Simply Better Connections

VE781020

20M True 4K HDMI Active Optical Cable (True 4K@20m)

The VE781010, VE781020, and VE781030 are hybrid True 4K HDMI Active Optical Cables that integrate both optical fiber and copper wires, enabling seamless high-bandwidth data transmission in AV installations. With a slim 4.5 mm outer diameter, these EMI-resistant HDMI Active Optical cables come in lengths of 10, 20, and 30 meters, delivering vivid True 4K (4096 x 2160 @ 60 Hz, 4:4:4) visual clarity over long distances, making them ideal for meeting rooms, home cinemas, and digital signage setups.

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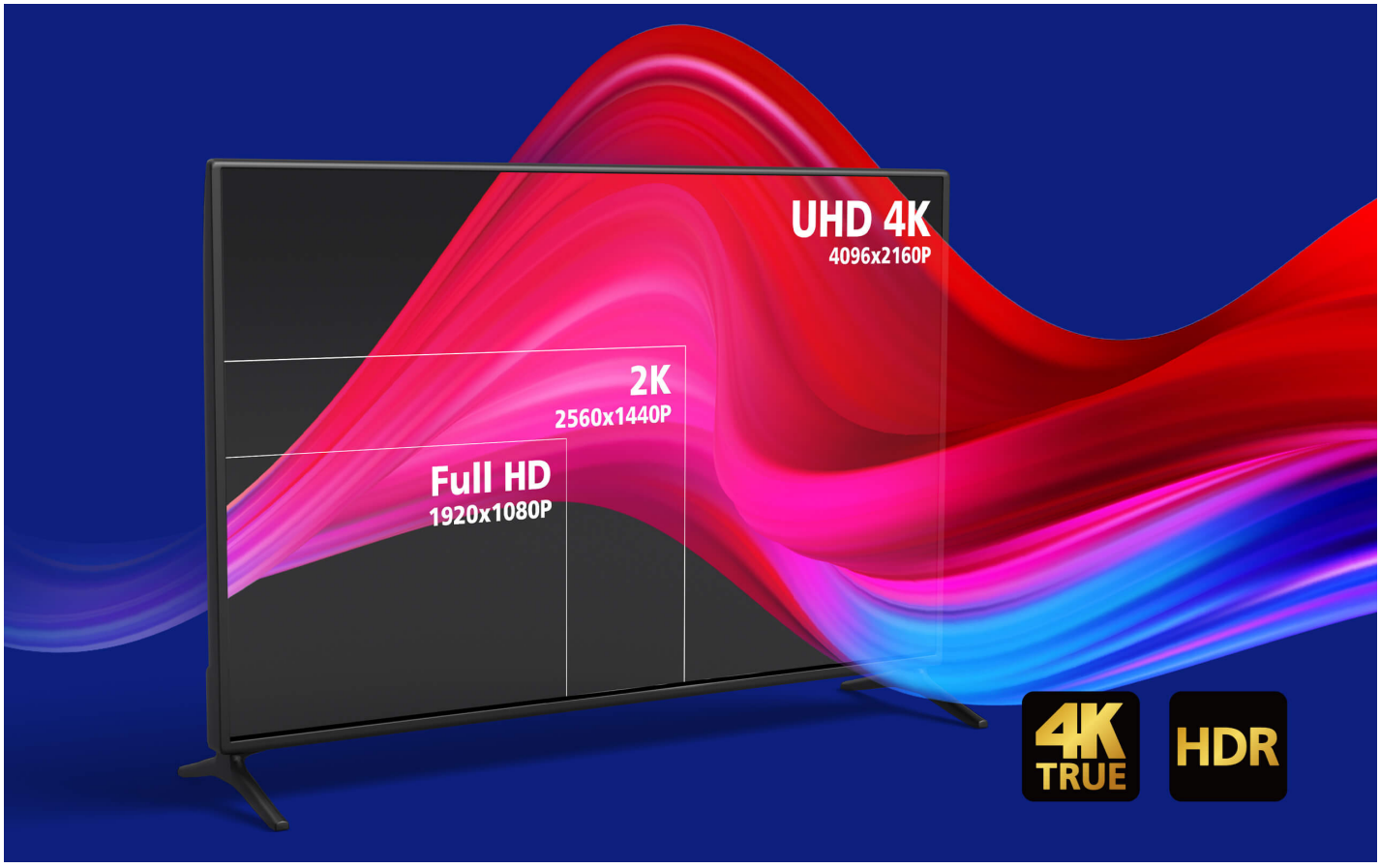
4K TRUE | Anti-EMI | HDMI / 18 Gbps | HDCP 2.2 | 3D | 48-bit | HDR | ARC

