CONNECTION DIAGRAM

Blu-Ray Player

Set-top Box

EX-57IP TX

IES-2404

EX-57IP RX

IR-Transmitter
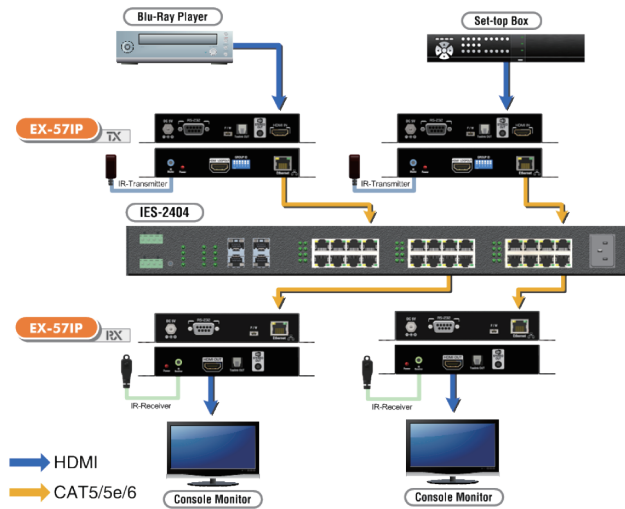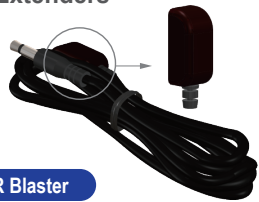
IR-Receiver

→ HDMI
→ CAT5/5e/6

Console Monitor

IR PASS-THROUGH

IR Extenders

IR Blaster

IR Receiver

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.

> ⚠ 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

1. IR Signal
2. Grounding

1. IR Signal[20-60 kHz]
2. Grounding
3. Power

1 2

IR Blaster

1 2 3

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

EX-57IP

HDMI over IP Multicast System

User Manual

✓ *Transmitter*   ✓ *Receiver*

Full HD 1080   HDCP HIGH-DEFINITION CONTENT PROTECTION   7.1 CH AUDIO   RoHS Compliance   FC   CE
x.v.Color

Safety and Notice

The **EX-57IP HDMI over IP Multicast System** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the **EX-57IP** 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.

ESD CAUTION

INTRODUCTION

The **EX-57IP HDMI over IP Multicast System** boosts up your video/audio transmission distance up to 100m(330ft) in HDTV 1080p format. With cost effective Ethernet cable, users can readily extend HDTV sources from DVD players, Blu-ray Disc player, PS3, PC, and any other HDMI sources broadcasting to distant display monitors including HDMI or DVI enabled TV sets or LCD PC monitors. Besides EX-57IP is HDCP compliant, and supports IR and RS-232 pass-through path.

With broadcasting management software and Gigabit Ethernet network switch (supported IGMP), EX-57IP is a complete HD video broadcasting solution for digital signage. It can transmit Full HD 1080p 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, so multi video and source allowed and supported.

FEATURES

- Supports resolution up to 1080p60
- HDMI v1.3 compliant
- HDCP 1.4 compliant
- Supports audio extraction via stereo & toslink on both transmitter and receiver
- Sample rates of 32~192KHz and sample sizes of 16~24 bits
- Transmits video and audio signal over a network
- Supports HDMI loop through
- Easy distribute multi scalable Full HD video to different locations based on IP network
- Supports full frequency IR signal pass-through from 20KHz to 60KHz
- Full Duplex RS-232 control up to 115,200 bps through connector
- Up to 1,063 Groups Multi-Casting
- Encoder: MPEG4 AVC part10 & MPEG audio layer (1/2/3) & Planar: 4:2:0 (YUV)
- Supports Protocol: IP, TCP, UDP, RTP, IPv4, DHCP, HTTP, IGMP, ICMP, MULTICAST, UNICAST
- Ethernet: 10/100 BASE-T RJ45
- Supports Streaming Bit rate up to 15Mbps (+-10%)
- Enable Protocol compatible with any software player (such as VLC® or others)
- Latency: 720P60: 190~240ms / 1080P60: 380~430ms.
- Wall mounting housing design for easy and robust installation

