50M single Cat5e/6 HDMI wall plate extender with bi-direction IR (LM-EW50)
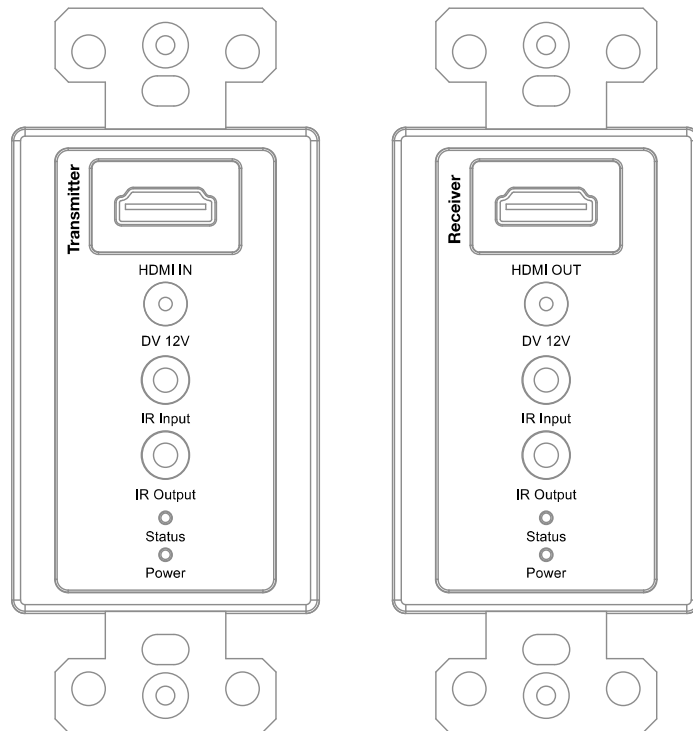
Transmitter

HDMI IN

DV 12V

IR Input

IR Output

Status

Power

Receiver

HDMI OUT

DV 12V

IR Input

IR Output

Status

Power

User manual

Preface

Thanks for purchasing our HDMI Single Cat5e/6 Wall Plate Extender. Before using this product, read this user manual carefully please. Follow the instruction to keep your safety and avoid products damage.

This user manual might be modified irregularly because of updated products. And the manual is for instruction only; we do not guarantee the information and the suggestions.

1. Cautions

■**Logo and meaning**

⚠Careful, warning, dangerous, Pay attend to following items.

■**Cautions**

● Do not use this product in the extreme hot, cold, dusty or humid environments.

● Prevent friction with hard objects.

● Avoid the product falling down from a high place, or it may damage the hardware.

● The product is not water proofed. So do not get any liquid into the unit please.

● Do not dismantle, assemble or alter the product arbitrarily.

⚠Warning

The CAT5e/6 cable can NOT be placed underground, outdoor, and between buildings. It must be placed with extenders indoor.

2. About

■**Product model and standard:**

Single Cat5e/6 Wall Plate Extender includes transmitter and receiver. Transmitters combine HDMI video, audio and control signals, then transmit them through single CAT5e cable. Receivers get these signals, separate signals and rebuild video, audio and control ones, output through HDMI interfaces. It also supports bi-direction remote IR (RX->TX and TX->RX), power over UTP, EDID call back, and both input and output are HDCP 1.2 compatible. This product can achieve all functions through single CAT5e cable. Extending distance is 50 meters for 1080p 60Hz HD signal.

■**Main features:**

1. Extending distance is 170ft(50 meters) at resolutions 1080P 3D or 1920x1200 60fs, and 270ft(80 meters) at 1080i/720P through single CAT5e cable.

2. Support audio formats, Dolby True HD, DTS-master, etc.

3. Support 3D signals (all 7 formats), such as Frame Packing, Side-by-Side, Top-to-Bottom, etc.

4. Supports EDID call back.

5. Supports CEC pass through.

6. VESA DDC and hot swap technology (HPD).

7. Supports power over UTP cable, single 12V DC power supply from any side of TX or RX.

8. 38KHz bi-direction remote IR (RX->TX and TX->RX).