True 4K HDR, True Immersion

Indulge in the unmatched realism of video resolution up to 4096x2160@60Hz 4:4:4, powered by 18Gbps ultra-high-speed bandwidth. This ensures smooth, vibrant image quality with stunning clarity, rich colors, and exceptional contrast, offering a truly immersive viewing experience.



Dive in Like It's Tangible!

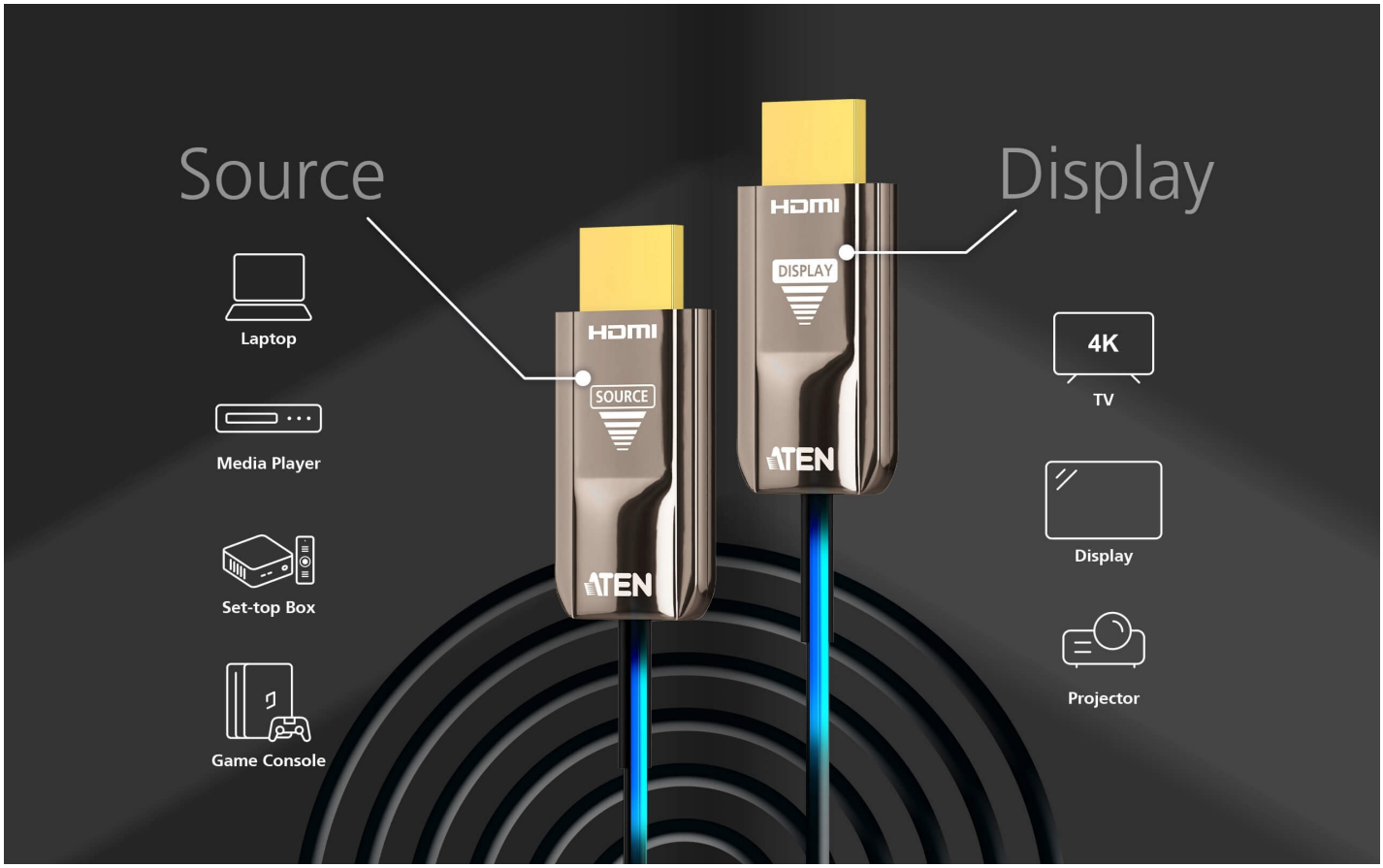
Engage in a more captivating gaming experience with crisp visuals, dynamic perspectives, minimal motion blur, and enhanced fluidity. With support for 48-bit deep color and HDR, enjoy stunning color accuracy and contrast for a truly immersive 3D adventure.

