



Shielded AOC HDMI Cable

Part Number:	P-HDAEC-XX
Revision Number:	1.1
Date:	2-15-2019
Page Number:	1 of 7

Product Overview

Featuring a new 4K optical chipset, the P-HDAEC-XX is suitable to connect all HDMI devices at distances up to 150ft. without the use of external power. The P-HDAEC-XX also has better equalization, which allows for longer front-end copper cables to be used in combination with this new AOC cable. The P-HDAEC-XX comes with an overall shield to protect the copper DDC lines and make it one of the most reliable AOC cables on the market today.

Use With Copper Cables

The P-HDAEC-XX has been designed from the ground up to work with copper cables, but not all 4K signals are equal. With a 4K30 HDMI signal, the P-HDAEC-XX can be coupled to copper cables with lengths up to 15 feet – the longest length of copper of any AOC cable. Increasing the refresh rate or increasing the color depth will shorten the usable distance; it is still recommended to go point-to-point with 4K60 signals.

Features

- Compliant to link with all HDMI A-type connector devices, Metallic cover to provide better shielding
- Compliant with HDMI 2.0 version
- Hybrid cable length 35', 50', 75', 100', 150' with CMP & none-CMP flammability rating offering
- Overall Braid Shield to prevent EMI issues
- Supports ARC on models up to and including 100ft.
- Easy to install optical fiber cable
- Support 4K@60Hz/3D/1080p/1080i/720p
- Support HDCP ver.2.2/ EDID/ CEC / DDC
- Supports all HDMI audio formats
- TAA Compliant Product

Applications

- Professional AV systems interconnection
- In & outdoor digital signage panels & kiosks
- Home theater systems
- Facility automation systems
- Hospital and medical applications

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Part Number:	P-HDAEC-XX
Revision Number:	1.1
Date:	2-15-2019
Page Number:	1 of 7

TECHNICAL SPECIFICATION



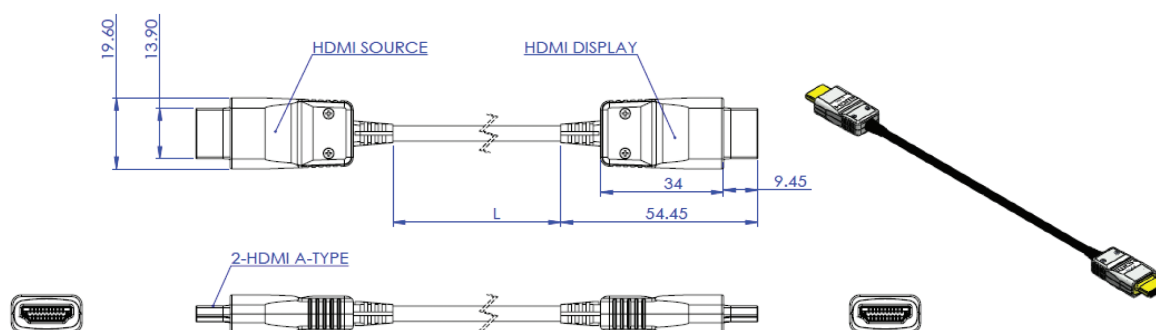
Technical Specifications	
HDMI Support	HDMI 2.0 Point-to-Point or HDMI 1.4b Multi-Point Applications
Video Formats	4K60 / 3D / 1080p / 1080i / 720p
Data Rates	18 Gbps Max.
Support Features	HDCP / EDID / CEC / DDC
Signal Input & Output Connector	HDMI A-Type (Plug)
Audio Support	Yes
Cable Length	35', 50', 75', 100, 150' ETL Plenum / CMP Rated
Single-ended input swing voltage	400mV < Vswing < 800mV

General	
Voltage	5V DC
Power Supplied Connector	N/A
Operating Temperature	0°C to 60°C
Humidity	0% ~ 85% RH

Electric Characteristics

Parameter	Symbol	Min.	Typ.	Max	Unit
Operating Current ²	I_{OP}	48		125	mA
Power Consumption	P_O	0.24		0.63	W
TMDS Different Input Voltage	V_{ID}	400		1600	mV
TMDS Different Output Voltage	V_{OD}	200	300	400	mV
TMDS Data Bit Rate		250		6000	Mbps

² The operating current is changed according to the resolution.



