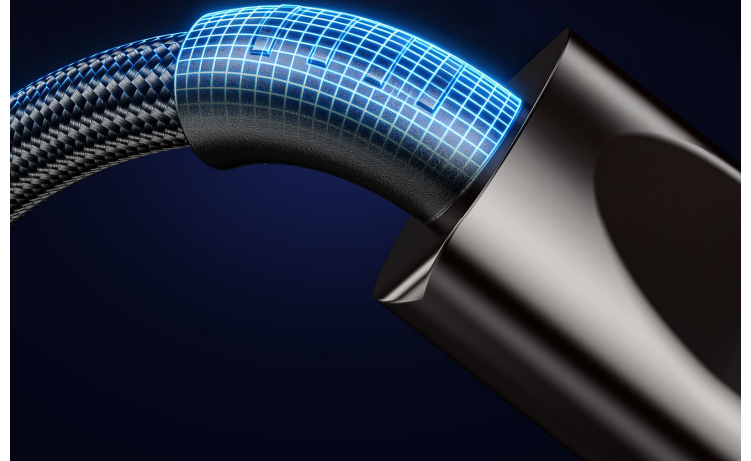
Photonic

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.



Touch Control Pass-Through

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



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DisplayPort 2.1 Applications

Powering next-generation displays, systems, and experiences across industries.



PROFESSIONAL & COMMERCIAL	INDUSTRIAL & HEALTHCARE	CONSUMER & SPECIALTY
Digital signage and LED signboards Streets, stadiums, hospitals, malls	Medical imaging equipment and diagnostic workstations	Home theater and entertainment systems Blu-ray, 3D video, projectors, set-top boxes, DVR
Conference rooms and video conferencing equipment	Machine vision and industrial automation systems	Gaming PCs and gaming consoles
Broadcasting and live streaming 4K capture devices, PTZ cameras, production systems	Security monitoring systems and access control	VR/AR headsets and immersive simulation environments
TV and radio broadcast stations	Airplane on-board video systems	Airport boarding video information systems
Professional AV setups and media players	DisplayPort docking stations, SSD enclosures, and NAS systems	DisplayPort docking stations, SSD enclosures, and NAS systems

DP 2.1

Built for Performance.
Designed for the Future.

www.ydsaoc.com



ACTIVE OPTICAL CABLES

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YDSAOC-40G-DP-M-M: 8K DisplayPort 2.1 Active Optical Cable

High-performance DisplayPort 2.1 to DisplayPort 2.1 Active Optical Cable (AOC) for ultra-high-definition video and audio transmission over long distances using fiber optic technology.

SUPPORTED RESOLUTIONS



HIGHLIGHT FEATURES



Performance & Signal Quality

- Lossless long-distance transmission
- Practically zero EMI/RFI profile
- Dynamic HDR support
- HDCP 2.3 ready



Audio Capabilities

- eARC audio standard
- High-bitrate audio up to 192kHz/24-bit
- Dolby lossless formats
- 32-channel uncompressed audio



Gaming & Display

- VRR (Variable Refresh Rate)
- ALLM, QMS, QFT support
- EDID auto-configuration



Design & Usability

- Plug-and-play installation
- Reversible connectors
- Corrosion-resistant connectors
- Customizable lengths and branding



APPLICATIONS

Professional	Digital signage	Broadcasting	Conference rooms
Industrial	Medical imaging	Machine vision	Security monitoring
Consumer	Home theater	Gaming	VR/AR headsets



COMPATIBILITY

Backward compatible with DisplayPort 2.1, 2.0, 1.4, and 1.2 standards. Works with MacBook, iPad Pro, Dell XPS 15, mobile phones, Blu-ray players, game consoles, and 4K/8K televisions.



Laptop



Tablet



Smartphone



Blu-ray Player



Game Console



4K/8K TV



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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.



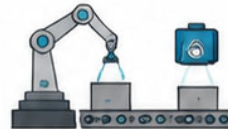
9 USB4 Applications

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