



HD-AOC-8K-D

HDMI™ AOC Hybrid Fiber Active Optical
Cable (with Detachable RX Connector)

48 Gbps UHD 8K60 5m-100m

User Manual



VER 1.0_01-01-2026_HD-AOC-8K-D_manual

HDMI™ AOC Hybrid Fibre Cable, Type-A Male-to-Male, Gold-Plated, 8K@60Hz, 48Gbps, 5–100 m

This HDMI™ Active Optical Cable (AOC) is a hybrid fibre HDMI™ cable with standard HDMI™ Type-A connectors (male-to-male, gold-plated), available in lengths from 5 m to 100 m (16–328 ft). It supports uncompressed UHD video resolutions up to 8K@60Hz with bandwidths of up to 48Gbps.

The cable converts HDMI™ electrical signals to optical signals for long-distance transmission, ensuring stable, loss-free delivery of high-bandwidth video and audio over extended runs. Its hybrid construction combines fibre optic and copper conductors to eliminate electromagnetic interference, making it ideal for professional installations.

Thanks to the fibre-optic core, the cable has a small diameter, tight bending radius, and low weight, allowing for easy routing through conduits and confined spaces. The detachable RX connector further simplifies installation by allowing the cable to be pulled through conduit or trunking before reconnecting the HDMI™ head.

This HDMI™ AOC is fully plug-and-play and requires no external power supply. It supports HDCP 2.3, HDR formats, and advanced audio formats including Dolby TrueHD and DTS-HD Master Audio, making it suitable for home cinema, conference rooms, and commercial AV installations.

Transfer of uncompressed video and audio signals over a distance of up to 5-100m (16-328ft) in UHD 8K resolution with 48Gbps bandwidth

- Supports HDMI™ 2.1 video resolutions up to 8K@60Hz (YUV 4:4:4), 8K@30Hz, and 4K@120Hz
- Data transfer rates up to 48Gbps
- HDR pass-through: HDR, HDR10, HDR10+, Dolby Vision, HLG
- Supports VRR, ALLM, QMS, QFT, and SBTM
- HDTV standard: Ultra HD 8K- Supports 3D video formats
- Maximum HDTV resolution: 4096 × 2560 @ 60Hz
- Supports advanced audio formats including LPCM, Dolby TrueHD, DTS-HD Master Audio, and DSD
- Supports 8-channel LPCM audio up to 192 kHz / 24-bit
- Supports Lip Sync (audio/video synchronisation)
- Extends uncompressed video and audio signals up to 5–100 m (16–328 ft)
- Hybrid copper and fibre construction for lossless long-distance transmission
- High-performance photoelectric conversion chip for stable, reliable signal transmission

- No external power supply required
- Supports CEC control
- Directional design: source connector connects to the source device and display connector to the display device
- Gold-plated connectors and nylon-braided PVC jacket for durability and long service life
- Double shielding for improved signal protection
- Detachable RX connector (HDMI™ Type D to Type A) for easy conduit installation
- Plug and play operation, no software installation required
- Compliant with HDCP 2.3 specifications

Product Specifications

Technical	
HDMI™ Compliance	HDMI™ 2.1
HDCP Compliance	HDCP 2.3
Video Bandwidth	Up to 48Gbps
Video Resolution	Up to 8K@60Hz YUV 4:4:4, 8K@30Hz, 4K@120Hz
Color Depth	8/10/12-bit
Color Space	YUV 4:4:4
HDMI™ Audio Format	LPCM, Dolby TrueHD, DTS-HD Master Audio, DSD
Transmission Distance	5m / 10m / 15m / 20m / 25m / 30m / 35m / 40m / 50m / 60m / 70m / 80m / 90m / 100m
ESD Protection	IEC 61000-4-2: ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
Connection	
Input	1× Source [HDMI™ Type A, 19-pin male]
Output	1× Display [HDMI™ Type A/D, 19-pin male]
Mechanical	
Outer Diameter	4.8mm
Cable Color	Black
Conductor	Optical Fiber + Tinned Copper
Chip	Optoelectronic conversion chip
Jacket	PVC
Connector Casing	Metal Enclosure
Connector Color	Gold-plated
Power Supply	Non external power required
Applicable Devices	Camera, Computer, DVD Player, TV box, HDTV, Projector, Home Theater, Multimedia, Monitor
Operation Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Relative Humidity	20%~90% RH (non-condensing)

Connection Instructions

Signal Source Devices



DVD or Blu-ray Player



Laptop



Game Console



Camera



Display Devices



HDTV



Monitor



Projector



Source connector of the AOC cable



Display connector of the AOC cable



Note: Always connect the **Source** connector to the signal source device and the **Display** connector to the display device. Reversing the connections will prevent proper operation.

