

DATA SHEET

HDMI Active Optical Cable, HDFC-100

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Description

New active optical HDMI cable, HDFC-100 is designed compact enough to be fitted into various installation environments. The HDFC-100 enables to transmit 4K 60Hz(4:2:0), 4K 30Hz(4:4:4) signal up to 150m (492feet) over hybrid cable, avoiding any tricks such as scaling or data compression for lessening a burden of data transmission.

The HDFC-100 gives slim, light, easy installation like a general copper HDMI cable. With low power consumption technology in OPTICIS, the HDFC-100 can be operated by DDC 5V in HDMI port without any external DC power or USB power.

It supports CEC, EDID, HDCP (High Definition Contents Protection) and ARC for better installation flexibility and compatibility.

The shipping items are shown as follows;

- 1) One (1) AOC cable
- 2) User's Manual

Features

- Extends up to 4K 60Hz(4:2:0), 4K 30Hz(4:4:4) (36bit, 3.4 Gbps/ch)
- Operated by HDMI source without external power
- Transmits HDMI data up to 150m (492feet) over Hybrid cable (ARC mode: 20m)
- Supports up to HDMI 2.0, 36bit color depth
- Supports 3D contents transmission
- Supports Audio Return Channel (ARC)
- Complies with CEC, EDID, HDCP
- Certifications: FCC /CE

Applications

- Home AV
- Digital signage
- Control room
- Conference room

Absolute Maximum Ratings

Stresses in excess of the absolute maximum ratings can cause permanent damage to the device.

These are absolute stress ratings only. Functional operation of the device is not implied at these of any other conditions in excess of those given in the operational sections of the datasheet. Exposure to absolute maximum ratings for extended periods can adversely affect device reliability.

Parameter	Symbol	Min	Typ	Max	Units
Storage Temperature ¹	T _{ST}	-40		85	°C
Volt Supply ¹	V _{CC} -V _{EE}	-0.3		12	V
Relative Humidity ²	RH	8		90	%
Electrostatic Discharge(Air)	ESD	-8		+8	KV

Recommended Operating Conditions

Parameter	Symbol	Min	Typ	Max	Units
Bitrate	B			3.4	Gbps
Operation Temperature Range	T _o	0		70	°C
Supply Voltage	V _{CC}	4	5	6	V
Supply Current	I _{CC}		45	50	mA
Differential Impedance	R		100		ohm
TX					
Input Voltage differential (P-P)	V _{IP} – V _{IN}	400		1500	mV
Input Rise / Fall time	T _R , T _F	50		75	Ps
Input Skew between differential				25	Ps
RX					
Output differential Voltage(P-P)	V _{OP} -V _{ON}	500	600	800	mV
Output pull-up resistor	R _P	40	50	60	ohm

Cable Fabric

4 channel Optical Ribbon Fiber

6 channel Copper Ribbon Cable

Shield jacket & shield cable

PVC cable jacket

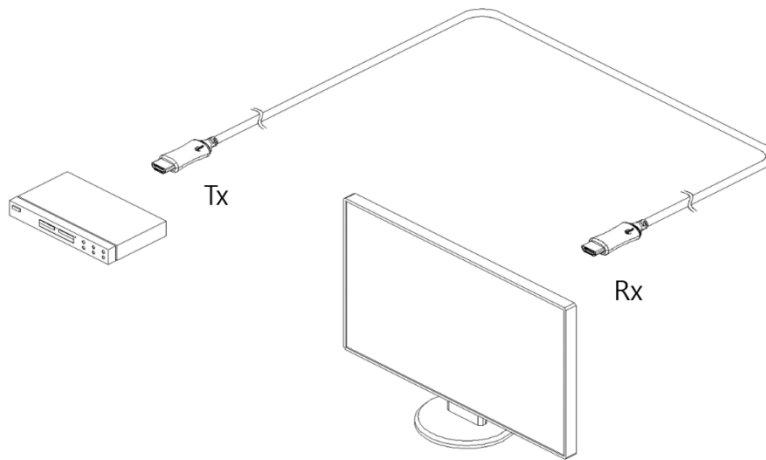
HDMI PIN Description

No	Pin Assignment Functional Description
1	TMDS2+ TMDS Data Signal Channel 2 Positive
2	TMDS2 Shield TMDS Data Signal Channel 2 Shield
3	TMDS2- TMDS Data Signal Channel 2 Negative
4	TMDS1+ TMDS Data Signal Channel 1 Positive
5	TMDS1 Shield TMDS Data Signal Channel 1 Shield
6	TMDS1- TMDS Data Signal Channel 1 Negative
7	TMDS0+ TMDS Data Signal Channel 0 Positive
8	TMDS0 Shield TMDS Data Signal Channel 0 Shield
9	TMDS0- TMDS Data Signal Channel 0 Negative
10	TMDS Clock+ TMDS Clock Channel Positive
11	TMDS Clock Shield TMDS Clock Channel Shield
12	TMDS1Clock- TMDS Clock Channel Negative
13	CEC Consumer Electronics Control
14	HEAC+
15	SCL HDCP/DDC communication clock
16	SDA HDCP/DDC communication data
17	1DDC/CEC Ground DDC/CEC shield
18	+5V Power 5 V Input for Transmitter for Host 5 V Output for Monitor from Receiver
19	HEAC-

Reliability TEST

Parameter	Specification
Cable	
Endurance at Bend Radius	Over 10k cycles at 50 mm Radius
Pull Strength	44 pounds
Minimum Bend Radius	78 mm
Operation	
High Temp & High Humidity	60 °C / 90% / 120hr
Temp cycling	-10~60°C / 30min / 20 cycle
High Temp	70 °C / 168hr
Storage	
High Temp & High Humidity	60 °C / 90% / 1000hr

Connection Diagram



Example : DVD and HDTV Set-up

- Tx : DVD, Blu-ray, PC, Set-top box, Video game console
- Rx : HDTV, Computer monitor, Projector

Dimensions: Size (L*W*H): 42.7x 19.6 x 11.5mm