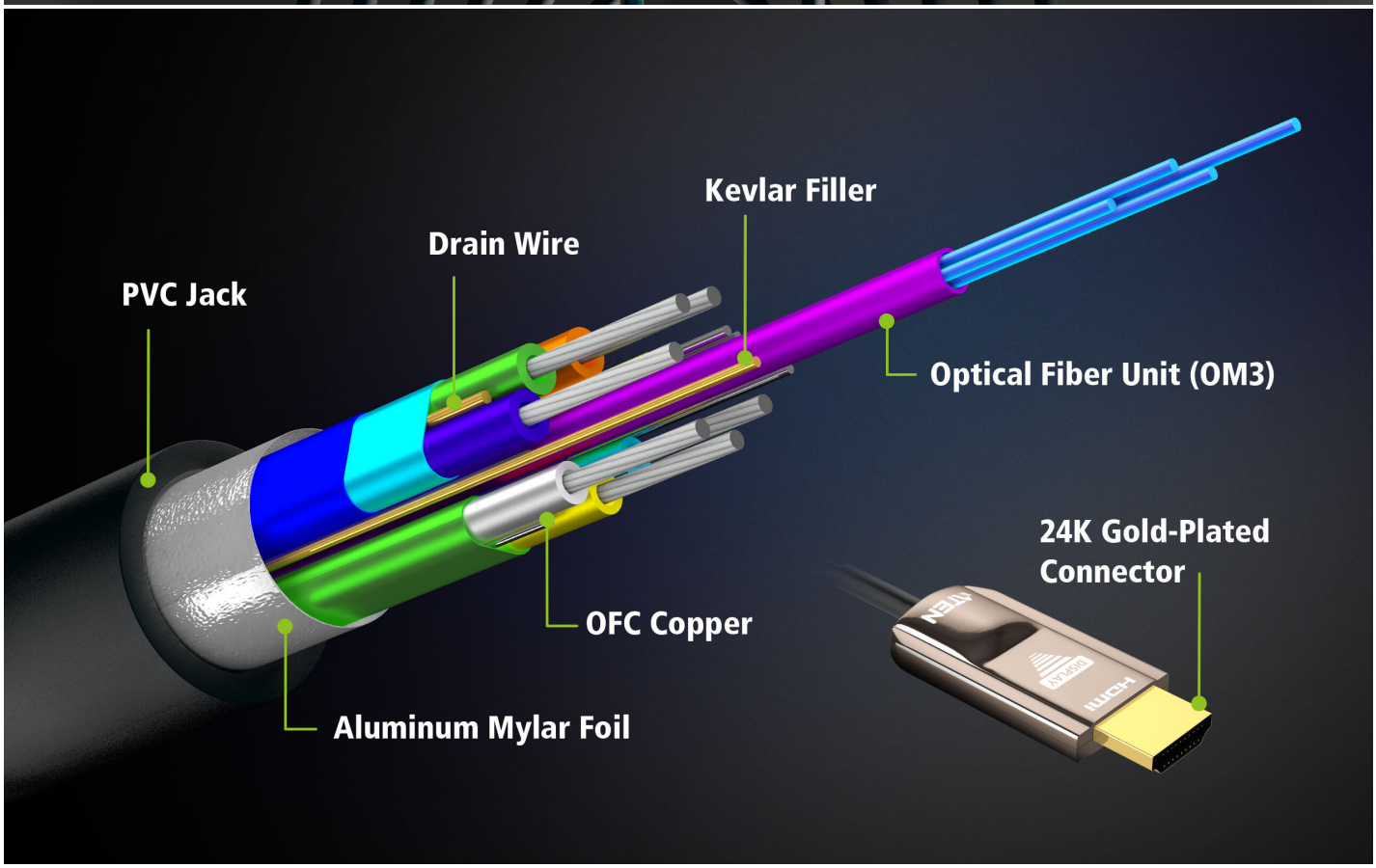
Superior Audio Fidelity with ARC Enhancement

