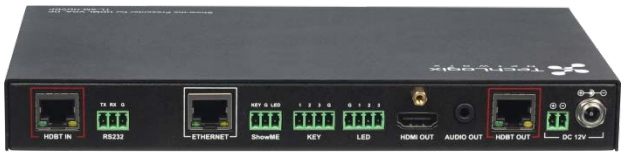
User Manual

TL-SM-HDVDP

Share-Me™ Presenter for HDMI, VGA, DP



Version: TL-SM-HDVDP_170609

Preface

Read this user manual carefully before using this product. Pictures shown in this manual are for reference only, slight differences may be evident on the real product.

This manual is only for operation instruction only, not for any maintenance usage.

Trademarks

Product model and logo are trademarks. Any other trademarks mentioned in this manual are acknowledged as the properties of the trademark owner. No part of this publication may be copied or reproduced without prior written consent.

FCC Statement

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.

SAFETY PRECAUTIONS

To insure the best experience from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Unpack the equipment carefully and save the original box and packing material for possible future shipment
- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burns.
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Do not put any heavy items on the extension cable in case of damage.
- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards.
- Install the device in a place with proper ventilation to avoid damage caused by overheat.
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Unplug the power cord when left unused for a long period of time.
- Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical wastes.

1. Introduction

TL-SM-HDVDP is a 100m 4K Share-Me™ Presenter with HDBaseT in and HDBaseT out, and utilizes HDBaseT technology as daisy-chain medium to cascade multiple A/V sources, displays or any devices with HDBaseT connection together in a chain to set up an A/V distribution system.

TL-SM-HDVDP supports three video inputs including HDMI, Display Port and VGA plus 3.5mm audio in, with HDBaseT input and HDBaseT output for cascading. A local HDMI out with audio de-embedder is provided in the rear side to connect local monitor or zone displays. It has a 2-Port Ethernet Switch built-in so that Ethernet could pass through over HDBaseT for LAN control, or to feed LAN access to sources or displays. A RS232 port is used to pass through RS232 commands or control a display device. USB charger is also provided to charge mobile devices. It offers ShowME button and Contact Closure to switch sources, and a rotary switch for EDID management.

TL-SM-HDVDP offers a future-ready Ultra HD A/V switching and distribution solution, and cutting-edge HDMI 2.0 and HDCP 2.2 compatibility. With user-friendly WEB GUI and Telnet API to configure advanced functionality including a CEC controller, RS232 controller and Daisy-chain Grouping, it is perfectly suitable for collaboration or presentation in conference and education applications.

1.1 Features

- HDMI, DisplayPort and VGA plus stereo switching inputs, local HDMI bypass out with audio de-embedder
- HDBaseT input and output to cascade multiple A/V sources and displays
- HDMI 2.0 and HDCP 2.2 compatible
- Supports 4K@60Hz 4:2:0 8-bit up to 70m over Cat5e/Cat6, or up to 100m over Cat6a/Cat7
- Built in CEC controller and RS232 controller for smart control
- Automatic CEC and RS232 command to Power ON/Standby Display, by detecting input signal status
- Daisy-chain Grouping mode offered to match flexible application
- LAN control with user-friendly WEB GUI and Telnet API
- ShowMe and Contact Closure for source switching

- Built in 2-Port Ethernet Switch for LAN control or LAN access
- Built in USB Charger up to 5V/1.5A to charge mobile devices
- Independent rotary switch for EDID management
- Advanced signal re-locking and cable equalization for multiple daisy-chains

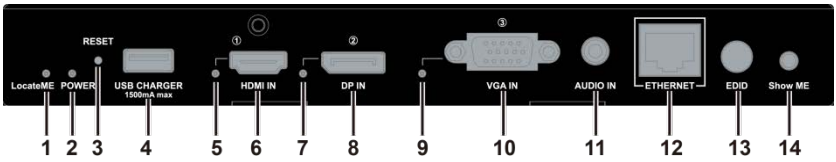
1.2 Package List

- ✓ 1 x SM-HDVDP
- ✓ 2 x 3.5mm Phoenix Male Connector (2Pin)
- ✓ 2 x 3.5mm Phoenix Male Connector (3Pin)
- ✓ 2 x 3.5mm Phoenix Male Connector (4Pin)
- ✓ 2 x Mounting ears
- ✓ 1 x Power Adapter (DC 12V 3A)
- ✓ 1 x User manual

🕮 Check whether all the items listed above are included in your package. If not, contact your dealer.

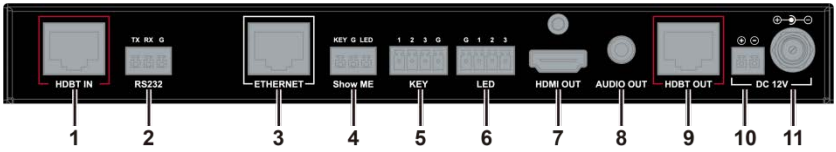
2. Appearance

Front Panel



No.	Name	Description
1	LocateMe LED	Used to located a device in the chain, LED flashes 2 times when you click “LocateME” in the WEB GUI
2	Power LED	Indicates power status
3	RESET	Press and hold this button for at least five seconds to reset the TL-SM-HDVDP
4	USB CHARGER	Charge USB device
5	HDMI IN LED	This LED is on if HDMI IN is selected as input
6	HDMI IN	Connects to HDMI source device
7	DP IN LED	This LED is on if DP IN is selected as input
8	DP IN	Connects to DisplayPort source device
9	VGA IN LED	This LED is on if VGA IN is selected as input
10	VGA IN	Connects to VGA source device
11	AUDIO IN	VGA analog stereo audio input
12	ETHERNET	Connects to a LAN device such as Laptop for LAN access or WEB control
13	EDID	Rotary switch is provided to offer EDID management.
14	Show Me Button	Press this button to switch the input source in turn, or activate remote device when an active source is detected on a remote device in cascaded connection. The ShowMe switch is only effective for active sources, and cannot switch to an inactive channel, disabled source or a source not been detected. By pressing the local ShowMe button on current selected device for 3 seconds, it will cancel the action and switch back to the last selected device/source.