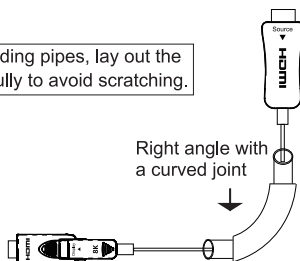


HDMI, HDMI High-Definition Multimedia Interface, and the HDMI logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

Wiring Precautions

When routing the cable through conduit at a 90° angle, use a curved elbow or radius bend, as shown in the figure below.

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



- When routing the cable through conduit lay it loosely in the channel. Do not pull, twist or knot the cable, as it may damage it.

- Please do not beat, strike, impact or crush the connector, as it may damage the internal chip.



No Twisting



No Knotting



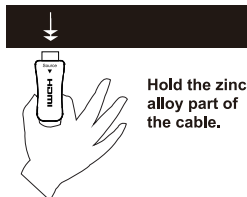
No Beating



No Smashing

The Do not exceed a tensile force of 10kg. Avoid pulling the cable forcefully during installation.

When plugging or unplugging the cable, hold the zinc alloy connector. Do not pull on the cable body.



PhD Solutions Product Warrantee

IMPORTANT INFORMATION ABOUT YOUR RIGHTS AND OBLIGATIONS, AS WELL AS LIMITATIONS AND EXCLUSIONS THAT MAY APPLY TO YOU. YOUR RIGHTS AND THIS LIMITED WARRANTY

This Limited Warranty gives you specific legal rights. You may also have other legal rights that vary by state, province or jurisdiction. The disclaimers, exclusions, and limitations of liability under this Limited Warranty will not apply to the extent prohibited by applicable law. For a full description of your legal rights you should refer to the laws applicable in your jurisdiction and you may wish to contact a relevant consumer advisory service. Should you feel your product does not function adequately due to defects in materials or workmanship, PhD Solutions (hereby referred to as "the warrantor") will, for the length of the period indicated below:

Repair the product with new or refurbished parts. or

Replace it with a new or refurbished product.

1. WHAT THIS LIMITED WARRANTY COVERS; PERIOD OF COVERAGE PHD Solutions ("PHD Solutions"), Level 6, Capricorn Tower, Trade Center 2nd, Sheikh Zayed Road, Dubai, UAE warrants to the owner of the enclosed product that the product contained in this box ("Product") will be free from defects in materials and workmanship for a period of two years from the date of delivery following the original purchase (the "Warranty Period"), or if this product has been professionally installed, the warranty start date is from the date your installer purchased the item, not your system commissioning date. Please check with your installer for their purchase date. If the Product fails to conform to this Limited Warranty during the Warranty Period, PHD Solutions will, at its sole discretion, either (a) repair or replace any defective Product or component; or (b) accept the return of the Product and refund the money actually paid by the original purchaser for the Product. Repair or replacement may be made with a new or refurbished product or components, at PHD Solutions' sole discretion.

If the Product or a component incorporated within it is no longer available, PHD Solutions may replace the Product with a similar product of similar function, at PHD Solutions' sole discretion. This is your sole and exclusive remedy for breach of this Limited Warranty.

Any Product that has either been repaired or replaced under this Limited Warranty will be covered by the terms of this Limited Warranty for the longer of ninety (90) days from the

date of delivery or the remaining Warranty Period. This Limited Warranty is transferable from the original purchaser to subsequent owners, but the Warranty Period will not be extended in duration or expanded in coverage for any such transfer.

