

ANI-11X2MFS

UHD 4K2K@30Hz Multi-Format Video Presentation Scaler Switch w/ Audio





SAFETY INFORMATION



1. To ensure the best results from this product, please read this manual and all other documentation before operating your equipment. Retain all documentation for future reference.
2. Follow all instructions printed on unit chassis for proper operation.
3. To reduce the risk of fire, do not spill water or other liquids into or on the unit, or operate the unit while standing in liquid.
4. Make sure power outlets conform to the power requirements listed on the back of the unit. Keep unit protected from rain, water and excessive moisture.
5. Do not attempt to clean the unit with chemical solvents or aerosol cleaners, as this may damage the unit. Dust with a clean dry cloth.
6. Do not use the unit if the electrical power cord is frayed or broken. The power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.
7. Do not force switched or external connections in any way. They should all connect easily, without needing to be forced.
8. Always operate the unit with the AC ground wire connected to the electrical system ground. Precautions should be taken so that the means of grounding of a piece of equipment is not defeated.
9. AC voltage must be correct and the same as that printed on the rear of the unit. Damage caused by connection to improper AC voltage is not covered by any warranty.
10. Turn power off and disconnect unit from AC current before making connections.
11. Never hold a power switch in the "ON" position.
12. This unit should be installed in a cool dry place, away from sources of excessive heat, vibration, dust, moisture and cold. Do not use the unit near stoves, heat registers, radiators, or other heat producing devices.
13. Do not block fan intake or exhaust ports. Do not operate equipment on a surface or in an environment which may impede the normal flow of air around the unit, such as a bed, rug, carpet, or completely enclosed rack. If the unit is used in an extremely dusty or smoky environment, the unit should be periodically "blown free" of foreign dust and matter.
14. To reduce the risk of electric shock, do not remove the cover. There are no user serviceable parts inside. Refer all servicing to qualified service personnel. There are no user serviceable parts inside.
15. When moving the unit, disconnect input ports first, then remove the power cable; finally, disconnect the interconnecting cables to other devices.
16. Do not drive the inputs with a signal level greater than that required to drive equipment to full output.
17. The equipment power cord should be unplugged from the outlet when left unused for a long period of time.
18. Save the carton and packing material even if the equipment has arrived in good condition. Should you ever need to ship the unit, use only the original factory packing.
19. Service Information Equipment should be serviced by qualified service personnel when:
 - A. The power supply cord or the plug has been damaged.
 - B. Objects have fallen, or liquid has been spilled into the equipment.
 - C. The equipment has been exposed to rain.
 - D. The equipment does not appear to operate normally, or exhibits a marked change in performance.
 - E. The equipment has been dropped, or the enclosure damaged.

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INTRODUCTION

The ANI-11x2MFS is a UHD 4K2K@30Hz multi-format video presentation scaler switch with audio. It features (11) inputs of various video formats including HDMI, VGA, Component, Composite and HDBaseT™ with HDMI and HDBaseT™ outputs. Video can be scaled to various aspect ratios and resolutions from 640x480 up to 1920x1080@60Hz, and using the by-pass, supports up to 4K2K@30Hz.

With embedded splitter and dual switcher modes, it can work as an 11:1x2 multiple splitter or a 5x1 & 11x1 dual switcher. It also features a switchable digital bypass output allowing any HDMI input to be directly bypassed to the HDMI and HDBaseT™ outputs to cater to the 4K source. With advanced audio embedding and de-embedding, it can provide flexible audio signal integration. Each source can be switched to the HDMI/HDBaseT™ outputs using the front-panel, IR remote control, RS-232 interface or Telnet.

The ANI-11x2MFS integrates easily into various analog to digital applications such as, in collaboration environments, lecture halls, conference rooms, class rooms, healthcare facilities and control centers.

The ANI-11x2MFS-Tx (Transmitter) / ANI-11x2MFS-Rx (Receiver) are HDBaseT™ Extenders. They can transmit 1080p@60Hz at 48bit deep color via a single CAT5e cable up to 330ft/100M and 4K2K@30Hz up to 230ft/70M. Bi-directional IR, RS-232 and Ethernet can also be transmitted over the same CAT5e cable. With support of PoH (Power over HDBaseT™), a power supply is not needed for either the transmitter or the receiver, as the ANI-11x2MFS provides the power. This product has a 3 year warranty.

PACKAGE CONTENTS

Before attempting to use this unit, please check the packaging and make sure the following items are contained in the shipping carton:

- ANI-11x2MFS UHD 4K2K Scaler Switch
- ANI-11x2MFS-HDBaseT™ PoE Tx
- ANI-11x2MFS-HDBaseT™ PoE Rx
- Remote control
- IR Transmitter & IR Receiver
- Rack Mounting ears
- (4) Surface-mounting tabs
- 12V/2A DC power supply
- 12V/5A DC power supply
- Users Guide

SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

DISCLAIMERS

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FEATURES

MAIN UNIT

- Switch & Scale (11) Inputs to (2) HD/UHD displays
- (4) HDMI, (4) VGA, (1) YPbPr, (1) Composite, (1) HDBaseT™ Inputs
- (2) simultaneous outputs ((1) HDMI, (1) HDBaseT™)
- Selectable Bypass and Scaled formatted output
- Selectable Dual mode (11:1x2 Splitter Mode or 5x1 & 11x1 Dual Switcher Mode)
- HDTV formats up to 4K2K@30Hz on both Input and Output (bypass)
- Scaling from 640x480 to 1920x1080@60Hz
- HDBaseT™ PoE Transmitter (included) HDBaseT™ PoE Receiver (included) supports distances up to 330 ft /100M
- Built in Ethernet Hub
- HDCP 1.4 compliant
- Audio embedder and audio extractor
- OSD menu for volume control and resolution selection
- Controllable via the front panel, IR remote, Telnet or RS-232
- Front-panel LCD display for status feedback
- Easy installation with rack-mounting ears

TRANSMITTER & RECEIVER

- HDMI v1.4 and HDCP compliant, supports 1080p@60Hz, 3D and 4K2K@30Hz
- Supports 1080p@60Hz or VESA: 1920x1200@60Hz up to 330 ft/100M
- Transmission distance for 4K2K@30Hz up to 230 ft/70M
- Dolby TrueHD and DTS-HD master audio pass through the HDMI output
- Bi-directional IR, RS-232 and Ethernet pass through
- Power over HDBaseT™ supported, only one power supply needed at either the transmitter or receiver side
- ESD Protection

