LevelOne

HVE-6501T/6501R

HDMI over IP PoE Transmitter/Receiver

HVE-6601T/6601R

HDMI Video Wall over IP PoE Transmitter / Receiver

V1.0

Quick Installation Guide

## Package Contents

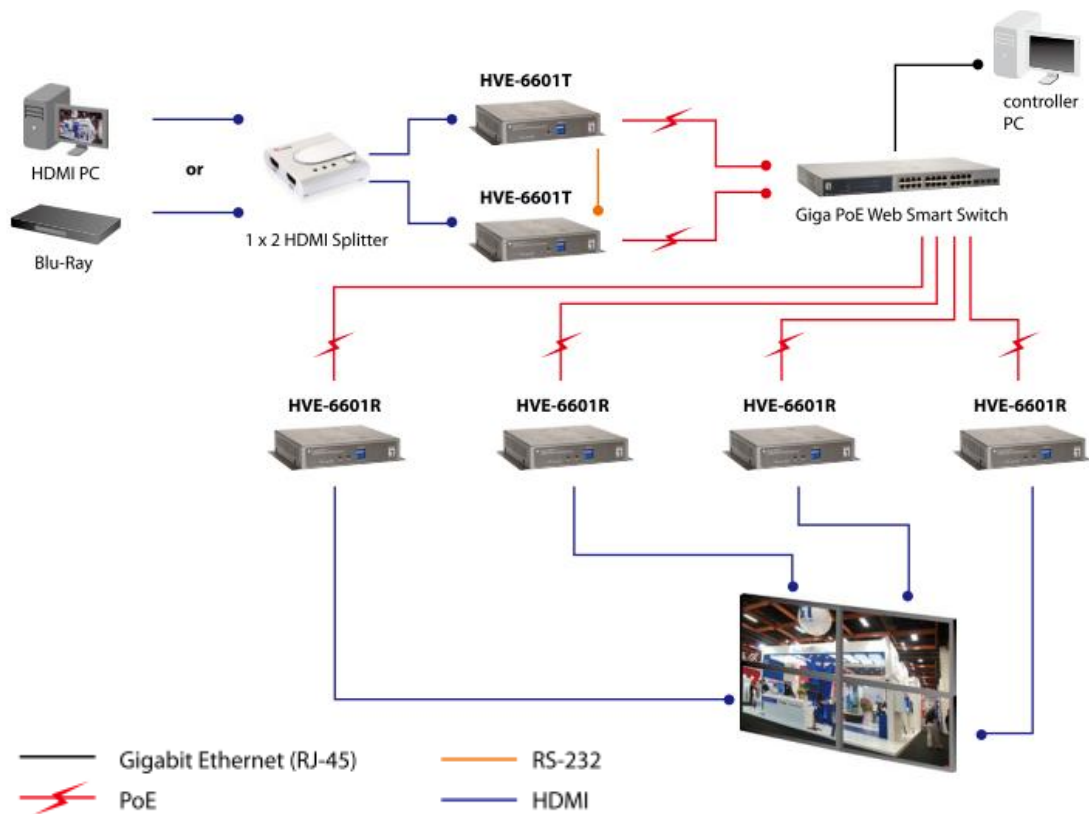| HVE-6501T:	HVE-6501R:
Power Adapter	Power Adapter
CD Manual/Utility	CD Manual/Utility
Quick Installation Guide	Quick Installation Guide
HVE-6601T:	**HVE-6601R:**
Power Adapter	Power Adapter
RS-232 Y-Cable	CD Manual/Utility
CD Manual/Utility	Quick Installation Guide
Quick Installation Guide	

This guide covers only the most common situations. All detailed information is described in the user manual

HVE-6501 Application: 1T+3R (Figure 1)
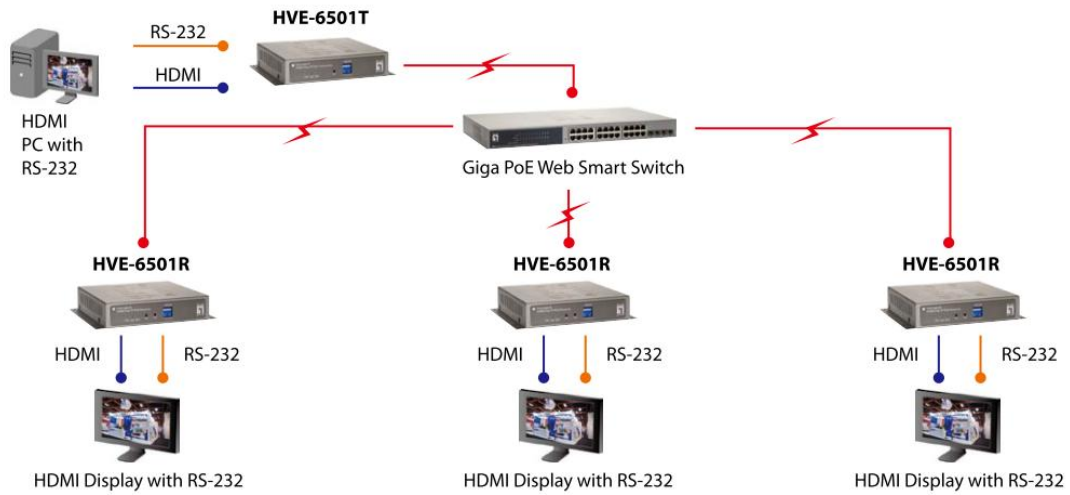
HVE-6601 Application: 2T+4R (Figure 2)

