CS-HDSCOAX2U
18Gbps HDMI over COAXIAL Extender (100m)

User Manual

VER 1.0

Thank you for purchasing this product

For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

Surge protection device recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lighting strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

Table of Contents

1. Introduction

This 18Gbps HDMI over COAXIAL Extender can extend HDMI video and audio signals up to 328ft / 100m via a single coaxial cable. Video resolution is up to 4K2K@50/60Hz 4:4:4. The Extender supports audio embedding and de-embedding function. It is equipped with bi-directional IR pass-through, allowing users to send IR control up to a distance of 328ft / 100m, making IR control possible without any additional wires. It also supports advanced EDID management.
The Extender provides exceptional quality, advanced & user-friendly operation, and flexible control.

2. Features

☆ HDMI 2.0 and HDCP 2.2 compliant
☆ Support 18Gbps video bandwidth
☆ Support video resolution up to 4K2K@50/60Hz 4:4:4
☆ Bi-directional IR with IR Adapter Cable to connect to control systems
☆ Support audio embedding / de-embedding function
☆ Up to 5.1-channel audio supported including Dolby Digital, DTS, and PCM. This unit does not support Dolby True HD, DTS-HD, or LPCM
☆ 4K transmission distance up to 328ft/100m via a single RG6 Copper (75 ohm) coaxial cable
☆ 3D, HDR, HDR10+, Dolby Vision, HLG supported
☆ Advanced EDID management
☆ Wall-mountable housing design for easy installation

3. Package Contents

① 1 × HDMI over COAXIAL Extender (Transmitter)
② 1 × HDMI over COAXIAL Extender (Receiver)
③ 1 × IR Blaster Cable (1.5 meters)
④ 1 × IR Receiver Cable (1.5 meters)
⑤ 4 × Mounting Ear
⑥ 8 × Machine Screw (KM3*4)
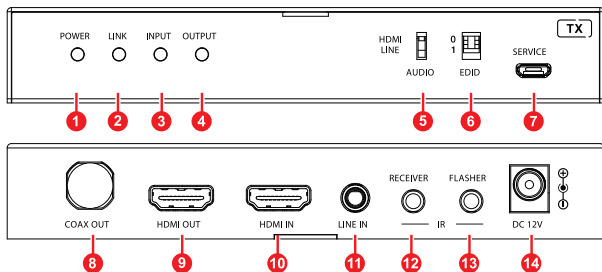⑦ 2 × 12V/1A Locking Power Adapter
⑧ 1 × User Manual

4. Specifications

Technical	
HDMI Compliance	HDMI 2.0
HDCP Compliance	HDCP 2.2
Video Bandwidth	594MHz/18Gbps
Video Resolution	480i ~ 1080p50/60Hz, 4Kx2K@24/30Hz, 4K2K@60Hz
HDR	HDR, HDR10+, Dolby Vision, HLG
Color Space	RGB, YCbCr 4:4:4 / 4:2:2, YUV 4:2:0
Color Depth	8/10/12-bit
Audio Formats	PCM 2.0: 32K, 44.1K, 48K, 16/20/24bit Dolby Digital 2.0/5.1: 32K, 44.1K, 48K, 16/20/24bit DTS 2.0/5.1: 32K, 44.1K, 48K, 16/20/24bit
IR Level	12Vp-p
Transmission Distance	328ft / 100m via RG6 Copper (75 ohm) coaxial cable

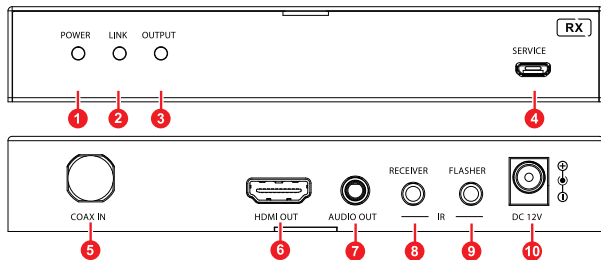| Connection	

Transmitter	Input: 1 × HDMI IN [Type A, 19-pin female]
	          1 × LINE IN [3.5mm audio jack]
	Output: 1 × COAX OUT [BNC connector]
	          1 × HDMI OUT [Type A, 19-pin female]
	Control: 1 × IR IN [3.5mm audio jack]
	          1 × IR OUT [3.5mm audio jack]
	          1 × SERVICE [Micro USB, 5-pin female]

Receiver	Input: 1 × COAX IN [BNC connector]
	Output: 1 × HDMI OUT [Type A, 19-pin female]
	          1 × AUDIO OUT [3.5mm audio jack]
	Control: 1 × IR IN [3.5mm audio jack]
	          1 × IR OUT [3.5mm audio jack]
	          1 × SERVICE [Micro USB, 5-pin female]

Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	Transmitter / Receiver: 144mm [W] x 78mm [D] x 23mm [H]
Weight	Transmitter/Receiver: 288g
Power Supply	Input: AC 100 - 240V 50/60Hz Output: DC 12V/1A (US/EU standard, CE/FCC/UL certified)
Power Consumption	Transmitter: 7.92W Receiver: 6.72W
Operating Temperature	32 - 104°F / 0 - 40°C
Storage Temperature	-4 - 140°F / -20 - 60°C
Relative Humidity	20 - 90% RH (no condensation)

