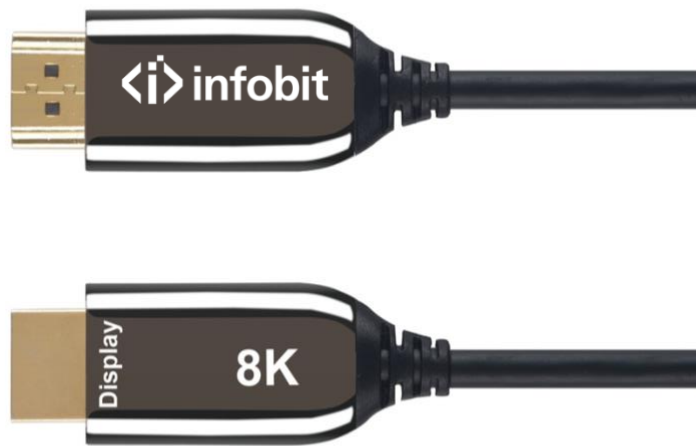


iFiber

HDMI 2.1 8K AOC Type A to A

Model: AOC-HDMI-AA8K



The HDMI 2.1 AOC is an active optical HDMI 2.1 cable, designed for transmission of the next generation of 8K video content. It is able to transmit resolutions up to 8K (7680 x 4320p) 4:4:4 at 60 Hz with a bandwidth of 48 Gbps via OM3 optical fiber technology, eliminating the possibility of electronic interference. It is backward compatible with HDMI 2.0 and HDMI 1.4, guaranteeing an optimal and future proof solution for any kind of installation.

The HDMI 2.1 active optical cable is ready for future HDCP 2.3 content encryption, compatible with all current and emerging HDR standards (HLG, HDR-10 and HDR-10+, Dolby Vision, Perceptual Quantizer and SL-HDR-1) and compatible with eARC HD audio standard.

Features

- HDMI2.1 specification with 48Gbps mass-capacity bandwidth. Backward compatible
- Up to 100m Maximum Length
- Designed for transmitting up to 8K@60Hz unparalleled visual, as well as VR and 3D display signal in a lossless way even a long distance
- Refresh rate at 120Hz while under 4K, ultra-fast motion UHD images to be crisp and razor-sharp, and higher refresh rate when using lower resolution
- With Dynamic HDR, contrast, depth, brightness and wider color gamut are shown at ideal values on a frame-by-frame basis
- With eARC, connectivity is enhanced and simplified for greater ease of use of multiple components discovery and audio optimization
- Support the high-bitrate audio formats up to 192kHz, 24-bit, and uncompressed 5.1 and 7.1, Dolby specific lossless audio formats, and 32-channel uncompressed audio
- With VRR, gameplay will be more fluid and better detailed with nearly zero lag, judder and frame tearing
- Support EDID incl. self-detecting function, ALLM, QMS and QFT
- Made with strong zinc-alloy housing and corrosion-resistant gold-plated connector
- Plug and Play
- High resistance against surrounding electromagnetic interference. Safe for everyone via the nil-radiation environment
- Hybrid optical cable with fiber and copper wire

Applications

- Digital Signage
- LED signboards in streets and in stadiums
- Medical Imaging Equipment
- Airplane On-board Video System
- Home Theater
- Blue-ray, 3D video, Projector, Set-up box, DVR, Game Consoles and Computer
- TV Broadcast Station
- Conference Room Video Equipment
- Security systems



NOTE: This HDMI 2.1 active optical cable is directional. Each end of the cable is marking “Source” and “Display” to indicate the direction of the signal flow. Always test the cable to be sure that the signal flow is correct and for device compatibility before permanently installing in a wall or ceiling.

Specs

Connector A	HDMI Type A
Connector B	HDMI Type A
Cable	Hybrid type with OM3 fiber and copper wire
Length	Up to 100m (328ft)
Cable Diameter	4.5mm
Jacket	PVC, RoHS Directive-compliant
HDMI Standard	HDMI 2.1
Video Resolution	8K@60Hz,4K@120Hz
Bandwidth	48Gbps
Color Depth	12 bit Max
Audio Compliance	Supports ARC, LPCM 7.1 audio, Dolby® Digital Plus,Dolby® TrueHD, and DTS-HD® Master Audio™
Power Consumption	250mW (max)
Operating Temperature	-40°C~70°C

Absolute Maximum Rating

Parameter	Symbol	Min	Max	Unit
Power Supply Voltage	VCC	4.5	5.5	V
Operating Temperature	Top	0	50	°C
Storage Temperature	Ts	-40	70	°C
Relative Humidity	Hs	10	80	%RH

