WOXCON

User Manual

SM62T

6x2 4K Presentation Switcher with Matrix Outputs

Version: SM62T_2018V1.1

Preface

Read this user manual carefully before using the product. Pictures are shown in this manual for reference only. Different models and specifications are subject to real product.

This manual is only for operation instruction, please contact the local distributor for maintenance assistance. In the constant effort to improve the product, we reserve the right to make functions or parameters changes without notice or obligation. Please refer to the dealers for the latest details.

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 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 burn.
- Using supplies or parts not meeting the specifications of product 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 extrusion.
- 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 fine 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 twist or pull by force ends of the optical cable. It can cause malfunction.
- 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, and please treat them as normal electrical wastes.

Contents

1. Product Introduction

The SM62T is a 6 input multi-format (3 HDMI, 2 VGA, and 1 DP) 4K presentation switcher that switches video signals to an HDMI and an HDBaseT output. The HDBaseT output supports PoH and can connect to a compatible HDBaseT receiver up to a maximum of 70 meters (230 feet) (HDBaseT receiver sold separately).

The SM62T supports for video resolutions up to UHD (4Kx2K@30Hz 4:4:4). With multiple built-in EDID settings, including an EDID pass-through option, the highest quality digital video signal will be routed directly to the display. When a VGA video signal is connected, the video signal will be scaled up to 1920x1200.

The SM62T supports stereo and multichannel audio on the HDMI/DP inputs. The analog audio paired with the VGA inputs is embedded into the digital video stream. In addition to the audio embedded in the HDMI and HDBT output stream, which may be muted, the audio is simultaneously de-embedded to an amplifier, a digital optical audio output, and four analog audio outputs: two 3-pin phoenix connectors, a 3.5mm mini jack, and a 5-pin phoenix connector.

The SM62T features multiple methods of control. When set to Auto, the switcher will automatically switch to the newest source device added to the SM62T; when the active source is removed, the SM62T will switch to the first detected input. The SM62T can be manually controlled via front panel, IR, RS232, and GUI.

1.1 Features

- The transmission distance between the switcher and HDBaseT receiver can up to 70m at 1080p, and 40m at 4K video.
- Supports auto-switching.
- HDMI input supports 4Kx2K@30Hz 4:4:4, HDCP2.2.
- VGA video resolution can be selected as 1024x768, 1280x720, 1280x800, 1360x768, 1920x1080 or 1920x1200.
- The MIC and LINE input can be mixed to audio outputs.
- 3-type microphone input, supports condenser microphone, dynamic microphone and wireless microphone.
- Supports audio matrix: 1 MIC input, 1 LINE input,1 HDMI embedded audio input, 1 HDBT embedded input, 2 unbalance audio outputs (3-pin phoenix connectors), 1 balanced/unbalanced audio output (3-pin phoenix connector), 1 analog stereo audio output (3.5mm mini jack), 1 digital optical audio output (SPDF) and 1 2x20 watt@4Ω amplifier. The balanced/unbalanced audio output, analog stereo audio output and digital optical audio output are come from the same input audio.

- Supports embedded EDID selection and customized EDID.
- Supports 48V PoH for simplified wiring.
- Controllable via front panel buttons, IR Remote, RS232 & GUI.
- Supports online software upgrading.

1.2 Package List

- 1 x SM62T 6x2 4K Presentation Switcher
- 2 x Mounting Ears with 6 Screws
- 4 x Plastic Cushions
- 1 x IR Receiver (5V with carrier wave)
- 1 x IR Remote
- 1 x RS232 Cable (3-pin to DB9)
- 4 x 3-pin Phoenix Connectors
- 1 x 4-pin Phoenix Connector
- 1 x 5-pin Phoenix Connector
- 1 x Power Cord
- 1 x User Manual

***Note**: Please contact your distributor immediately if any damage or defect in the components is found.*

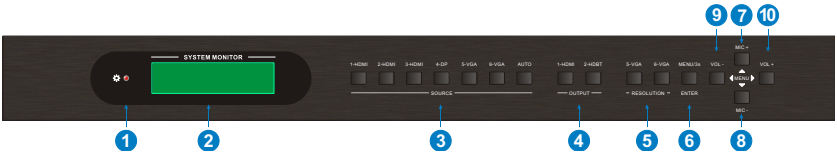
2. Specification

Video Input	
Input	(3) HDMI; (1) DP; (2) VGA
Input Connector	(3) Female HDMI; (1) DisplayPort; (2) Female VGA (15-pin)
Input Video Signal	HDMI, DP, VGA
HDMI Input Resolution	Up to 4Kx2K @30Hz 4:4:4
DP Input Resolution	Up to 4Kx2K@30Hz
VGA Input Resolution	Up to 1920x1200@50/60Hz
Video Output	
Output	(1) HDMI; (1) HDBT
Output Connector	(1) Female HDMI; (1) RJ45
Output Video Signal	HDMI, HDBaseT
HDMI Output Resolution	Up to 4Kx2K @30Hz 4:4:4
HDBT Output Resolution	Up to 4Kx2K @30Hz 4:4:4
VGA Scaling Resolution	1024x768, 1280x720, 1280x800, 1360x768, 1920x1080, or 1920x1200 can be selected.
Audio Input	
Input	(2) Stereo analog audio for VGA; (1) LINE audio; (1) Microphone audio
Input Connector	(2) 3.5mm stereo jacks; (2) 3-pin phoenix connectors
De-embedded Audio Input	HDMI and HDBT audio.
Input analog Audio Format	PCM
Audio Input Impedance	>10kΩ
Audio Output	
Output	(2) Unbalanced analog audio (AUDIO 1 and AUDIO 2); (1) L/R balanced/unbalanced analog audio (AUDIO 3); (1) Stereo analog audio (AUDIO 3); (1) Digital optical audio (AUDIO 3); (1) Power amplifier
Output Connector	(2) 3-pin phoenix connectors; (1) 5-pin phoenix connector; (1) 3.5mm stereo jack; (1) SPDIF;

	(1) 4-pin/5 mm phoenix connector
Output Analog Audio Format	PCM
Output Digital Audio Format	PCM/Dobly/DTS
Audio Output Impedance	70 Ohms
Frequency Response	20 Hz to 20 kHz, ±3dB
Common Mode Rejection Ratio (CMRR)	>70 dB at 20 Hz to 20 kHz
Signal to Noise Ratio (SNR)	80 dB (Max)
Control	
Control port	(1) EDID; (1) IR IN; (1) FIRWARE; (1) RS232; (1) TCP/IP
Control Connector	(1) 3-pin DIP switch; (1) 3.5mm mini jack; (1) Micro USB; (1) 3-pin phoenix connector; (1) RJ45
General	
Transmission Distance	HDBT OUT: 1080p≤70m; 4Kx2K≤40m
Operation Temperature	0 ~ +40℃
Storage Temperature	-10 ~ +55℃
Relative Humidity	10% ~ 90%
External Power Supply	100V~240V AC, 50/60Hz
Power Consumption	40W (Max)
Dimension (W*H*D)	436.4mm x 44mm x 236.5mm
Net Weight	2.4kg

3. Panel Description

3.1 Front Panel



① Power LED: GREEN when the device is in standby mode, RED when device is powered on.

② LCD Screen: Shows real-time operation status.

