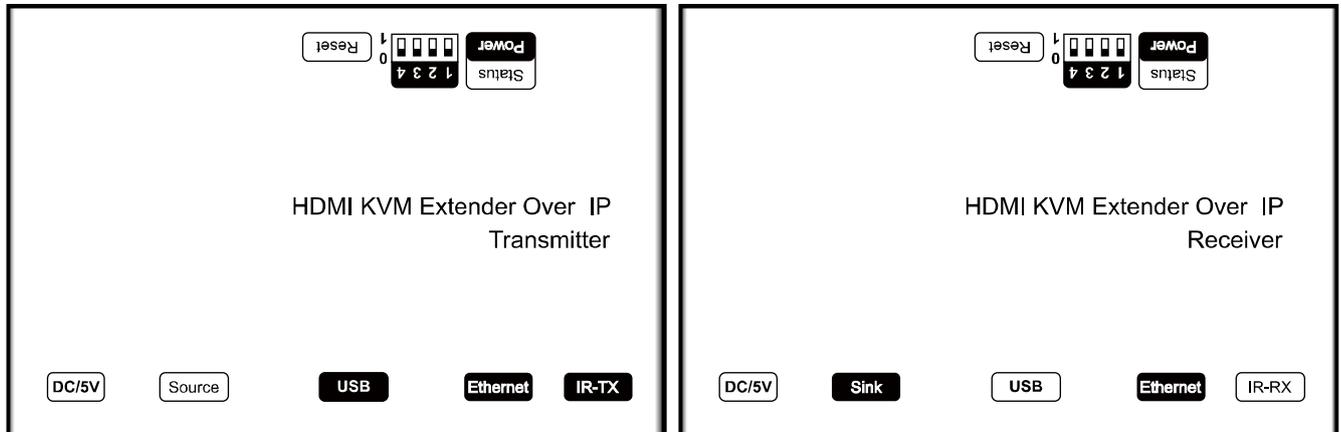# HDMI Extender over TCP/IP, with DIP Switch, USB, POE

Operating Instructions

Dear Customer

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.

FEATURES

- Supports 1080p and 720p video, plus 2-channel audio.
- Uses off-the-shelf gigabit IP switches for extension and disyribution.
- Plug-and-play operation-no programming or setup required.
- Extends 1080p HDMI signals up to 120m over a single Cat5e/6 cable.
- Traffic can unicast, multicast or broadcast for different applications.
- Build-in DIP swith to change Group ID for multiple displays.
- Can be cascaded for many layers by daisychain Ethernet switches.
- Allows wide-band IR(38-56KHZ) remote control of sources devices.
- Dual power input: 802.3af compliant POE & DC 5V.
- HDCP Compatible.
- Supports USB.
- Size: L94xW93.5xH24.6mm.

NOTICE

Our company reserve the right to make changes in the hardware, packaging and any accompanying documentation without prior written notice.

