Simply Better Connections

# VE781020

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

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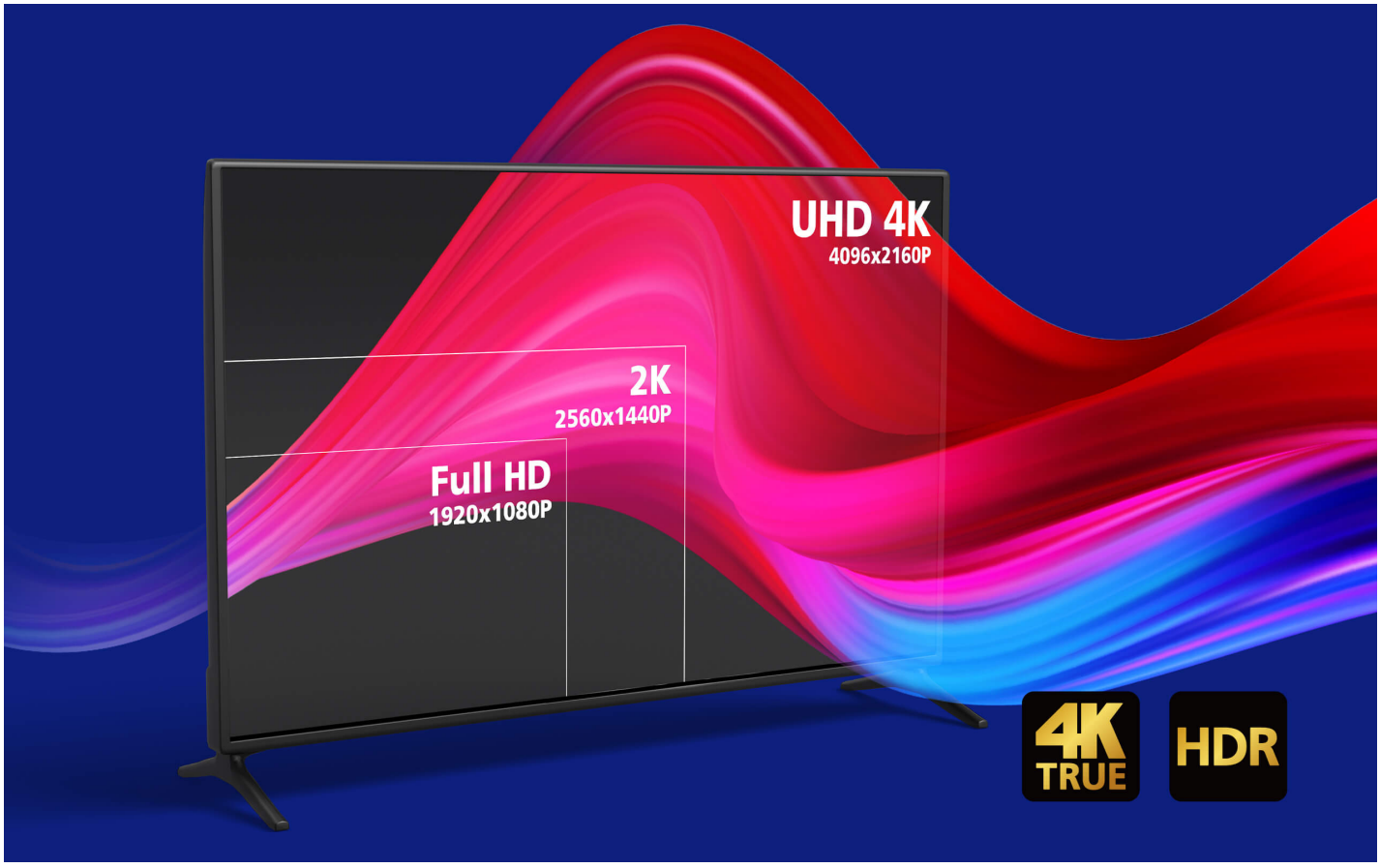
4K TRUE | Anti-EMI | HDMI / 18 Gbps | HDCP 2.2 | 3D | 48-bit | HDR | ARC

