

OptoHD™ Cable



US Patent No. 8,948,197

OPTOHD-S-D-XXX-Z-Y

S-D (Source & Display Connector Type):

XXX (Cable length in meters) ^{[1], [2], [3]} :

Z (Fire Resist Rating):

Y (cable diameter):

Version 1

A(Standard), **C**(Mini) or **D**(Micro)

010, 015, 020, 030, 050, 100 m

P (Plenum), **R** (Riser)

N (Regular 3.8mm) or **S** (Slim 3.2mm)

APPLICATIONS

Sources

Computers
Blu-ray/DVD
Set-top Boxes
Phones/Tablets
Digital cameras

Displays

AV Receivers
TV Monitors
Digital Signage
Medical/Industrial

FEATURES

- High Speed Fiber Optics
- Up to 100 meters
- High Definition 1080p & 4K
- Deep Color (48-bit)
- Option for ARC/HEAC
- Supports 3D Displays
- EMI/RFI resistant



Cosemi OptoHD™ cables support high definition (1080p) and ultra-high definition (4K) videos, Deep Color (48-bit), 3D and multi-channel digital audio on a single cable. Utilizing fiber optics, these cables provide full signal integrity over distance and future-proofed bandwidth for the next generation of video displays.

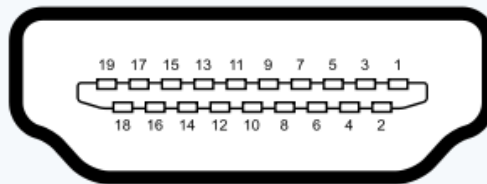
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Supported Features

Common Name	Resolution	Refresh Rate	Color Sampling	Color Depth
1080p	1920x1080	60P	4:4:4	8-bit
1080p	1920x1080	60P	4:4:4	10-bit
1080p	1920x1080	60P	4:4:4	12-bit
1080p	1920x1080	60P	4:4:4	16-bit
4K	3840x2160	30P	4:4:2	8/10/12-bit
4K	3840x2160	30P	4:4:4	8-bit

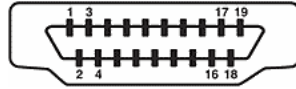
● Video formats below 1080P are all supported

Type-A Connector Pin Assignment



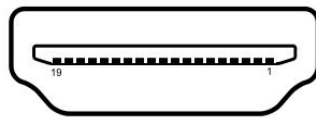
Pin 1	TMDS Data2+	Pin 11	TMDS Clock Shield
Pin 2	TMDS Data2 Shield	Pin 12	TMDS Clock-
Pin 3	TMDS Data2-	Pin 13	CEC
Pin 4	TMDS Data1+	Pin 14	Utility/HEAC+
Pin 5	TMDS Data1 Shield	Pin 15	SCL
Pin 6	TMDS Data1-	Pin 16	SDA
Pin 7	TMDS Data0+	Pin 17	CEC Ground
Pin 8	TMDS Data0 Shield	Pin 18	+5 V Power
Pin 9	TMDS Data0-	Pin 19	Hot Plug Detect/HEAC-
Pin 10	TMDS Clock+		

Type-D Connector Pin Assignment



Pin 1	Hot Plug Detect/HEAC-	Pin 11	TMDS Data0-
Pin 2	Utility/HEAC+	Pin 12	TMDS Clock+
Pin 3	TMDS Data2+	Pin 13	TMDS Clock Shield
Pin 4	TMDS Data2 Shield	Pin 14	TMDS Clock-
Pin 5	TMDS Data2-	Pin 15	CEC
Pin 6	TMDS Data1+	Pin 16	CEC Ground
Pin 7	TMDS Data1 Shield	Pin 17	SCL
Pin 8	TMDS Data1-	Pin 18	SDA
Pin 9	TMDS Data0+	Pin 19	+5 V Power
Pin 10	TMDS Data0 Shield		