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SPECIFICATIONS

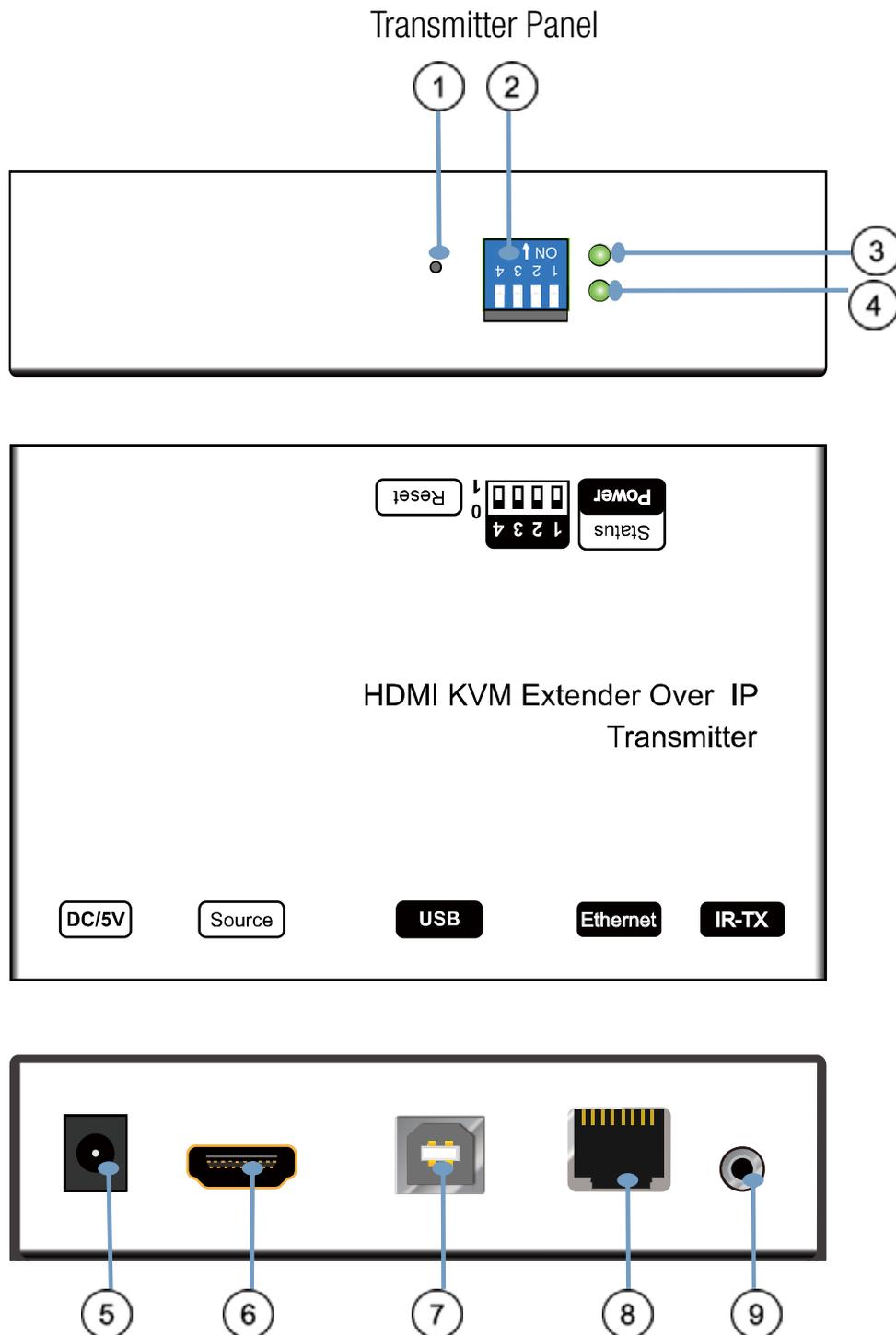|	
Operating Temperature Range	-5 to +35℃(+23 to +95℃)
Operating Humidity Range	5 to 90%RH (No Condensation)
Support Video Format	DTV/HDTV:480i/576i/480P/576P/720P/1080i/1080P
Output Video	HDMI,HDCP
Transmission Distance	1080P @60Hz 120m(Maximum) over single CAT5E/6 /24AWG/Solid
Power consumption	5V/1A DC , 802.3af POE Power consumption: Max. 4W
Dimension (L×W×H)	L94xW93.5xH24.6mm
IR frequency range	38-56kHz
Net Weight	Receiver:255g,Transmitter:255g
TX	Default IP address:192.168.168.55; MAC address:00:0b:78:00:60:01 Group IP address: 239.168.168.xx, (xx is the value of bits[2:0])
RX	Default IP address:192.168.168.56; MAC address:00:0b:78:00:60:02 Group IP address: 239.168.168.xx, (xx is the value of bits[2:0])

Note1: Specifications are subject to change without notice. Mass and dimensions are approximate.

Note2: IP and MAC address must be different for one TX to many RX or many TX to many RX configuration.