9. Both HDMI input and output are compatible with HDCP 1.2.

10. Be compatible with DVI 1.0.

11. Support cascade to enhance extending distance.

■**Parameters:**

Interface	Transmitters	HDMI input, IR output (3.5mm), IR input (3.5mm),RJ45 Ethernet interface, 12V DC in
	Receivers	HDMI output, IR output (3.5mm), IR input (3.5mm),RJ45 Ethernet interface, 12V DC in
Power	<3.5W TX or <2.5W RX	
Dimension	(L x W x H): 108 x 46 x 35mm	
Net weight	0.1kg per unit	
Video bandwidth	Maximum TMDS clock frequency 165MHz, 4.95Gbps	
Resolution and distance	1080P 170ft (50 meters)-CAT5e/ 270ft (80 meters)-CAT6 720P/1080i 270ft (80 meters)-CAT5e/ 330ft (100 meters)-CAT6	
Audio formats	8-channel, support Dolby TrueHD and DTS Master	
TMDS input signal	1.2 volts (point to point)	
DDC input signal	5 volts (point to point)	
Indicator	Power-green, video link-yellow	
HDMI interface standard	HDMI 1.3 standard (HDMI 1.4 3D function), HDCP 1.2, support CEC, EDID	
Remote IR	38khz	
ESD level	HBM ±8 kV (Contact Discharge)	
Temperatu	0 ~ 40°C (operation), -20~60°C(stock)	

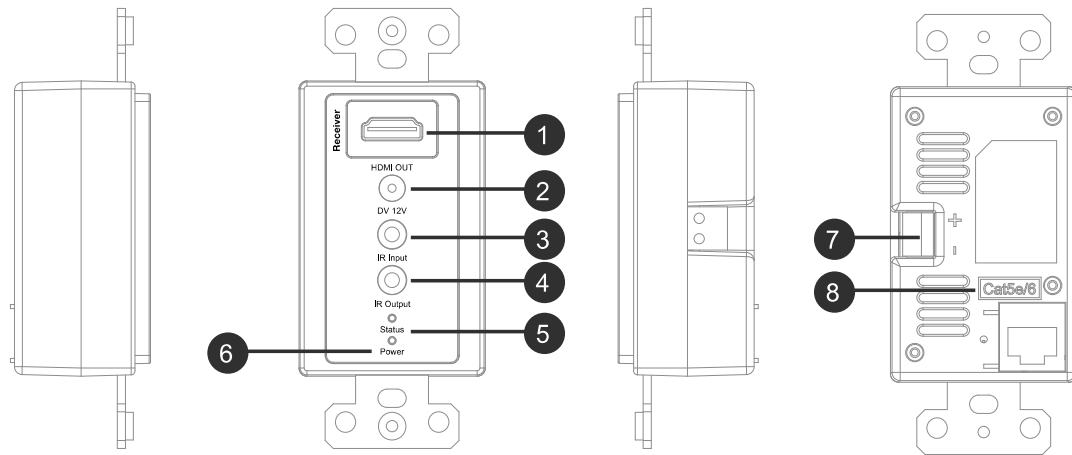| re range	
Complianc e	FCC; CE; RoHS

■Product introduction

Transmitter：
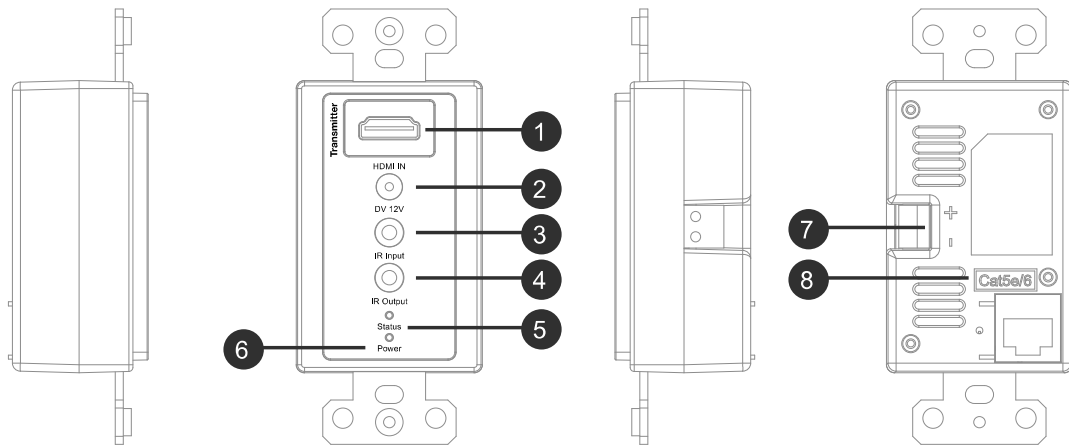
① HDMI Input port, connect to Video source