SPECIFICATIONS

MAIN UNIT

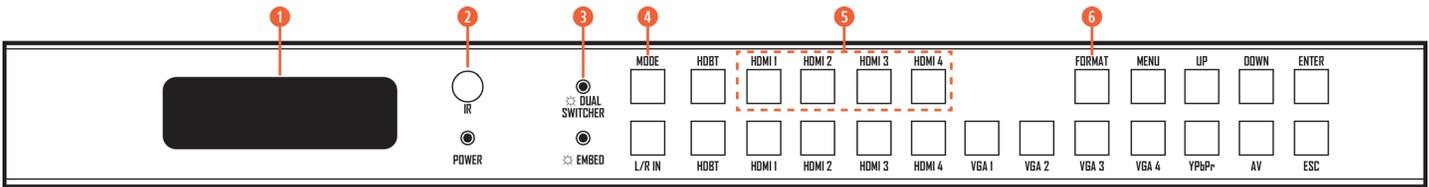
- **Bandwidth:** 10.2Gbps
- **Video Input Connectors:** (4) HDMI Type A, (4) VGA, (1) RJ-45, (1) YPbPr, (1) AV
- **Video Output Connectors:** (1) HDMI Type A, (1) RJ-45
- **Audio Input Connectors:** (11) 3.5mm stereo jack
- **Audio Output Connectors:** (1) 3.5mm stereo jack, (1) RCA (SPDIF)
- **RS-232 Serial Port:** (1) DB 9 connector, (1) 3-Phoenix terminal
- **TCP/IP:** (3) RJ-45 ((2) Ethernet pass-thru, (1) Device Control)
- **IR Input Ports:** (2) 3.5mm stereo jack
- **IR Output Ports:** (1) 3.5mm mono jack
- **Dimensions (WxHxD):** 17.2 x 8.9 x 1.73 in (438x225x44mm) without feet or rack ears
- **Weight:** 6.8 lb (Unit only) / 12.3 lb (Net)
- **Operating Temperature:** 32°F to 104°F (0°C to 40°C)
- **Storage Temperature:** -4°F to 140°F (-20°C to 60°C)
- **Power Supply:** 12VDC@5A

TRANSMITTER & RECEIVER

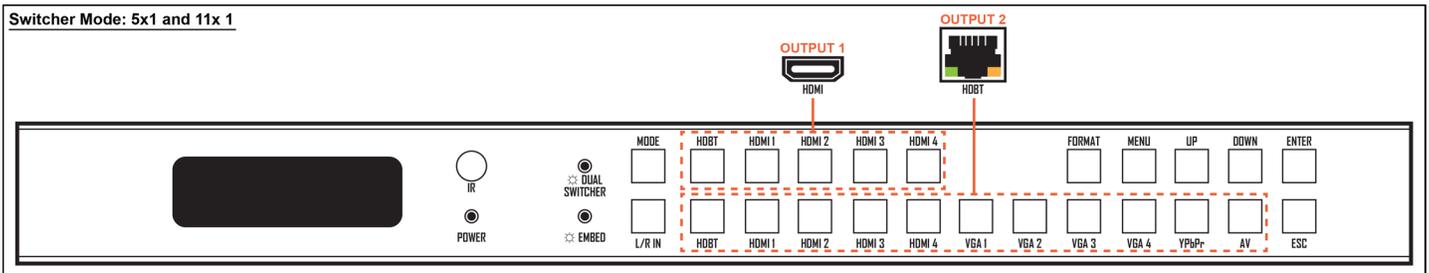
- **Bandwidth:** 2.97Gbps per Color
- **Video Inputs:**
 - Transmitter: (1) HDMI Type A, 19-pin, female
 - Receiver: (1) RJ-45
- **IR Inputs:** (2) 3.5mm stereo jack
- **IR Outputs:** (2) 3.5mm stereo jack
- **Audio:** Passes up to Dolby TrueHD or DTS-HD Master Audio
- **Resolutions:**
 - Video: Up to 4K2K@30Hz
 - VESA: Up to 1920x1200
- **Distances:**
 - 230ft@1080p over CAT5e/6
 - 130ft@4K2K over CAT5e/6
- **Dimensions:** 4.1 x 4.1 x 1.1 in (105x105x27mm)
- **Weight:** 0.7 lb (Unit only) / 12.3 lb (Net)
- **Temperature:**
 - Operating: 32°F to 104°F (0°C to 40°C)
 - Storage: -4°F to 140°F (20°C to 60°C)
- **Rack-Mountable:** Surface mounting tabs
- **Power Supply:** 12V/2A DC, screw type connector
- **Power Consumption:** 9.5W

As product improvements are continuous, specifications are subject to change without notice.

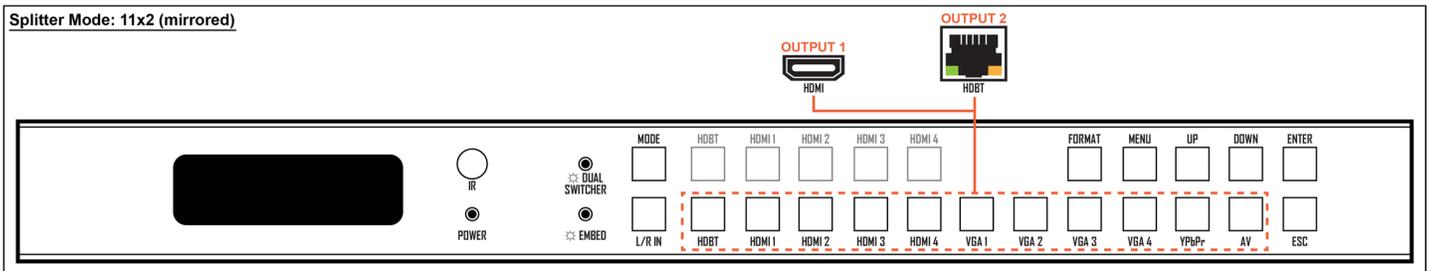
FRONT PANEL



- ❶ **LCD DISPLAY:** Shows the status of the input-output selection, EDID info and so on.
- ❷ **IR RECEIVER WINDOW:** Receives the IR from the remote control.
- ❸ **DUAL SWITCHER LED INDICATOR:** When the LED is lit, the dual switcher mode is active. When not lit, the splitter mode is active.



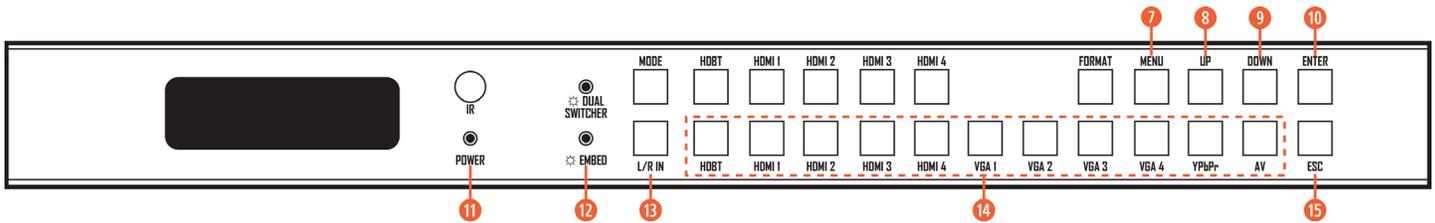
Output HDMI (#1) Source Selection: HDBaseT™, HDMI1, HDMI2, HDMI3 or HDMI4.