Rear Panel



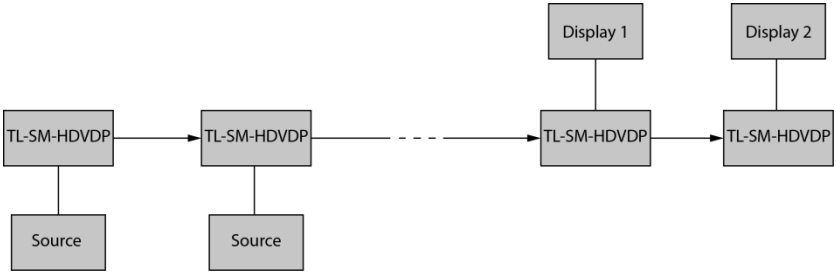
No.	Name	Description
1	HDBT IN	Connects to HDBT output port of any HDBT device or the other TL-SM-HDVDP.
2	RS232	Connects to a controllable device such as projector for RS232 pass-through
3	Ethernet	Connects to a LAN device such as IP-based touch panel for LAN control
4	SHOW ME	Connects to a controller such as keypad to switch sources
5	KEY	Connects to a controller such as a keypad to select HDMI, DP or VGA source directly. Pin 1 represents HDMI IN, Pin 2 represents DP IN, Pin3 represents VGA IN. Pin G represents Ground.
6	LED	Connects to a controller such as a keypad to indicate current selected input channel. Pin 1 represents HDMI IN, Pin 2 represents DP IN, Pin3 represents VGA IN. Pin G represents Ground.
7	HDMI OUT	Connects to a HDMI display device
8	AUDIO OUT	Connects to audio system such as an amplifier
9	HDBT OUT	Connects to HDBT input port of any HDBT device or the other TL-SM-HDVDP.
10	Power 10	Connects to power supply with 2-pin phoenix connector
11	Power 11	DC 12V power input

🕮 Pictures shown in this manual are for reference only.

3. Quick Start

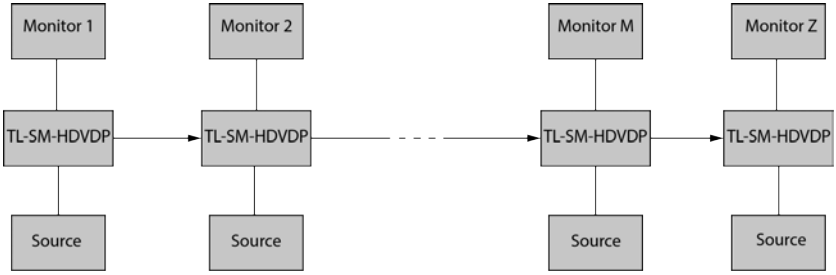
TL-SM-HDVDP could be used flexibly as either transmitter or receiver to support many different installations and applications, because of the local HDMI Out port built in.

Application 1: Chain-type Connection



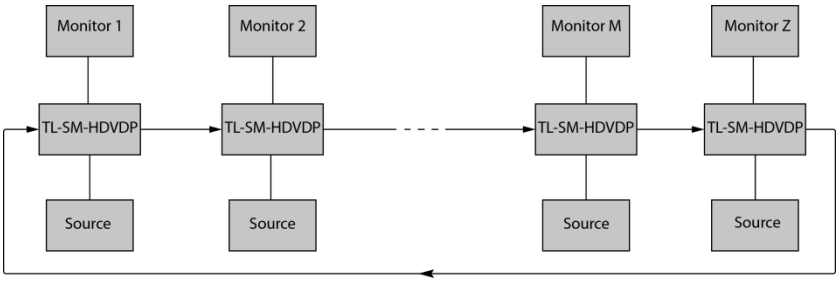
In Application 1, Device 1 and Device 2 are used as transmitter to connect source, while Device M and Device Z are dedicated receivers to connect multiple displays.

Application 2: Chain-type Connection with Local Monitor



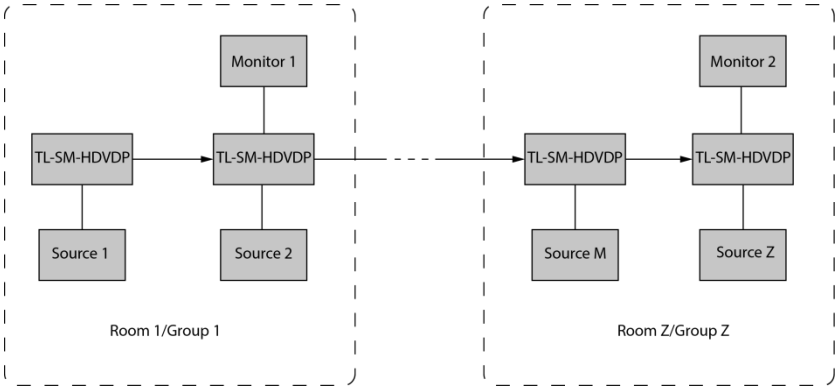
In Application 2, each TL-SM-HDVDP in the chain has their local HDMI Out connected with local monitor, so as to show upstream or local source once it's selected in the chain. Please note only downstream devices can display upstream sources, while upstream devices can not have their local monitor show downstream sources.

Application 3: Ring-type Connection



In Application 3, the last Device Z has its HDBT OUT connecting to HDBT IN of the first Device 1. As a result, each source selected could be displayed by any monitor in the chain, as opposed to the chain-type connection in which downstream sources can not be displayed to upstream monitors.

Application 4: Grouping Mode



In Application 4, Device 1 and Device 2 work in Group 1, while Device M and Device Z work in a separate Group Z. Devices in different groups can not select or display sources from other groups. Grouping mode is simply activated by Telnet API or clicking the Daisy-chain Grouping option on the first device of different groups in WEB GUI.

For example, set Device 3 in grouping mode to make Device 1 and Device 2 work as Group 1, then Device 3 and all downstream devices are in the other group; set Device 2 and Device 5 in grouping mode to make Device 2 to Device 4 work in same group. (For

more details please check Page 18.) Both Chain-type and Ring-type connection support grouping mode.

Before set up, please take the following steps:

1. Connect a PC to each device by Ethernet port, log in their WEB GUI to set static IP address and alias name for every device. (Please check Page 13 to learn how to log in WEB GUI.)

2. Connect all devices by HDBaseT ports through Cat cable, make a Chain-type connection first and feed LAN access to the Ethernet port of any device. Do not make Ring-type connection directly with LAN access, otherwise there will be LAN conflicts and LAN control disabled.

3. Log into the WEB GUI of the first device in the chain, input total quantity of devices cascaded within Daisy-chain Sequence and then click Start Sequence. (For more details please check Page 17 - Daisy-Chain Sequence).

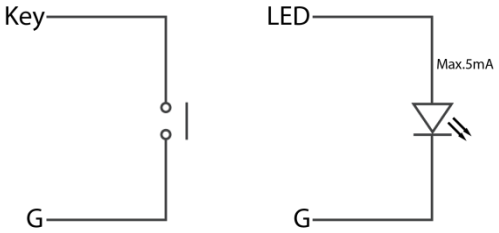
4. Connect the HDBT OUT of the last device to the HDBT IN of the first device, log into the WEB GUI of the first device to click Start Sequence again, then Ring-type connection will be set up correctly.

If any TL-SM-HDVDP is reset, removed, replaced or newly added in the chain, please follow above instruction to configure them again.