5. Operation Controls and Functions

5.1 Transmitter Panel

No.	Name	Function Description
1	POWER LED	Blue LED indicates that the Transmitter is powered on.
2	LINK LED (Blue)	▪ Light on: Transmitter and Receiver are in good connection status. ▪ Light off: Transmitter and Receiver are not connected, or the system is powered off.
3	INPUT LED	▪ Light on: There is video signal input. ▪ Light off: There is no video signal input, or the system is powered off.
4	OUTPUT LED (Blue)	The OUTPUT LED lights in blue when the HDMI OUT port is connected with display devices normally.
5	AUDIO DIP switch	Used to switch the audio source (HDMI IN or LINE IN) for the HDMI OUT port and the AUDIO OUT port. **Switch to "HDMI"**: The HDMI OUT port and the AUDIO OUT port outputs the audio de-embedded from the HDMI IN port. **Switch to "LINE"**: The HDMI OUT port and the AUDIO OUT port outputs the audio embedded from the LINE IN port (When there is no signal input for the HDMI IN port, the HDMI OUT port outputs black screen and the audio from LINE IN, and the AUDIO OUT port outputs the audio from LINE IN).
6	EDID DIP switch	Used for EDID setting: 00- Copy RX HDMI OUT port sink EDID (as factory default) 01- Copy TX HDMI LOOP OUT port sink EDID 10- HDMI 1080p@60Hz, Audio 2ch PCM 11- HDMI 4K@60Hz 4:4:4, Audio 5.1ch PCM/DTS/DOLBY

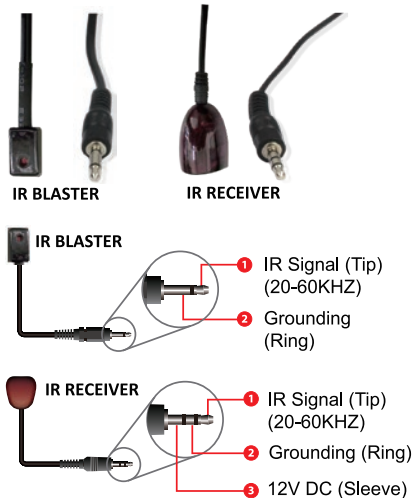| No.	Name	Function Description
7	SERVICE	Firmware update port.
8	COAX OUT	Signal output coaxial port, connected to the COAX IN port of Receiver with a single RG6 Copper (75 ohm) coaxial cable.
9	HDMI OUT	HDMI signal output port, connected to HDMI display device.
10	HDMI IN	HDMI signal input port, connected to signal source device.
11	LINE IN	Analog audio input port, used for audio embedding input.
12	RECEIVER	IR signal input port, connected to IR Receiver cable.
13	FLASHER	IR signal output port, connected to IR Flasher cable.
14	DC 12V	DC 12V/1A power input port.

5.2 Receiver Panel

No.	Name	Function Description
1	POWER LED	Blue LED indicates that the Receiver is powered on.
2	LINK LED (Blue)	▪ Light on: Transmitter and Receiver are in good connection status. ▪ Light off: Transmitter and Receiver are not connected, or the system is powered off.
3	OUTPUT LED	The OUTPUT LED lights in blue when the HDMI OUT port is connected with display devices normally.
4	SERVICE	Firmware update port.
5	COAX IN	Signal input coaxial port, connected to the COAX OUT port of Transmitter with a single RG6 Copper (75 ohm) coaxial cable.

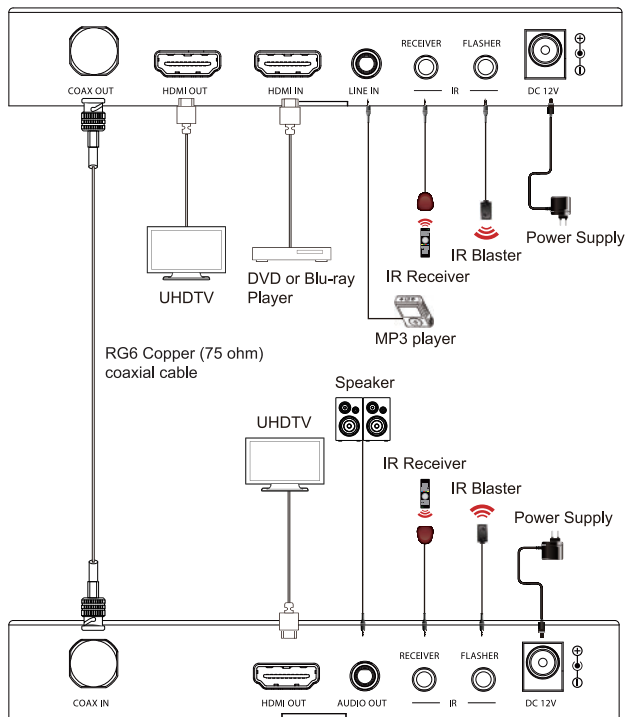| No.	Name	Function Description
6	HDMI OUT	HDMI signal output port, connected to HDMI display device.
7	AUDIO OUT	Analog audio output port. It also can be used for audio de-embedding output.
8	RECEIVER	IR signal input port, connected to IR Receiver cable.
9	FLASHER	IR signal output port, connected to IR Flasher cable.
10	DC 12V	DC 12V/1A power input port.

6. IR Pin Definition

IR Receiver and Flasher pin's definition as below:

IR BLASTER

IR RECEIVER

IR BLASTER
- ➊ IR Signal (Tip) (20-60KHZ)
- ➋ Grounding (Ring)

IR RECEIVER
- ➊ IR Signal (Tip) (20-60KHZ)
- ➋ Grounding (Ring)
- ➌ 12V DC (Sleeve)

Note: When the angle between the IR receiver and the remote control is ± 45 °, the transmission distance is 0-5 meters; when the angle between the IR receiver and the remote control is ± 90 °, the transmission distance is 0-8 meters.

7. Application Example

The terms HDMI and HDMI High-Definition Multimedia interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.