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Page Number:	1 of 7

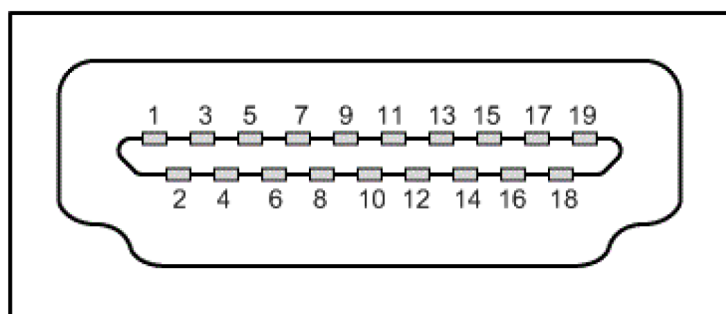
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Physical Characteristics

Pin	Symbol	
1	TMDS2+	TMDS data signal channel 2 positive
2	GND	TMDS data signal channel 2 shield
3	TMDS2-	TMDS data signal channel 2 negative
4	TMDS1+	TMDS data signal channel 1 positive
5	GND	TMDS data signal channel 1 shield
6	TMDS1-	TMDS data signal channel 1 negative
7	TMDS0+	TMDS data signal channel 0 positive
8	GND	TMDS data signal channel 0 shield
9	TMDS0-	TMDS data signal channel 0 negative
10	TMDSC+	TMDS data signal channel C positive
11	GND	TMDS data signal channel C shield
12	TMDSC-	TMDS data signal channel C negative
13	CEC	Consumer Electronics Control
14	RESERVED	TBD
15	SCL	Display Data Channel Clock line
16	SDA	Display Data Channel Data line
17	GND	Display Data Channel / CEC Shield
18	VCC5V	+5V Input for Transmitter from Source Host +5V Output for Sink Monitor from Receiver
19	HPD	Hot Plug Detect Signal



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Page Number:	1 of 7

Active Optical HDMI Cable

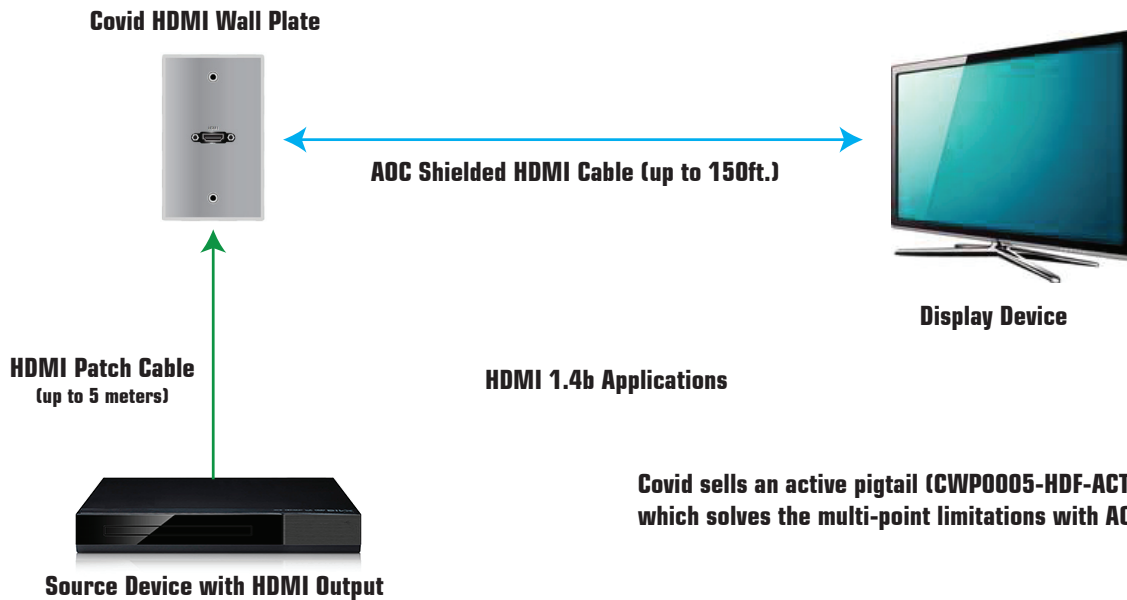
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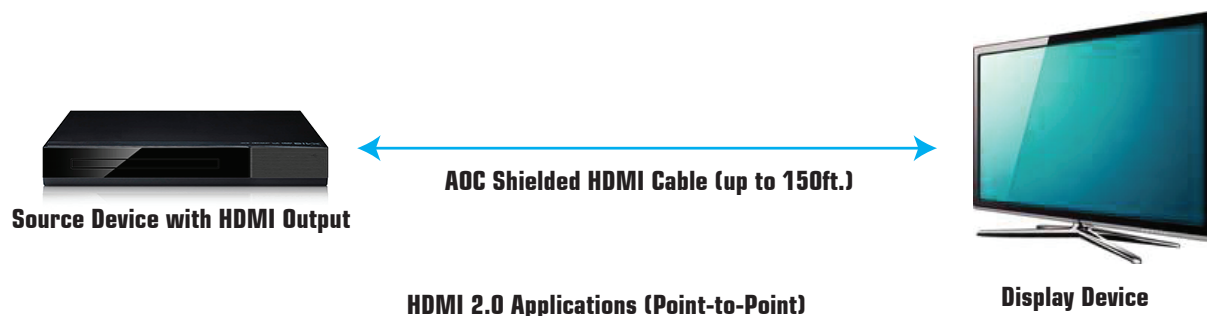
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Application Diagram HDMI 1.4