Output HDBaseT™ (#2) Source Selection: HDBaseT™, HDMI1, HDMI2, HDMI3, HDMI4, VGA1, VGA2, VGA3, VGA4, YPbPr or /AV.

- ❹ **MODE BUTTON:** Press to cycle between the Dual Switcher and Splitter mode.
- ❺ **INPUT SELECTION BUTTONS:** For HDMI Output #1 when in Dual Switcher mode. *These buttons are inactive when in Splitter Mode.*
- ❻ **FORMAT SET BUTTON:** Press to set the resolution for the output.

FRONT PANEL



7 MENU BUTTON: Press to enter EDID, volume setting or F/W information. (3) EDID segments will display on the LCD panel formatted as: INPUT VIDEO AUDIO.

For Example: IN1 1080p 2.0CH, means to set 1080p 2.0CH EDID to INPUT1. The blinking segment is the one that can be changed currently; press the **MENU** button to change the segment.

Segment Content Items as Below:

INPUT	VIDEO	AUDIO	NOTE
IN1	1080i	2.0CH	
IN2	1080p	5.1CH	
IN3	3D	7.1CH	
IN4	4K2K@30Hz	NONE	
IN5	D1024		D1024=DVI 1024x768
IN6	D1080		D1080=DVI 1920x1080
IN7	D1200		D1200=DVI 1920x1200
IN8	OUT1		OUT1=Copy OUTPUT1 EDID to INPUTx
IN9	OUT2		OUT2=Copy OUTPUT2 EDID to INPUTx
IN10			
IN11			
ALL			ALL=Set EDID to ALL INPUTs

8 UP SELECTION BUTTON: Press to change the segment's value.

9 DOWN SELECTION BUTTON: Press to change the segment's value.

10 ENTER BUTTON: Press to confirm the settings.

11 POWER LED INDICATOR: Indicates the status of power.

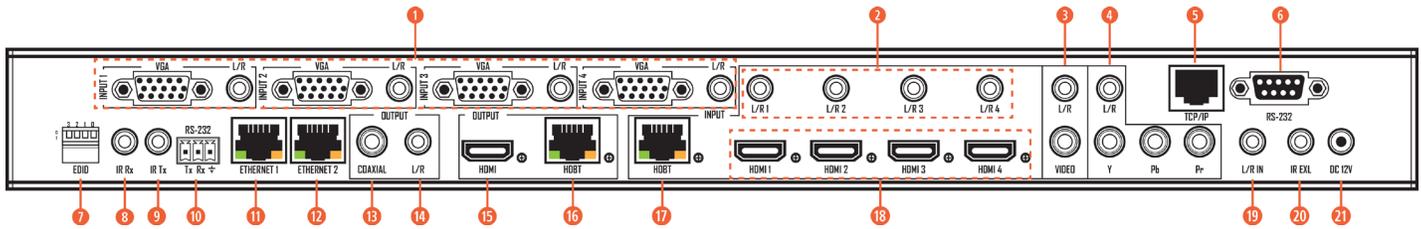
12 EMBED LED INDICATOR: When the LED is lit, embed mode is on. When embed in on, the L/R In will be embedded into the HDMI outputs (The (2) outputs will be embedded with the L/R in audio and the volume is adjustable.)

13 L/R IN SELECTION BUTTON: Press to embed L/R audio to both outputs.

14 INPUT SELECTION BUTTONS: For HDBaseT™ Output #2 when in Dual Switcher mode OR Splitter mode.

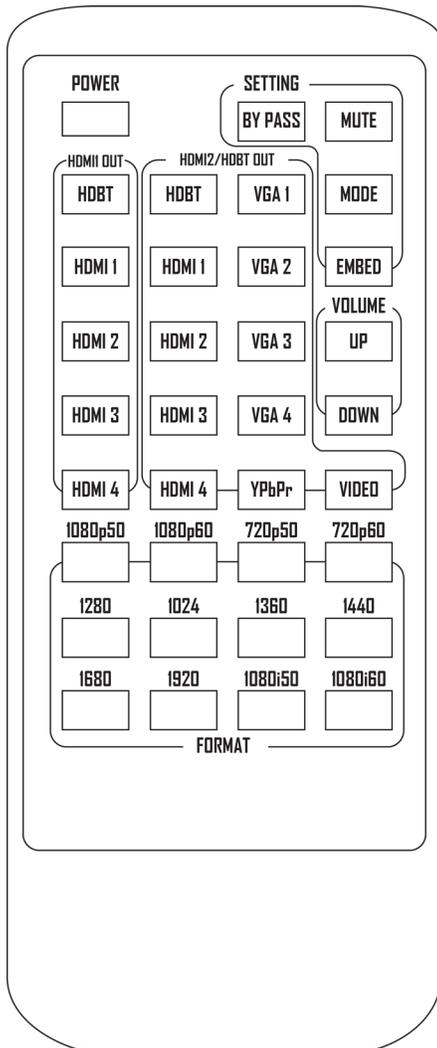
15 ESC: Press to quit when in Menu mode.

BACK PANEL



- 1 **VGA INPUT 1 TO 4:** VGA input 1 to 4 with L/R audio input.
- 2 **L/R IN 1 TO 4:** Connects to the additional audio sources to embed on to HDMI Sources 1 thru 4.
- 3 **AV INPUT:** AV input with L/R audio input.
- 4 **YPbPr INPUT:** YPbPr input with L/R audio input.
- 5 **TCP/IP:** Connects to the Ethernet for device control.
- 6 **RS-232 PORT:** DB9 connector for device control.
- 7 **DIP SWITCHER:** EDID settings.
 [DIP]=0000: HDMI 1080p@60Hz, Audio 2CH PCM
[DIP]=1111: Follows setting set from front panel EDID management
 [DIP]=0001: HDMI 1080p@60Hz, Audio 5.1CH PCM/DTS/DOLBY
 [DIP]=0010: HDMI 1080p@60Hz, Audio 7.1CH PCM/DTS/DOLBY/HD
 [DIP]=0011: HDMI 1080i@60Hz, Audio 2CH PCM
 [DIP]=0100: HDMI 1080i@60Hz, Audio 5.1CH PCM/DTS/DOLBY
 [DIP]=0101: HDMI 1080i@60Hz, Audio 7.1CH PCM/DTS/DOLBY/HD
 [DIP]=0110: HDMI 1080p@60Hz/3D, Audio 2CH PCM
 [DIP]=0111: HDMI 1080p@60Hz/3D, Audio 5.1CH PCM/DTS/DOLBY
 [DIP]=1000: HDMI 1080p@60Hz/3D, Audio 7.1CH PCM/DTS/DOLBY/HD
 [DIP]=1001: HDMI 4K2K, Audio 2CH PCM
 [DIP]=1010: HDMI 4K2K, Audio 5.1CH PCM/DTS/DOLBY
 [DIP]=1011: HDMI 4K2K, Audio 7.1CH PCM/DTS/DOLBY/HD
 [DIP]=1100: DVI 1280x1024@60Hz, Audio None
 [DIP]=1101: DVI 1920x1080@60Hz, Audio None
 [DIP]=1110: DVI 1920x1200@60Hz, Audio None
- 8 **IR RX:** Connects to the IR receiver cable. Pass thru to HDBaseT™.
- 9 **IR TX:** Connects to the IR emitter cable. Pass thru to HDBaseT™.
- 10 **PHOENIX TERMINAL:** Works with the HDBaseT™ Transmitter / Receiver for RS-232 pass thru to HDBaseT™.
- 11 **ETHERNET PORT:** Connects to the Ethernet. (Embedded Ethernet hub)
- 12 **ETHERNET PORT:** Connects to the Ethernet port. (Embedded Ethernet hub)
- 13 **COAXIAL AUDIO OUTPUT:** It will always follow HDMI Output 2.
- 14 **L/R AUDIO OUTPUT:** It will always follow HDMI Output 2.
- 15 **HDMI OUTPUT 1:** Connects to a HDTV.
- 16 **HDBT OUTPUT 2:** Connects to the HDBT class A receiver (included).
- 17 **HDBT INPUT:** Connects to the HDBT class A transmitter (included).
- 18 **HDMI INPUT 1 TO 4:** Connects to the HDMI sources.
- 19 **L/R IN:** Connects to the Global Audio Input source. Used to override existing audio signals simultaneously on both HDMI Output #1 and HDBaseT™ Output #2.
- 20 **IR EXT.:** Connects to the IR receiver cable. For device control only.
- 21 **DC 12V:** Connects to the 12V/5A power supply.