Quick Installation on HVE-6501 :

● HVE-6501T Transmitter

1. **DC5V or PoE:** Connect it to the external AC adapter which plugs into an electrical outlet. Or via 802.3af PoE PSE to GIGA LAN port.
2. **GIGA LAN:** Connect directly to a Receiver or to a Gigabit IGMP Ethernet Switch using CAT5e/6 cable.
3. **HDMI IN:** Connect to an HDMI source device with an HDMI M-M cable. Use an HDMI --> DVI adapter if the source is DVI.

LEDs , Button and Group ID setting

1. **POWER LED Blinking:** power on and the unit is booting up.
2. **POWER LED On:** power on and the unit is active.
3. **LINK LED Off:** LAN is not connected.
4. **LINK LED On:** LAN is connected.
5. **DATA LED Blinking:** if Transmitter is connecting with LAN, or the HDMI source is removed.
6. **DATA LED On:** All the connections are working.
7. **RESET Button:** change Link / Unlink; Engineering Mode and Reset to default using this button. Please to see the **RESET Button Descriptions.**
8. **GROUP ID:** Set up the Transmitter's group ID by adjusting the 4-pin DIP switch, ON means "1", OFF means "0", there are 16 groups available to set up.

Multicast IP Address

255.0.0.XXX & 255.0.1.XXX, the XXX are resolved by the 4-pin DIP Switch on the Transmitter.

● HVE-6501R Receiver

1. **DC5V/PoE:** Connect to the supplied AC adapter and plug into an electrical outlet. Or via 802.3af PoE PSE to GIGA LAN port.
2. **GIGA LAN:** Connect directly to a Transmitter or to a Gigabit IGMP Ethernet Switch using CAT5e/6 cable.
3. **HDMI OUT:** Connect to an HDMI display device with an HDMI M-M cable. Use an HDMI --> DVI adapter if the display is DVI.

LEDs , button and Group ID setting

1. **POWER LED Blinking:** power on and the unit is booting up.
2. **POWER LED On:** power on and the unit is active.
3. **LINK LED Off:** LAN is not connected.
4. **LINK LED On:** LAN is connected.
5. **DATA LED Blinking:** The Receiver is connecting with Transmitter, or the HDMI source is removed.
6. **DATA LED On:** All the connections are working.
7. **PB 1** : Change Link/Unlink; Firmware Upgrade Mode and Reset to default* using this button. Please to see the **Button Descriptions.**
8. **PB 2 :** change between Video Mode / Graphic Mode ; Anti-Dither ; Update EDID* using this button. Please to see the **Push Button Descriptions.**
9. **GROUP ID:** The Receiver's default GROUP ID is "0000". Set the same group ID as Transmitter.

● Transmitter & Receiver IP Address

The default setting is for "auto ip" mode and uses the 169.254.xxx.xxx private IP domain range. The IP of target TX/RX board is resolved by its hostname using DNS protocol. The RX's HDMI GUI will display the RX's IP address and the connected TX's IP address. You can see the RX's HDMI GUI by connecting it with power adapter and HDMI monitor only, without LAN cable.

Quick Installation on HVE-6601 :

● HVE-6601T Transmitter (Video Wall)

1. **DC5V/PoE:** Connect it to the external AC adapter which plugs into an electrical outlet. Or via 802.3af PoE PSE to GIGA LAN port.
2. **GIGA LAN:** Connect directly to a Receiver or to a Gigabit IGMP Ethernet Switch using CAT5e/6 cable.
3. **HDMI IN:** Connect to an HDMI source device via HDMI splitter (optional) with an HDMI M-M cable.
4. **RS-232:** Used Y Cable to separate S0(RS-232 port) and S1(Debug console port) for Video Wall system solutions.
   - P1(DB9P-M): Connect to RS232 port of HVE-6601T.
   - P2(DB9P-F)(S0): Connect to next HVE-6601T's P3(S1) of Y cable.
   - P3(DB9P-M) (S1): Connect to previous HVE-6601T's P2(S0) of Y cable.