③ Source Selector:

- Manually press the **1-HDMI**, **2-HDMI**, **3-HDMI**, **4-DP**, **5-VGA** or **6-VGA** to select input channel.
- Press **AUTO**, and then press the output **1-HDMI** to enable the HDMI output port to automatically switch its input channel. Press them again to disable this auto mode.
- Press **AUTO**, and then press the output **2-HDBT** to enable the HDBT output port to automatically switch its input channel. Press them again to disable this auto mode.

④ Output Switch: Manually press the **1-HDMI**/**2-HDBT** to select output channel.

⑤ VGA Resolution Selector: Press **5-VGA**/**6-VGA** to respectively set its output resolution as 1024x768, 1280x720, 1280x800, 1360x768, 1920x1080 and 1920x1200, press again to switch to the next one. For example, when press again at 1920 x 1200, return back to the first one as 1024x768.

⑥ ENTER and MENU/3s:

- ENTER: Confirm button.
- MENU/3s: Press and hold for 3 seconds to enter link status query menu.

⑦ MIC+: Microphone input volume up adjuster or up key for query menu.

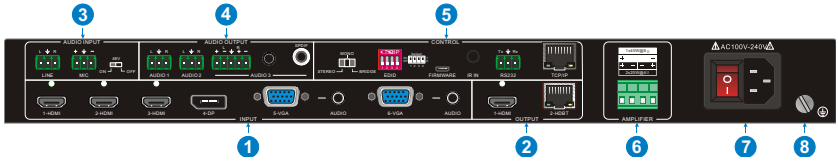
⑧ MIC-: Microphone input volume down adjuster or down key for query menu.

⑨ VOL-: MASTER volume down or left key for navigation menu.

⑩ VOL+: MASTER volume up or right key for navigation menu.

Note: *The MASTER volume indicates all audio outputs volume.*

3.2 Rear Panel



① INPUT: 3 HDMI, 1 DP and 2 VGA with auxiliary audio inputs.

② OUTPUT:

- 1-HDMI: HDMI video output port.
- 2-HDBT: Supports 48V PoH. Connect with a compatible HDBaseT receiver to transmit AV signal, IR or RS232 control signal.

③ AUDIO INPUT:

- LINE: 3-pin phoenix connector for connecting connect with wireless microphone or line audio input source.
- MIC: 3-pin phoenix connector for connecting condenser or dynamic microphone input
- 48V phantom power mode switch: When put this switch in “ON” position, the MIC port for connecting condenser microphone. When put this switch in “OFF” position, the MIC port for connecting dynamic microphone.

④ AUDIO OUTPUT:

- AUDIO 1: 3-pin phoenix connector for analog audio output.
- AUDIO 2: 3-pin phoenix connector for analog audio output.
- AUDIO 3: Including the below three ports to simultaneously output same audio.
  1) 5-pin phoenix connector for balanced/unbalanced analog audio output.
  2) 3.5mm mini jack for stereo analog audio output.
  3) SPDIF for digital optical audio output.

⑤ CONTROL

- Amplifier Output Mode Selector: Stereo, mono or bridge.
- EDID: 4-pin DIP switch for invoking embedded EDID.
- FIRMWARE: Micro-USB port for updating system firmware.
- IR IN: Connect with the IR receiver (with carrier wave only) to control this switcher via the including IR remote.
- RS232: Serial port, 3-pin phoenix connector, connect with a control device (such as PC) to control the switcher or other third-party device connected with

HDBaseT receiver.

- TCP/IP: Ethernet port, connect with PC to control the switcher via GUI.

⑥ AMPLIFIER: 4/8 Ohm speaker outputs.

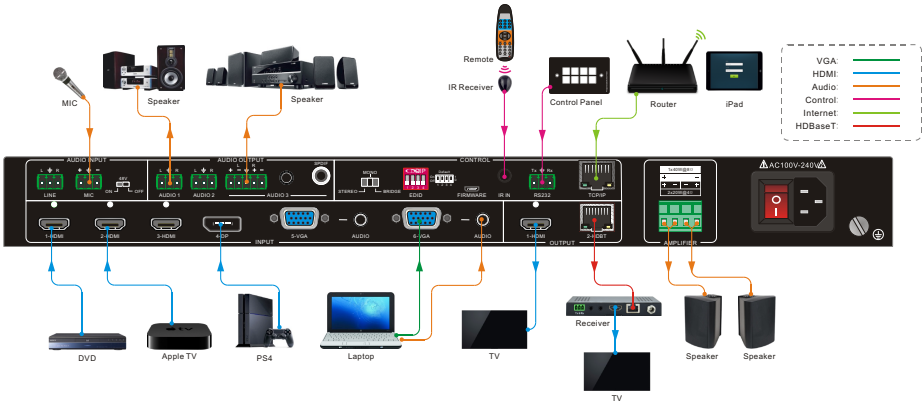
⑦ AC100V~240V: Power port, connect to an AC 100V~240V power via the included power cord.

4. System Connection

4.1 Usage Precaution

- Verify all components and accessories included before installation.
- System should be installed in a clean environment with proper temperature and humidity.
- All of the power switches, plugs, sockets, and power cords should be insulated and safe.
- All devices should be connected before power on.

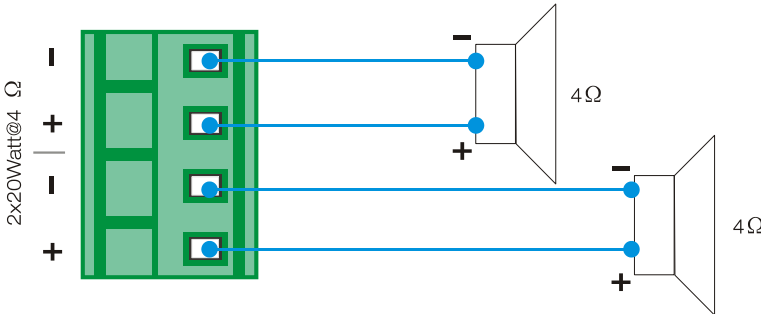
4.2 System Diagram



4.3 Speaker Wiring

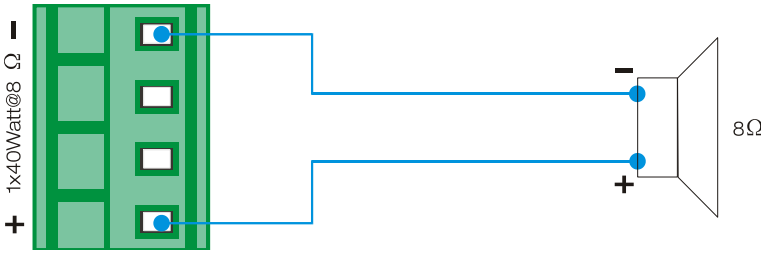
4.3.1 Stereo and Mono Options

4Ω Load with 4Ω Speakers:



4.3.2 Bridged Audio Option

8Ω Load with 8Ω Speakers:



5. Button Control

The front panel buttons can be used for signal switching, VGA resolution, and volume adjustment.

5.1 Manual Signal Switching

First press any one of six inputs button, second press either 1-HDMI or 2-HDBT output button, and finally press ENTER to select. The following are two examples:

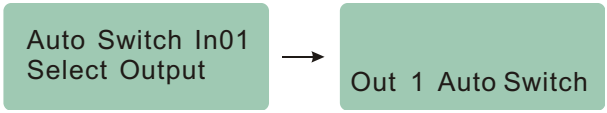
1) Switch **2-HDMI** input to **1-HDMI** output:

2) Switch **5-VGA** input to **2-HDBT** output:

5.2 Auto Signal Switching

- Press **AUTO**, and then press the output **1-HDMI** to enable the HDMI output port to automatically switch its input channel. Press them again to disable this auto mode.
- Press **AUTO**, and then press the output **2-HDBT** to enable the HDBT output port to automatically switch its input channel. Press them again to disable this auto mode.