Application Diagram HDMI 2.0



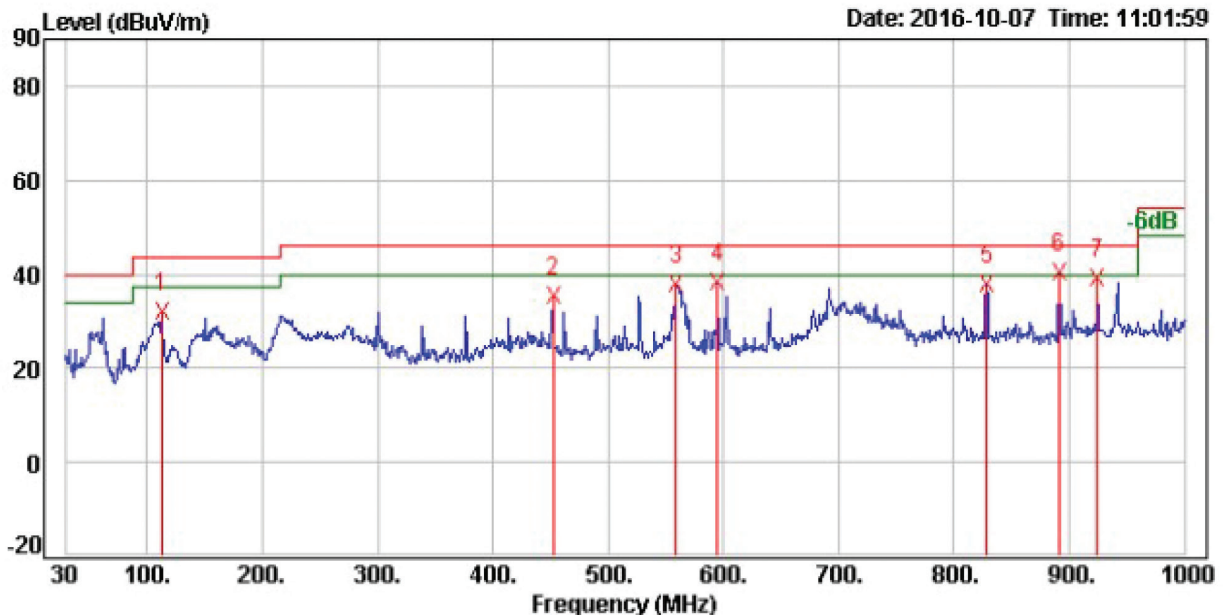
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EMII TESTING (FCC 15B_CLASS B)



Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
112.45	46.83	-14.73	32.10	43.50	-11.40	190	100	Peak
451.95	44.16	-8.69	35.47	46.00	-10.53	172	100	Peak
558.65	45.29	-7.20	38.09	46.00	-7.91	222	100	Peak
594.54	45.07	-6.84	38.23	46.00	-7.77	211	100	Peak
828.31	41.71	-3.81	37.90	46.00	-8.10	348	100	Peak
891.36	43.36	-3.00	40.36	46.00	-5.64	190	100	Peak
924.34	41.91	-2.67	39.24	46.00	-6.76	144	100	Peak

Remarks: 1. The emission levels of other frequencies were very low against the limits .
 2. Correction Factor = Insertion loss + Cable loss - Preamplifier gain
 3. Margin value = Result value - Limit value

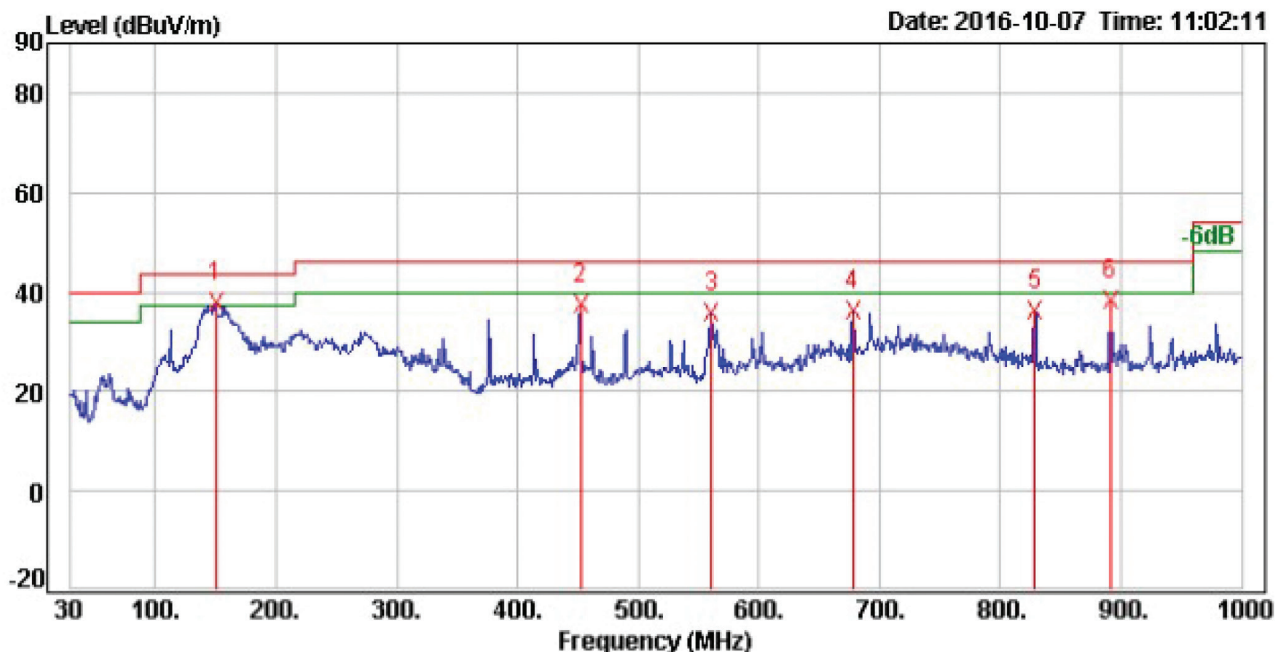
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Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
150.28	53.41	-15.43	37.98	43.50	-5.52	152	200	Peak
451.95	46.30	-8.69	37.61	46.00	-8.39	143	200	Peak
560.59	42.93	-7.18	35.75	46.00	-10.25	133	400	Peak
677.96	42.11	-5.91	36.20	46.00	-9.80	148	100	Peak
828.31	40.18	-3.81	36.37	46.00	-9.63	145	100	Peak
891.36	41.46	-3.00	38.46	46.00	-7.54	242	100	Peak

Remarks: 1. The emission levels of other frequencies were very low against the limits .
 2. Correction Factor = Insertion loss + Cable loss - Preamplifier gain
 3. Margin value = Result value - Limit value

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