LEDs , button and Group ID setting

1. **POWER LED Blinking:** power on and the unit is booting up.
2. **POWER LED On:** power on and the unit is active.
3. **LINK LED Off:** LAN is not connected.
4. **LINK LED On:** LAN is connected.
5. **DATA LED Blinking:** if Transmitter is connecting with LAN, or the HDMI source is removed.
6. **DATA LED On:** All the connections are working.
7. **PB :** change Link / Unlink; Engineering Mode and Reset to default using this button. Please to see the **Push Button Descriptions.**
8. **GROUP ID:** Set up the Transmitter's group ID by adjusting the 4-pin DIP switch, ON means "1", OFF means "0", there are 16 groups available to set up.

Multicast IP Address

255.0.0.XXX & 255.0.1.XXX, the XXX are resolved by the 4-pin DIP Switch on the Transmitter.

● HVE-6601R Receiver (Video Wall)

1. **DC5V/PoE:** Connect to the supplied AC adapter and plug into an electrical outlet. Or via 802.3af PoE PSE to GIGA LAN port.
2. **GIGA LAN:** Connect directly to a Transmitter or to a Gigabit IGMP Ethernet Switch using CAT5e/6 cable.
3. **HDMI OUT:** Connect to an HDMI display device with an HDMI M-M cable. Use an HDMI --> DVI adapter if the display is DVI.
4. **RS-232:** In Video Wall system solutions it will not be used. Set the same group ID as Transmitter.

LEDs , Button and Group ID setting

1. **POWER LED Blinking:** power on and the unit is booting up.
2. **POWER LED On:** power on and the unit is active.
3. **LINK LED Off:** LAN is not connected.
4. **LINK LED On:** LAN is connected.
5. **DATA LED Blinking:** The Receiver is connecting with Transmitter, or the HDMI source is removed.
6. **DATA LED On:** All the connections are working.
7. **PB 1** : Change OSD shows control/Column position; Firmware Upgrade Mode and Reset to default* using this button. Please to see the **Push Button Descriptions.**
8. **PB 2 :** change between Video Mode / Graphic Mode ; Anti-Dither ; Update EDID* using this button. Please to see the **Push Button Descriptions.**
9. **GROUP ID:** The default GROUP ID is "0000".Set the same group ID as Transmitter.

Transmitter & Receiver IP Address

The default setting is for "auto ip" mode and uses the 169.254.xxx.xxx private IP domain range. The IP of target TX/RX board is resolved by its hostname using DNS protocol. The RX's HDMI GUI will display the RX's IP address and the connected TX's IP address. You can see the RX's HDMI GUI by connecting it with power adapter and HDMI monitor only, without LAN cable.

● Video Wall setting procedure (example 2x2)

1. Prepare host(HVE-6601T) x 2 and client x 4(HVE-6601R).
2. Follow "**Figure 2"** to construct the whole system.
3. Reboot all devices. Ensure that all remote displays and all network cables are connected correctly. (Video source is required at this step)
4. If the control PC (Windows OS) doesn't install bonjour SDK yet, please install it. Google "bonjour SDK download" for the installation file or download it here: http://developer.apple.com/opensource/ .
5. Configure the control PC's network setting to use 169.254.xxx.xxx IP domain with netmask 255.255.0.0. Or immediate running LinkTool.exe (copy from CD of package to control PC).
6. Open PC's web browser (Google Chrome performs best. IE is not recommended). Link to the control portal (the first HVE-6601T) by following web address http://last-gateway0000.local/vw/ .
7. Once user completes the 3 steps of "Basic Setup", a basic video wall configuration is done.

Notice: How to get the best HDMI display results

Many factors influence the quality and reliability of an HDMI® signal distribution installation. The following are the main factors to consider, and basic precautions that will ensure the best possible performance.

1. **Dedicated network.**
   The HVE-650/660 Series is designed to operate on a dedicated Gigabit Ethernet network, not to be combined with other network traffic or with access to the internet.
2. **Resolution tracking.**
   a. Set up the source to output the best resolution that all TVs are capable of displaying.
   b. The HVE-650/660 Series supports 720p and 1080p. If some TVs in the network are not capable of accepting 1080p, the higher resolution sets may not be shown to their best advantage.
3. **Source resolution and video/sound quality.**
   Sources, such as satellite receivers or cable boxes, can output at low resolutions or deliver extremely compressed video material, yielding poor results. Consider the source when planning and troubleshooting your system.
4. **Display devices.**
   The perceived quality of the video image depends heavily upon the type and quality of the TVs or projectors used. High quality displays should be expected to produce a noticeably better image.
5. **Distance between the transmitter and the receiver.**
   Long distances are possible, but premium quality Cat 5e/6 cables are necessary for the longest runs.
6. **Source and TV connection cables.**
   Use short, premium HDMI cables; low quality cables are often unreliable. Always use good strain relief methods or locking cables to prevent cables from becoming loose over time.
7. **Interference from nearby electrical devices**
   It can have an adverse effect on signal quality. For example, older computer monitors often emit very high electromagnetic fields that can interfere with the performance of nearby video equipment.