4. Hardware Installation

1. Connect the HDBT OUT port of TL-SM-HDVDP 1 to the HDBT IN port of TL-SM-HDVDP 2, connect the HDBT OUT port of TL-SM-HDVDP 2 to the HDBT IN port of TL-SM-HDVDP 3, and follow to daisy-chain multiple TL-SM-HDVDP through HDBT ports by Cat cable.
2. Use quality HDMI/DP/VGA cables to connect different sources (such as Laptop, PC, Blu-ray, satellite/cable TV, etc.) to HDMI IN/DP IN/VGA IN port of TL-SM-HDVDP.

3. Use quality HDMI cables to connect the HDMI display device (such as Projector, Monitor or TV) to the HDMI OUT of TL-SM-HDVDP.
4. Connect a controller such as IP-based touch panel to an Ethernet port of the TL-SM-HDVDP, or Contact Closure-based keypad to the ShowME/KEY/LED ports to control. Circuit diagram of Contact Closure ports including SHOW ME, KEY and LED without any resistors as shown:



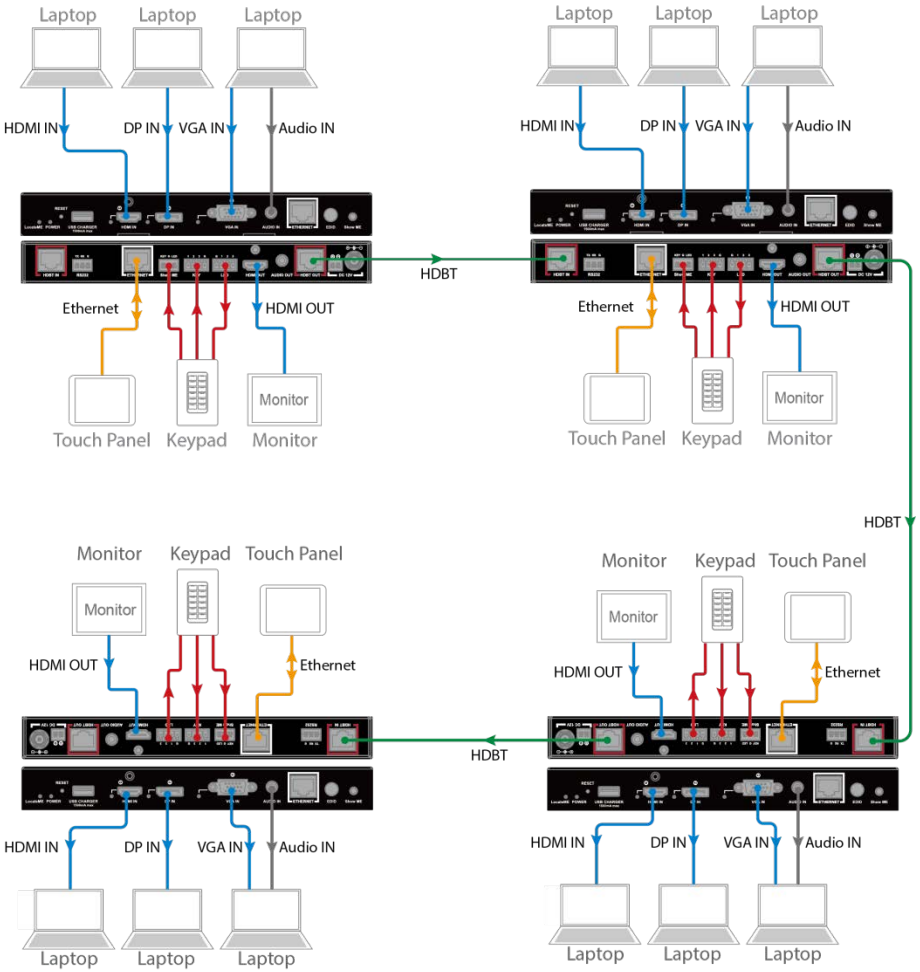
5. Power on all devices. Use the ShowMe button, Contact Closure, WEB GUI or Telnet API command to operate the TL-SM-HDVDP.

Note: Quality CAT cables are highly recommended, such as Cat6, AWG 23 or better, S/FTP cable. Please check http://www.hdbaset.org/cables to learn HDBaseT recommended cables.

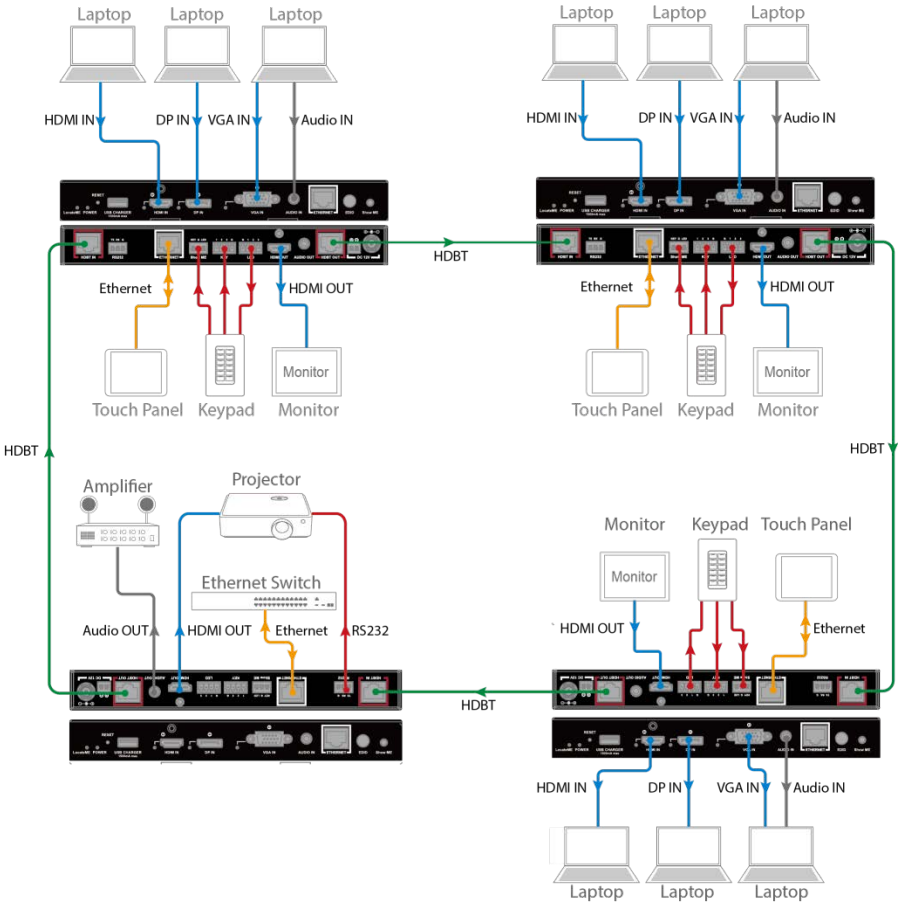
5. System Connection

The figure below illustrates a typical connection that can be utilized with TL-SM-HDVDP:

Chain-type Connection:



Ring-type Connection:



1) System should be installed in a clean environment with proper temperature and humidity.
2) All of the power switches, plugs, sockets and power cords should be insulated.
3) All devices should be connected before power on.

