

AOC-DP8K

8K DisplayPort 2.0 Hybrid Fiber Optic Cable

USER MANUAL

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Thank you for purchasing this product

For optimum performance and safety, please read these instructions carefully before connecting, operating, or adjusting this product. Keep this manual for future reference.

Important Safety Note – Surge Protection Recommended

This product contains sensitive electronic components that may be damaged by electrical spikes, surges, lightning strikes, or static discharge. To protect and extend the service life of your equipment, we strongly recommend using a surge protection device.

Warranty Registration

Activate your warranty by registering your product at:

→ **www.orei.com/register**

Need Technical Support? We're Here to Help.

Our experienced Technical Support Team is available to answer your questions, offer expert advice, and help troubleshoot any issues to keep your project on track—on time and on budget.

Live Support Hours (US/Canada/Mexico):

Monday–Friday | 9:00 a.m. – 5:00 p.m. Central Time

Contact Us:

Email: info@orei.com

Phone: 877-290-5530

Chat Live: www.orei.com

Send us an instant message—our team typically responds within moments during live support hours.

Introduction

The AOC-DP8K is a high-performance DisplayPort hybrid Active Optical Cable (AOC) engineered for ultra-reliable, long-distance signal transmission with extremely high bandwidth. By converting DisplayPort electrical signals into optical signals, it delivers uncompressed video and audio with bandwidths of up to 54Gbps, supporting resolutions up to 8K@120Hz and 4K@240Hz (downward compatible with 8K@60Hz). Fully compliant with DisplayPort 2.0 and UHBR13.5, it ensures lossless, low-latency transmission without signal degradation or interference.

The cable supports advanced video and gaming features including HDR, HDR10, HDR10+, Dolby Vision, HLG, as well as VRR, ALLM, and QFT, making it ideal for high-end gaming, professional AV, and immersive visual applications. Available in 15ft ~ 300ft lengths, it provides flexible installation options for both residential and commercial environments.

Its hybrid copper-fiber construction eliminates electromagnetic interference while maintaining flexibility, a low bend radius, and a lightweight design. Finished with gold-plated connectors and a nylon-braided PVC jacket for durability, the AOC-DP8K is well suited for home theaters, conference rooms, professional AV systems, and in-wall installations. With true plug-and-play operation and no external power or software required, it delivers flawless performance with effortless setup.

Features

1. **DisplayPort 2.0 Compliant** – Fully compatible with the latest DP devices and UHBR13.5 transmission mode.
2. **Video Resolutions up to 8K** – Delivers resolutions up to 8K@120Hz and 4K@240Hz.
3. **Ultra-High Bandwidth** – Supports up to 54Gbps for uncompressed, lossless signal transmission.
4. **Hybrid Active Optical Cable (AOC)** – Converts DP signals to optical for long-distance, interference-free transmission.
5. **HDR & Advanced Video Formats** – Supports HDR, HDR10, HDR10+, Dolby Vision, and HLG pass-through.
6. **Gaming Features Support** – Compatible with VRR, ALLM, and QFT for smooth, low-latency gameplay.
7. **Electromagnetic Interference Resistant Design** – Fiber optic core prevents signal loss and electromagnetic interference.
8. **Durable, Flexible Construction** – Nylon-braided PVC jacket with gold-plated connectors for long-term reliability.
9. **Multiple Length Options** – Available in 15ft ~ 300ft lengths for flexible installations.
10. **Plug-and-Play Operation** – No external power or software required for instant setup.

Specifications

Technical	
DP Compliance	DP 2.0
HDCP Compliance	HDCP 2.3
Video Bandwidth	Up to 54Gbps
Video Resolution	Up to 8K@120Hz and 4K@240Hz, backward compatible with 8K@60Hz, supporting UHBR13.5 mode
Color Depth	8/10/12-bit
Color Space	YUV 4:4:4
Optional Cable Length	5m (16 feet) / 10m (30 feet) / 15m (50 feet) / 30m (100 feet) / 45m (150 feet) / 60m (200 feet) / 75m (250 feet) / 90m (300 feet)
ESD Protection	IEC 61000-4-2: ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
Connection	
Input	1× Source [DisplayPort, male]
Output	1× Display [DisplayPort, male]
Mechanical	
Outer Diameter	4.8mm
Cable Color	Black
Conductor	Optical Fiber + Tinned Copper
Connector Color	Gold-plated
Connector Casing	Metal Enclosure
Jacket	PVC
Chip	Optoelectronic conversion chip
Power Supply	No need for external power supply
Applicable Devices	Smart box, set-top box, laptop, host computer, projector, monitor
Operation Temperature	0˚C ~ 40˚C / 32˚F ~ 104˚F
Storage Temperature	-20˚C ~ 60˚C / -4˚F ~ 140˚F
Operating Humidity	20%~80% (Relative Humidity, non-condensing)
Storage Humidity	10%~90% (Relative Humidity, non-condensing)

Application Example



Source connector
of the AOC cable

Signal Source Devices



Smart box



Set-top box



Host computer



Laptop

• • •



Display connector
of the AOC cable

Display Devices



Monitor

• • •



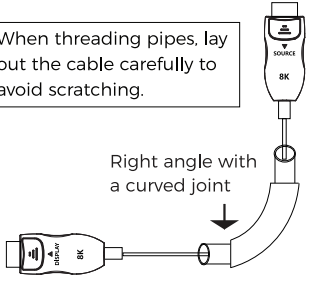
Projector

Note: This is a directional cable. Make sure the SOURCE end is connected to the media source and the DISPLAY end is connected to the display. Reversing the connections will not work.

Wiring Precautions

• When threading pipes at a 90˚ angle, please use a right angle with a curved joint, as shown in the following figure.

When threading pipes, lay out the cable carefully to avoid scratching.



• The DP connector features a buckle to prevent accidental pulling/loosening. Please press the buckle first before plugging/unplugging. It is strictly prohibited to forcefully pull the cable body.



First press the buckle, then plug/unplug the connector.

• When threading pipes, it is suggested to lay out the cable in a slot. Please do not forcefully pull, twist, or knot the cable.



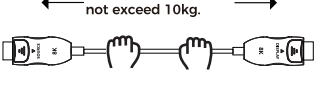
⊗ No Twisting ⊗ No Knotting

• Please do not beat, heavily impact, or smash the connector to avoid damaging the chip.



⊗ No Beating ⊗ No Smashing

• The tensile force does not exceed 10kg. Please do not pull the cable forcefully during wiring.



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