4K POE HDMI Series over IP Extender Manual

1 Product Overview
1.1 Brief Introduction
4kPOE HDMI over IP series product extend and distribute HDMI signal via Gigabit IP network. This product can work not only as normal HDMI extender by CAT5/6 cable up to 120 meters, but also could transmit video data over switch, router and other Ethernet device. It can work in broadcast mode, send video data from 1 sender to 253 receivers.

Highlights of this series products are support of 4K@30Hz 4:4:4 video, 5.1ch/7.1ch/DTS/Dolby audio and ultra-low latency <50ms, which meet high-end customer's requirement.

Furthermore, UART / IR / external Audio all could be transmitted to help customer build complex commercial system.

1.2 Features
- Resolution up to 4K@30Hz 4:4:4, video no-loss
- Ultra-low latency <50ms
- Support HDMI audio 2CH/5.1CH/7.1CH/DTS/Dolby format
- Support PoE（802.3AF）power supply, improve system robustness
- Support maxim 1 sender to 253 receivers
- Bi-direction UART bypass
- Reverse IR bypass
- External stereo audio channel (supported by HSV622)

1.3 Specifications

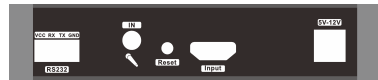| Item	Description
Power	PoE(802.3AF)or 12V1A DC
HDMI format	HDMI1.4, HDCP
HDMI audio format	2ch/5.1ch/7.1ch/DTS/Dolby
Ethernet Interface	RJ45 Gigabit Ethernet
Resolution supported	4K@30Hz 1080p@60Hz/ 1080p@50Hz / 1080p@30Hz 720p@50Hz / 720p@60Hz / 480p@60Hz
External Audio Interfac（Optional）	3.5mm L/R jacket
IR frequency	38KHz – 56KHz
UART Baudrate	115200bps/9600bps/4800bps
Working Mode	Point to Point/Point to Multi-Point/Cascade
Transmission distance	Point to Point: CAT5e 100m/CAT6 120m Cascade: maxim 20km
Working Temperature	0°C - 40°C
Working Humidity	20% ~ 90% RH(Non-condensing)

2 Hardware Description
2.1 Sender
2.1.1 Front Panel

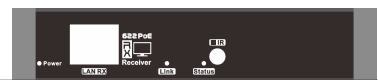| ID	Type	Description
POWER	LED	Light on: Power on
LAN TX	Input / Output	GE LAN port, support PoE(802.3AF)
Link	LED	Light on: sender and receiver connected
Status	LED	Flash slow: system working correct
		Flash fast: system working abnormal
Signal	LED	Light on: video transmission correct
▲IR	Output	Connect to IR emitter

2.1.2 Back Panel

ID	Type	Description
RS232	Input / Output	Bypass bi-direction RS232 data to/from receiver. Support baudrate 4800,9600,115200
IN	Input	Stereo audio input interface. When this port connected, receiver side HDMI audio and audio output will be same as this input. ＊HSV622 support ＊HSV621 NOT support
Reset	Button	Short press to restart device
Input	Input	HDMI Input
5V-12V	Input	5V 2A or 12V 1A DC power input

2.2 Receiver
2.2.1 Front Panel

ID	Type	Description
POWER	LED	Light on: Power on
LAN RX	Input / Output	GE LAN port, support PoE(802.3AF)
Link	LED	Light on: sender and receiver connected
Status	LED	Flash slow: system working correct
		Flash fast: system working abnormal
■IR	Input	Connect to IR receiver

#### 2.2.2 Back Panel

ID	Type	Description
Rs232	Input/Output	Bypass bi-direction RS232 data to/from sender. Support baudrate 4800, 9600,115200
OUT	Output	Stereo output, same as HDMI ＊HSV622 support ＊HSV621 NOT support
Reset	Button	Short press to restart device
Output	Output	HDMI output
OK-Button2	Button	Select/Confirm
EDID-Button1	Button	Short press to select function update EDID /change baudrate / show MAC Address / show IP address When "update EDID" shows, press OK-Buttont2 to confirm, The system EDID will update to the receiver connected display's EDID. When "baudrate" shows, press OK-Button2 to select baudrate, then press Button1 to change system baudrate.（MAC address and IP address can not be changed）Long press 3 seconds, directly update system EDID to the receiver connected display's EDID.
5V-12V	Input	5V 2A or 12V 1A DC power input