PACKING CONTENTS

1) Main Unit. transmitter & receiver HDMI Extender

2) Power adapter DC 5V 1A x2PCS

3) IR-TX cable & IR-RX cable

4) Operating Instruction

PANEL DESCRIPTIONS
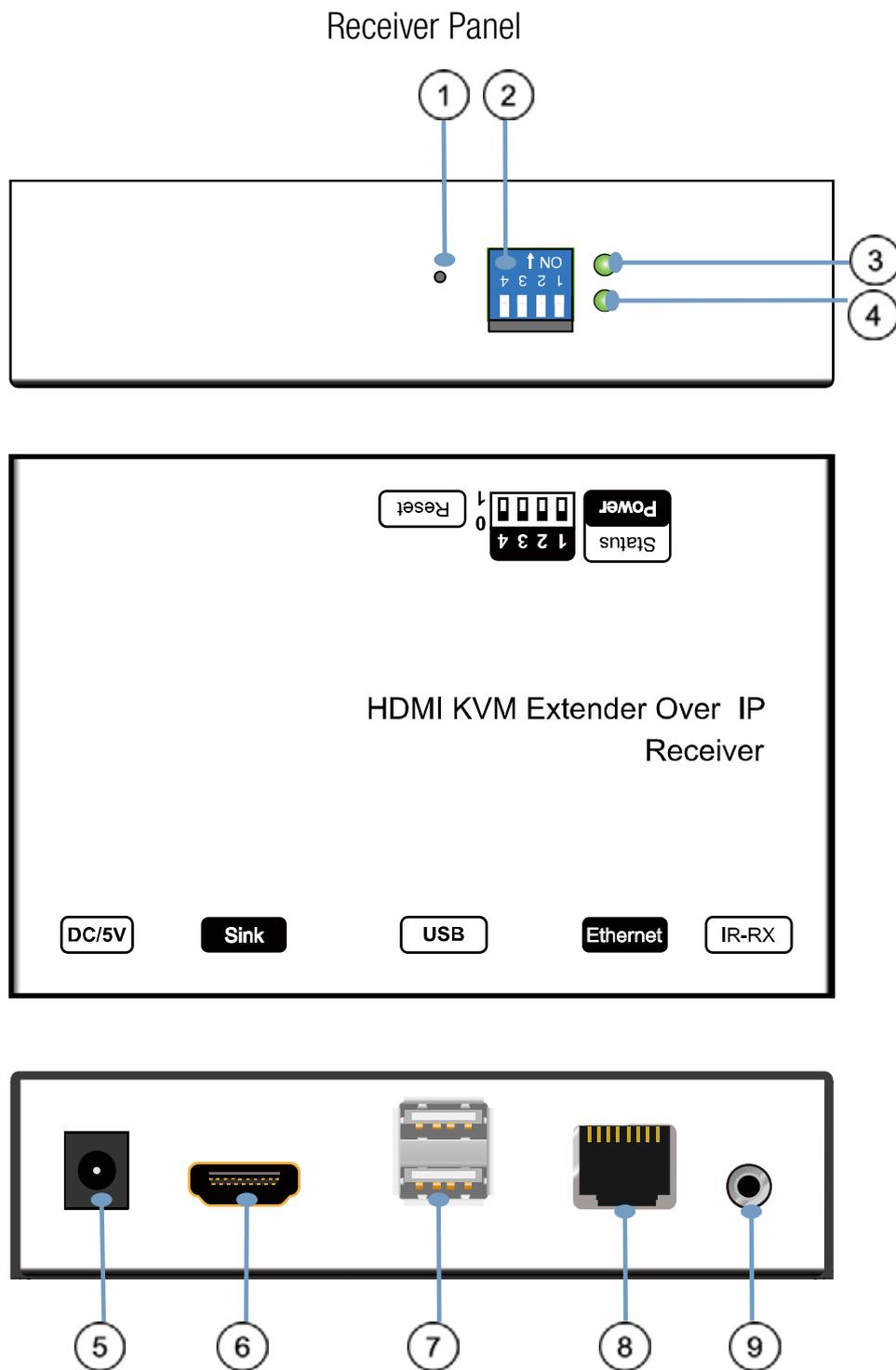
Transmitter Panel

HDMI KVM Extender Over IP
Transmitter

DC/5V   Source   USB   Ethernet   IR-TX

① Reset button   ② DIP switch   ③ HDMI input Indicator of power input
④ Status of signal connection   ⑤ Power input port   ⑥ HDMI input
⑦ USB HOST   ⑧ Ethernet port   ⑨ IR-TX port

4 bits DIP Switch:

Use 4bits DIP switch to select 16 groups ID (such as 0001,0010,0101 etc,)

Default TX unicast IP address is 192.168.168.55 , it can be configured from webpage.