For example: Enable auto switching mode for 1-HDMI output:



The auto-switching mode abides by the following principles:

✓ New input
Once detecting a new input signal, the switcher would switch to this new signal automatically.

✓ Rebooting device
The switcher has the ability to save the last configuration before losing power. If the last switching mode is auto-switching, once rebooted, the switcher will automatically enter auto-switching mode, then detect all inputs and memorize their connection status for future rebooting using. If the last displayed signal is still available, the unit

will output the signal. If not, the unit will detect all the input signals with priority from 1-HDMI to 6-VGA. When detected the first signal, it will transfer to output.

✓ Signal removing
Once removing the current display signal, the switcher will detect all input signals with priority from 1-HDMI to 6-VGA. It will transfer the signal firstly detected to be available to output devices.

5.3 VGA Scaling Resolution Selection

Press **5-VGA/6-VGA** to set its output resolution, press again to select next one (1024x768, 1280x720, 1280x800, 1360x768, 1920x1080, or 1920x1200).

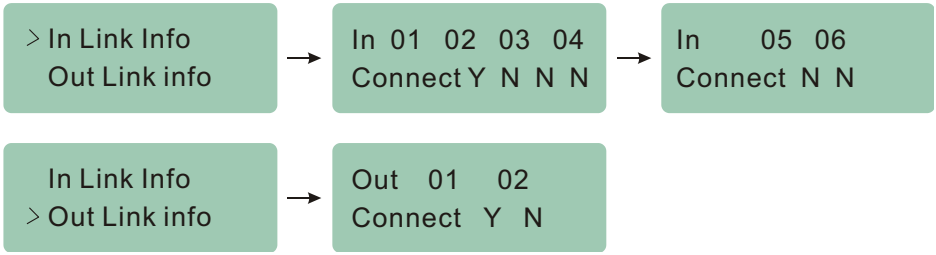
5.4 Volume Adjustment

Press **MIC+** or **MIC-** to increase or decrease microphone volume.

Press **VOL+** or **VOL-** to simultaneously increase or decrease the volume of all audio outputs.

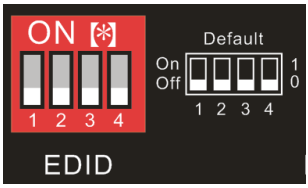
5.5 Link Status Query

Press and hold **MENU/3s** for 3 seconds to enter link status query menu, and then press **Up** and **Down** key to select **IN Link Info** or **OUT Link Info**, press **Right** key to enter status information interface, finally, press **Up** or **Down** key to turn previous or next page.



5.6 Embedded EDID Invoking

The rear panel boasts a 4-pin DIP switcher to invoke embedded EDID. The embedded EDID data and their corresponding DIP switcher status are shown in the below list.

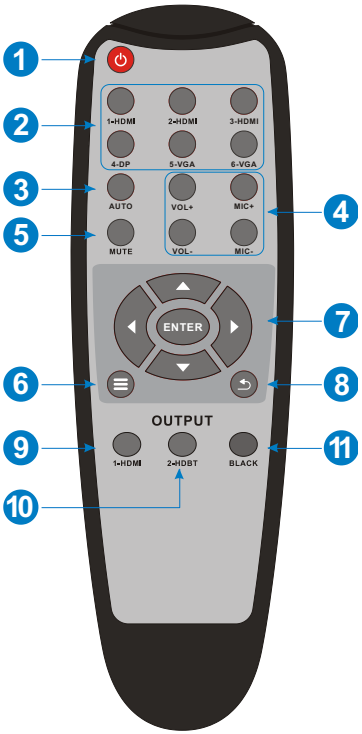


DIP Switcher

ID	Status	EDID
0	0000	The source device obtains its EDID from HDBT output.
1	0001	The source device obtains its EDID from HDMI output.
2	0010	1080p 3D PCM 2CH AUDIO
3	0011	1080p 2D PCM 2CH AUDIO
4	0100	1080i 3D PCM 2CH AUDIO
5	0101	1080i 2D PCM 2CH AUDIO
6	0110	4K PCM 2CH AUDIO
	1111	Enable RS232 or GUI control mode to set EDID.

6. IR Remote Control

Connect IR receiver to **IR IN** port, the switcher can be controlled by using the including IR Remote.



① Enter/ exit standby mode.

② Source Selector (1~6): Select video source via pressing corresponding button (VGA audio switched following the corresponding video signal).

③ AUTO: Press **AUTO** + **1-HDMI**/ **2-HDBT** output to enable HDMI or HDBT auto switching mode, press again to disable.

④ Volume adjustment:

- MIC+ and MIC-: Microphone volume adjuster.
- VOL+ and VOL-: Output volume adjuster.

⑤ MUTE: Mute/ unmute all output audio.

⑥ ENTER: confirm button; Navigation buttons: Up/Down/Left/ Right button, for value setting or page-turn on link status query menu.

⑦ Enable/disable link status query menu.

⑧ Exit button: Exit link status query menu or current operation.

⑨ 1-HDMI: Turn on/off HDMI output.

⑩ 2-HDBT: Turn on/off HDBT output.

⑪ BLACK: Press **BLACK** + **1-HDMI**/**2-HDBT** to output black screen.

7. RS232 Control

The switcher can be controlled by sending RS232 commands. As RS232 signal can be transmitted from the switcher to HDBaseT receiver, so it is able to control a far-end third-party device based on RS232 pass-through function.

The baud rate can support 2400, 4800, 9600(default), 19200, 38400, 57600 or 115200.

7.1 RS232 Control Software

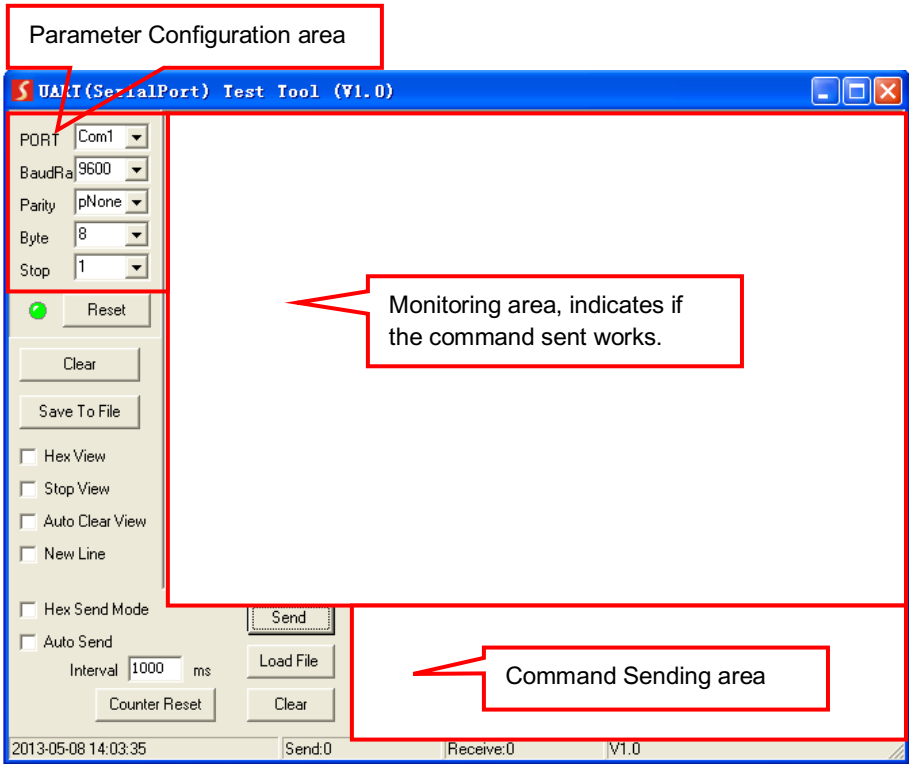
- **Installation:** Copy the control software file to the computer connected with the switcher.
- **Uninstallation**: Delete all the control software files in corresponding file path.