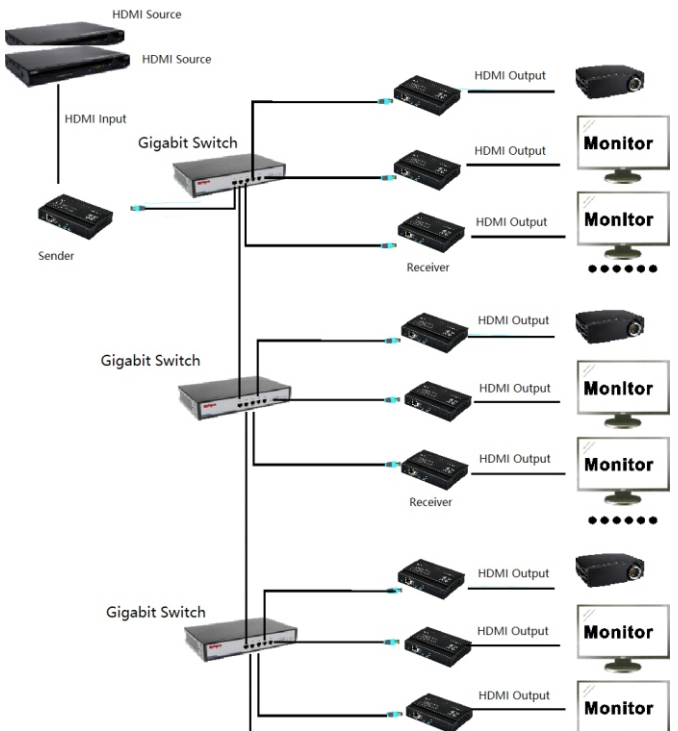## 3 Connection Diagram
3.1 Point to Point

3.2 Point to Multi-Point
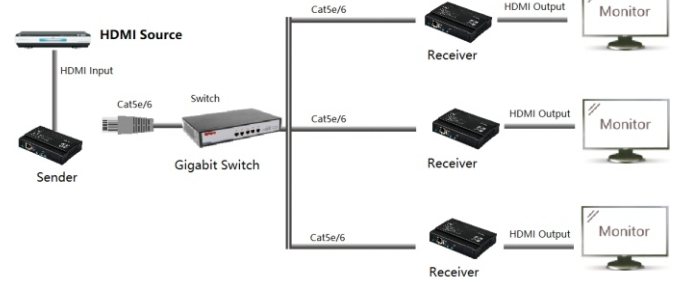
3.3 Cascade Mode

3.4 Hybrid Mode

4 Attention
1） Please us Gigabit switch in this system. Fast Ethernet switch could not be used.
2） Please do not plug or unplug HDMI cable when the device is power on, to avoid HDMI port components damage.
3） Please do not plug or unplug Ethernet cable when the device is power on, to avoid RJ-45 port components damage.

5 FAQ
Q：Yellow light led of LAN port is not light?
A： 1）Check connection of network cable
　　2）Change short network cable to test
　　3）Check whether sender and receiver working correctly(Status LED flash slow)

Q：Green light led of LAN port is not light
A： 1）Check whether the HDMI source is working correct.
　　2）Check whether the "signal" LED on sender side is light on. If not, please check the HDMI
　　3）Connection, HDMI cable, HDMI resolution setting

Q：No display on screen connect to receiver?
A： 1）Check the HDMI connection, HDMI cable between receiver and screen.
　　2）Check whether sender and receiver working correctly(Status LED flash slow)
　　3）Check whether the screen support 4K, whether the output resolution supported by screen.