

HDMI over Optical Fibre Transmitter & Receiver Kit # 15354



Operation Manual

Introduction

With HDMI becoming more and more popular around the world, many consumers have been searching for a way to transmit HDMI signals over very long distances. The HDMI to Optical Transmitter and Receiver set which uses fiber optical cables will give you longer transmission distances (up to 300m) while also providing you with thinner, lighter cables for easier installation. With this system the HDMI signal is not compressed and is fully compliant with HDMI and HDCP.

Applications

- IR & RS-232 control over fiber optical
- Digital signage, airport displays, advertising, video walls or special events
- Surveillance systems

Features

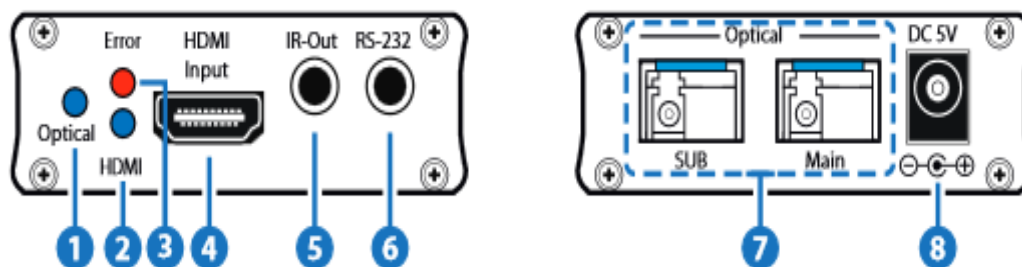
- HDMI v1.2, HDCP and DVI compliance
- Long transmission distances - up to 300m or more
- Thinner and lighter cables for easier, more discreet installations
- Faster data transmission
- Lower power consumption
- Support the reading of EDID information

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

Transmitter Front and Rear Panels



1. OPTICAL LED:

This blue LED will illuminate when at least one optical cable is connected and has successfully detected and communicated data between the Transmitter and Receiver.

Note: If the LED is not illuminated then users will need to check the connection of the fiber cable between the Transmitter and Receiver units and then check the connection is good and that the cable itself is correct and undamaged.

2. ERROR LED:

This red LED will illuminate when there is an error in the input signal data rate that is higher than 75/170MHz (Single/Dual).

Double Check all connections and make sure they are properly connected.

3. HDMI LED:

This blue LED will illuminate when the Transmitter unit is receiving a HDMI signal from the source device.

4. HDMI INPUT:

Connect to an HDMI input source such as a DVD or Blu-ray player with a HDMI cable.

5. IR-OUT:

Connect to the supplied IR blaster cable for IR signal transmission. Place the IR blaster in direct line-of-sight of the equipment to be controlled.

6. RS-232:

Connect to a PC or laptop (with supplied 3.5mm phone jack to D-Sub 9pin adaptor) for the transmission of RS-232 commands.

7. OPTICAL SUB & MAIN:

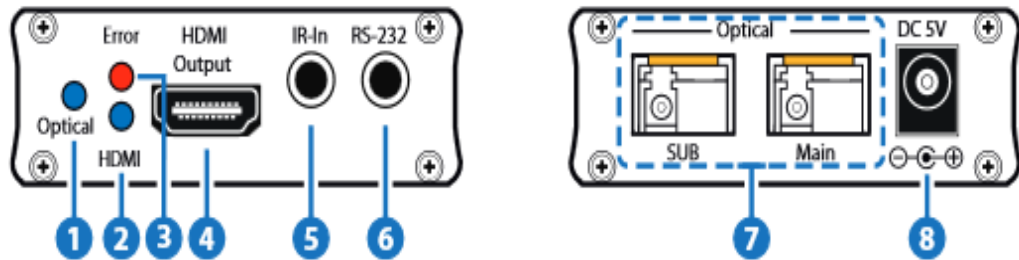
Connect the Transmitter and Receiver units with 2-way fiber optical cable to transmit the data signal

Note: Connector Type: LC-LC, Fiber: Duplex Single-mode Fiber

8. DC 5V:

Connect to the power adaptor included in the package from the AC wall outlet for power supply.

Receiver Front and Rear Panels



1. OPTICAL LED:

This blue LED will illuminate when at least one optical cable is connected and has successfully detected and communicated data between the Transmitter and Receiver.

Note: If the LED is not illuminated then users will need to check the connection of the fiber cable between the Transmitter and Receiver units and then check the connection is good and that the cable itself is correct and undamaged.