Basic Settings:

First to connect the switcher with all input devices and output devices needed, then to connect it with a computer which is installed with RS232 control software.

Double-click the software icon to run this software. Here we take the software **CommWatch.exe** as example. The icon is shown as below:

The interface of the control software is shown as below:



Please set the parameters of COM number, bound rate, data bit, stop bit and the parity bit correctly, and then you are able to send command in Command Sending Area.

7.2 RS232 Communication Command

Communication protocol: RS232 Communication Protocol
Baud rate: 9600 Data bit: 8 Stop bit: 1 Parity bit: none

7.2.1 System Command

Command	Description	Command Example and Response
/*Type;	Report system model.	/*Type; SM62T
/%Lock;	Lock front panel buttons.	/%Lock; System Locked!
/%Unlock;	Unlock front panel buttons.	/%Unlock; System UnLock!
/^Version;	Report software version.	/^Version; V1.0.0
Demo.	Switch to demo testing mode, switch AV 1>1, 2>2 and so on.	Demo. Demo Mode AV:01->01 AV:02->01 AV:03->01 AV:04->01 AV:05->01 AV:06->01 AV:01->02 AV:02->02 AV:03->02 AV:04->02 AV:05->02 AV:06->02
Undo.	Cancel the previous operation.	Undo. Undo Ok!
PWON.	Power on the system.	PWON. PWON
PWOFF.	Power off the HDBaseT power.	PWOFF. PWOFF
STANDBY.	Turn the system to standby mode.	STANDBY. STANDBY
%9961.	Report the system locking status.	%9961.

Command	Description	Command Example and Response
		System UnLock! System Locked!
%9962.	Report the system power status.	%9962. PWON /PWOFF
%9964.	Report the IP address.	%9964. IP:192.168.0.178
%0911.	Reset to factory default.	%0911. Factory Default V1.0.1 System UnLock! IP:192.168.0.178 LCD 2: SM62T LCD 1: HDBaseT Matrix

7.2.2 Signal Switching

Command	Description	Command Example and Response
HDMI Auto.	Automatically switch input source to HDMI output.	HDMI Auto. HDMI Auto Switch.
HDMI Manual.	Manually switch input source to HDMI output.	HDMI Manual. HDMI Manual Switch.
HDBT Auto.	Automatically switch input source to HDBT output.	HDBT Auto. HDBT Auto Switch.
HDBT Manual.	Manually switch input source to HDBT output.	HDBT Manual. HDBT Manual Switch.
[x]All.	Switch input [x] AV to all output. x=1~6.	2All. 02 To All.
All#.	Switch all input signal to the corresponding output channel.	All#. All Through.
All$.	Switch off all output.	All$. All Closed.
[x]#.	Switch input [x] to output [x]. x=1~2.	1#. 01 Through.
[x]$.	Turn off output [x]. x=1~2.	1$. 01 Closed.

Command	Description	Command Example and Response
[x]@.	Turn on output [x]. x=1~2.	1@. 01 Open.
All@.	Turn on all outputs.	All@. All Open. Out 01 02 In 04 04
[x]V[y].	Switch input [x] to output [y]. x=1~6, y=1~2.	1V1. AV: 1->1.
Status[x].	Report the input channel on output [x]	Status1. AV: 1->1.
Status.	Report the input channel on output channel one by one.	Status. AV: 05->01.AV: 02->02.
Black/[x]:[y].	Set output [x] to output black screen. x= 1~2, y= 1 (black screen) /0(no black screen)	Black/1:1. Black/1:1.
%9971.	Get the input link status.	%9971. In 01 02 03 04 Connect Y Y Y Y In 05 06 Connect Y Y
%9972.	Get the output link status.	%9972. Out 01 02 Connect Y Y
%9975.	Get the switching status.	%9975. Out 01 02 In 01 02
%9979.	Get the black screen status of outputs.	%9979. Out 1 is Unblack. Out 2 is Black.

7.2.3 Preset Setting

Command	Description	Command Example and Response
Save[y].	Store the current switching status to present [y]. y=0~ 9.	Save3. Save To F3
Recall[y].	Recall present [y]. y=0~ 9.	Recall9. Recall From F9
Clear[y].	Clear the present [y].	Clear9. Clear F9

7.2.4 Audio Setting

Command	Description	Command Example and Response
SetLineVol:xxx.	Set line audio volume to xxx (0~100).	SetLineVol:95. Volume of LINE : 95.
LineVolume+.	Line audio volume +1.	LineVolume+. Volume of LINE : 96.
LineVolume-.	Line audio volume -1.	LineVolume-. Volume of LINE : 94.
LineMute.	Mute line audio.	Line Mute.
LineUnmute.	Unmute line audio.	Line Unmute.
SetMicVol: xxx.	Set microphone audio volume to xxx (0~100).	SetMicVol: 90. Volume of Mic : 90.
MicVolume+.	Microphone audio volume +1.	MicVolume+. Volume of Mic : 91.
MicVolume-.	Microphone audio volume -1.	MicVolume-. Volume of Mic : 89.
MicMute.	Mute microphone audio.	Mic Mute.
MicUnmute.	Unmute microphone audio.	Mic Unmute.
SetMasterVol:xxx.	Set master audio (all audio output) volume to xxx (0~100).	SetMasterVol:80. Volume of Master : 80.
MasterVolume+.	Master audio volume +1.	MasterVolume+. Volume of Master : 81.
MasterVolume-.	Master audio volume -1.	MasterVolume-. Volume of Master :90.
MasterMute.	Mute master audio.	Master Mute.
MasterUnmute.	Unmute master audio.	Master Unmute.
SetOut1Vol:xxx.	Set the volume of audio output 1 to xxx (0~100).	SetOut1Vol:70. Volume of Out1 :70.
Out1Volume+.	The volume of audio output 1 +1.	Out1Volume+. Volume of Out1 :71.
Out1Volume-.	The volume of audio output 1 -1.	Out1Volume-. Volume of Out1 :69.
Out1Mute.	Mute the volume of audio output 1.	Out1 Mute.
Out1Unmute.	Unmute the volume of audio output 1.	Out1 Unmute.
SetOut2Vol: xxx.	Set the volume of audio output 2 to xxx (0~100).	SetOut2Vol:70. Volume of Out2 :70.