REMOTE CONTROL



NEC CODE: 1898

POWER:	1898 14
MODE:	1898 0D
BYPASS:	1898 41
MUTE:	1898 46
EMBED:	1898 15
VOLUME UP:	1898 08
VOLUME DOWN:	1898 4A

HDMI 1 OUT

HDBT:	1898 09
HDMI1:	1898 19
HDMI2:	1898 17
HDMI4:	1898 5E

HDMI 2/HDBT OUT

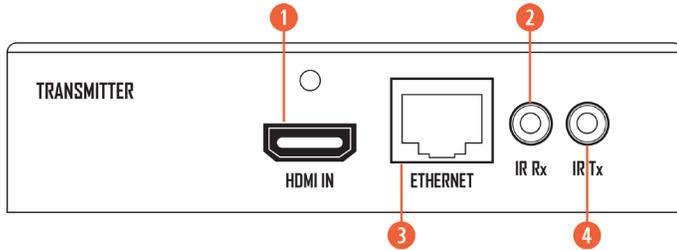
HDBT:	1898 1D
HDMI1:	1898 1B
HDMI2:	1898 12
HDMI3:	1898 55
HDMI4:	1898 06
VGA1:	1898 1F
VGA2:	1898 11
VGA3:	1898 59
VGA4:	1898 48
YPBPR:	1898 05
VIDEO:	1898 03

OUTPUT RESOLUTION

1080p50	1898 47
1080p60	1898 07
720p50	1898 40
720p60	1898 02
1280X1024	1898 18
1360X768	1898 44
1440X900	1898 51
1680X1050	1898 0A
1920X1200	1898 1E
1080i50	1898 0E
1080i60	1898 1A

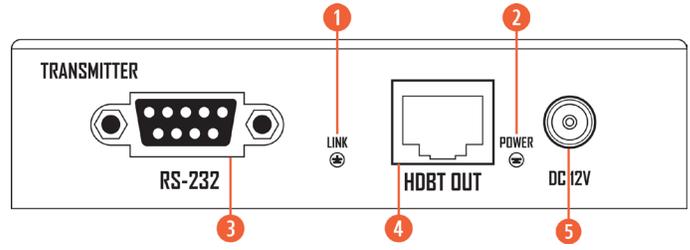
TRANSMITTER

FRONT PANEL



- ① HDMI input.
- ② IR Receiver jack.
- ③ Ethernet input.
- ④ IR Transmitter jack.

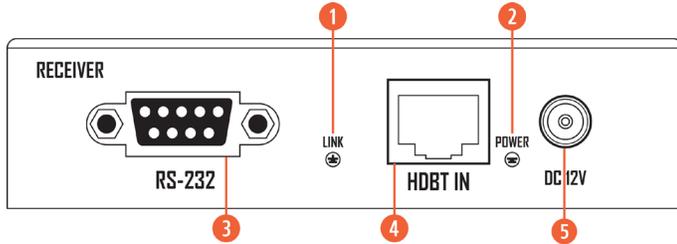
BACK PANEL



- ① Signal Link indicator.
- ② Power status indicator.
- ③ RS-232 connector.
- ④ HDBT output.
- ⑤ DC 12V screw type connector.

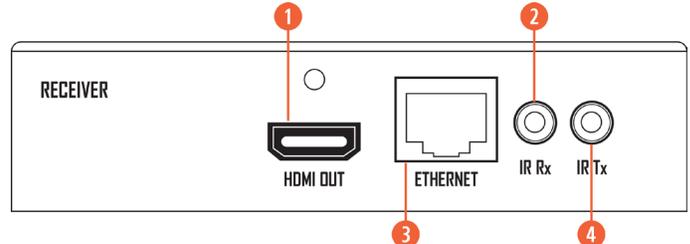
RECEIVER

FRONT PANEL



- ① Signal Link indicator.
- ② Power status indicator.
- ③ RS-232 connector.
- ④ HDBT input.
- ⑤ DC 12V screw type connector.

BACK PANEL



- ① HDMI output.
- ② IR Receiver jack.
- ③ Ethernet output.
- ④ IR Transmitter jack.

RS-232 & TELNET COMMANDS

NO.	COMMAND	ACTION
1	?	Prints Help Information
2	HELP	Prints Help Information
3	STATUS	Prints System Status and Port Status
4	PON	Power On, System Run On Normal State
5	POFF	Power Off, System Run On Power Save State
6	IR ON/OFF	Sets System IR Control On or Off
7	KEY ON/OFF	Sets System KEY Control On or Off
8	DBG ON/OFF	Sets Debug Mode On or Off
9	BEEP ON/OFF	Sets Onboard Beep On or Off
10	LCD ON/OFF	Sets LCD Always On or Auto Turn Off in Power On State
11	RESET	Resets System to Default Setting (Should Type "Yes" to Confirm, "No" to Discard)
12	IR232 vv	Sets IR and RS-232. Connects to Remote Valens RX/TX vv=OFF: Disconnect With Valens vv=RRX: Remote Valens RX vv=RTX: Remote Valens TX vv=BOTH: Remote Valens RX and TX
13	OUT xx FR yy	Sets OUTPUT:xx from INPUT:yy xx=00: Selects All OUTPUT Ports xx=[01...02]: Selects One OUTPUT Port yy=[01...04]: HDMI Input 01 ~ 04 yy=HDBT: HDBT/Valens Input yy=AV: AV Input (Output 02 Only) yy=YBPBR: Component Input (Output 02 Only) yy=VGA1...VGA4: VGA Input (Output 02 Only)
14	OUT BYP ON/OFF	Sets HDMI Input Signal Through Scaler or Bypass
15	OUT SP/MX	Sets OUTPUT to Splitter or Matrix Mode
16	OUT RES rr	Sets Scaler Output Resolution (Changing Output Resolution will Effect the EDID Setting) rr=01: 1080P@50Hz rr=02: 1080P@60Hz rr=03: 720P@50Hz rr=04: 720P@60Hz rr=05: 1280x1024@60Hz rr=06: 1024x768@60Hz rr=07: 1360x768@60Hz rr=08: 1440x900@60Hz rr=09: 1680x1050@60Hz
17	OUT FREQ mm	Sets Output Frequency Mode (When Output Resolution is 1080P or 720P) mm=AUTO: Sets Output Freq Auto Change to Input Freq mm=FORCE: Sets Output Freq by CMD:OUT RES rr Select
18	AUD SCA ORG	Scaler Audio Input Follows Port Selection
19	AUD SCA ANA	Selects Global Audio from Analog L/R Input to Override existing audio signals simultaneously on both HDMI Output #1 and HDBase™ Output #2
20	AUD HDMI yy ORG	HDMI Input:yy Uses Original HDMI/DVI Signal Signal yy=[01...04]: HDMI Input 01 ~ 04