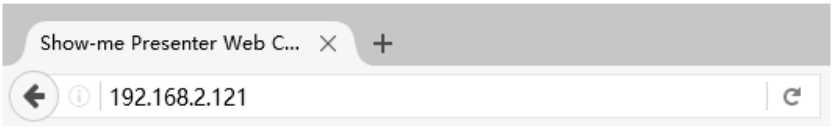
6. Web Control

TL-SM-HDVDP offers a Web GUI for product configuration.

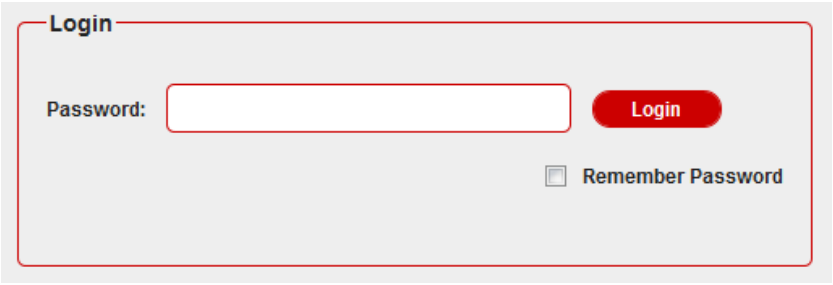
Access the WEB GUI

Step 1. Connect TL-SM-HDVDP to a computer using a Cat cable. The default IP address of the TL-SM-HDVDP is 192.168.1.121, make sure the computer's IP address is 192.168.1.X (such as 192.168.1.100).

Step 2. Type the IP address into a web browser (as seen below).



A login screen will appear:

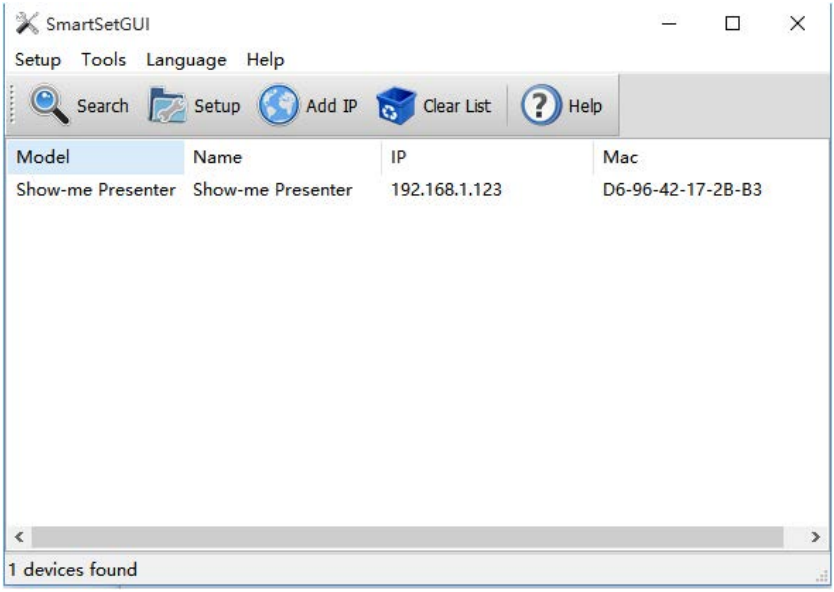


The default password is admin.

Note:

If the IP address of TL-SM-HDVDP has been changed, a user can search the new IP using SmartSetGUI tool or press the reset button to reset the TL-SM-HDVDP.

Run the SmartSetGUI tool to obtain the IP address. Click **Search**, it will display the new IP address.



WEB GUI Introduction

The WEB GUI contains three sub-menu: Status, Configuration and Advanced.

Status

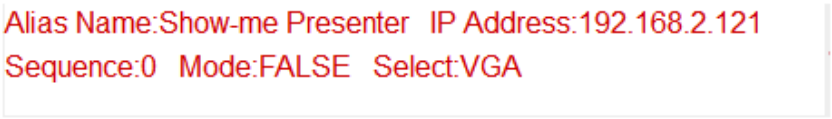
This sub-menu displays the current status of TL-SM-HDVDP.

Device in red represents TL-SM-HDVDP working in Show Me mode.

Device in green represents TL-SM-HDVDP connecting in the chain but not working in Show Me mode.

Device in black represents not connecting in the chain.

Click the device icon, it displays the alias name, IP address, sequence, mode and input source of the TL-SM-HDVDP.

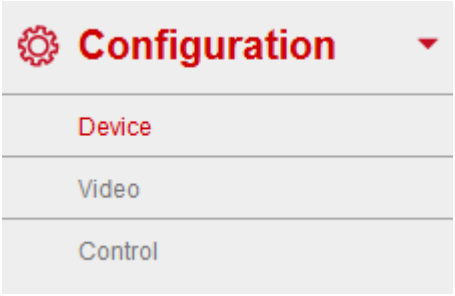


Note:

- Mode 'False' represents the TL-SM-HDVDP not working in group mode.
- Mode 'True' represents TL-SM-HDVDP working in group mode.

Configuration

There are three sub-menus: Device, Video and Control.



6.1.1 Device

This sub-menu is used to perform the following tasks:

- Locate ME
- Alias Name
- Daisy-chain Sequence
- Daisy-chain Grouping
- Network

Locate Me

When you click the **LocateME** button, the **LocateME** LED of TL-SM-HDVDP will be on so the user can locate which TL-SM-HDVDP's WEB GUI is controlling.

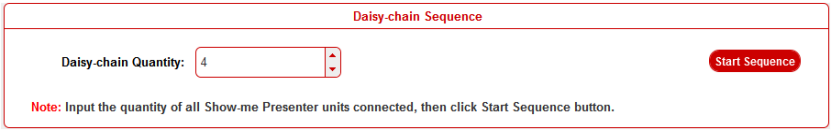
Alias Name

Users can modify the TL-SM-HDVDP name for installations where multiple TL-SM-HDVDP are cascaded.

Click the **Apply** button to save modifications.

Note: The Alias name must be 1~20 characters in length, it could be letters, numbers, space, underscore "_"or dash"-".

Daisy-chain Sequence



Users can set the daisy-chain quantity in this column.

When multiple TL-SM-HDVDP are cascaded, it's recommended to input the total quantity of devices cascaded in the chain by logging into the WEB GUI of the first device and then clicking the **Start Sequence** button.