Command	Description	Command Example and Response
Out2Volume+.	The volume of audio output 2 +1.	Out2Volume+. Volume of Out2 :71.
Out2Volume-.	The volume of audio output 2 -1.	Out2Volume-. Volume of Out2 :69.
Out2Mute.	Mute the volume of audio output 2.	Out2 Mute.
Out2Unmute.	Unmute the volume of audio output 2.	Out2 Unmute.
SetOut3Vol: xxx.	Set the volume of audio output 3 to xxx (0~100).	SetOut3Vol:70. Volume of Out3 :70.
Out3Volume+.	The volume of audio output 3 +1.	Out3Volume+. Volume of Out3 :71.
Out3Volume-.	The volume of audio output 3 -1.	Out3Volume-. Volume of Out3 :69.
Out3Mute.	Mute the volume of audio output 3.	Out3 Mute.
Out3Unmute.	Unmute the volume of audio output 3.	Out3 Unmute.
SetAmpVol:xxx.	Set amplifier volume to xxx (0~100).	SetAmpVol:80. Volume of Amp : 80.
AmpVolume+.	Amplifier volume +1.	AmpVolume+. Volume of Amp : 81.
AmpVolume-.	Amplifier volume -1.	AmpVolume-. Volume of Amp : 79.
AmpMute.	Mute amplifier.	Amp Mute.
AmpUnmute.	Unmute amplifier.	Amp Unmute.
SetHdOutVol:xxx.	Set HDMI audio output volume to xxx (0~100).	SetHdOutVol:80. Volume of HdOut : 80.
HdOutVolume+.	HDMI audio output volume +1.	HdOutVolume+. Volume of HdOut : 81.
HdOutVolume-.	HDMI audio output volume -1.	HdOutVolume-. Volume of HdOut : 79.
HdOutMute.	Mute HDMI audio output volume.	HdOut Mute.
HdOutUnmute.	Unmute HDMI audio output volume.	HdOut Unmute.
SetBtOutVol: xxx.	Set HDBT audio output volume to xxx (0~100).	SetBtOutVol: 80. Volume of BtOut : 80.
BtOutVolume+.	HDBT audio output volume +1.	BtOutVolume+. Volume of BtOut : 81.

Command	Description	Command Example and Response
BtOutVolume-.	HDBT audio output volume -1.	BtOutVolume-. Volume of BtOut : 79.
BtOutMute.	Mute HDBT audio output volume.	BtOut Mute.
BtOutUnmute.	Unmute HDBT audio output volume.	BtOut Unmute.
DelayTime/[x]:[y].	Set the delay time [y] for audio output [x]. x= 1~6, y=0~2000ms.	DelayTime/3:200.
[x]Mix[y].	Switch audio input [x] to audio output [y]. x= 1~4, y=1~6.	4Mix2.
[x]Unmix[y].	Disconnect audio input [x] to audio output [y]. x= 1~4, y=1~6.	4Unmix2.
[x1],[x2],[x3],[x4] Mix[y].	Switch audio input [x1], [x2], [x3], [x4] to audio output [y]. x1~ x4 = 1~4, y=1~6.	1,2,3,4Mix[6]. 1,2,3,4A[6].
[x1],[x2],[x3],[x4] Unmix[y].	Disconnect audio input [x1], [x2], [x3], [x4] to audio output [y]. x= 1~4, y=1~6.	1,2,3,4Unmix[6]. 1,2,3,4A[6].
AllMix.	All input audio mixed all audio outputs.	AllMix. 1,2,3,4A1. 1,2,3,4A2. 1,2,3,4A3. 1,2,3,4A4. 1,2,3,4A5. 1,2,3,4A6.
AllUnmix.	Cancel all audio mixing input.	AllUnmix. 0,0,0,0A1. 0,0,0,0A2. 0,0,0,0A3. 0,0,0,0A4. 0,0,0,0A5. 0,0,0,0A6.
%9978.	Get all audio status.	%9978. Mic Unmute. Line Unmute. Master Unmute. Out1 Unmute. Out2 Unmute.

Command	Description	Command Example and Response
		Out3 Unmute. Amp Unmute. HdOut Unmute. BtOut Unmute. Volume of MIC : 48. Volume of LINE : 61. Volume of MASTER : 55. Volume of Out1 : 50. Volume of Out2 : 50. Volume of Out3 : 50. Volume of Amp : 50. Volume of HdOut : 50. Volume of BtOut : 50.
%9967.	Get the audio status of HDMI and HDBT outputs.	%9967. Out 1 is MIX Audio Out 2 is HDMI Audio
%9920.	Get the mixing status of input and output audio.	%9920. 1,0,0,0A1. 0,2,0,0A2. 0,0,3,0A3. 0,0,0,4A4. 0,0,0,0A5. 0,0,0,0A6.
%9921.	Get microphone audio mute status.	%9921. Mic Mute. Mic Unmute.
%9922.	Get line audio mute status.	%9922. Line Mute. Line Unmute.
%9923.	Get master audio mute status.	%9923. Master Mute. Master Unmute.
%9924.	Get audio output 1 mute status.	%9924. Out1 Mute. Out1 Unmute.
%9925.	Get audio output 2 mute status.	%9925.

Command	Description	Command Example and Response
		Out2 Mute. Out2 Unmute.
%9926.	Get audio output 3 mute status.	%9926. Out3 Mute. Out3 Unmute.
%9927.	Get amplifier mute status.	%9927. Amp Mute. Amp Unmute.
%9928.	Get the microphone audio volume.	%9928. Volume of MIC : 80.
%9929.	Get the line audio volume.	%9929. Volume of LINE : 80.
%9930.	Get the master audio volume.	%9930. Volume of MASTER : 80.
%9931.	Get the volume of audio output 1.	%9931. Volume of Out1 : 80.
%9932.	Get the volume of audio output 2.	%9932. Volume of Out2 : 80.
%9933.	Get the volume of audio output 3.	%9933. Volume of Out3 : 80.
%9934.	Get the amplifier audio volume.	%9934. Volume of Amp : 80.
%9935.	Get the audio volume of HDMI output.	%9935. Volume of HdOut : 80.
%9936.	Get the audio volume of HDBT output.	%9936. Volume of BtOut : 80.
%9937.	Get HDMI output mute status.	%9937. HdOut Mute. HdOut Unmute.
%9938.	Get HDBT output mute status.	%9938. BtOut Mute. BtOut Unmute.

7.2.5 VGA Scaling Resolution Setting

The default output resolution for VGA is 1920x1080. Below is a list of the output resolutions the built-in scaler can output.

<table>
<tr><th>Command</th><th>Description</th><th>Command Example and Response</th></tr>
<tr><td>VRES/[x]:[y].</td><td>x=5/6 is the number of the VGA input port;
y=1~6 is the number of resolution.
<table>
<tr><td>y</td><td>Resolution</td></tr>
<tr><td>1</td><td>1024x768</td></tr>
<tr><td>2</td><td>1280x720</td></tr>
<tr><td>3</td><td>1280x800</td></tr>
<tr><td>4</td><td>1360x768</td></tr>
<tr><td>5</td><td>1920x1080</td></tr>
<tr><td>6</td><td>1920x1200</td></tr>
</table></td><td>VRES/5:1.
Resolution
In 5 1024x768</td></tr>
<tr><td>%9965.</td><td>Get the 5-VGA input resolution.</td><td>%9965.
Resolution
In 5 1920x1080</td></tr>
<tr><td>%9966.</td><td>Get the 6-VGA input resolution.</td><td>%9966.
Resolution
In 6 1920x1080</td></tr>
<tr><td>%9976.</td><td>Get the output resolution.</td><td>%9976.
Resolution
Out 1 1920x1080
Out 2 1920x1080</td></tr>
</table>

7.2.6 EDID Configuration

The 4-pin DIP switcher on rear panel must be set as “1111” to enable EDID RS232 control mode, and then send the below commands to manage EDID.