RS-232 & TELNET COMMANDS

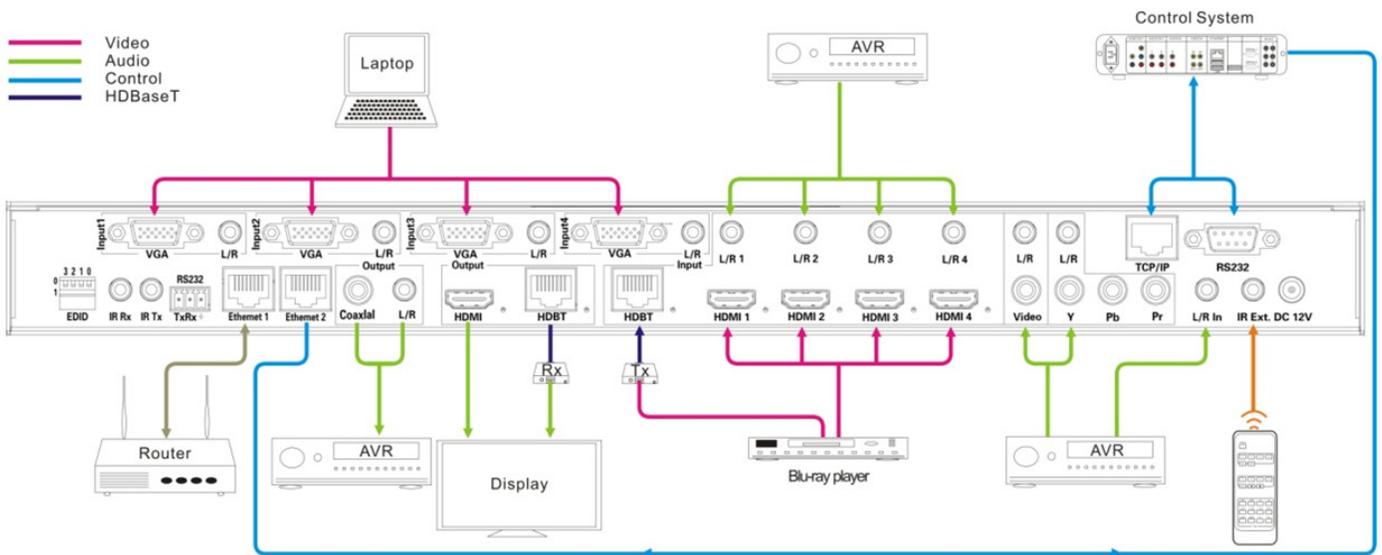
NO.	COMMAND	ACTION
21	AUD HDMI yy ANA	HDMI Input:yy Embedded Analog L/R Signal yy=[01...04]: HDMI Input 01 ~ 04
22	AUD HDMI yy AUTO	HDMI Input:yy Embedded Analog L/R When Input is a DVI signal Signal yy=[01...04]: HDMI Input 01 ~ 04
23	VOL xx	Sets Scaler Audio Volume xx=[00...30]: Volume Value xx=+: Volume Increase xx=-: Volume Decrease
24	EDID xx CP yy	Sets Input:xx EDID Copy from Output:yy xx=00: Selects All INPUT Ports xx=01: Selects HDBT INPUT Port xx=[02...05]: Selects HDMI INPUT:01~04 Ports yy=[01...02]: Selects One OUTPUT Port
25	EDID xx DF zz	Sets Input:xx EDID to Default EDID:zz (cmd: OUT RES rr will Effect the EDID Setting) xx=00: Selects All INPUT Ports xx=01: Selects HDBT INPUT Port xx=[02...05]: Selects HDMI INPUT:01~04 Ports zz=00: PC 1080p, HDMI 1080p, 2CH PCM zz=01: PC 1080p, HDMI 1080p, 5.1CH PCM/DTS/DB zz=02: PC 1080p, HDMI 1080p, 7.1CH PCM/DTS/DB/HD zz=03: PC 1080i, HDMI 1080i, 2CH PCM zz=04: PC 1080i, HDMI 1080i, 5.1CH PCM/DTS/DB zz=05: PC 1080i, HDMI 1080i, 7.1CH PCM/DTS/DB/HD zz=06: PC 1080p, HDMI 3D, 2CH PCM zz=07: PC 1080p, HDMI 3D, 5.1CH PCM/DTS/DB zz=08: PC 1080p, HDMI 3D, 7.1CH PCM/DTS/DB/HD zz=09: PC 4K2K, HDMI 4K2K, 2CH PCM zz=10: PC 4K2K, HDMI 4K2K, 5.1CH PCM/DTS/DB zz=11: PC 4K2K, HDMI 4K2K, 7.1CH PCM/DTS/DB/HD zz=12: DVI 1280x1024@60Hz, Audio None zz=13: DVI 1920x1080@60Hz, Audio None zz=14: DVI 1920x1200@60Hz, Audio None

RS-232 PIN ASSIGNMENT

ANI-11X2MFS		Remote Control Console	
PIN	Assignment	PIN	Assignment
1	NC	1	NC
2	Tx	2	Rx
3	Rx	3	Tx
4	NC	4	NC
5	GND	5	GND
6	NC	6	NC
7	NC	7	NC
8	NC	8 </td <td>NC</td>	NC
9	NC	9	NC