ARC (Audio Return Channel) support enables two-way audio transmission between the display and the audio system, simplifying AV connections and ensuring high-quality audio output for streaming content, gaming, and other multimedia experiences.

Broad Compatibility

The HDMI Active Optical Cables are compatible with a wide range of AV devices, providing unidirectional connections to source and display devices, respectively.


Source
Display
Laptop
Media Player
Set-top Box
Game Console
HDMI
SOURCE
ATEN
HDMI
DISPLAY
ATEN
4K
TV
Display
Projector


PVC Jack
Drain Wire
Kevlar Filler
Optical Fiber Unit (OM3)
OFC Copper
Aluminum Mylar Foil
24K Gold-Plated Connector

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Remarkable Engineering, Industry-Proven Quality

The 4K HDMI Active Optical Cables feature a German chipset, ensuring stable AV performance without blinking, black screens, or snowflakes. These cables are certified for safety and emissions by CE, FCC, RoHS, REACH, UL VW-1, and meet Class-A/Class-B EMC standards.

- **OM3 Optical Fiber:** Delivers high-speed bandwidth with no delays or flashing issues.
- **Kevlar Filler:** A material used in bulletproof vests, it enhances tensile strength, withstanding pulling forces of up to 24 kg and over 10,000 bending cycles without failure.
- **Oxygen-Free Copper (OFC):** Improves conductivity, durability, and reduces interference.
- **Double-Layer Aluminum Shield:** Provides robust protection against EMI and EMR, enhancing ARC functionality.
- **24K Gold-Plated Connector:** Designed to endure over 10,000 plug/unplug cycles for long-lasting performance.

1.
2.
3.
4.
5.
6.
7.

Meeting Room / Office

Home Cinema

Classroom

Digital Signage

Museum

Simply Better Connections

Medical Facility

Previous Next

Talk to Our Experts

If you prefer to have ATEN contact you, please complete the form and a representative will be in touch with you shortly

