

# EX-57EG-W

## HDMI2.0 over IP Multicast Transceiver System with Video Wall support & PoE support

### User Manual



rev: 180719  
Made in Taiwan



## **Safety and Notice**

The **EX-57EG-W HDMI2.0 over IP Multicast Transceiver System with Video Wall support & PoE support** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment, the **EX-57EG-W** should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.



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# INTRODUCTION

The **EX-57EG-W HDMI2.0 over IP Multicast Transceiver System with Video Wall support & PoE support** boosts up your video/audio transmission distance up to 120m(396ft) in UHD 4K2K format. With cost effective Ethernet cable, users can readily extend UHD sources from DVD players, Blu-ray Disc player, PS4, PC, and any other HDMI sources broadcasting to distant display monitors including HDMI or DVI enabled TV sets or LCD PC monitors. In addition, EX-57EG-W is HDCP compliant, and supports PoE, IR and RS-232 pass-through path.

With broadcasting management software and Gigabit Ethernet network switch (supporting IGMP), EX-57EG-W is a complete UHD video broadcasting solution for digital signage. It can transmit UHD HDMI video broadcasting over IP network. The broadcasting format can be Point to Point, Point to Many, and Multi-Casting. Multi-casting is based on Managed Gigabit Switch with 802.1Q VLAN function which provides control remotely and so multi video sources are allowed and supported. To provide more flexibilities for installations, EX-57EG-W can work as either a transmitter or a receiver. By this transceiver feature, we can bring more possibilities for field applications and verifications.

## FEATURES

- Supports HDMI input up to 4K2K@60 4:4:4 8bits
- Supports HDMI output up to 4K2K@30 RGB
- Supports High Dynamic Range (HDR)\*
- HDMI 2.0a compliant
- HDCP 2.2 compliant
- Supports PoE function
- Can be configured as a transmitter or receiver
- Flexible and scalable UHD Video Broadcasting by Gigabit Ethernet LAN/Switch
- one to one, one to many & multi-casting broadcasting architecture
- Each transmitter can be theoretically multicast up to an unlimited number of displays in video wall applications or unlimited displays in multicast applications
- Supports full frequency IR signal from 20KHz to 60KHz
- Bi-directional IR path
- Full Duplex RS-232 control up to 115,200 bps through connector
- Up to 1,023 Groups Multi-Casting
- Easy Dip Switch matching for multi-casting group configuration
- Latency: 1080p60Hz: 23ms
- Supports Video Wall function
- Supports 180 and 270 clockwise image rotation
- Supports USB2.0
- Wall mounting housing design for easy and robust installation



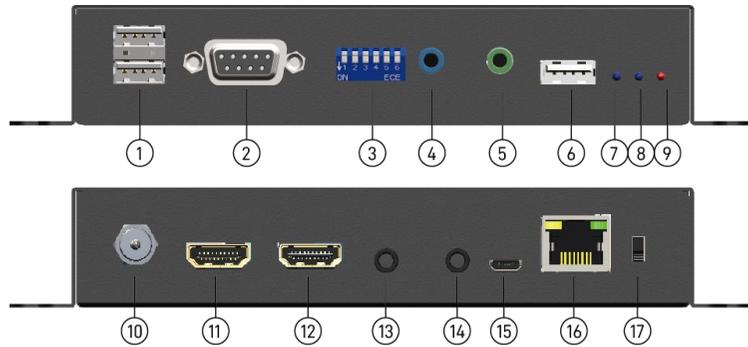
Due to the video compression, some distortion in terms of visual perception may happen in HDR mode.

# SPECIFICATIONS

Model Name	EX-57EG-W	
<b>Technical</b>	<b>EX-57EG-W</b>	
Role of usage	Transceiver	
HDMI compliance	HDMI	
HDCP compliance	Yes	
Input Video support	Up to 4K2K@60 (4:4:4 8bits)	
Output Video support	Up to 4K2K@30 (RGB)	
Latency	2 frames (33 ms) maximum	
HDMI over UTP transmission [24-bit]	Ultra HD (4K2K60)-120m (396ft) [CAT.X]	
Audio support	Surround sound (up to 7.1ch) or stereo digital audio	
Input TMDS signal	1.2 Volts [peak-to-peak]	
Input DDC signal	5 Volts [peak-to-peak, TTL]	
ESD protection	Human body model — ±15kV [air-gap discharge] & ±8kV [contact discharge]	
IR pass-thru	Full-duplex bi-directional	
RS-232 support	Yes	
I/O connector	2x HDMI + 4x 3.5mm + 3x USB + 1x RJ45 + 1x DIN9	
HDMI source control	Controllable via IR pass-through from RX to TX and from TX to RX with IR extenders	
IR remote control	Electro-optical characteristics: $\tau = 25^\circ$ / Carrier frequency: 20-60kHz	
HDMI connector	Type A [19-pin female]	
Min DIN connector	DIN-9	
RJ45 connector	WE/SS 8P8C with 2 LED indicators	
3.5mm connector	IR blaster & IR receiver	
<b>Mechanical</b>		
Housing	Metal enclosure	
Dimensions [L x W x H]	Model	180 x 142 x 28mm[7" x 5.5" x 3.2"]
	Package	264 x 170 x 77mm[10.3" x 6.7" x 3"]
	Carton	430 x 358 x 291mm[1'4" x 1'2" x 11.5"]
Weight	Model	664g [23 oz]
	Package	889g [2 lbs]
Fixedness	Wall-mounting case with screws	
Power supply	5V 2A DC / 48V POE	
Power consumption	Watts	Watts
Operation temperature	0~40°C [32~104°F]	
Storage temperature	-20~60°C [-4~140°F]	
Relative humidity	20~90% RH [no condensation]	