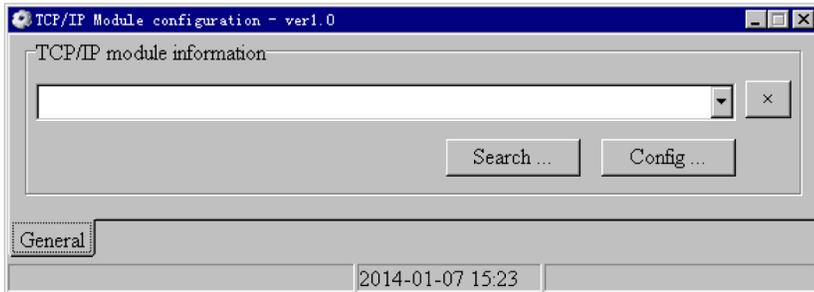
Baud Rate: 57600bps
 Data Bit: 8bit
 Parity: None
 Stop Bit: 1bit
 Flow Control: None

APPLICATION DIAGRAM - MAIN UNIT



TCP MODULE USER INSTRUCTIONS

- Enable the PC's RJ-45 interface and disable the PC's WIFI.
- Connect the PC and Matrix with a CAT6 cable directly through the RJ-45 interface.
- Set the PC net properties to: IP=192.168.0.200, Subnet Mask=255.255.255.0, Gateway=192.168.0.1.
- Run "TCP-IP module configuration-v1.0.exe", the main window will show as below:

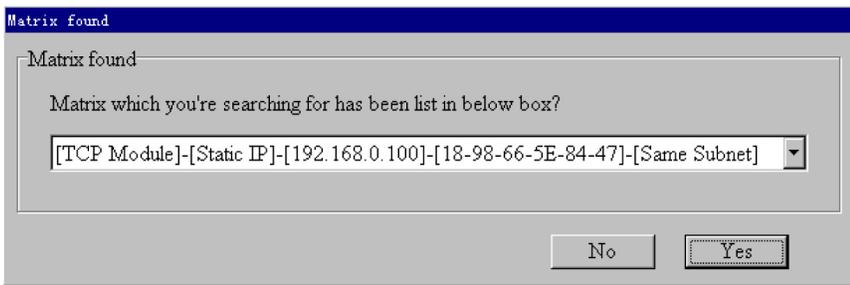


- Click the "Search" button to find the built-in TCP Module:

Searching...

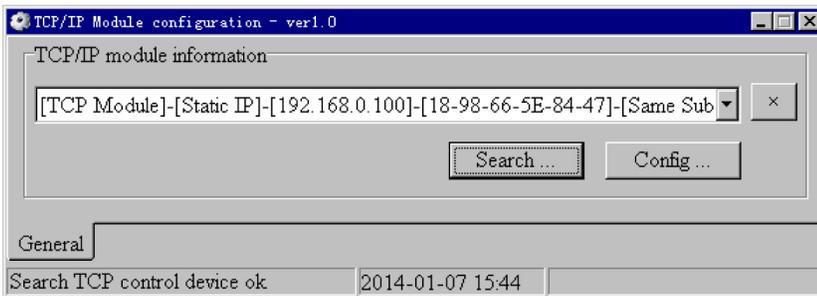


Found



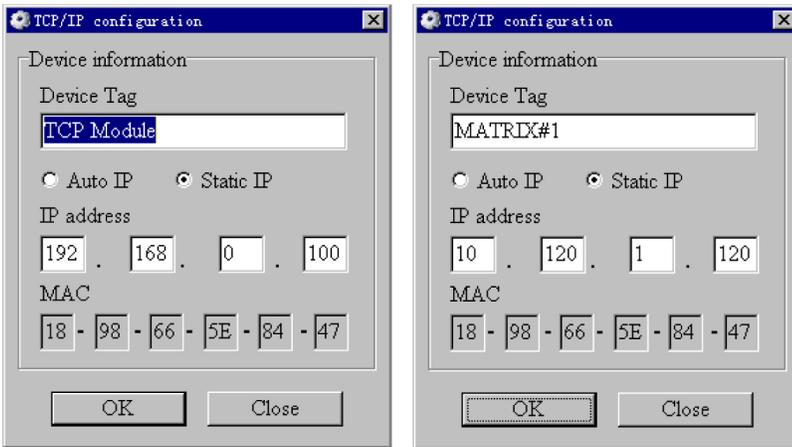
NOTE: Default settings for the TCP module are: Static IP mode and the IP address is 192.168.0.100.

- Click the "Yes" button, the TCP Module item will be added in the list box:

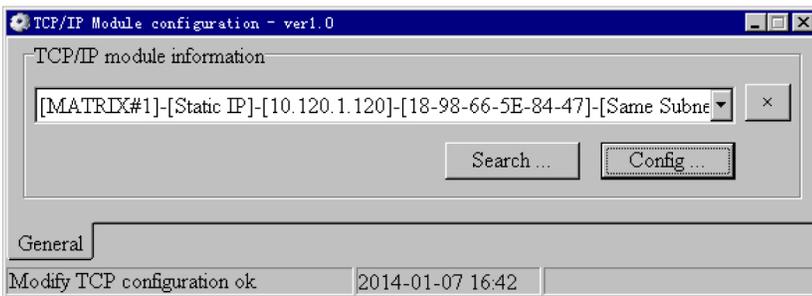


TCP MODULE USER INSTRUCTIONS

- Click the “Config” button to modify the Device Tag, IP mode and IP address of the TCP Module:



When filled in, click the “OK” button:
 Device Tag = “MATRIX#1”, Static IP
 IP Address = 10.120.1.120.



NOTE: Static IP mode is recommended.

- After these modifications, put the Matrix under the router or net switcher to which the PC will connect with. Set the PC’s net to the same as the Matrix connections.
- Ping the Matrix IP address with the PC. When a reply is received, it means OK.

```
C:\Documents and Settings\Administrator>ping 10.120.1.120
Pinging 10.120.1.120 with 32 bytes of data:
Reply from 10.120.1.120: bytes=32 time=4ms TTL=100
Reply from 10.120.1.120: bytes=32 time=1ms TTL=100
Reply from 10.120.1.120: bytes=32 time<1ms TTL=100
Reply from 10.120.1.120: bytes=32 time=2ms TTL=100

Ping statistics for 10.120.1.120:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 4ms, Average = 1ms
```

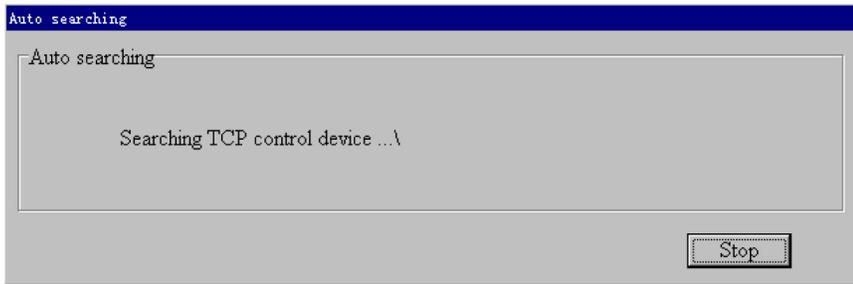
- Then Telnet commands can be used to control the Matrix.

```
C:\Documents and Settings\Administrator>telnet 10.120.1.120
```

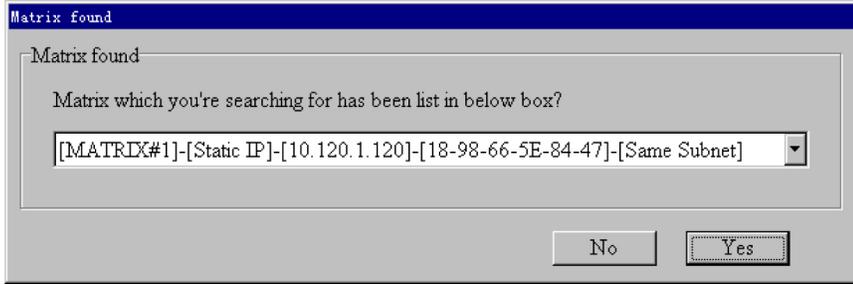
TCP MODULE USER INSTRUCTIONS

- Run the “TCP-IP module configuration-v1.0.exe” again.
- Search the TCP control module.