Command	Description	Command Example and Response
EDIDH[x]B[y].	Set the EDID data of output [x] to input [y].If the EDID data is available and the audio part supports not only PCM format, then force-set it to only support PCM. If the EDID data is not available, it will set to initial EDID.	EDIDH2B1 EDIDH2B1
EDIDPCM[x].	Set the audio format of input [x] to PCM.	EDIDPCM1 EDIDPCM1
EDIDG[x].	Get the EDID data from output [x].	
EDIDMInit.	Reset factory default EDID to all input ports.	EDIDMInit. EDIDMInit.
EDIDM[x]B[y].	Set the EDID data of output [x] to input [y]. If the EDID data is not available, the switcher will set it to initial EDID data.	EDIDM2B1. EDIDM2B1.
EDIDUpgrade[x].	Upgrade the EDID data of the input port [x]. When the command applied, system prompts to upload the EDID file (.bin). Operation will be cancelled in 10 seconds	EDIDUpgrade1.

<table>
<tr><th>Command</th><th>Description</th><th>Command Example and Response</th></tr>
<tr><td>EDIDIN/[x]/[y].</td><td>The input [x] invoke embedded EDID [y].
<table>
<tr><th>y</th><th>EDID</th></tr>
<tr><td>1</td><td>The source device obtains its EDID from HDBT output.</td></tr>
<tr><td>2</td><td>The source device obtains its EDID from HDMI output.</td></tr>
<tr><td>3</td><td>1080p 3D PCM 2CH</td></tr>
<tr><td>4</td><td>1080p 2D PCM 2CH</td></tr>
<tr><td>5</td><td>1080i 3D PCM 2CH</td></tr>
<tr><td>6</td><td>1080i 2D PCM 2CH</td></tr>
</table></td><td>EDIDIN/1/0.
EDIDIN/1/0</td></tr>
<tr><td>GetInPortEDID[x].</td><td>Get the EDID of input [x].</td><td>GetInPortEDID1.</td></tr>
<tr><td>%9977.</td><td>Get the EDID DIP switch status.</td><td>%9977.
EDID_RS232_GUI_CONTROL 1111
EDID_BYPASS 0000
EDID_BYPASS 0001
EDID_1080P_2D_PCM2CH 0011</td></tr>
</table>

7.2.7 HDCP Compliance

Command	Description	Command Example and Response
%0801.	Auto HDCP management mode.	%0801. HDCP AUTO.
%9973.	Get the HDCP status of input ports.	%9973. In 01 02 03 04 HDCP Y Y Y N In 05 06 HDCP N N
%9974.	Get the HDCP status of output ports.	%9974. Out 01 02 HDCP Y Y
%9968.	Get the management mode of output ports.	%9968. Out 1 is HDCP Auto Mode. Out 2 is HDCP Auto Mode.

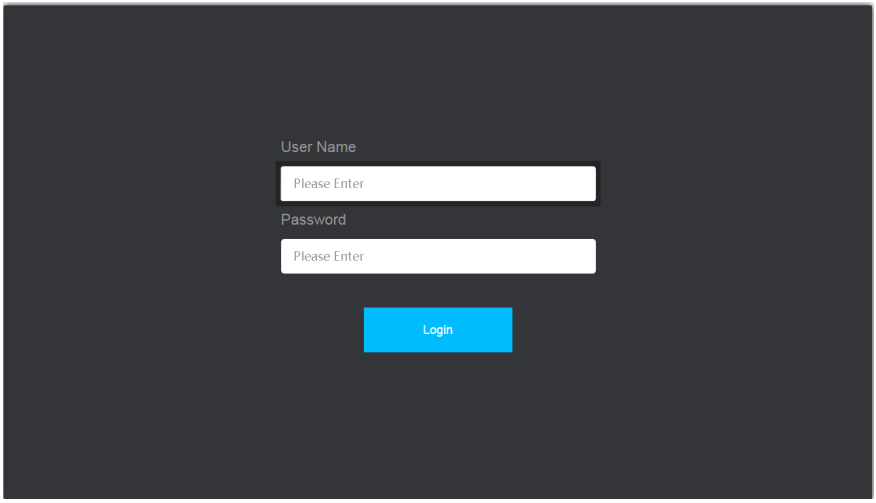
7.2.8 Control Far-end Device

<table>
<tr><th>Command</th><th>Description</th><th>Command Example and Response</th></tr>
<tr><td>/+1/[x]:******.</td><td>Send ASCII command to control far-end device from switcher to receiver based on RS232 pass-through function.
① x = 1~7 is for baud rate.
<table>
<tr><th>x</th><th>Baud Rate</th></tr>
<tr><td>1</td><td>2400</td></tr>
<tr><td>2</td><td>4800</td></tr>
<tr><td>3</td><td>9600,</td></tr>
<tr><td>4</td><td>19200</td></tr>
<tr><td>5</td><td>38400</td></tr>
<tr><td>6</td><td>57600</td></tr>
<tr><td>7</td><td>115200</td></tr>
</table>
② ***** is for ASCII data (max 48 Byte).</td><td>/+1/[3]:123456.
123456</td></tr>
<tr><td>/-1/[x]:** ** **.</td><td>Send HEX command to control far-end device from switcher to receiver based on RS232 pass-through function.
① x = 1~7 is for baud rate.
<table>
<tr><th>x</th><th>Baud Rate</th></tr>
<tr><td>1</td><td>2400</td></tr>
<tr><td>2</td><td>4800</td></tr>
<tr><td>3</td><td>9600,</td></tr>
<tr><td>4</td><td>19200</td></tr>
<tr><td>5</td><td>38400</td></tr>
<tr><td>6</td><td>57600</td></tr>
<tr><td>7</td><td>115200</td></tr>
</table>
② ***** is for HEX data (max 48 Byte).</td><td>/-1/[X]:98 0A fe.
98 0A fe</td></tr>
</table>

8. GUI Control

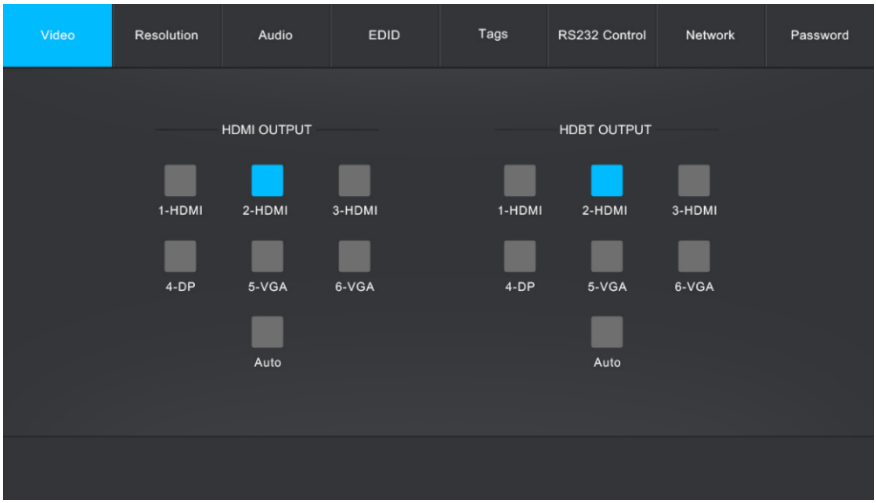
In addition to control the switcher via front panel button, IR remote and RS232 communication software. The switcher can be controlled via GUI. It allows users to interact with the switcher through graphical icons and visual indicators.