# PANEL DESCRIPTIONS

## Transceiver unit ▶ EX-57EG-W



1. **USB(USB 2.0 downstream port):** Connect to USB flash driver or other USB devices (device configure as RX)
2. **RS-232:** Connect to PC serial port with a DSUB-9 male-male cable here
3. **Dip Switch:** Video channel selection
4. **IR Blaster:** Infrared 3.5mm socket for plugging in the extension cable of IR blaster
5. **IR Receiver:** Infrared 3.5mm socket for plugging in the extension cable of IR receiver
6. **USB:** Connect to upstream USB host (device configure as TX)
7. **Link LED indicator:**  
[Blink] When unit connect a Cat-5/5e/6 cable  
[Shine] When transmitting unit connect to a HDMI source and linked to the receiving unit
8. **System LED indicator:**  
[Blink] When unit connect a power supply unit  
[Shine] After booting, when device become stably
9. **Info LED indicator:** When user click the LED button from software, the LED light will blink 30 seconds.
10. **+5V DC:** Connect to 5V DC power supply
11. **HDMI IN:** Connects to a HDMI source with a HDMI male-male cable
12. **HDMI OUT:** Connects to a HDMI display with a HDMI male-male cable.
13. **Analog audio line in:** Connect to upstream speaker output (device configure as TX)
14. **Analog audio line out:** Connect to downstream headphone output (device configure as RX)
15. **Micro-USB:** for F/W update
16. **RJ-45:** Gigabit Ethernet port
17. **Dip Switch:** configures as a transmitter or receiver  
[▲] configures as a transmitter  
[▼] configures as a receiver

## Notes: Group ID dip-switch setting

1. For ID=1~63, please refer the table below to set up (Hardware control)
2. For ID=64~1023, please adjust the DIP switch to ID=0, and the real ID can be decided by the external software (Software control)

ID	Pin1	Pin2	Pin3	Pin4	Pin5	Pin6
0	↑	↑	↑	↑	↑	↑
1	↓	↑	↑	↑	↑	↑
2	↑	↓	↑	↑	↑	↑
3	↓	↓	↑	↑	↑	↑
4	↑	↑	↓	↑	↑	↑
5	↓	↑	↓	↑	↑	↑
6	↑	↓	↓	↑	↑	↑
7	↓	↓	↓	↑	↑	↑
8	↑	↑	↑	↓	↑	↑
9	↓	↑	↑	↓	↑	↑
10	↑	↓	↑	↓	↑	↑
11	↓	↓	↑	↓	↑	↑
12	↑	↑	↓	↓	↑	↑
13	↓	↑	↓	↓	↑	↑
14	↑	↓	↓	↓	↑	↑
15	↓	↓	↓	↓	↑	↑
16	↑	↑	↑	↑	↓	↑
17	↓	↑	↑	↑	↓	↑
18	↑	↓	↑	↑	↓	↑
19	↓	↓	↑	↑	↓	↑
20	↑	↑	↓	↑	↓	↑
21	↓	↑	↓	↑	↓	↑
22	↑	↓	↓	↑	↓	↑
23	↓	↓	↓	↑	↓	↑
24	↑	↑	↑	↓	↓	↑
25	↓	↑	↑	↓	↓	↑
26	↑	↓	↑	↓	↓	↑
27	↓	↓	↑	↓	↓	↑
28	↑	↑	↓	↓	↓	↑
29	↓	↑	↓	↓	↓	↑
30	↑	↓	↓	↓	↓	↑
31	↓	↓	↓	↓	↓	↑