1. Click the “Search” button to pop up the auto searching window:

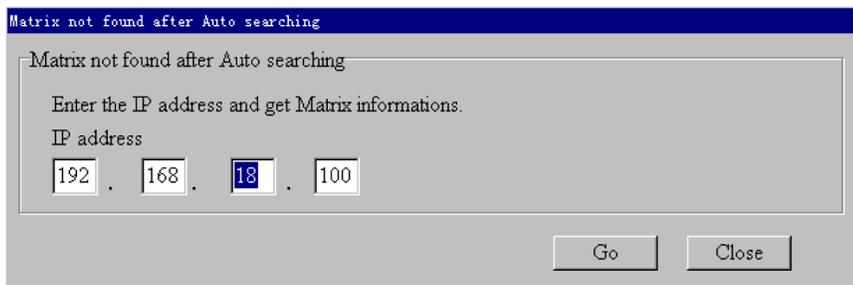


2. Because the TCP control module is in the same subnet, it will be found after auto searching:

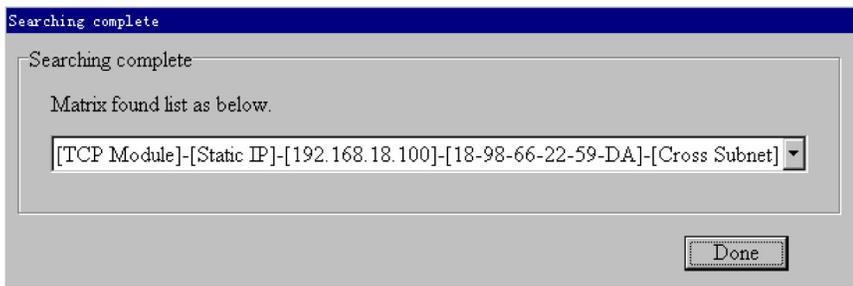


NOTE: Default settings of the TCP module are: Static IP mode and the IP address is 192.168.0.100.

3. If the TCP control module is in the cross subnet, the IP address should be entered manually in the edit boxes as below:



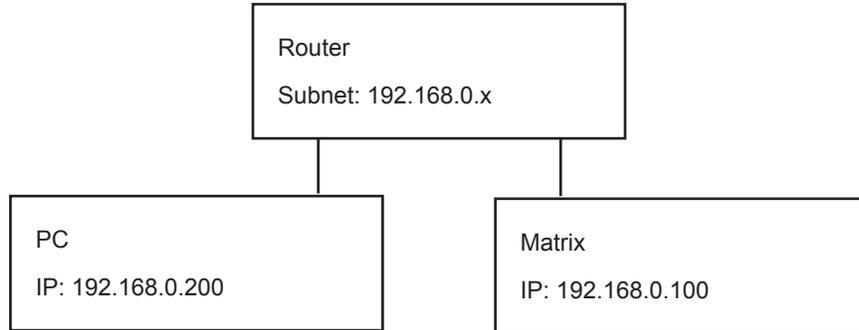
4. Then click the “Go” button, the TCP control module will be found:



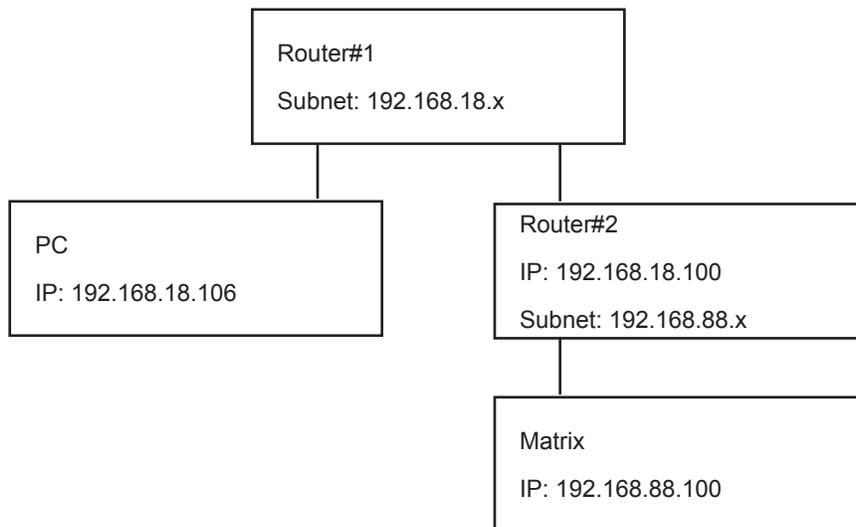
TCP MODULE USER INSTRUCTIONS

NOTE:

1. **Same Subnet** means the Matrix connects to a router which is the same as the PC it is connected to, example below:



2. **Cross Subnet** means the Matrix connects to a router which is different from what the PC is connected to, example below:



Items listed below should be added to router#1's "Virtual Server" setting page:

SERVICE PORT	IP ADDRESS	PROTOCOL	STATUS
8000	192.168.18.100	TCP	Active
30600	192.168.18.100	UDP	Active
30601	192.168.18.100	UDP	Active

Items listed below should be added to the router#2's "Virtual Server" setting page:

SERVICE PORT	IP ADDRESS	PROTOCOL	STATUS
8000	192.168.88.100	TCP	Active
30600	192.168.88.100	UDP	Active
30601	192.168.88.100	UDP	Active

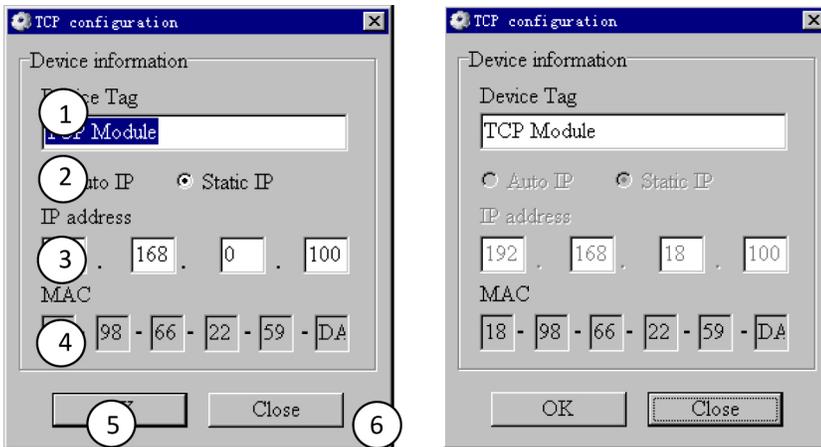
After setting these three items on each Router's "Virtual Server" setting page, the PC can relocate the Matrix over ports 8000/30600/30601 of the TCP/UDP/UDP protocols.