2. HDMI LED:

This blue LED will illuminate when the device is successfully communicating with the display.

3. ERROR LED:

Under normal conditions, this red LED will not illuminate but will blink for few seconds when startup of the device.

When the LED is illuminated constantly, it means the HDMI output is not able to output a HDMI signal. Double check the connection and also make ensure the source is sending a compatible HDMI signal. Check all connections and make sure they are all properly connected.

4. HDMI OUTPUT:

Connect to a HDMI Display device, such as a TV or monitor, with a HDMI cable.

5. IR-IN:

Connect to the supplied IR Extender cables for IR signal reception. Ensure that remote being used is within the direct line-of-sight of the IR extender.

6. RS-232:

Connect to the device that is to be controlled (with the supplied 3.5mm phone jack to D-Sub 9pin adaptor) by RS-232 commands

7. OPTICAL SUB & MAIN:

Connect the Transmitter and Receiver units with 2-way fiber optical cable to transmit the data signal.

Note: Connector Type: LC-LC, Fiber: Duplex Single-mode Fiber

8. DC 5V:

Connect to the power adaptor included in the package from the AC wall outlet for power supply.

Support Timing Chart

TV Timing

VIC	Formats	Field Rate	Picture Aspect Ratio
1	720 × 480p	59.94Hz/60Hz	4:3
2	720 × 480p	59.94Hz/60Hz	16:9
3	1280 × 720p	59.94Hz/60Hz	16:9
4	1920 × 1080i	59.94Hz/60Hz	16:9
5	720 (1440) × 480i	59.94Hz/60Hz	4:3
6	720 (1440) × 480i	59.94Hz/60Hz	16:9
7	1920 × 1080p	59.94Hz/60Hz	16:9
8	720 × 576p	50Hz	4:3
9	720 × 576p	50Hz	16:9
10	1280 × 720p	50Hz	16:9
11	1920 × 1080i	50Hz	16:9
12	720 (1440) × 576i	50Hz	4:3
13	720 (1440) × 576i	50Hz	16:9
14	1920 × 1080p	50Hz	16:9
15	1920 × 1080p	23.97Hz/24Hz	16:9
16	1920 × 1080p	25Hz	16:9
17	1920 × 1080p	29.97Hz/30Hz	16:9