Type ***192.168.0.178*** in your browser, it will enter the log-in webpage shown as below:



8.1 Video Switching

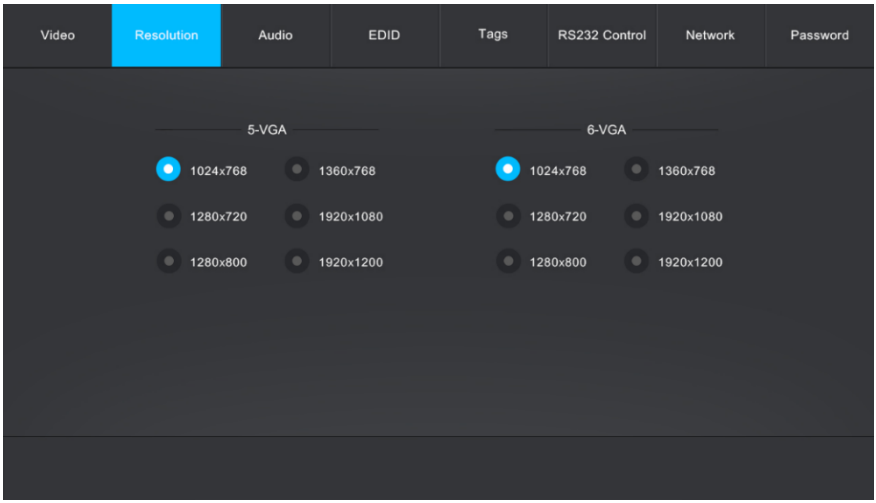
Type the user name and password (both of them are “admin”), and then click **Login** to enter the section for video switching.



- **HDMI OUTPUT**: Switch 1-HDMI, 2-HDMI, 3-HDMI, 4-DP, 5-VGA or 6-VGA input to HDMI output.
- **HDBT OUTPUT**: Switch 1-HDMI, 2-HDMI, 3-HDMI, 4-DP, 5-VGA or 6-VGA input to HDBT output.
- **AUTO**: Enable/disable auto switching mode.

8.2 VGA Scaling Resolution Selection

Click **Resolution** to enter the section for selecting VGA resolution.



- 1024x768, 1280x720, 1280x800, 1360x768, 1920x1080, or 1920x1200 can be selected for port 5-VGA and port 6-VGA.

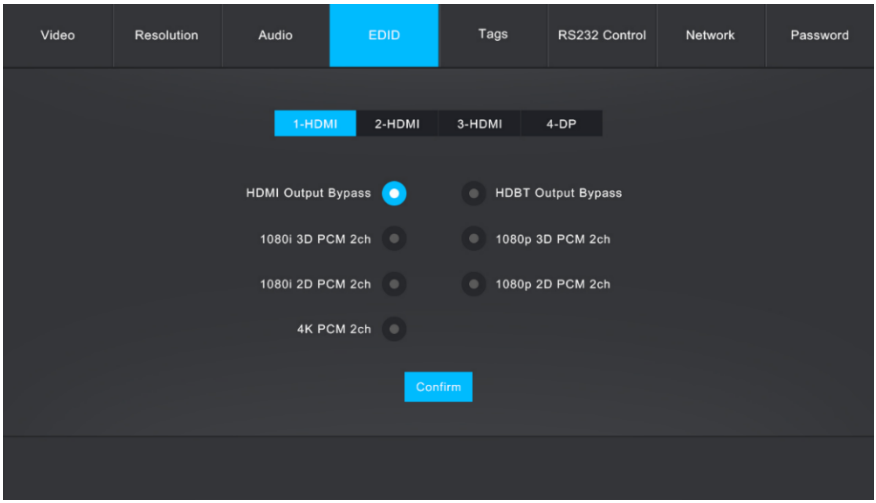
8.3 Audio Switching and Volume Adjustment

Click **Audio** to enter the section for audio matrix switching and volume adjustment.

- **LINE/MIC**: Volume control for line or microphone input.
- **MASTER Volume**: Volume control for all audio outputs.
- **MIX**: Audio matrix for switching de-embedded HDMI audio, de-embedded HDBT audio, LINE or MIC audio to audio outputs.
- **Volume**: Volume control for audio outputs.

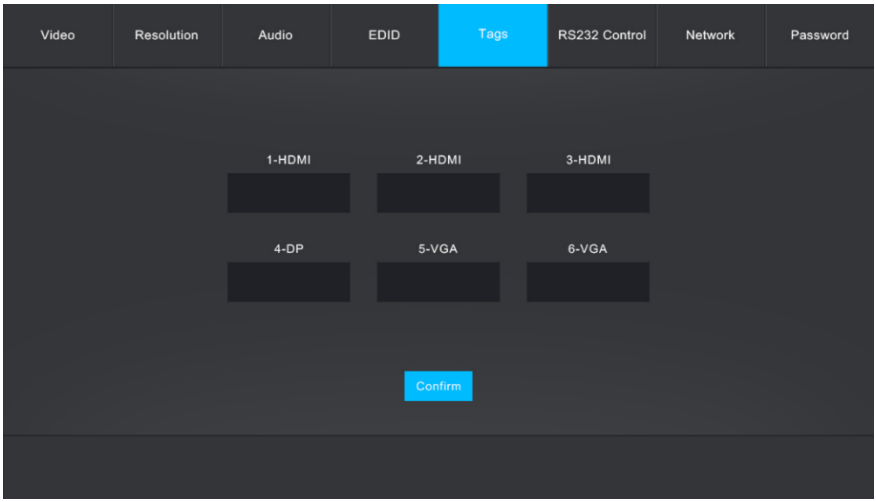
8.4 EDID Management

Click **EDID** to enter the section for invoking embedded EDID to HDMI and DP inputs.



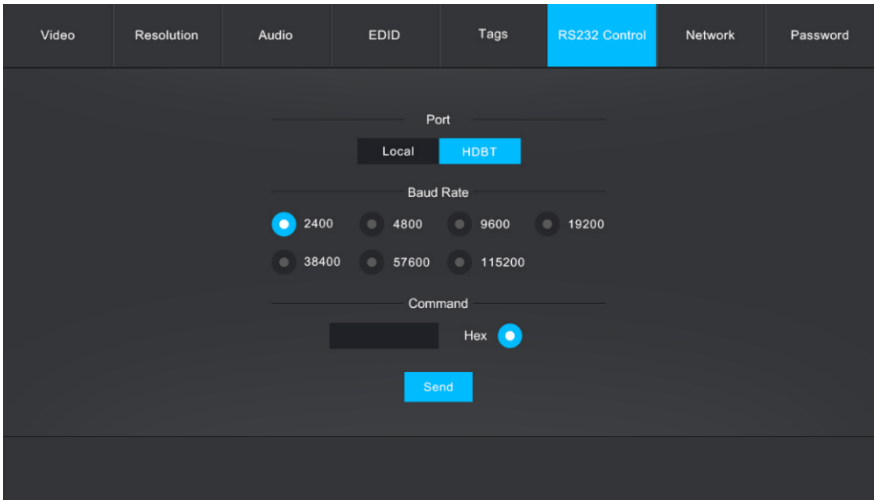
8.5 Input Tag Setting

Click **Tags** to enter the section for renaming input ports.



