

DisplayPort 1.4 Active Optical Cable, 8K

Introduction

The Black Box DisplayPort Active Optical Cables offer an all-in-one, plug-and-play solution for flawlessly transmitting uncompressed, full Ultra HD 8K video signals over significantly extended distances—up to 50 meters, which copper alternatives cannot match. These hybrid cables, incorporating both fiber and copper, eliminate signal loss or degradation over distances and provide high immunity to EMI/RFI interference. Their design allows for power over the cable, removing the need for external power, resulting in a much thinner, more flexible, and lighter cable with a tighter bend radius, making installation easier in tight spaces. It supports advanced features like HDR, 18 Gbps data transfer rates, and comprehensive audio channels, ensuring uncompromised, high-definition video and audio for demanding applications such as control rooms, digital signage, and conference rooms.

Typical Applications:

- Control rooms
- Digital signage
- Healthcare facilities
- Conference rooms
- Mass transit
- Any application requiring uncompromised Ultra High Definition video

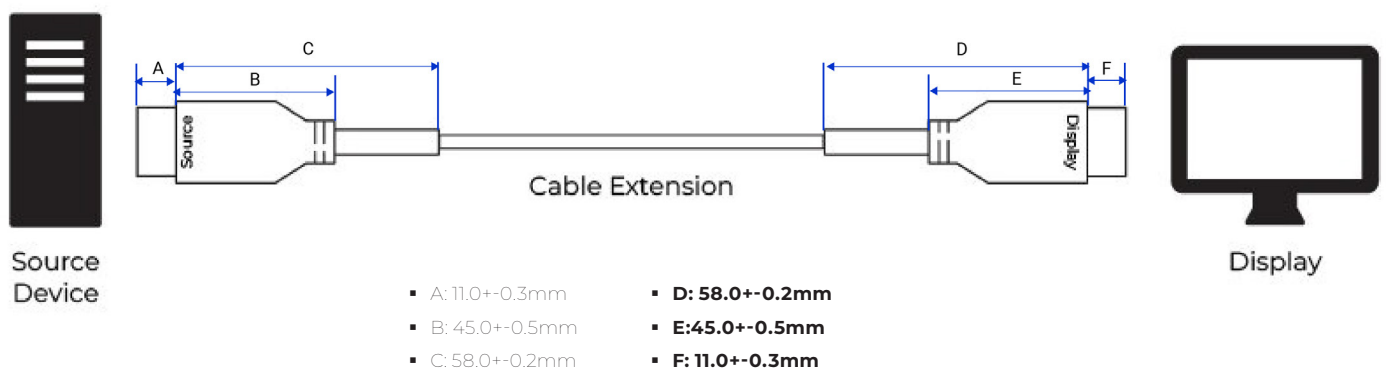
Product Images



Key Features

- **High-Resolution Video:** It supports up to full 7680 x 4320 (8K) video signals at 60 Hz (4:2:0), with data transfer rates up to 32.4 Gbps, adhering to the DisplayPort 1.4 specification.
- **Enhanced Visuals:** The cable supports High Dynamic Range (HDR) video for expansive contrast ratio and color accuracy, as well as BT.2020 colorimetry. It also handles a 21:9 Cinema aspect ratio
- Supports delivery of dual video streams to a display (if supported by display)
- **Superior Audio:** The cable can transmit up to 32 audio channels with a 1536 kHz sampling rate
- **Protocol Support:** It supports DPCP/EDID/CEC/DDC
- **Ease of Use:** It is plug-and-play, requiring no software installation. The cable is unidirectional, meaning the source side connector connects to the source and the display side connector connects to the displayconnector connects to the display
- **Hybrid Construction:** It utilizes a hybrid design incorporating both copper and fiber. This design enables significantly increased bandwidth for Ultra HD video at distances copper alternatives cannot match, provides higher immunity to EMI/RFI interference and electromagnetic noise, and allows for power to be delivered over the cable, eliminating the need for external power
- **Design and Durability:** The hybrid design results in a much thinner and more flexible cable with a tighter bend radius, making it easier to route through tight spaces, navigate corners, and reducing the risk of signal loss. It is also much lighter than all-copper counterparts. Latching connectors prevent accidental disconnections, and it features zinc alloy connectors for enhanced durability
- **Active Signal Conversion:** Converts DisplayPort signals to optical and back for higher bandwidth and longer distances than copper cables.

Application Diagram



Specifications

Video	
Max. Video Resolution	7680 x 4320 (8K) @ 60 Hz (4:2:0)
Max. Color Depth	30/36/48-bit Deep Color: 48-bit
DisplayPort Specification	1.4
Bandwidth	32.4 Gbps

Physical	
Product Type	Cable
Connector Plating	Gold
Connector Width	20.0mm +/-0.3mm
Outer Diameter	0.189" (4.8 mm)
Connector A	DisplayPort Male
Connector B	DisplayPort Male
Jacket Type	LSZH
Fiber Type	OM3 MMF

Power	
Power Consumption	250 mW

Environmental	
Operating Temperature	32 to 158° F (0 to 70° C)
Storage Temperature	14 to 158° F (-10 to 70° C)
Operating Humidity Range	10 to 85% RH, condensing
Storage Humidity Range	5 to 89% RH, noncondensing

Specifications (Continued)

Regulatory and Warranty	
Approvals/Certifications	FCC, CE, RoHS
Warranty Options	3-year limited warranty

Ordering Information

Product Code	Description
AOC-HL-DP4-10M-R3	DisplayPort™ 1.4 Active optical cable 10M
AOC-HL-DP4-15M-R3	DisplayPort 1.4 Active optical cable 15M
AOC-HL-DP4-30M-R3	DisplayPort 1.4 Active optical cable 30M
AOC-HL-DP4-50M-R3	DisplayPort 1.4 Active optical cable 50M

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