PACKAGE CONTENTS

EX-57IP-TX
- 1x EX-57IP-TX
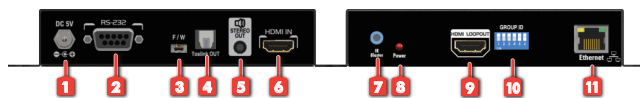- 1x 5V2A Power adaptor
- 1x IR blaster cable
- 1x User Manual

EX-57IP-RX
- 1x EX-57IP-RX
- 1x 5V2A Power adaptor
- 1x IR receiver cable
- 1x User Manual

SPECIFICATIONS

Model Name	EX-57IP	
Technical	**EX-57IP[Tx]**	**EX-57IP[Rx]**
Role of usage	Transmitter [TX]	Receiver [TX]
HDMI compliance	HDMI	
HDCP compliance	Yes	
Video bandwidth	Single-link 225MHz [6.75Gbps]	
Video support	Up to 1080p60	
HDMI over UTP transmission [24-bit]	Full HD (1080p)-100m(330ft) [CAT.X]	
Audio support	stereo digital audio	
Input TMDS signal	1.2 Volts [peak-to-peak]	
Input DDC signal	5 Volts [peak-to-peak, TTL]	
ESD protection	[1] Human body model - ±19kV [air-gap discharge] & ±12kV [contact discharge] [2] Core chipset - ±8kV	
PCB stack-up	4-layer board [impedance control — differential 100Ω; single 50Ω]	
IR pass-thru	Yes	
RS-232 support	Yes	
Input	1x HDMI	1x RJ45 + 1x 3.5mm
Output	1x RJ45 +1x HDMI + 2x 3.5mm + 1x TOSLink	1x HDMI + 1x 3.5mm + 1x TOSLink
HDMI source control	Controllable via IR pass-through from RX to TX with IR extenders	
IR remote control	Electro-optical characteristics: τ = 25° / Carrier frequency: 20-60kHz	
HDMI connector	Type A [19-pin female]	
RJ45 connector	WE/SS 8P8C with 2 LED indicators	
3.5mm connector	IR blaster, IR receiver, & Stereo out	
Mechanical		
Housing	Metal enclosure	
Dimensions [L x W x H] — Model	135 x 97 x 28mm[5.3" x 3.8" x 1.1"]	133 x 96 x 27mm[5.2" x 3.8" x 1"]
Dimensions [L x W x H] — Package	264 x 170 x 77mm[10.3" x 6.7" x 3"]	264 x 170 x 77mm[10.3" x 6.7" x 3"]
Dimensions [L x W x H] — Carton	430 x 358 x 291mm[1'4" x 1'2" x 11.5"]	430 x 358 x 291mm[1'4" x 1'2" x 11.5"]
Weight — Model	407g [14.4oz]	407g [14.4oz]
Weight — Package	732g [1.6lbs]	732g [1.6lbs]
Fixedness	Wall-mounting case with screws	
Power supply	5V 2A DC	
Power consumption	5 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

Transmitting unit ► EX-57IP-TX

1. **+5V DC:** Connect to 5V DC power supply
2. **RS-232:** Connect to PC serial port with a DSUB-9 male-male cable here
3. **Mini USB:** for F/W update
4. **S/PDIF Output** (TOSLINK)
5. **Stereo Output** (3.5mm)
6. **HDMI IN:** Connects to a HDMI source with a HDMI male-male cable
7. **IR Blaster:** Infrared 3.5mm socket for plugging in the extension cable of IR blaster
8. **LED Indicator:** Power and signal LED indicator
9. **HDMI LOOPOUT:** Connect to a HDMI display with a HDMI male-male cable
10. **Dip Switch:** Video channel setting (Please refer to "Notes")
11. **HDMI Signal OUT:** RJ-45 Network connector