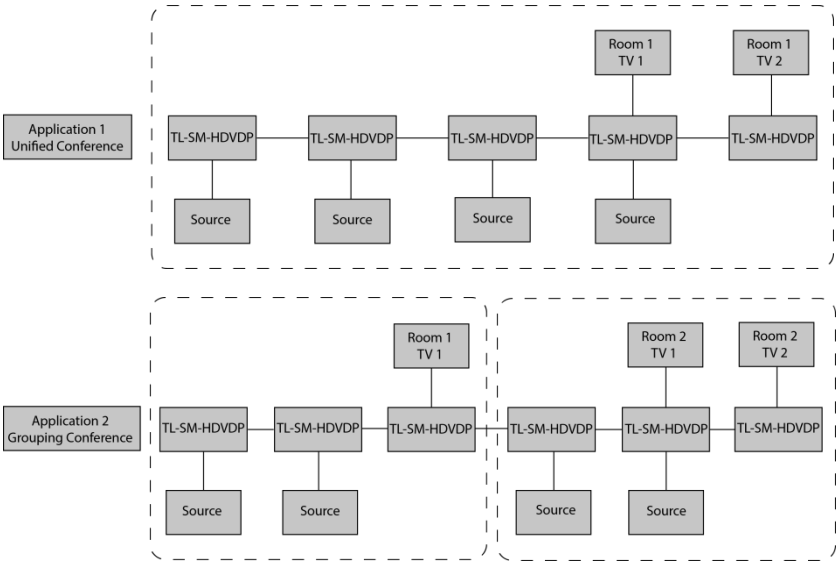
When any TL-SM-HDVDP is removed or added into a cascaded connection, please log in the first device's WEB GUI in the chain to reconfigure. This function allows the TL-SM-HDVDP to find out its sequence in the daisy-chain automatically, and it's particularly necessary for a Ring-type Connection.

Note: If the Daisy-chain Quantity is set to a value higher than the number of devices cascaded in the chain, additional devices will be showed in black on the Status page.

Daisy-chain Grouping

User can set TL-SM-HDVDP working in grouping mode in this column.

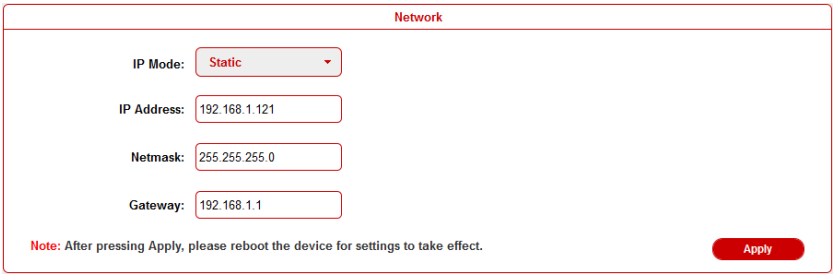
TL-SM-HDVDP offers a Daisy-Chain Grouping mode for conference group applications. In this mode, multiple conference groups can be set up to work independently in a cascaded connection. In this way, each group will only have their local sources available for display, and can't be shared to other groups.



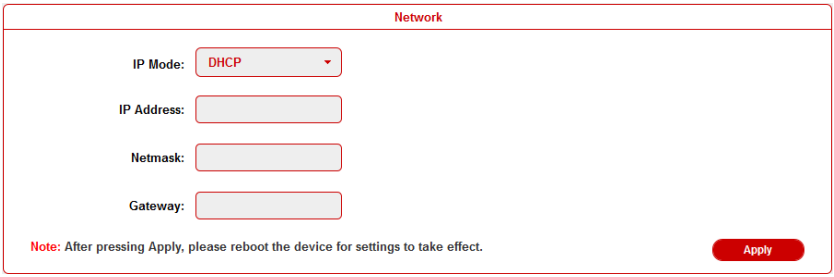
Daisy-Chain Grouping is simply activated using the Telnet API or clicking the option on the first device of different groups. After applying, the selected TL-SM-HDVDP and downstream devices can not select or display upstream sources.

A cascaded chain can support multiple groups. It's set up in the WEB GUI one by one; Telnet API is also provided to set all or each device independently to work in grouping mode, or cancel it.

Network



The TL-SM-HDVDP can be controlled over LAN. There are two IP Mode to choose: Static and DHCP. By default, the IP address to access the TL-SM-HDVDP is Static. The user must configure the IP address of each device before the installation to avoid IP conflicts when multiple devices are connected.

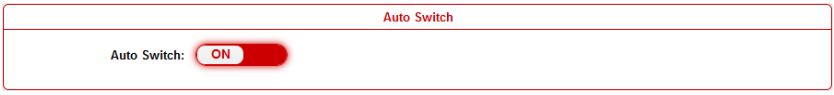


6.1.2 Video

This sub-menu is used to perform the following tasks:

- Auto Switch
- HDCP
- EDID

Auto Switch

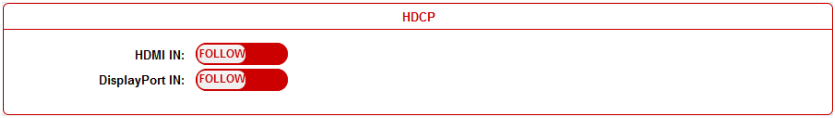


Users can enable or disable the Auto Switch function in this column.

If the Auto Switch function is on:

- When a new input is detected, the device will automatically select the new input.
- When an active source is removed or disabled, the unit will switch to an active input by checking their priority, HDMI has a higher priority over DP, and DP has a higher priority over VGA
- Once an active input is restored, it will automatically switch to that source.

HDCP



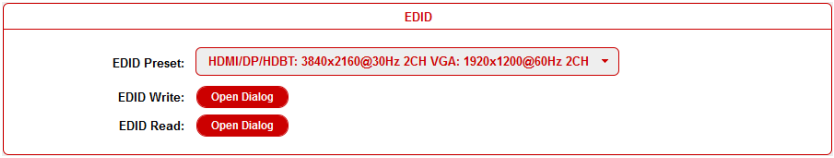
Users can set the HDCP ON or OFF for both HDMI and DisplayPort inputs by WEB GUI or Telnet API, which requests specified source to output encrypted or un-encrypted video.

FOLLOW means the source is allowed to output encrypted video.

OFF means the source can only output un-encrypted video.

Note: This function is only applied to the specified source. This function is useful to force laptops to output unencrypted content. If your system connects to a video conferencing codec for video capture, it is recommended to set the inputs to HDCP OFF.

EDID



To set the EDID by WEB GUI, first adjust the EDID switch to Position 9.

For example, if user wants to write the HDMI OUT EDID of TL-SM-HDVDP 1 to HDMI IN of TL-SM-HDVDP 2, log in TL-SM-HDVDP 1's WEB GUI, click **Open Dialog** button of **EDID Read**, save the Bin file, and then log in TL-SM-HDVDP 2's WEB GUI, click **Open Dialog** button of **EDID Write**, import the Bin file.