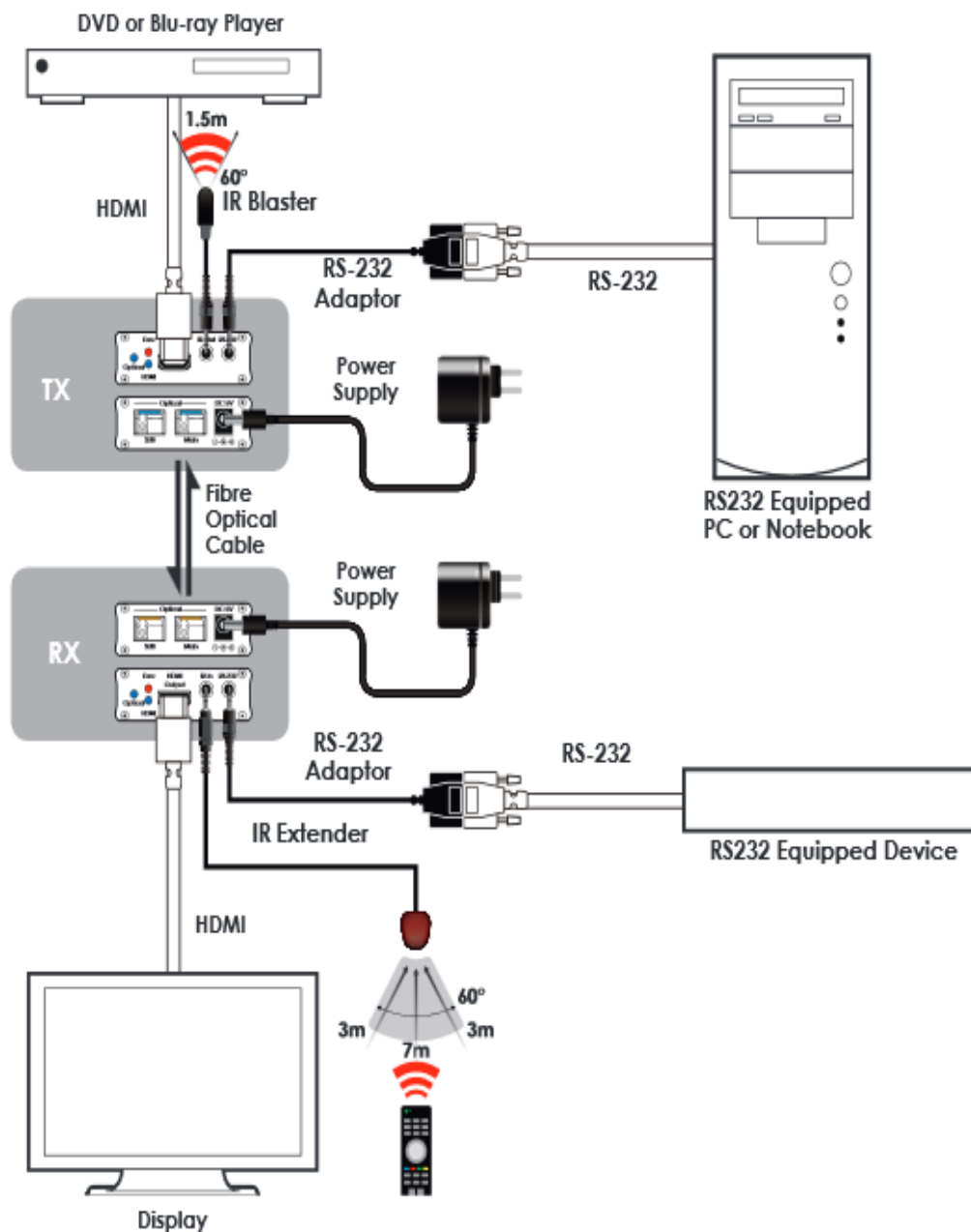
PC Timing

Pixel Format	Refresh Rate	Horizontal Frequency	Pixel Frequency	Standard Type
640×350	85Hz	37.9kHz	31.500MHz	VESA Standard
640×400	85Hz	37.9kHz	31.500MHz	VESA Standard
720×400	85Hz	37.9kHz	35.500MHz	VESA Standard
640×480	60Hz	31.5kHz	25.175MHz	Industry Standard
800×600	60Hz	37.9kHz	40.000MHz	VESA Standard
1024×768	60Hz	48.4kHz	65.000MHz	VESA Standard
1280×720	60Hz	45.0kHz	74.250MHz	CEA Standard
1280×768	60Hz	47.8kHz	79.500MHz	CVT
1280×960	60Hz	60.0kHz	108.000MHz	VESA Standard
1280×1024	60Hz	64.0kHz	108.000MHz	VESA Standard
1366×768	60Hz (RB)	47.4kHz	85.500MHz	VESA Standard
1400×1050	60Hz	65.3kHz	121.750MHz	CVT
1440×900	60Hz	55.9kHz	106.500MHz	CVT
1680×1050	60Hz (RB)	64.7kHz	119.000MHz	CVT Red. Blanking
1920×1080	60Hz	67.5kHz	148.500MHz	CEA Standard
1920×1200	60Hz (RB)	74.0kHz	154.000MHz	CVT Red. Blanking

Specifications

Optical Fiber Transmitter	Duplex SM 9/125um, LC-LC Connector
Input Port	1× HDMI, 1× RS-232, 1× IR Out
Output Port	1× Duplex Single-mode Fiber Optical
Receiver	
Input Port	1× Duplex Single-Mode Fiber Optical
Output Port	1× HDMI, 1× RS-232, 1× I R In
HDMI In/Out Cable Distance	Up to 10 Meters
Optical In/Out Cable Distance	Up to 300 Meters
ESD Protection	Human Body Model: ±8kV (air-gap discharge) ±4kV (contact discharge)
Power Supply	5V/1.25A DC (US/EU Standards, CE/ FCC/UL certified)
Dimensions	114mm (W)×65mm (D)×26mm (H)/Each
Weight	200 g/Each
Chassis Material	Metal
Silkscreen Color	Black
Operating Temperature	0℃~40℃/32℉~104℉
Storage Temperature	-20℃~60℃/-4℉~140℉
Relative Humidity	20~90% RH (non-condensing)
Power Consumption	4.6W (TX), 4W (RX)

Connection Diagram



Note:

The RS-232 design here works in 2 ways and therefore, no Input/Output determination.

However, when connecting to a RS-232 equipped device and controlled from PC, a cross over RS-232 cable should be added and connect in between the equipped device and the RS-232 output