**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!**

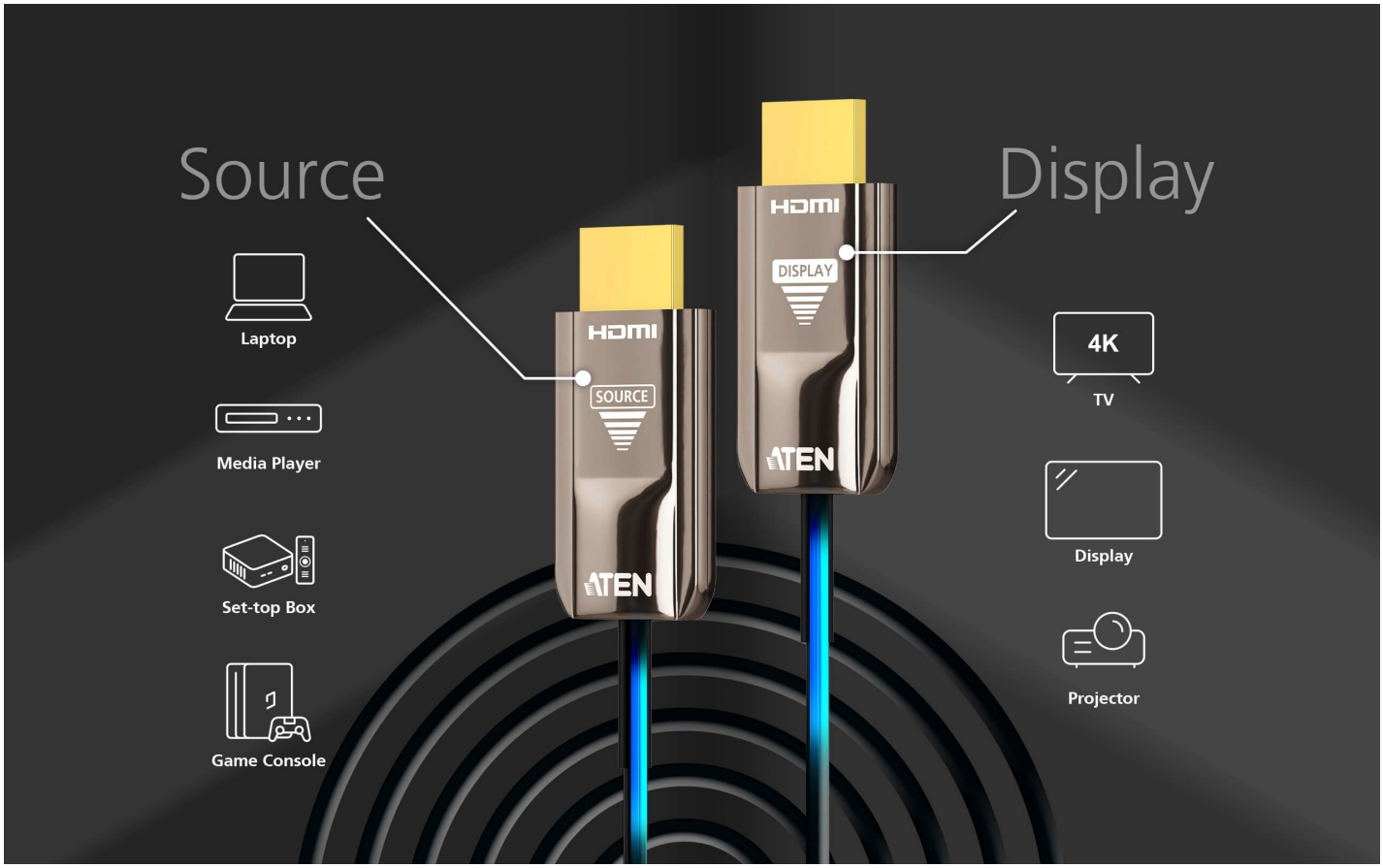
Engage in a more captivating gaming experience with crisp visuals, dynamic perspectives, minimal motion blur, and enhanced fluidity. With support for 48-bit deep color and HDR, enjoy stunning color accuracy and contrast for a truly immersive 3D adventure.