TX Group IP address: 239.168.168.xx, (xx is the value of bits[2:0])

Receiver Panel

① HDMI Output   ② DIP switch   ③ Indicator of power input
④ Status of signal connection   ⑤ Power input port   ⑥ HDMI Output
⑦ Double USB ports   ⑧ Ethernet port   ⑨ IR-RX port

4 bits DIP Switch:

Use 4bits DIP switch to select 16 group ID(such as 0001,0010,0101 etc,)
Default RX unicast IP address is 192.168.168.56, it can be configured from webpage.
RX Group IP address: 239.168.168. XXX (XXX is the value of bits[2:0])

User should configure the DIP switch within 10 seconds, firmware should reset the system 20 second after detecting the first change of DIP switch, and latch the new DIP switch value after reset.
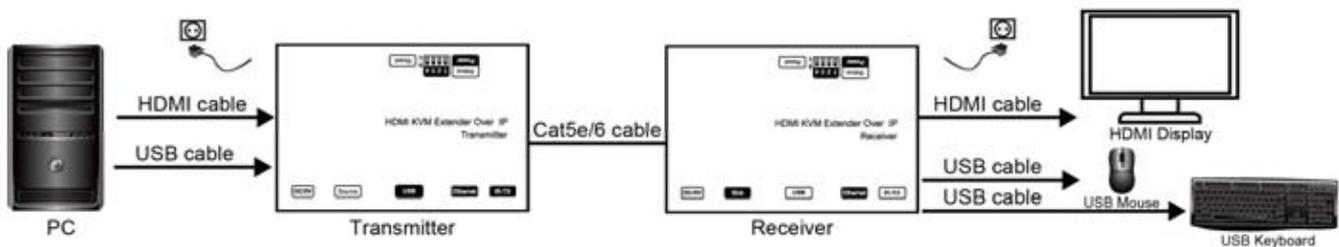
Application 1:
Point to point configuration:

1. Connect one HDMI Cable between the HDMI output port of source device and the HDMI input port of Transmitter unit
2. Connect one HDMI Cable between the HDMI input port of display and the HDMI output port of Receiver unit.
3. Connect one UTP Cat5e or better cables between the RJ45 port of Transmitter unit and RJ45 port of Receiver unit.
4. Connect the PC to the transmitter by USB AM-USB BM cable.
5. Connect keyboard, mouse to the receiver.
6. Connect 5V DC power supplies to both Transmitter unit and Receiver unit.
7. Power on the output device first and the source second.