First Name *

Last Name *

- Country *

Company *

Email *

Phone Number *

- Customer Type *

Job Title *

HDMI
HIGH-DEFINITION MULTIMEDIA INTERFACE

Features

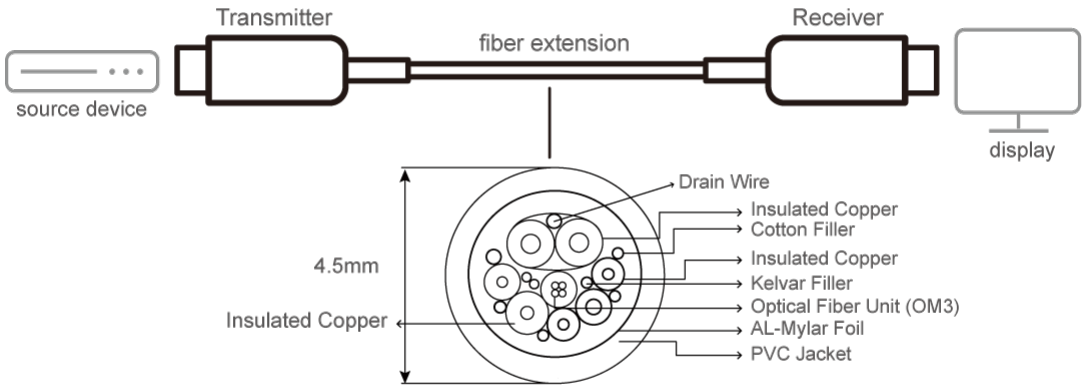
ATEN VE781020 True 4K HDMI Active Optical Cable utilizes AOC technology that enables conversion between input signals and optical signals for optimum high bandwidth data transmissions. The EMI-resistant optical cables come in 20 m with full support of True 4K resolutions. It is fully compliant with HDCP 2.2 standards and meets HDMI specifications including 3D, deep color, and data rates up to 18 Gbps. Supported Dolby True HD and DTS-HD Master Audio, the optical cables guarantee lossless audio signal transmissions. The VE781020 optical cable is an ideal solution for extending the reach of your digital signage in a wide range of settings, such as traffic stations, shopping centers, and hospital facilities.

- Supports resolution up to True 4K (4096 x 2160 @ 60Hz 4:4:4)
- HDMI (3D, Deep Color, True 4K, HDR, ARC); HDCP 2.2 compliant
- Extends True 4K signals up to 20 m
- Reduced EMI and RFI for lower noise interference
- High data transfer rate of 18 Gbps
- Supports multi audio channel – Dolby TrueHD and DTS-HD Master Audio
- Robust cable pulling strength (Max.10 kg) and compression load resistance (Max.50 kg)
- Plug-and-play

Specification

Cable Length	20M / 65.6ft
Cable Type	Hybrid type with optical fiber (OM3) and copper wire
Video Input	
Interfaces	1 x HDMI 19-pin Type-A Male
Video Output	
Interfaces	1 x HDMI 19-pin Type-A Male
Video	
Max. Data Rate	18 Gbps (6 Gbps per Channel)
Max. Pixel Clock	600 MHz (Max.)
Max. Resolutions / Distance	Up to 4096 x 2160 / 3840 x 2160 @60Hz (4:4:4) / 20M *Color sub-sampling: 4:4:4 / 4:2:2 / 4:2:0 *Color Depth: 30 / 36 / 48 bit
Compliance	HDMI (3D, Deep Color, 4K, HDR, ARC) HDCP 2.2
Communication	
Signals	TMDS / HDCP 2.2 / EDID / CEC
Audio	
Input	PCM 8-channel, Dolby Digital True HD, DTS-HD Master Audio
Output	PCM 8-channel, Dolby Digital True HD, DTS-HD Master Audio
Conductor	
Construction	7 x Tinned Copper wire strand 4 x OM3 Optical Fiber (50/125um)
Notification	Bend Radius: 20mm (Min.) Compression Load Resistance: Max. 50kg (500N) Cable Filler: Kevlar Cable Marking: ATEN INTERNATIONAL --- HIGH SPEED HDMI HYBRID ACTIVE OPTICAL CABLE 4K@60Hz 18Gbps -- PVC CE EU RoHS EC ZONE/DEVICE * NO external power required
Certifications	
Certifications	Safety and Emission: CE / FCC / RoHS / REACH / UL VW-1 EMC Class-A / Class-B
Power Consumption	DC5.0V:0.25W:0.05ABTU/h Note: ● The measurement in Watts indicates the typical power consumption of the device with no external loading. ● The measurement in BTU/h indicates the power consumption of the device when it is fully loaded.
Jacketed	
Material	PVC (85P) Color: Black
Environmental	
Operating Temperature	0°C to 50°C (32°F to 122°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F)
Humidity	0 - 85% RH, Non-Condensing
Physical Properties	
Housing	Connector Case: Zinc Alloy
Weight	0.65 kg (1.43 lb)
Cable Outer Dimension	4.5mm (± 0.2mm)
Carton Lot	5 pcs

Diagram



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