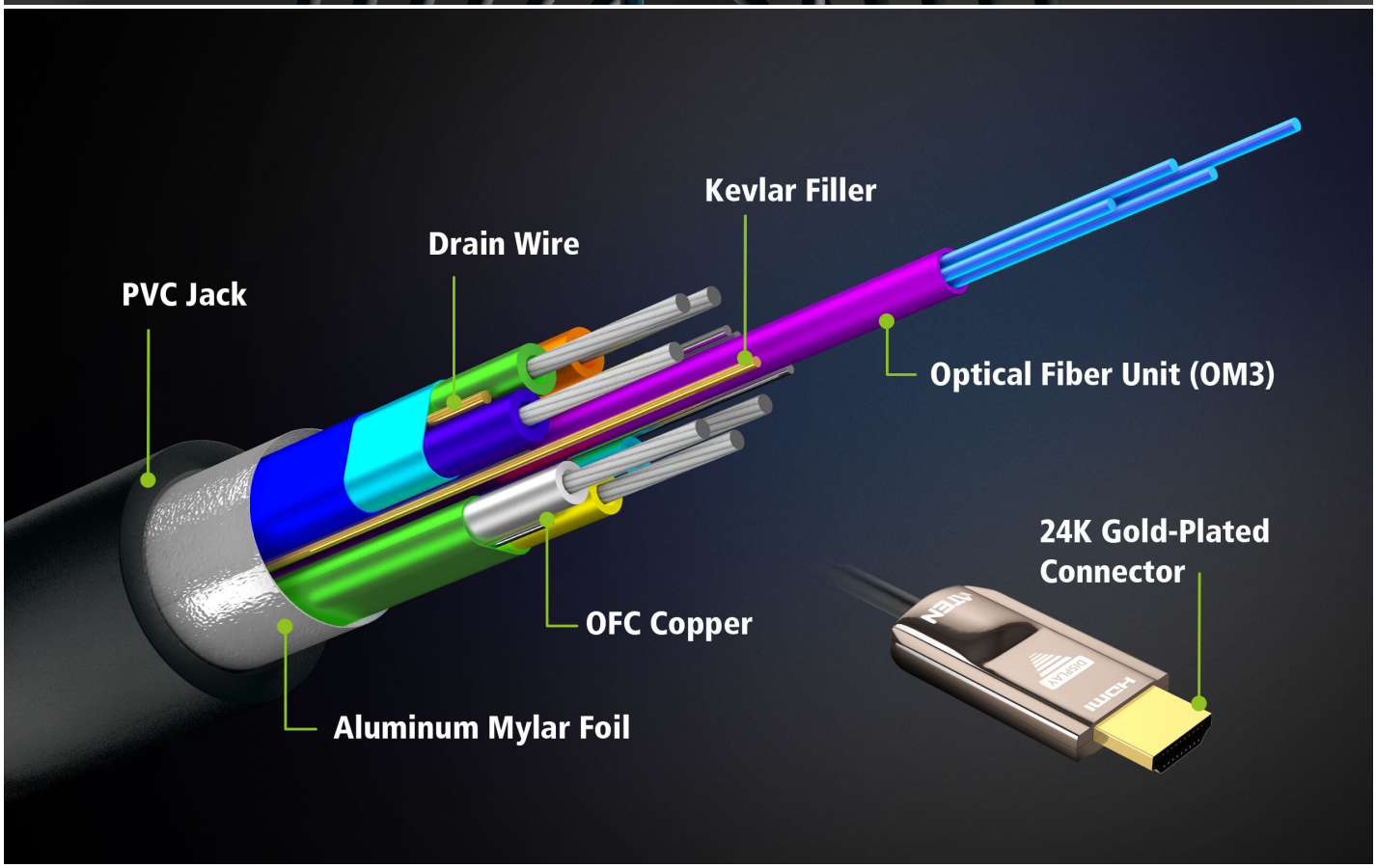
**Superior Audio Fidelity with ARC Enhancement**

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

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**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**

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First Name *

Last Name *

- Country *

Company *

Email *

Phone Number *

- Customer Type *

Job Title *

**Features**

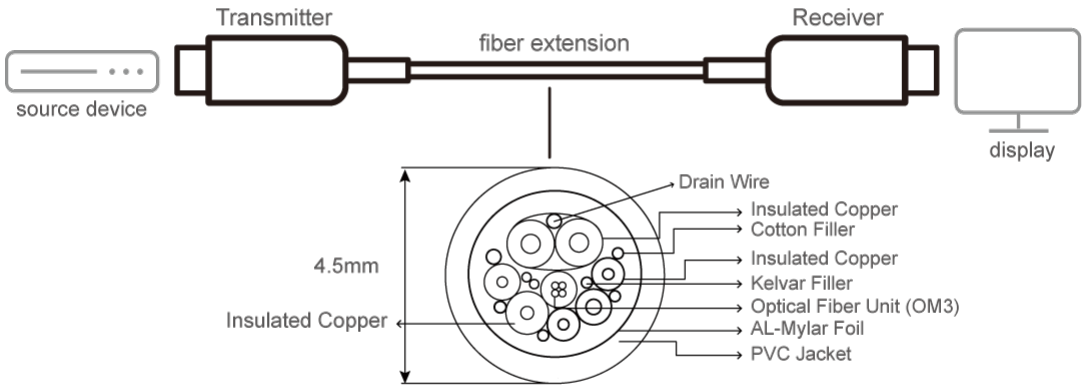
ATEN VE781020 True 4K HDMI Active Optical Cable utilizes AOC technology that enables conversion between input signals and optical signals for optimum high bandwidth data transmissions. The EMI-resistant optical cables come in 20 m with full support of True 4K resolutions. It is fully compliant with HDCP 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

**Specifications**

| | |
|---|---|
| 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<br>*Color sub-sampling: 4:4:4 / 4:2:2 / 4:2:0<br>*Color Depth: 30 / 36 / 48 bit |
| Compliance | HDMI (3D, Deep Color, 4K, HDR, ARC)<br>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<br>4 x OM3 Optical Fiber (50/125um) |
| Notification | Bend Radius: 20mm (Min.)<br>Compression Load Resistance: Max. 50kg (500N)<br>Cable Filler: Kevlar<br>Cable Marking: ATEN INTERNATIONAL --- HIGH SPEED HDMI HYBRID ACTIVE OPTICAL CABLE 4K@60Hz 18Gbps -- PVC CE EU RoHS EC ZONE/DEVICE<br>* NO external power required |
| Certifications | |
| Certifications | Safety and Emission: CE / FCC / RoHS / REACH / UL VW-1<br>EMC Class-A / Class-B |
| Power Consumption | DC5.0V:0.25W:0.05ABTU/h<br><br>Note:<br>● The measurement in Watts indicates the typical power consumption of the device with no external loading.<br>● The measurement in BTU/h indicates the power consumption of the device when it is fully loaded. |
| Jacketed | |
| Material | PVC (85P)<br>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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