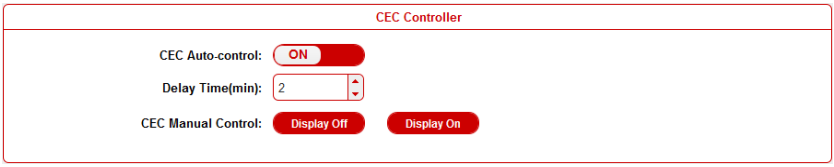
Note: For EDID write, HDMI/DP/HDBT supports 256 bytes only, VGA supports 128 bytes.

6.1.3 Control

This sub-menu is used to perform the following tasks:

- CEC Controller
- RS232 Controller
- RS232 Pass-through

CEC Controller



The TL-SM-HDVDP has a built in CEC controller, and is able to turn on/off the display by sending CEC commands to display via the HDMI output port automatically.

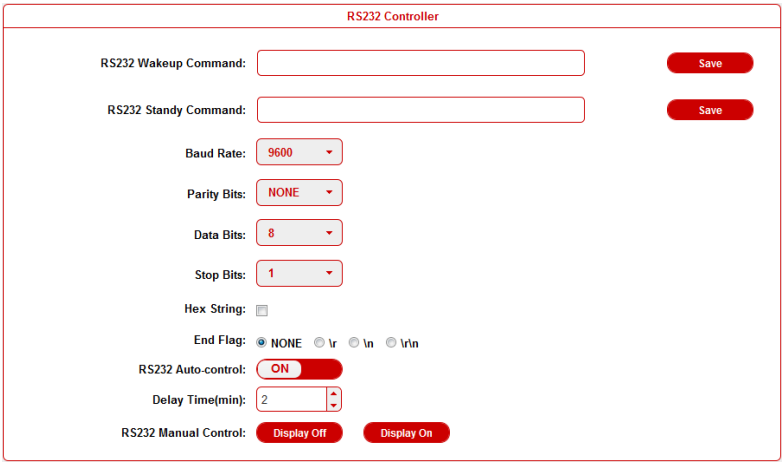
Note: This function is only effective for CEC supported and enabled displays.

CEC Auto control: Enable/disable CEC Auto-control

Delay Timing: Set the delay time of turn on/off display after receiving CEC command. The range is 0~30 minutes.

CEC Manual Control: Turn on/off display by CEC command manually.

RS232 Controller



The TL-SM-HDVDP is equipped with a built in RS232 controller, and is able to save RS232 Wakeup and Standby Commands of the display. This allows you to turn on/off the display through connected RS232 port using auto-detect source status.

*Check the display model's user manual for RS232 settings and commands,

RS232 Wakeup Command: Input the RS232 Wakeup Command of connected display, and click **Save** button.

RS232 Standby Command: Input the RS232 Standby Command of connected display, and click **Save** button.

Baud Rate: Set the Baud Rate of connected display.

Parity Bits: Set the Parity Bits of connected display.

Data Bits: Set the Data Bits of connected display.

Stop Bits: Set the Stop Bits of connected display.

Hex String: Check this option represents the command is Hexadecimal format.

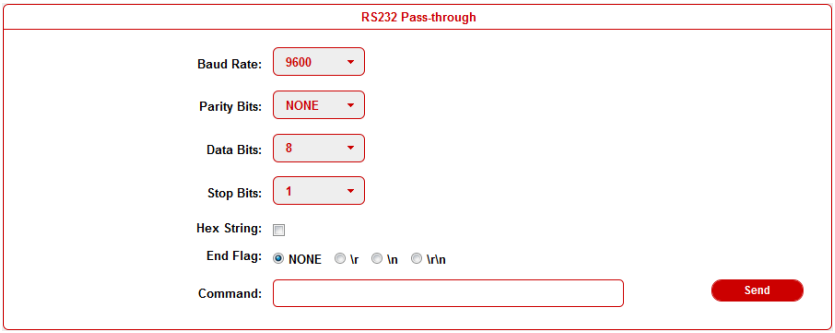
End Flag: Choose the end flag of command. The command could be end with none, "\r" (carriage return), "\n" (line feed) or "\r\n" (carriage return/line feed).

RS232 Auto Control: Enable/disable RS232 Auto-control.

Delay Time (min): Set the delay time of display on/off after receiving RS232 command. The range is 0~30 minutes.

RS232 Manual Control: Turn on/off display manually by RS232 command.

RS232 Pass-through



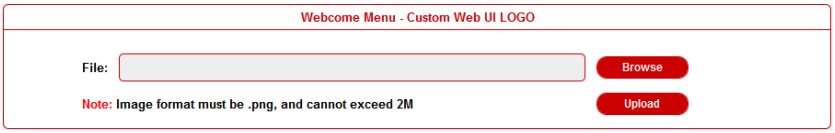
RS232 pass through is used to send an RS232 command manually from the Web GUI to a selected device out. Telnet API is also provided for this function.

Advanced

This sub-menu is used to perform the following tasks:

- Welcome Menu
- Password
- System
- Version

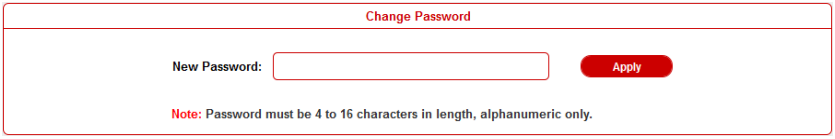
6.1.4 Welcome Menu



User can change the WEB GUI logo if they need. click **Browse** button to browse the Logo file, and then click **Upload** button.

Note: Image must be .png format.

6.1.5 Password



Input a new login password, click **Apply** button to save the change.

Note: Password must be 4 to 16 characters in length, alphanumeric only.

6.1.6 System

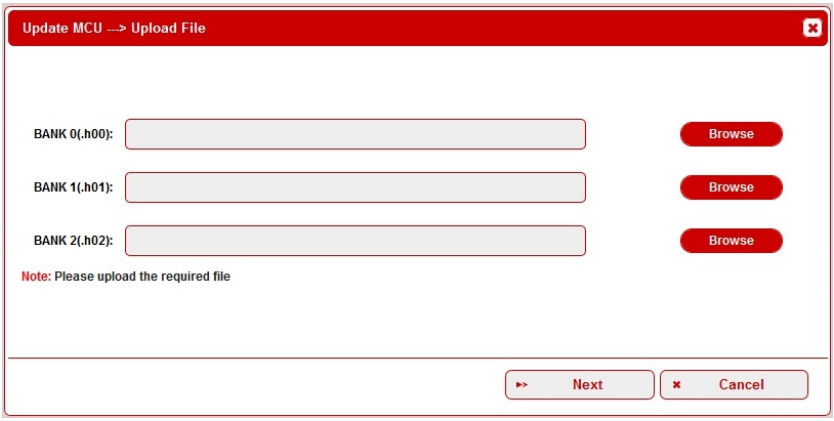
Factory Default: click this button to reset the TL-SM-HDVDP to factory default settings.