② DC 12V input

③ IR blaster output

④ IR receiver input

⑤ Status indicator

⑥ Power indicator

⑦ Internal DC input port

⑧ CAT5e/6 cable RJ45 port

Receiver：

① HDMI Output port, connect to display terminal

② DC 12V input

③ IR blaster output

④ IR receiver input

⑤ Status indicator

⑥ Power indicator

⑦ Internal DC input port

⑧ CAT5e/6 cable RJ45 port

■**Packing list**

1. 1 unit transmitter, 1 unit receiver.

2. 2 remote IR blaster (with 1.5m cable), 2 IR receiver (with 2m cable).

3. 1 unit DC 12V 1A adapter.

4. 240*155*65mm carton packing.

3. Installation

■Installation details and cautions

1. Before installation

   a) Prepare place for installing system. The video sources should be close to the transmitter, and the display terminals should be close to receiver. It is better to keep the HDMI cables less than 6 meters.

   b) Basing on real request, make CAT5e/6 cables for connecting the transmitter and the receiver. The length can NOT be more than distance of parameters.

   c) CAT5e/6 cables should be far away from electromagnetic disturbance sources. Such as AC motors, electro soldering, fluorescents, microwave ovens, etc. These disturbance sources might affect extending distance or video quality.

   d) Ensure the length of cable is suitable, no external tensions.

   e) Ensure reliable DC adapter or other DC source.

2. Typical installation instruction

   Connect a player and a HDTV:
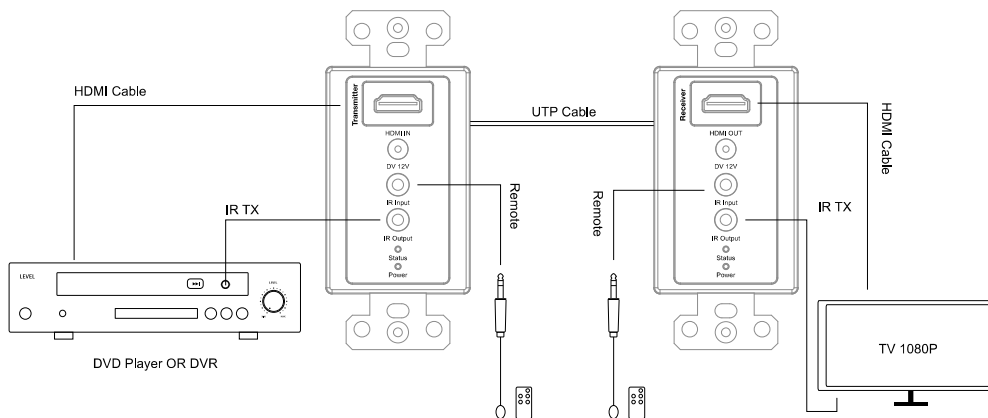
3. Transmitter side connection

   a) Connect your Player and HDMI IN port of transmitter with HDMI cable (HDMI cables are not included in this product).

   b) Insert IR blaster cable to extender TX IR OUT port. IR blaster should be close to your player or other controlled equipment. TX IR IN port can be connected an IR receiving cable.

   c) Insert CAT5e/6 cable to CAT5e/6 port.

   d) Connect power adapter or provide DC input from rear DC input port. If RX side has connected DC adapter, TX can get the DC power over UTP cable, so can leave DC input port empty.

4. Receiver side connection

   a) Connect your HDTV and HDMI OUT port of receiver with HDMI cable (HDMI cables are not included in this product).

   b) Insert IR receiving cable to extender RX IR IN port. IR receiver should be face outside for easy operation. RX IR OUT port can be

connected another IR blaster cable.

c) Insert CAT5e/6 cable to CAT5e/6 port.

d) Connect power adapter or provide DC input from rear DC input port. If TX side has connected DC adapter, RX can get the DC power over UTP cable, so can leave DC input port empty.