Type-C Connector Pin Assignment



Pin 1	TMDS Data2 Shield	Pin 11	TMDS Clock+
Pin 2	TMDS Data2+	Pin 12	TMDS Clock-
Pin 3	TMDS Data2-	Pin 13	CEC Ground
Pin 4	TMDS Data1 Shield	Pin 14	CEC
Pin 5	TMDS Data1+	Pin 15	SCL
Pin 6	TMDS Data1-	Pin 16	SDA
Pin 7	TMDS Data0 Shield	Pin 17	Utility/HEAC+
Pin 8	TMDS Data0+	Pin 18	+5 V Power
Pin 9	TMDS Data0-	Pin 19	Hot Plug Detect/HEAC-
Pin 10	TMDS Clock Shield		

Mechanical

Cable Color	Black
Cable Diameter	3.8mm or 3.2mm ^[4]
Bulkhead Dimensions	Type-A: 40 mm x 20 mm x 10 mm Type-D: 28mm x 11.5mm x 8.2mm Type-C: TBD
Operational Bend Radius	10 mm
Length	10, 20, 30, 50, or 100 m
Cable Weight	19.7g/m or 14.2g/m
Cable Horizontal Tensile Strength	800N (180 lbs)
Connector Contact Material	Nickel or Gold-plated Phosphorous Bronze
Bulkhead Pulling Force	200N (45 lbs)

Environmental

Storage Temperature	-5 to 85C
Operating Case Temperature	0 to 70C
Humidity	0 to 85% RH

Notes:

1. Compliant to HDMI 1.4b
2. Support from HDMI source to HDMI sink compliant to HDMI1.4b. Connectivity between other types of ports using HDMI adapters is not guaranteed.
3. Power booster may be required to ensure connectivity from HDMI source to HDMI sink compliant to HDMI1.4b, which will be attached to the order for optional use. Connectivity between other types of ports using HDMI adapters is not guaranteed.
4. Cables with standard diameter will support up to 100m, and cables with slim version will support up to 60m
5. Option available for supporting ARC/HEAC up to 30m

Handling and Care

- When removing the OptoHD connector from a socket, do not pull on the cable itself. Pull the connector by its housing from the socket.
- Do not remove the connector housing or cut into the cable.
- Discard cables with mechanically damaged housings or jackets properly.

Eye Safety

Optical energy contained within cable.

CAUTION: Do not cut optical cable. Viewing the cut fiber ends, especially with certain optical instruments (for example, eye loupes, magnifiers, and microscopes) may pose an eye hazard.

- This product is classified as a Class 1M Laser product in accordance with IEC 60825-1:1993+A1+A2 and complies with 21CFR 1040.10 and 1040.11 except for deviations pursuant to laser notice N0. 50, dated 24-Jun-2007. Use or modification of this device other than those specified herein may result in hazardous radiation. To meet laser safety requirements the cable shall be used within environmental specifications. Tampering with or modifying the device will result in voiding of the product warranty.

**INVISIBLE LASER RADIATION
DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS “(MAGNIFIERS)”
CLASS 1M LASER PRODUCT
840-850nm, 700uW**

Laser Emission Data

Wavelength	850 nm
Accessible Emission Limit (as defined by IEC: 7 mm aperture at 70 mm distance)	0
Beam Divergence (full angle)	N/A

OptoHD HDMI1.4 Cable Data Sheet



Certifications/Compliance

HDMI certification
RoHS compliant
HDCP compliance



Ordering Info

Part No.: OptoHD-X-Y-DDD-Z-Y

X=Source Connector

- A – Standard
- C – Mini
- D – Micro

Y=Display Connector

- A – Standard
- C – Mini
- D – Micro

DDD=Length

Available Length: 010, 015, 020, 030, 050, 100 meters

Z=Fire Resist Rating

- R - Optical Fiber Conductive Riser
- P - Optical Fiber Conductive Plenum

Y=Diameter of Cable

- N – Standard size of 3.8mm black cable
- S – Slim size of 3.2mm black cable

OptoHD-A-A-030-R-N= 30 m HDMI1.4b cable with type-A source connector and type-A display connector and regular riser rated conductive cable

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