Reboot: click this button to reboot the TL-SM-HDVDP.

6.1.7 Version

Update MCU

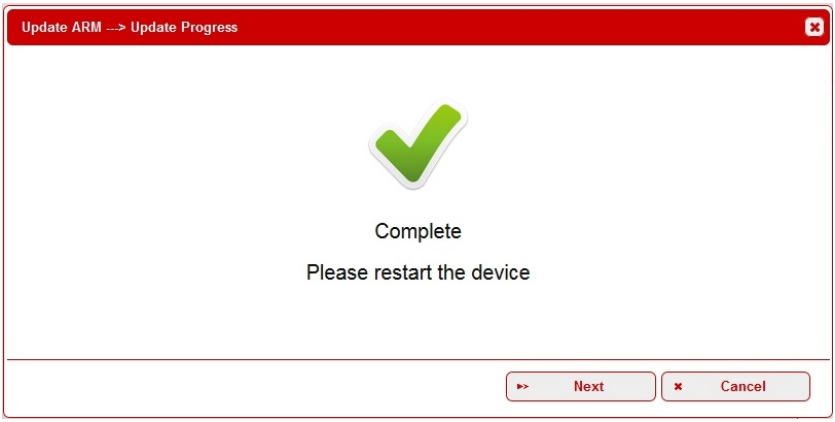
Step 1. click **Update** button.



Step 2. Browse for the update file

Step 3. Upload File OK, click **Next** button.

Step 4. It takes about one minute to update. Please restart the device.



Update ARM

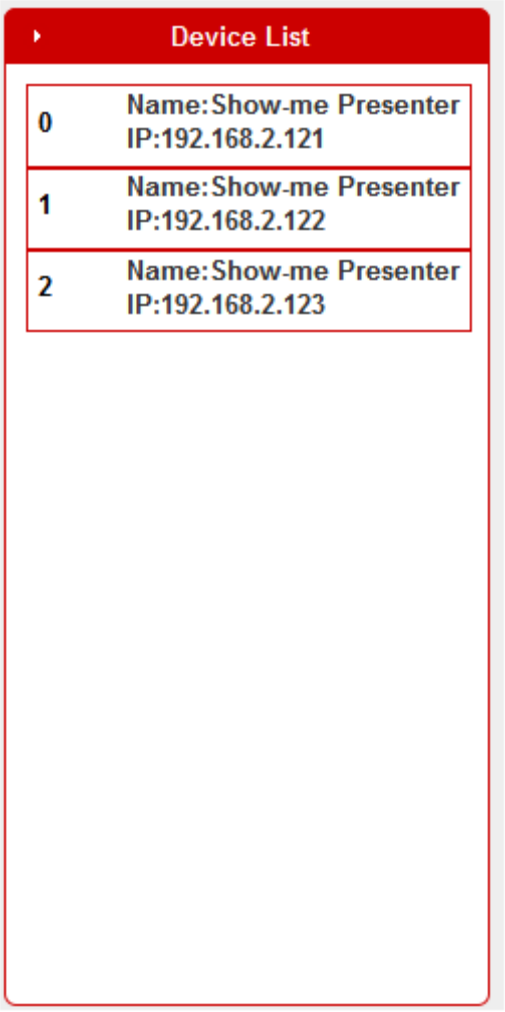
Step 1. click **Update** button.

Step 2. Browse for the update file.

Step 3. Upload File OK, click **Next** button.

Step 4. Complete. Close this window.

Device List Window



This window displays the name and IP address of current devices.

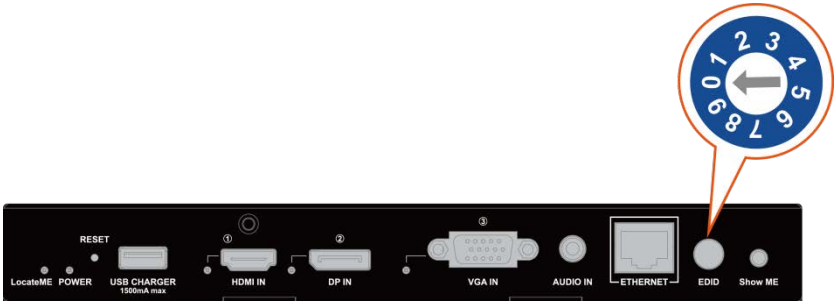
Click on the device, it will forward the user to the WEB GUI of the selected device.

Click the triangle icon to hide this window.

7. EDID Management

EDID (Extend Display Identification Data) is data generated from each display in the system to communicate the capabilities of the device. The TL-SM-HDVDP features an EDID copy mode that can be used when the EDID does not meet the installation requirements. The EDID mode has several options available to encourage device communication.

Set it to the appropriate position based on the preferred timing of connected display.



DIP Switch	EDID Description
0	HDMI/DP: 3840 x 2160@60Hz 2CH VGA: 1920 x 1200@60Hz 2CH
1	1920 x 1200@60Hz 2CH
2	1920 x 1080@60Hz 2CH
3	1680 x 1050@60Hz 2CH
4	1600 x 900@60Hz 2CH
5	1440 x 900@60Hz 2CH
6	1366 x 768@60Hz 2CH
7	1280 x 800@60Hz 2CH
8	1024 x 768@60Hz 2CH

8. Specification

Technical	
Input	1 x HDMI IN, 1 x DisplayPort IN, 1 x VGA IN, 1 x HDBaseT IN 1 x Audio in for VGA, DP/HDMI/HDBT embedding audio
Input Signal Type	HDMI: HDMI 2.0 w/HDCP 2.2, DP: DP 1.2 w/HDCP2.2 Audio: 3.5mm jack
Input Resolution Support	HDMI: 4096 x 2160@24/25/30/50/60Hz, 3840 x 2160@24/25/30/50/60Hz, 1080p@24/25/30/50/60Hz, 1080i@50/60Hz, 720p@50/60Hz, 576p@50Hz, 480p@60Hz; 1920 x 1200@60Hz, 1680 x 1050@60Hz, 1600 x 1200@60Hz, 1600 x 900@60Hz, 1440 x 900@60Hz, 1400 x 1050@60Hz, 1366 x 768@60Hz, 1360 x 768@60Hz, 1280 x 1024@60H, 1280 x 960@60Hz, 1280 x 800@60Hz, 1280 x 768@60Hz, 1024 x 768@60Hz, 800 x 600@60Hz DisplayPort: 800x600@60Hz, 1024x768@60Hz, 1280x768@60Hz, 1280x800@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1360x768@60Hz, 1366x768@60Hz, 1440 x900@60Hz, 1600 x900@60Hz, 1600 x1200@60Hz, 1680 x1050@60Hz, 1920 x1080@60Hz, 1920 x1200@60Hz,