4. Operation instruction

■**Getting started**

After finishing all steps above, system is workable, follow below steps.

a) Ensure the video source and the display terminal are powered on.

b) Ensure all input, output cables are connected.

c) Insert TX or RX power adapters into power plug bases.

d) Green power indicator will light.

e) It takes about 2~3 seconds to finish EDID and other initialization automatically.

f) Transmitter video indicator will light; it means input video signal is OK. Then receiver video indicator will light, it means output video signal is OK.

g) At this time, display terminal will show the same format video that video source send out.

■**Remote IR function**

Using video source's (such as Blue-ray DVD) IR controller faces extender RX side IR receiver. IR signal will be transmitted to extender TX side IR output port, to control video source directly. Similarly, using display terminal's (such as TV, projector) IR controller faces extender TX

side IR receiver. IR signal will be transmitter to extender RX side IR output port, to control display terminal directly.

■**EDID call back function**

Products support EDID call back function. Receiver unit will read EDID from display terminal, and then pass this EDID information to transmitter unit. The transmitter unit will update internal NVRAM to save new EDID information, and inform video source to read updated EDID information. This function is automatic, no need to setup by customers. This function is to keep maximum compatibility.

■**CEC pass through function**

Products support CEC pass through function. When the system is powered on, CEC pass through is built automatically.
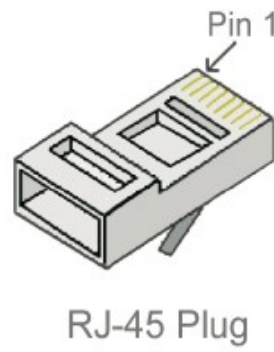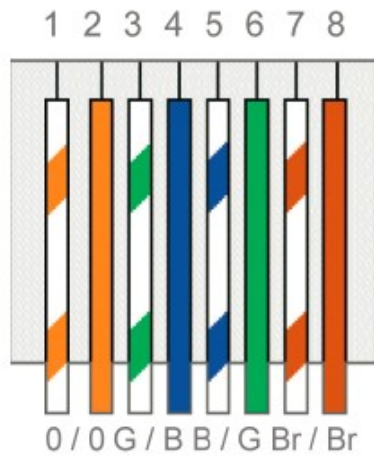
■**How to make Cat5e/6 cable**

Products request normal CAT5e or CAT6 Ethernet cables, which must meet standard-TIA/EIA-568B, refer to below pin definition.
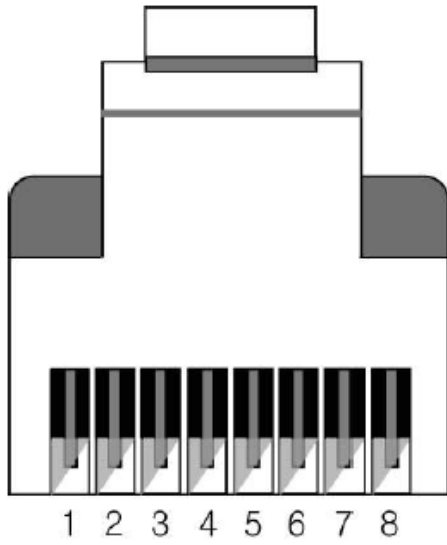
T-568B

Pin	TIA/EIA-568B Wire color
1	Orange/ White
2	Orange
3	Green/ White
4	Blue
5	Blue/ White
6	Green
7	Brown/ White
8	Brown

O / O G / B B / G Br / Br

RJ-45 Plug

5. Maintenance

■**Storage conditions**

Products storage temperature should be -20°C~60°C. For long time storage requirement, please use original carbon boxes, and avoid from high humid, acid base or dusty place.

■**Maintenance**

△ Warning

To ensure your safety, place choose original adapters. And provide stable AC input according to this manual.

6. Trouble shooting

■**Normal problems**

a) No output on display terminals

Check transmitter and receiver power first. And then check if transmitter unit video indicator is light. If it is not, check video source please. If it is, check receiver unit video indicator. If receiver video indicator is not light, check CAT5e/6 cable please. If length of cable is longer than maximum distance, the system is not workable. Refer to manual parameters segment to get more details of distance. If receiver video status indicator is light, check HDMI cable and display terminal please.

b) Remote IR is not workable

Check transmitter and receiver power fist. Ensure both TX and RX power and video indicators are light. And then check CAT5e/6 cable please. Check if IR blaster unit connects to extender IR out port, and close to controlled device. And check if remote controller faces to IR receiver.