8.6 RS232 Control

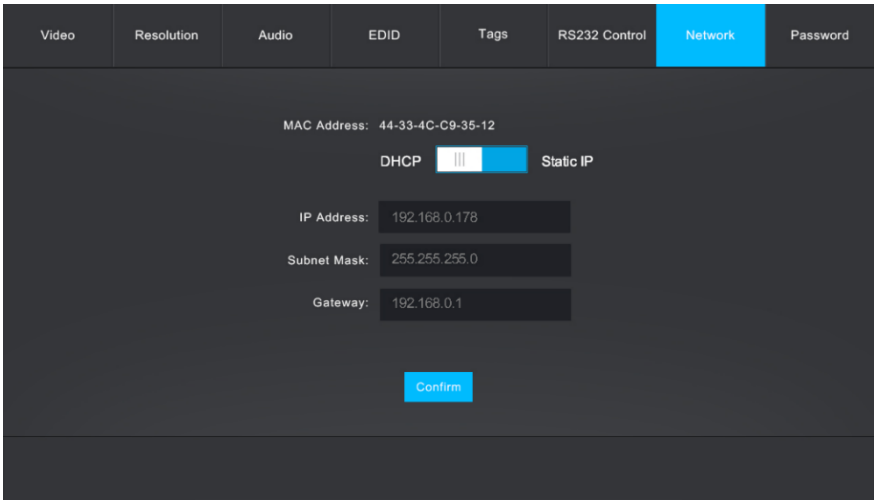
Click **RS232 Control** to enter the section to send commands to control the switcher or far-end third-party device.



- **Port**: Local refers to the RS232 port of the switcher, and HDBT refers to the RS232 port of HDBaseT receiver.
- **Baud Rate**: The baud rate of local port is 9600, but the HDBT port can support 2400, 4800, 9600, 19200, 38400, 57600 or 115200.
- **Command**: Typing commands in this box to control the switcher or the far-end third-party device connected to HDBaseT receiver. If check the “Hex”, you can type RS232 commands with hexadecimal value in the “Command” box.

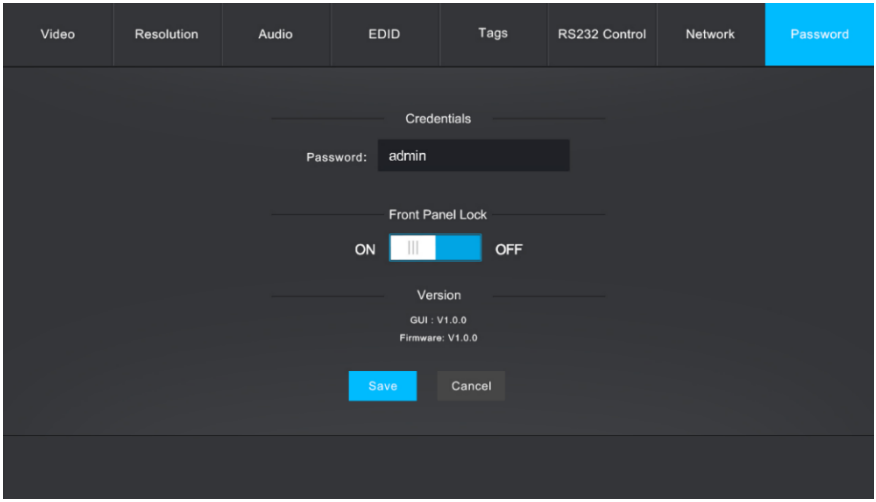
8.7 Network Setting

Click **Network** to enter the section for network setting. The IP address, subnet mask and gateway can be reset on the static mode.



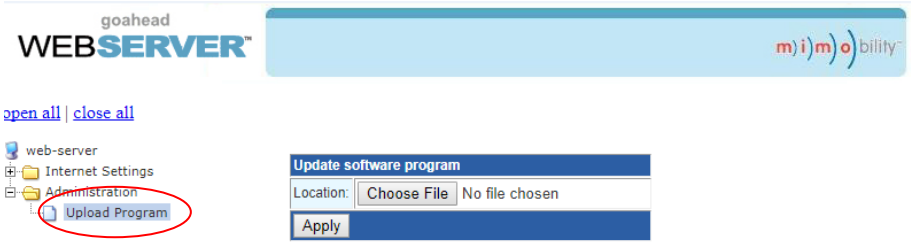
8.8 Password Setting

Click **Password** to enter the section to reset password and lock or unlock front panel buttons.



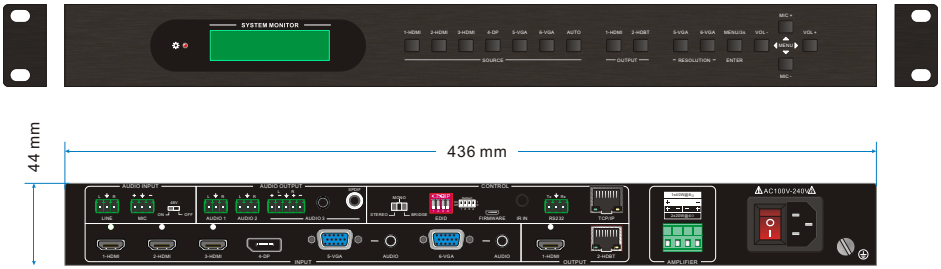
8.9 GUI Update

GUI for the switcher supports online update in http://192.168.0.178:100. Type the username and password (the same as the GUI log-in settings, modified password will be available only after rebooting) to log in the configuration interface. After that, click **Administration** at the source menu to get to **Upload Program** as shown below:



Select the update file and click **Apply** button, it will start upgrading then.

9. Panel Drawing



10. Troubleshooting & Maintenance

Problems	Potential Causes	Solutions
Output image with snowflake.	Bad quality of the connecting cable.	Try another high-quality cable.
	Fail or loose connection.	Make sure the connection is good.
No output image when switching.	No signal at the input / output end.	Check with oscilloscope or multimeter if there is any signal at the input/ output end.
	Fail or loose connection.	Make sure the connection is good.
	The switcher is broken.	Send it to authorized dealer for repairing.
POWER indicator doesn't work or no respond to any operation.	Fail connection of power cord.	Make sure the power cord connection is good.
EDID management does not work normally.	The HDMI cable is broken at the output end.	Change for another HDMI cable which is in good working condition.
Static becomes stronger when connecting the video connectors.	Bad grounding.	Check the grounding and make sure it is connected well.
Cannot control the device by control device (e.g. a PC) through RS232 port.	Wrong RS232 communication parameters.	Type in correct RS232 communication parameters.
	Broken RS232 port.	Send it to authorized dealer for checking.
Cannot control the device by front panel buttons while can control it through RS232 port	The front panel buttons are locked.	Send command **/%Unlock;** to unlock the front panel buttons.

Note: *If your problem still remaining after following the above troubleshooting steps, please find further assistance.*

11. Customer Service

The return of a product to our Customer Service implies the full agreement of the terms and conditions hereinafter. There terms and conditions may be changed without prior notice.

1) Warranty

The limited warranty period of the product is fixed three years.

2) Scope

These terms and conditions of Customer Service apply to the customer service provided for the products or any other items sold by authorized distributor only.

3) Warranty Exclusions:

- 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.
  - ✓ Servicing not authorized by distributor.
  - ✓ Any other causes which does not relate to a product defect.
- Shipping fees, installation or labor charges for installation or setup of the product.

4) Documentation:

Customer Service will accept defective product(s) in the scope of warranty coverage at the sole condition that the defeat has been clearly defined, and upon reception of the documents or copy of invoice, indicating the date of purchase, the type of product, the serial number, and the name of distributor.

Remarks: For further assistance or solutions, please contact your local distributor.