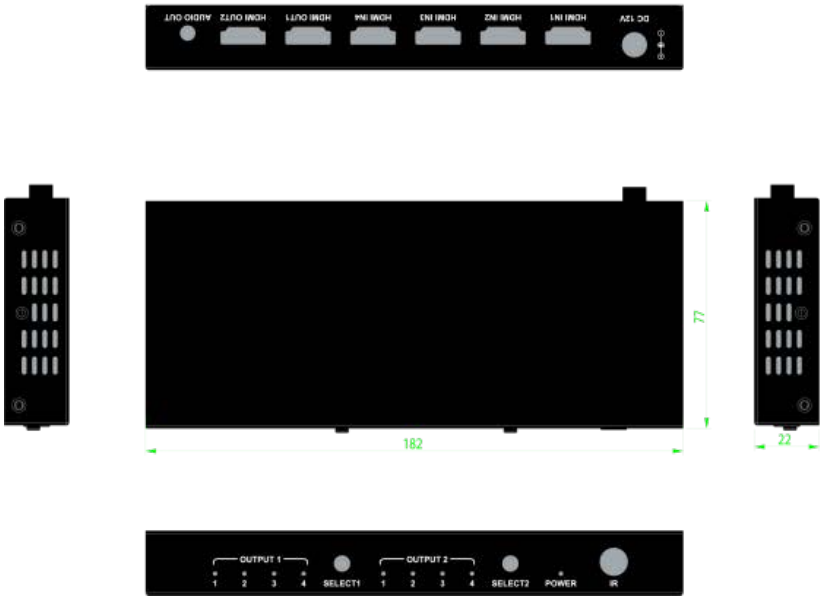
	1280x720P@50Hz, 1280x720P@60Hz, 1920x1080P@50Hz, 1920x1080P@60Hz, 3840x2160@50Hz, 3840x2160@60Hz, 4096x2160@50Hz, 4096x2160@60Hz. VGA: 800x600@60Hz, 1024x768@60Hz, 1280x768@60Hz, 1280x800@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1360x768@60Hz, 1366x768@60Hz, 1440 x900@60Hz, 1600 x900@60Hz, 1600 x1200@60Hz, 1680 x1050@60Hz, 1920 x1080@60Hz, 1920 x1200@60Hz, 1280x720P@50Hz, 1280x720P@60Hz, 1920x1080P@50Hz, 1920x1080P@60Hz,
Input Video Level	0.5-1.2 V p-p
Input DDC Level	5 volts p-p (TTL)
Output	1 x HDMI OUT, 1x HDBaseT OUT, 1 x HDMI audio de-embedded, Stereo
Output Signal Type	HDMI 1.4 w/HDCP 2.2 , HDBaseT;
Output Resolution Support	HDMI: 4096 x 2160@24/25/30/50/60Hz, 3840 x 2160@24/25/30/50/60Hz, 1080p@24/25/30/50/60Hz, 1080i@50/60Hz, 720p@50/60Hz, 576p@50Hz, 480p@60Hz; 1920 x 1200@60Hz, 1680 x 1050@60Hz, 1600 x 1200@60Hz, 1600 x 900@60Hz, 1440 x 900@60Hz, 1400 x 1050@60Hz, 1366 x 768@60Hz, 1360 x 768@60Hz, 1280 x 1024@60H, 1280 x 960@60Hz,

	1280 x 800@60Hz, 1280 x 768@60Hz, 1024 x 768@60Hz, 800 x 600@60Hz DisplayPort: 800x600@60 Hz, 1024x768@60Hz , 1280x768@60Hz, 1280x800@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1360x768@60Hz, 1366x768@60Hz, 1440 x900@60Hz, 1600 x900@60Hz, 1600 x1200@60Hz, 1680 x1050@60Hz, 1920 x1080@60Hz, 1920 x1200@60Hz, 1280x720P@50Hz, 1280x720P@60Hz, 1920x1080P@50Hz, 1920x1080P@60Hz, 3840x2160@50Hz, 3840x2160@60Hz, 4096x2160@50Hz, 4096x2160@60Hz. VGA: 800x600@60 Hz, 1024x768@60Hz , 1280x768@60Hz, 1280x800@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1360x768@60Hz, 1366x768@60Hz, 1440 x900@60Hz, 1600 x900@60Hz, 1600 x1200@60Hz, 1680 x1050@60Hz, 1920 x1080@60Hz, 1920 x1200@60Hz, 1280x720P@50Hz, 1280x720P@60Hz, 1920x1080P@50Hz, 1920x1080P@60Hz, Note: HDBaseT out: HDMI 1.4 with 4k@60Hz (Chroma sub-sampling 4:2:0 8-bit only)
Video Impedance	100 Ω
Maximum Pixel Clock	600MHz

Control	
Control Method	ShowME, Contact Closure, Telnet, Web GUI
General	
Operating Temperature	0°C to 45°C (32°F to 113°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F)
Humidity	10% to 90%, non-condensing
ESD Protection	Human-body Model: ±8kV(Air-gap discharge)/ ±4kV(Contact discharge)
Power Supply	DC 12V 3A
Power Consumption	20.52W (Maximum)
Device Dimension (W x H x D)	223mm x 27mm x 124.2mm / 8.78” x 1.06” x 4.89”
Product Weight	0.8kg
Certification	CE, FCC, RoHS

🕮 Use quality HDMI cable to connect the devices to ensure preferred transmission effect.

9. Panel Drawing



10. Troubleshooting & Maintenance

Problems	Causes	Solutions
Color loss or blurry/ double image on HDMI display	Poor quality HDMI cable	Change for a quality HDMI cable.
Power led is off, operations don't work	No power	Power up the unit
	Poor contact of power port	Make sure power adapter is properly seated
No output on the display	Source/ Display is off	Turn on the source/ display
	Poor contact of HDMI ports	Check the HDMI ports one by one to make sure they're properly seated.

🕮 If your problem persists after following the above troubleshooting steps, seek further help from authorized dealer or our technical support.

11. After-sales Service

If there appear some problems when running the device, please check and deal with the problems referenced in this user manual.

4) **Product Limited Warranty:** We warrant that our products will be free from defects in materials and workmanship for **three years.** Please see warranty page posted on www.tlnetworx.com for more info.
5) **What the warranty does not cover:**
   - Warranty expiration.
   - Factory applied serial number has been altered or removed from the product.
   - Damage, deterioration or malfunction caused by:
     - Normal wear and tear
     - Use of supplies or parts not meeting our specifications
     - No certificate or invoice as the proof of warranty.
     - The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.
     - Damage caused by force majeure.
     - Non-authorized service
     - Other causes which does not relate to a product defect
   - Delivery, installation or labor charges for installation or setup of the product
6) **Technical Support:** Email to our after-sales department or make a call, please inform us the following information about your cases.
   - Product version and name.
   - Detailed failure situations.
   - The formation of the cases.

Remarks: For any questions or problems, please try to get help from your local distributor.