Note Please make sure power on the transmitter and receiver first, then power on the source!
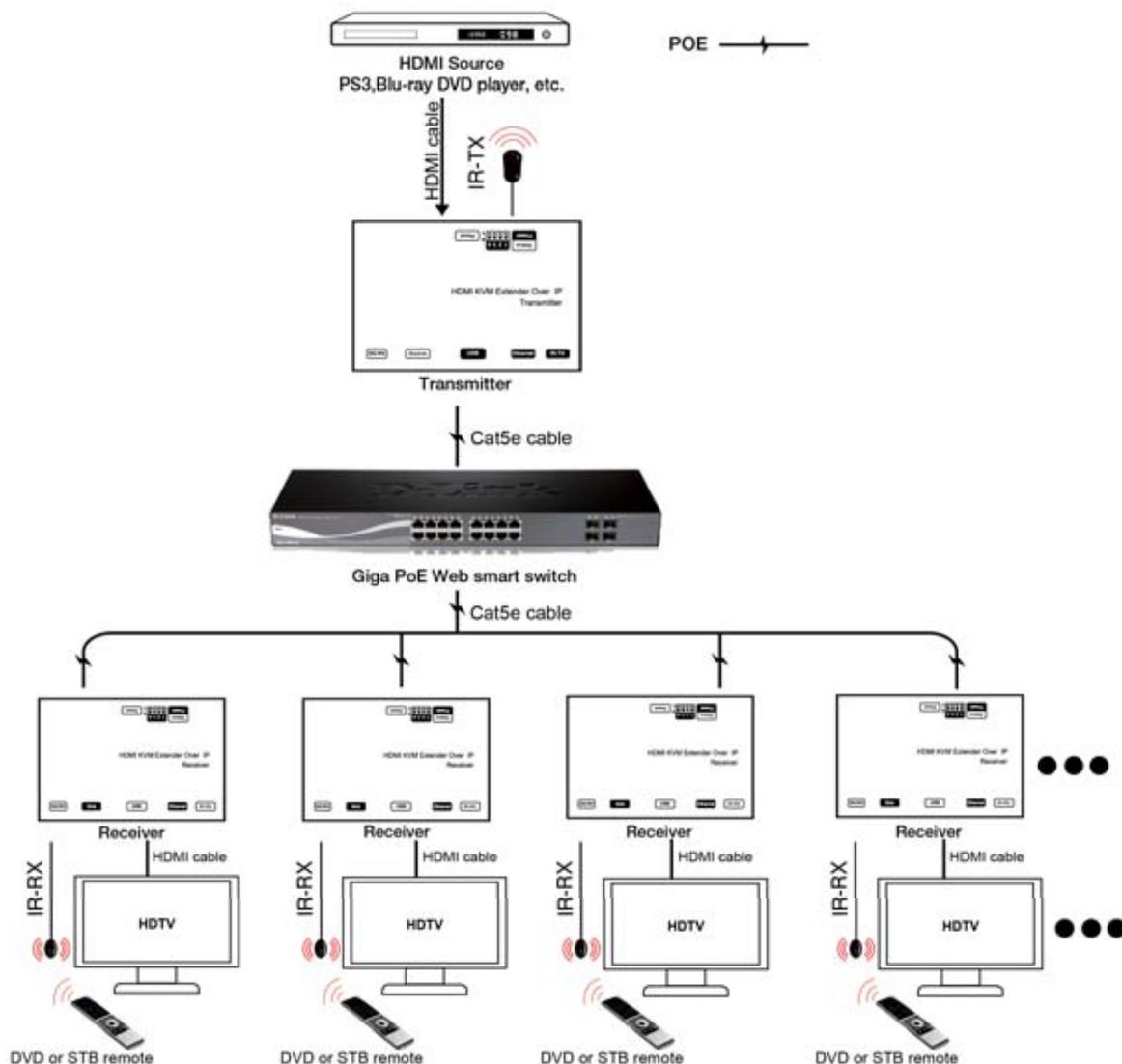
Application 2:
One to many network configuration:

1. Connect one HDMI Cable between the HDMI output port of source device and the HDMI input port of Transmitter unit

2. Connect one CAT5e or better cable between the RJ45 port of transmitter and input port of Gigabit Ethernet switch hub.

3. Connect one CAT5e or better cable between the output port of each Gigabit Ethernet switch hub and RJ45 port of Receiver unit.

4. Power on the output device first and then the source device.

5. If DIP switch of the transmitter is set up: Group ID:0001, then DIP switch for receiver should be set up Group ID:0001

Important: **Please make sure power on the POE switch adopter for TX&RX when connecting with POE switch first , then power on the source !**

No need power adapter for TX & RX when connecting with POE Switch.

Modify the TX and all RX for a different IP & MAC address in LAN (local area network）to avoid conflict.

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Application 3:
Many to Many network configuration:

1. Connect one HDMI Cable between the HDMI output port of source device and the HDMI input port of Transmitter unit.
2. Connect one HDMI Cable between the HDMI inpu port of display and the HDMI output port of Receiver unit.
3. Connect one CAT5e or better cable between the RJ45 of each Transmitter unit and RJ45 port of Gigabit Ethernet switch hub.
4. Connect over each RJ45 port of Gigabit Ethernet switch hub with RJ45 port of Receiver unit.
5. Use DIP switch to select sources, User can select source channel by DIP switch setting on each transmitter unit and set up DIP switch on each receiver.   And select display devices for Receiver units via one remote control
Important: Please make sure power on the POE switch first, then power on the source !