2. WARRANTY CONDITIONS; HOW TO GET SERVICE IF YOU WANT TO CLAIM UNDER THIS LIMITED WARRANTY

Before being able to claim under this Limited Warranty, the owner of the Product must (a) notify PHD Solutions of the intention to claim during the Warranty Period and providing a description of the alleged failure, and (b) comply with PHD Solutions' return shipping instructions, and (c) ship the Product at owner's cost (except where prohibited by applicable law) to PHD Solutions for repair or replacement. PHD Solutions will have no warranty obligations with respect to a returned Product if it determines, in its reasonable discretion after examination of the returned Product that the Product is an Ineligible Product (defined below). PHD Solutions will bear all costs of return shipping to owner, except with respect to any Ineligible Product, for which owner will bear all shipping costs.

3. WHAT THIS LIMITED WARRANTY DOES NOT COVER

This warranty does not cover the following (collectively "Ineligible Products"): Products marked as "sample" or sold "AS IS"; or Products that have been subject to: (a) modifications, alterations, tampering, or improper maintenance or repairs; (b) handling, storage, installation, testing, or use not in accordance with the Installation Guide or other instructions provided by PHD Solutions; (c) abuse or misuse of the Product; (d) breakdowns, fluctuations, or interruptions in electric power or the telecommunications network; or (e) Acts of God, including lightning, fire, flood, tornado, earthquake, or hurricane. This warranty does not cover consumable parts, including batteries, unless damage is due to defects in materials or workmanship of the Product, or software (even if packaged or sold with the product).

PHD Solutions recommends that you use only authorized service providers for maintenance or repair. Unauthorized use of the Product or software can impair the Product's performance and may invalidate this Limited Warranty. PHD Solutions does not warrant that operation of the Product will be error-free or uninterrupted or that the Product will in every case process all data correctly.

4. DISCLAIMER OF WARRANTIES

Except as stated above in this limited warranty, and to the maximum extent permitted by applicable law, PHD Solutions disclaims all express, implied, and statutory warranties and conditions with respect to the product, including the implied warranties of merchantability, fitness for a particular purpose. To the maximum extent permitted by applicable law, also limits the duration of any implied warranties or conditions to the duration of this limited warranty.

5. LIMITATION OF DAMAGES

In addition to the above warranty disclaimers, in no event will PHD Solutions be liable for any consequential, incidental, exemplary, or special damages, including any damages for lost data or lost profits, arising from or relating to this limited warranty or the product, and PHD Solutions' total cumulative liability arising from or related to this limited warranty or the product will not exceed the amount actually paid for the product by the original purchaser.

6. LIMITATION OF LIABILITY

PHD Solutions disclaims all liability of any kind of PHD Solutions' suppliers. The PHD Solutions online services ("services") may provide you information ("product information") regarding your products performance and/or peripherals connected to your product ("product peripherals"). The type of product peripherals that may be connected to your product may change from time to time. Without limiting the generality of the disclaimers above, all product information is provided for your convenience, "as is", and "as available". PHD Solutions does not represent, warrant, or guarantee that product information will be available, accurate, or reliable. You use all product information, the services, and the product at your own discretion and risk.

You will be solely responsible for (and PHD Solutions disclaims) any and all loss, liability, or damages, including to your HVAC system, plumbing, home, product, product peripherals, computer, mobile device, and all other items and pets in your home, resulting from your use of the product information, services, or product.

Product information provided by the services is not intended as a substitute for direct

means of obtaining the information.

7. VARIATIONS THAT MIGHT APPLY TO THIS LIMITED WARRANTY

Some jurisdictions do not allow limitations on how long an implied warranty lasts or exclusions/limitations on incidental or consequential damages, so some of the limitations set out above may not apply to you.

8. COPYRIGHT NOTICE

No part of this document may be reproduced, transmitted, transcribed, stored in a retrieval system, or any of its part translated into any language or computer file, in any form or by any means (electronic, mechanical, magnetic, optical, chemical, manual, or otherwise) without express written permission and consent from PHD Solutions.

© Copyright 2026 PHD Solutions. All Rights Reserved.

Version 1.0 – 01 January 2026



www.phdsolutions.co