PANEL DESCRIPTIONS

Receiving unit ► EX-57IP-RX

12. **LED Indicator:** Power and signal LED indicator
13. **IR Receiver:** Infrared 3.5mm socket for plugging in the extension cable of IR receiver
14. **HDMI OUT:** Connect to a HDMI display with a HDMI male-male cable.
15. **S/PDIF Output** (TOSLINK)
16. **Stereo Output** (3.5mm)
17. **+5V DC:** Connect to 5V DC power supply
18. **RS-232:** Connect to PC serial port with a DSUB-9 male-male cable here
19. **Mini USB:** for F/W update
20. **HDMI Signal IN:** RJ-45 Network connector

Notes: TX group ID dip-switch setting

1. For ID=1~63, please refer the table below to set up (Hardware control)
2. For ID=64~1063, 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	ID	Pin1	Pin2	Pin3	Pin4	Pin5	Pin6
0	↓	↓	↓	↓	↓	↓	32	↓	↓	↓	↓	↓	↑
1	↑	↓	↓	↓	↓	↓	33	↑	↓	↓	↓	↓	↑
2	↓	↑	↓	↓	↓	↓	34	↓	↑	↓	↓	↓	↑
3	↑	↑	↓	↓	↓	↓	35	↑	↑	↓	↓	↓	↑
4	↓	↓	↑	↓	↓	↓	36	↓	↓	↑	↓	↓	↑
5	↑	↓	↑	↓	↓	↓	37	↑	↓	↑	↓	↓	↑
6	↓	↑	↑	↓	↓	↓	38	↓	↑	↑	↓	↓	↑
7	↑	↑	↑	↓	↓	↓	39	↑	↑	↑	↓	↓	↑
8	↓	↓	↓	↑	↓	↓	40	↓	↓	↓	↑	↓	↑
9	↑	↓	↓	↑	↓	↓	41	↑	↓	↓	↑	↓	↑
10	↓	↑	↓	↑	↓	↓	42	↓	↑	↓	↑	↓	↑
11	↑	↑	↓	↑	↓	↓	43	↑	↑	↓	↑	↓	↑
12	↓	↓	↑	↑	↓	↓	44	↓	↓	↑	↑	↓	↑
13	↑	↓	↑	↑	↓	↓	45	↑	↓	↑	↑	↓	↑
14	↓	↑	↑	↑	↓	↓	46	↓	↑	↑	↑	↓	↑
15	↑	↑	↑	↑	↓	↓	47	↑	↑	↑	↑	↓	↑
16	↓	↓	↓	↓	↑	↓	48	↓	↓	↓	↓	↑	↑
17	↑	↓	↓	↓	↑	↓	49	↑	↓	↓	↓	↑	↑
18	↓	↑	↓	↓	↑	↓	50	↓	↑	↓	↓	↑	↑
19	↑	↑	↓	↓	↑	↓	51	↑	↑	↓	↓	↑	↑
20	↓	↓	↑	↓	↑	↓	52	↓	↓	↑	↓	↑	↑
21	↑	↓	↑	↓	↑	↓	53	↑	↓	↑	↓	↑	↑
22	↓	↑	↑	↓	↑	↓	54	↓	↑	↑	↓	↑	↑
23	↑	↑	↑	↓	↑	↓	55	↑	↑	↑	↓	↑	↑
24	↓	↓	↓	↑	↑	↓	56	↓	↓	↓	↑	↑	↑
25	↑	↓	↓	↑	↑	↓	57	↑	↓	↓	↑	↑	↑
26	↓	↑	↓	↑	↑	↓	58	↓	↑	↓	↑	↑	↑
27	↑	↑	↓	↑	↑	↓	59	↑	↑	↓	↑	↑	↑
28	↓	↓	↑	↑	↑	↓	60	↓	↓	↑	↑	↑	↑
29	↑	↓	↑	↑	↑	↓	61	↑	↓	↑	↑	↑	↑
30	↓	↑	↑	↑	↑	↓	62	↓	↑	↑	↑	↑	↑
31	↑	↑	↑	↑	↑	↓	63	↑	↑	↑	↑	↑	↑