How to use DIP switch:
1).Use 4-bit DIP switch to select 16 group ID (such as 0001, 0010, 0101 etc.)

2).Change group ID easily to select the sources.

3).For example, when the devices are connection as below:
Source (DVD1) - TX (TX1) - Gigabit Switch – RX (RX1)- TV1
Source (DVD2) - TX (TX2) - Gigabit Switch – RX (RX2) - TV2
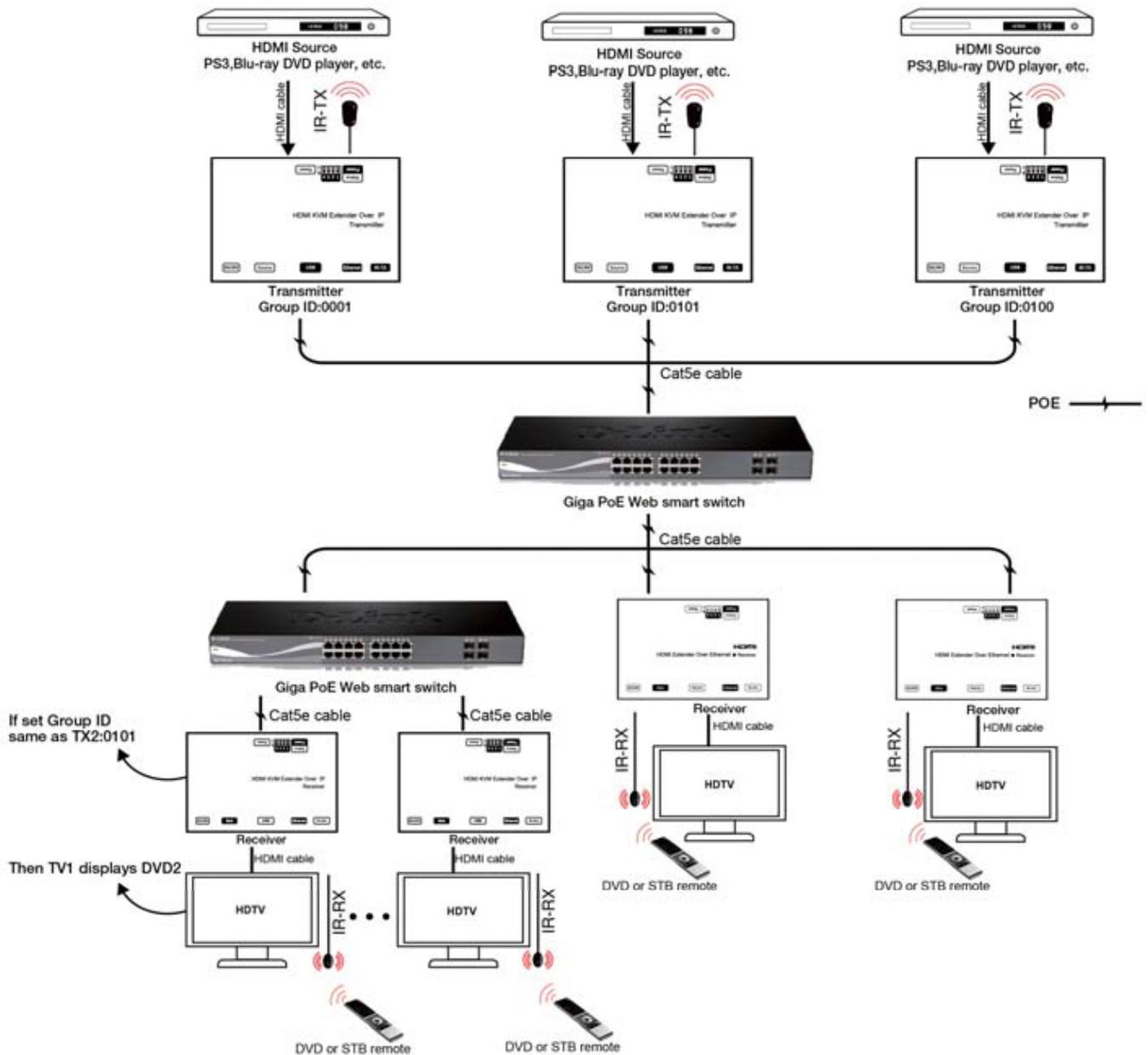Source (DVD3) - TX (TX3) - Gigabit Switch – RX (RX3) - TV3

When you set up the group ID for each transmitter just like this:
TX1 (0001)
TX2 (0101)
TX3 (0100)
Now, If you need display Source2 on TV1, then just set Group ID of RX1 0101, same as TX2: 0101 (refer to Diagram).