ID	Pin1	Pin2	Pin3	Pin4	Pin5	Pin6
32	↑	↑	↑	↑	↑	↓
33	↓	↑	↑	↑	↑	↓
34	↑	↓	↑	↑	↑	↓
35	↓	↓	↑	↑	↑	↓
36	↑	↑	↓	↑	↑	↓
37	↓	↑	↓	↑	↑	↓
38	↑	↓	↓	↑	↑	↓
39	↓	↓	↓	↑	↑	↓
40	↑	↑	↑	↓	↑	↓
41	↓	↑	↑	↓	↑	↓
42	↑	↓	↑	↓	↑	↓
43	↓	↓	↑	↓	↑	↓
44	↑	↑	↓	↓	↑	↓
45	↓	↑	↓	↓	↑	↓
46	↑	↓	↓	↓	↑	↓
47	↓	↓	↓	↓	↑	↓
48	↑	↑	↑	↑	↓	↓
49	↓	↑	↑	↑	↓	↓
50	↑	↓	↑	↑	↓	↓
51	↓	↓	↑	↑	↓	↓
52	↑	↑	↓	↑	↓	↓
53	↓	↑	↓	↑	↓	↓
54	↑	↓	↓	↑	↓	↓
55	↓	↓	↓	↑	↓	↓
56	↑	↑	↑	↓	↓	↓
57	↓	↑	↑	↓	↓	↓
58	↑	↓	↑	↓	↓	↓
59	↓	↓	↑	↓	↓	↓
60	↑	↑	↓	↓	↓	↓
61	↓	↑	↓	↓	↓	↓
62	↑	↓	↓	↓	↓	↓
63	↓	↓	↓	↓	↓	↓

# PACKAGE CONTENTS

- 1x EX-57EG-W
- 1x IR blaster cable
- 1x IR receiver cable
- 1x User Manual

# IR PASS-THROUGH

## IR Extenders

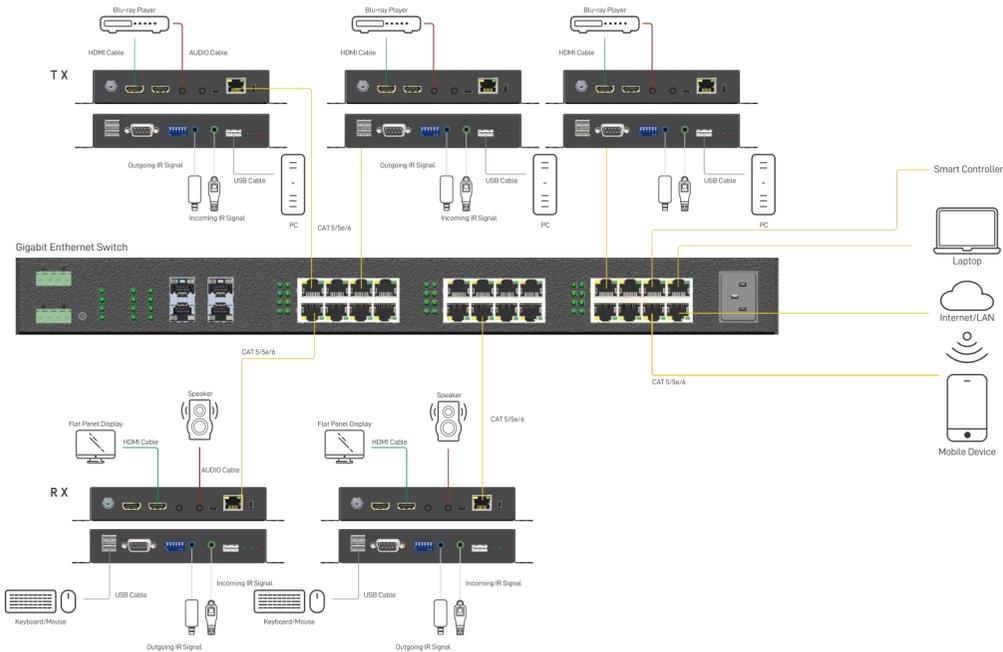
IR Blaster



IR Receiver



# CONNECTION DIAGRAM



## IR Sockets

**IR BLASTER:** plug in the IR blaster to emit all IR command signals received from the IR receiver from the other end to control the devices corresponding to the IR signals.

**IR RECEIVER:** plug in the IR receiver to receive all IR command signals from the IR remote controls of the corresponding devices.

### CAUTION!

*Incorrect placement of IR Blaster and Receiver may result in the failure of the IR extenders. Please check carefully before plugging in the IR extender to the respective IR sockets. Warranty will not cover the damage.*

## Definition of IR Earphone Jack

IR Blaster



IR Receiver



You can buy any IR extension cables in the market that are compatible to the definition of the IR sockets for the matrix if necessary for replacement use. However, IR cables longer than 2m (6-ft) may not work.

# WARRANTY

The SELLER warrants the **EX-57EG-W HDMI2.0 over IP Multicast Transceiver System with Video Wall support & PoE support** free from defects in the material and workmanship for 1 year from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 1 year warranty period, The SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surge. This warranty is offered by the SELLER for its BUYER with direct transaction only. This warranty is void if the warranty seal on the metal housing is broken.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables and power adapters are limited to a 30 day warranty and must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. **Also, the technical information contained herein regarding the EX-57EG-W features and specifications is subject to change without further notice.**