

COH-Tx & COH-Rx

HDMI to Optical Transmitter and Receiver

Operation Manual



COH-Tx & COH-Rx

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• **Safety Precautions**

Please read all instructions before attempting to unpack or install or operate this equipment, and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through module openings or empty slots, as you may damage parts.
- Do not attach the power supply cabling to building surfaces.
- Do not allow anything to rest on the power cabling or allow it to be abused by persons walking on it.
- To protect the equipment from overheating, do not block the slots and openings in the module housing that provide ventilation.

• **Revision History**

Version No	Date	Summary of Change
V1	20100728	Preliminary Release
VR2	20110526	Add PC Support Timing
VR3	20110929	TV Support Timing Change

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1. Introduction

While HDMI is becoming more common around the world, some consumers have been wishing for a way to transmit HDMI signals at very long distances. Enter the HDMI to Optical Transmitter and Receiver which uses fiber optical cables to give you a longer transmission distance, up to 300m while also providing you with thinner lighter cables for easy installations. With this system the HDMI signal is not compressed and is fully compliant with HDMI and HDCP.

2. Applications

- Digital signage, airport displays, advertising, video walls or special events
- Surveillance systems

3. Package Contents

- HDMI to Optical Transmitter
- Optical to HDMI Receiver
- 5V DC Power adaptor x 2
- Operation Manual

4. System Requirements

Input source devices such as DVD or Blu-Ray players with HDMI cables and output displays such as HDTV's and monitors with HDMI ports.

5. Features

- HDMI v1.2, HDCP and DVI compliance
- Long distance transmission up to 300M or more
- Thinner and lighter cables for better looking and easier installations
- Faster data transmission
- Lower power consumption
- Supports EDID reading

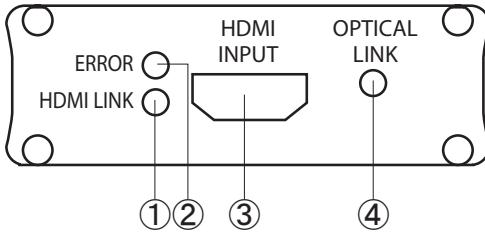
6. Specifications

Transmitter	
Input Port	1 x HDMI
Output Port	1 x Duplex Multi-Mode Fiber Optical with LC connector
Receiver	
Input Port	1 x Duplex Multi-Mode Fiber Optical with LC connector
Output Port	1 x HDMI
Dimensions (mm)	114(W) x 65(D) x 26(H)
Weight(g)	200
Chassis Material	Metal
Silkscreen Color	Black
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Relative Humidity	20~90% RH (non-condensing)
Power Consumption	3.5W/each

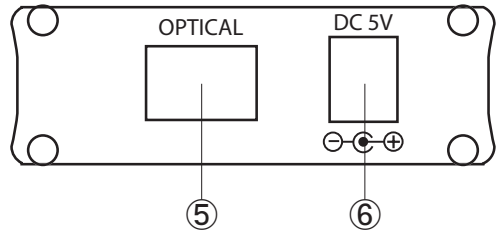
7. Operation Controls and Functions

7.1 Transmitter

Front Panel



Rear Panel

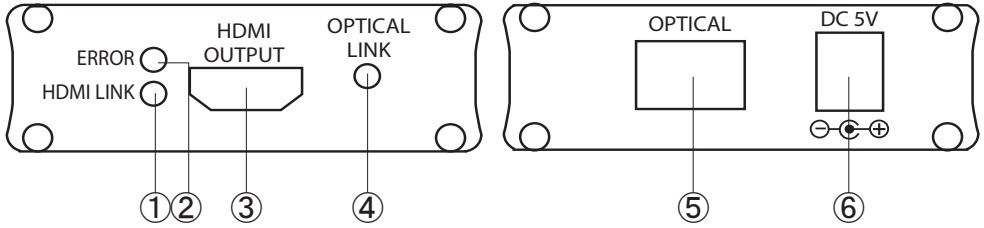


- ① HDMI LINK: This LED will illuminate in blue when at least one optical cable is connected and has successfully detected and communicated between Tx and Rx with video or audio data sending.
- ② ERROR: This LED will illuminate in red when there appears to be an error in the input signal data rate that is higher than 75MHz or the HDMI output is not output able.
- ③ HDMI INPUT: This slot is to connect with an input source such as a DVD or Blu-Ray player with HDMI cable.
- ④ OPTICAL LINK: This LED will turn illuminate in blue when the optical cable is connected and has successfully detected and communicated between Tx & Rx with data sending. If the LED is not illuminate users need to check the connection of the fiber cable and then make sure the connection is well and the cable itself is good.
- ⑤ OPTICAL: Connect both ends of the fiber optical cable to each side of the device in order send a signal.
Note: Connector Type: LC-LC, Fiber: Duplex Multi-mode Fiber
- ⑥ DC 5V: Plug the 5V DC power supply into the unit and connect the adaptor to an AC outlet. The LED will switch on when the power cable is plugged in.