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No need power adapter for TX & RX when connecting with POE Switch.

Modify all TX and all RX for a different IP & MAC address in LAN (local area network） to avoid conflict.

Setup HDMI TX and HDMI RX

A HTTP server is embedded in each TX and RX. you can setup IP address for HDMI extender via web browser.

The default IP address of the **TX is 192.168.168.55,   MAC address is: 00:0b:78:00:60:01.**

The default IP address of the **RX is 192.168.168.56,   MAC address is: 00:0b:78:00:60:02.**

Step 1: Assign the PC (or laptop) IP address on the computer : "Control Panel"→" Network Connections"→"Local Area Connections Status"→"Properties"→"Internet Protocol (TCP/IP)", Type the IP address field with 192.168.168.11 (0-255) and Subnet mask with 255.255.255.0.   After that press OK to save the configuration.

Note: The IP address of PC should be different from the IP address of TX and RX.

Step 2: Use an Ethernet Cable to connect the PC (or laptop) and the extender. the power LED for the extender is red and the status LED becomes green.

Step 3: please Ping the connected device through the sequence on computer: "Start"→ "Run"→ input "CMD"→ input "ping 192.168.168.55" for TX or input "ping 192.168.168.56" for RX, you will receive the reply if the connection is established.

Step 4: Login in the IP adress :192.168.168.55 (default IP for TX) or 192.168.168.56(default IP for RX), You can setup IP address, subnet mask, gateway, and MAC address for the TX and RX.

Please set IP address for each TX and each RX, IP:192.168.168.XX (XX:1-255. all IP address for TX and RX must be different .

Please set MAC address for TX and RX, MAC:00:0b:78:XX:XX-XX (XX:01-FF), The MAC address for each TX and each RX must be different .

Step 5: After click "Apply" button, the green LED light on the device will go out, you have successfully set IP address for TX and RX now.

Note: if you need to restore the device to it's factory default settings, please power on the device, the red light becomes lighting, waiting about 10 seconds, the green LED light starts working, at this time to press the reset button about 5-10 seconds, then the green light will go out, you have successfully restored IP address to factory IP address now.

WARRANTY

If your product does not work properly because of a defect in materials or workmanship, our Company (referred to as "the warrantor") will, for the length of the period indicated as below, **(Parts(2)Year, Labor(90) Days)** which starts with the date of original purchase ("Limited Warranty period"), at its option either(a) repair your product with new or refurbished parts, or (b) replace it with a new of a refurbished product. The decision to repair or replace will be made by the warrantor.
During the "Labor" Limited Warranty period there will be no charge for labor.
During the "Parts" warranty period, there will be no charge for parts. You must mail-in your product during the warranty period. This Limited Warranty is extended only to the original purchaser and only covers product purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

MAIL-IN SERVICE

When shipping the unit carefully pack and send it prepaid, adequately insured and preferably in the original carton. Include a letter detailing the complaint and provide a day time phone and/or email address where you can be reached.

LIMITED WARRANTY LIMITS AND EXCLUSIONS

1) This Limited Warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage.
The Limited Warranty ALSO DOES NOT COVER damages which occurred in shipment,
or failures which are caused by products not supplied by warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or service by anyone other than a Factory Service center or other Authorized Servicer, or damage that is attributable to acts of God.
2) THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE".
THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRNTY. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable,
travel to and from the service, loss of or damage to media or images, data or other recorded content. The items listed are not exclusive, but are for illustration only.)
3) PARTS AND SERVICE, WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY, ARE
　　YOUR RESPONSIBILITY.