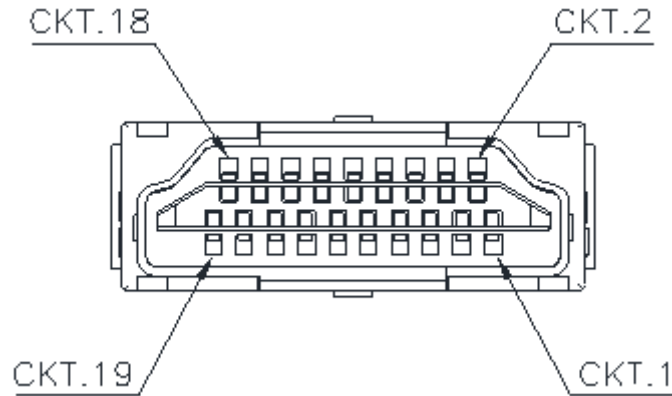
Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Power Supply Voltage	VCC	4.75	5.0	5.25	V
Operating Temperature	Top	0		50	°C

Specifications

Item	Description	
Units	Transmitter (Source)	Receiver (Display)
HDCP & DDC	HDCP 2.2 Fully Support bi-directional EDID and HDCP communication	
Video Bandwidth	12 Gbps/x4Channel	
Supported Resolution & Distance	480p, 720p, 1080i and 1080p deep color, 4Kp50/60/100/120 and 8Kp50/60 up to 100m	
O/E Converter	4 channel 850 nm VCSEL array	4 CH GaAs PD array
Connector Type	HDMI type A	
Cable Type	Hybrid type with OM3 fiber and copper wire	
Cable Length	10m/15m/20m/25m//30m/40m/50m/60m/70m/80m/90m/100m (with +/-30cm tolerance) Custom length available.	
Cable Outer Diameter	4.5mm	
Jacket Outer Material	PVC/TPU(Custom)	
Cable Weight TBD	Cable Weight TBD	
Cable Color TBD	Cable Color TBD	
Differential Input	100 ohm (typ)	
Power Consumption	250mW (max)	
Power Supply	Non external power required	

HDMI Type A Pin Assignment



HDMI Type A Connector Pin Assignment

PIN	Function	PIN	Function
1	T.M.D.S. Data 2+	11	TMDS Clock Shield
2	T.M.D.S. Data 2 Shield	12	TMDS Clock-
3	T.M.D.S. Data 2-	13	CEC
4	T.M.D.S. Data 1+	14	Utility
5	T.M.D.S. Data 1 Shield	15	SCL
6	T.M.D.S. Data 1-	16	SDA
7	T.M.D.S. Data 0+	17	DDC/CEC Ground
8	T.M.D.S. Data 2 Shield	18	+5V Power
9	T.M.D.S. Data 0-	19	Hot Plug Detect
10	TMDS Clock+		

Ordering Information

Part Number	Description
AOC-HDMI-AA8K-10	Infobit HDMI 2.1 8K Active Optical Cable, Type A to A, 4K/120Hz, 8K/60Hz, 48Gbps, 10m/33ft.
AOC-HDMI-AA8K-15	Infobit HDMI 2.1 8K Active Optical Cable, Type A to A, 4K/120Hz, 8K/60Hz, 48Gbps, 15m/ 49ft.
AOC-HDMI-AA8K-20	Infobit HDMI 2.1 8K Active Optical Cable, Type A to A, 4K/120Hz, 8K/60Hz, 48Gbps, 20m/ 65ft.
AOC-HDMI-AA8K-25	Infobit HDMI 2.1 8K Active Optical Cable, Type A to A, 4K/120Hz, 8K/60Hz, 48Gbps, 25m/ 82ft.
AOC-HDMI-AA8K-30	Infobit HDMI 2.1 8K Active Optical Cable, Type A to A, 4K/120Hz, 8K/60Hz, 48Gbps, 30m/ 98ft.
AOC-HDMI-AA8K-40	Infobit HDMI 2.1 8K Active Optical Cable, Type A to A, 4K/120Hz, 8K/60Hz, 48Gbps, 40m/ 131ft.

AOC-HDMI-AA8K-50	Infobit HDMI 2.1 8K Active Optical Cable, Type A to A, 4K/120Hz, 8K/60Hz, 48Gbps, 50m/ 164ft.
AOC-HDMI-AA8K-60	Infobit HDMI 2.1 8K Active Optical Cable, Type A to A, 4K/120Hz, 8K/60Hz, 48Gbps, 60m/ 196ft.
AOC-HDMI-AA8K-70	Infobit HDMI 2.1 8K Active Optical Cable, Type A to A, 4K/120Hz, 8K/60Hz, 48Gbps, 70m/ 229ft.
AOC-HDMI-AA8K-80	Infobit HDMI 2.1 8K Active Optical Cable, Type A to A, 4K/120Hz, 8K/60Hz, 48Gbps, 80m/ 262ft.
AOC-HDMI-AA8K-90	Infobit HDMI 2.1 8K Active Optical Cable, Type A to A, 4K/120Hz, 8K/60Hz, 48Gbps, 90m/ 295ft.
AOC-HDMI-AA8K-100	Infobit HDMI 2.1 8K Active Optical Cable, Type A to A, 4K/120Hz, 8K/60Hz, 48Gbps, 100m/ 328ft.