7.2 Receiver

Front Panel

Rear Panel



- ① HDMI LINK: This LED will illuminate in blue when at least one optical cable is connected and has successfully detected and communicated between Tx and Rx with video or audio data sending.
- ② ERROR: This LED will illuminate in red when there appears to be an error in the input signal data rate that is higher than 75MHz or the HDMI output is not output able.
- ③ HDMI OUTPUT: This slot is to connect with an output display such as an HDTV or monitor with HDMI cable.
- ④ OPTICAL LINK: This LED will turn illuminate in blue when the optical cable is connected and has successfully detected and communicated between Tx & Rx with data sending. If the LED is not illuminate users need to check the connection of the fiber cable and then make sure the connection is well and the cable itself is good.
- ⑤ OPTICAL: Connect both ends of the fiber optical cable to each side of the device in order send a signal.
Note: Connector Type: LC-LC, Fiber: Duplex Multi-mode Fiber
- ⑥ DC 5V: Plug the 5V DC power supply into the unit and connect the adaptor to an AC outlet. The LED will switch on when the power cable is plugged in.

8. Support Timing Chart

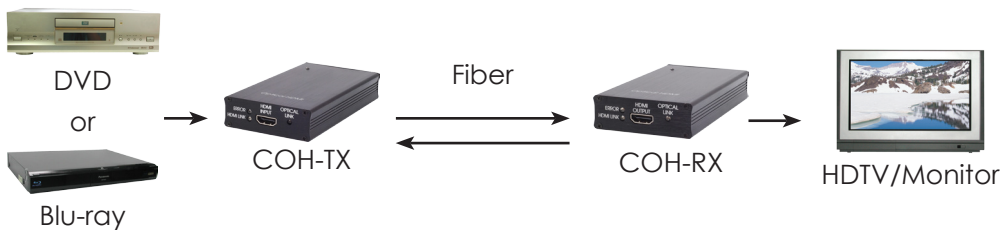
8.1 TV Timing

NO.	Formats	Field Rate	Picture Aspect Ratio
1	720x480p	59.94Hz/60Hz	4:3
2	720x480p	59.94Hz/60Hz	16:9
3	1280x720p	59.94Hz/60Hz	16:9
4	1920x1080i	59.94Hz/60Hz	16:9
5	720(1440)x480i	59.94Hz/60Hz	4:3
6	720(1440)x480i	59.94Hz/60Hz	16:9
7	720x576p	50Hz	4:3
8	720x576p	50Hz	16:9
9	1280x720p	50Hz	16:9
10	1920x1080i	50Hz	16:9
11	720(1440)x576i	50Hz	4:3
12	720(1440)x576i	50Hz	16:9
13	1920x1080p	23.97Hz/24Hz	16:9
14	1920x1080p	25Hz	16:9
15	1920x1080p	29.97Hz/30Hz	16:9

8.2 PC Timing

Pixel Format	Refresh Rate	Horizontal Frequency	Pixel Frequency	Standard Type
640 x 350	85 Hz	37.9 kHz	31.500 MHz	VESA Standard
640 x 400	85 Hz	37.9 kHz	31.500 MHz	VESA Standard
720 x 400	85 Hz	37.9 kHz	35.500 MHz	VESA Standard
640 x 480	60 Hz	31.500 kHz	25.175 MHz	Industry Standard
800 x 600	60 Hz	37.9 kHz	40.000 MHz	VESA Guidelines
1024 x 768	60 Hz	48.4 kHz	65.000 MHz	VESA Guidelines
1280 x 720	60Hz	37.9KHz	40.000MHz	VESA Guidelines
1280 x 768	60Hz	37.9KHz	40.000MHz	VESA Guidelines

9. Connection and Installation





Acronyms

Acronym	Complete Term
HDCP	High-bandwidth Digital content protection
HDMI	High-Definition Multimedia Interface



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