3. It's recommended that the Matrix is installed on the **Same Subnet**.

4. In the **Same Subnet**, both the DHCP and Static IP modes are supported, while only the Static IP mode is supported in **Cross Subnet** mode.

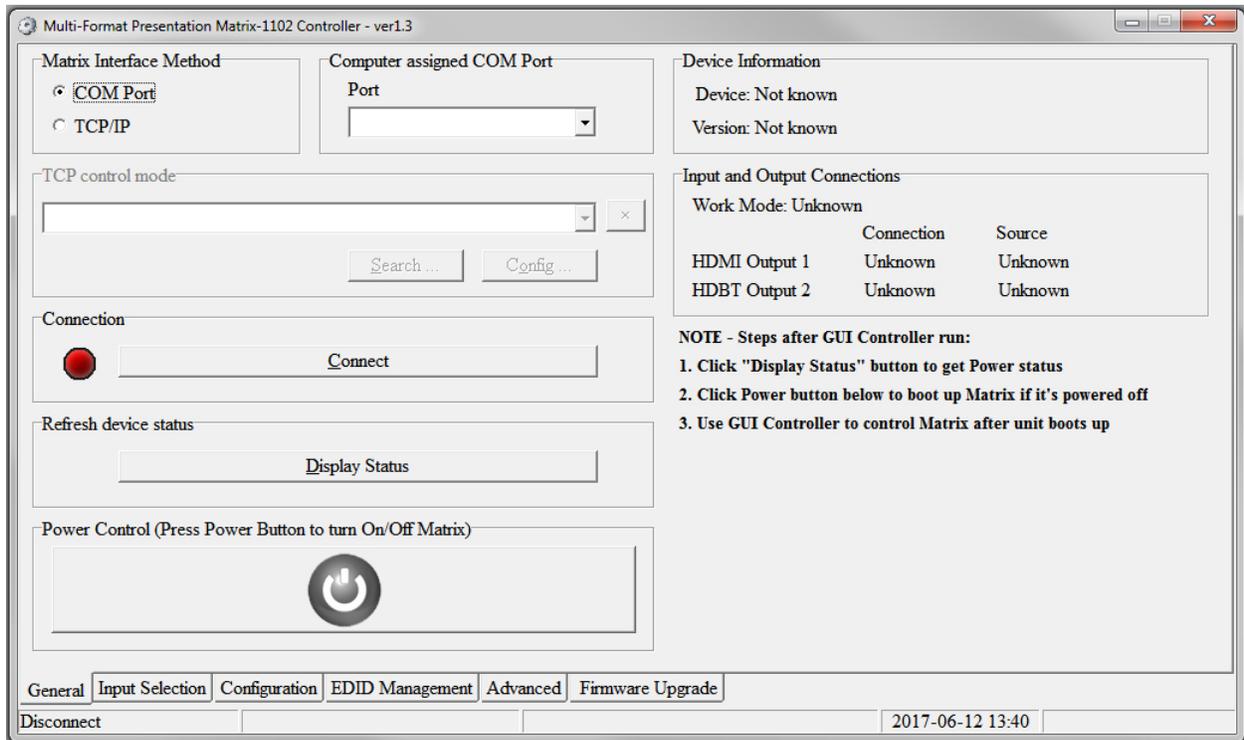
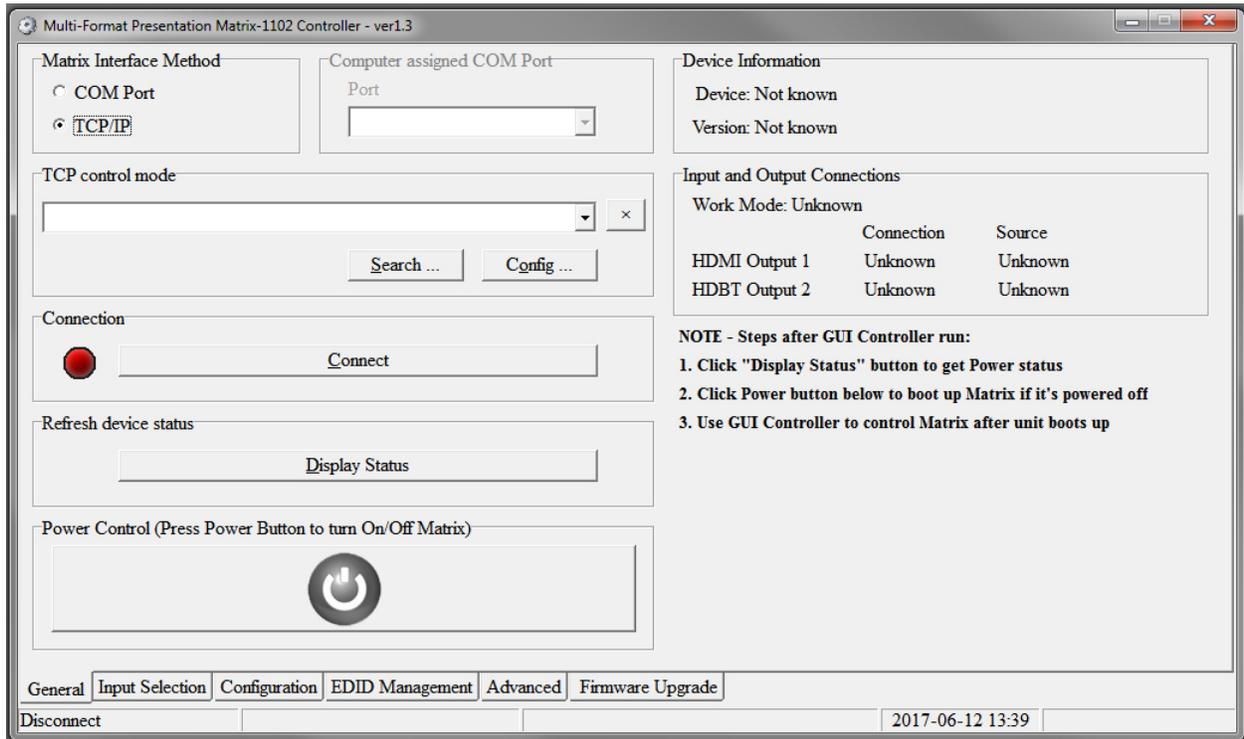
TCP MODULE USER INSTRUCTIONS

- Set the TCP control configuration.
- Click the “**Config**” button to show the TCP configuration window.

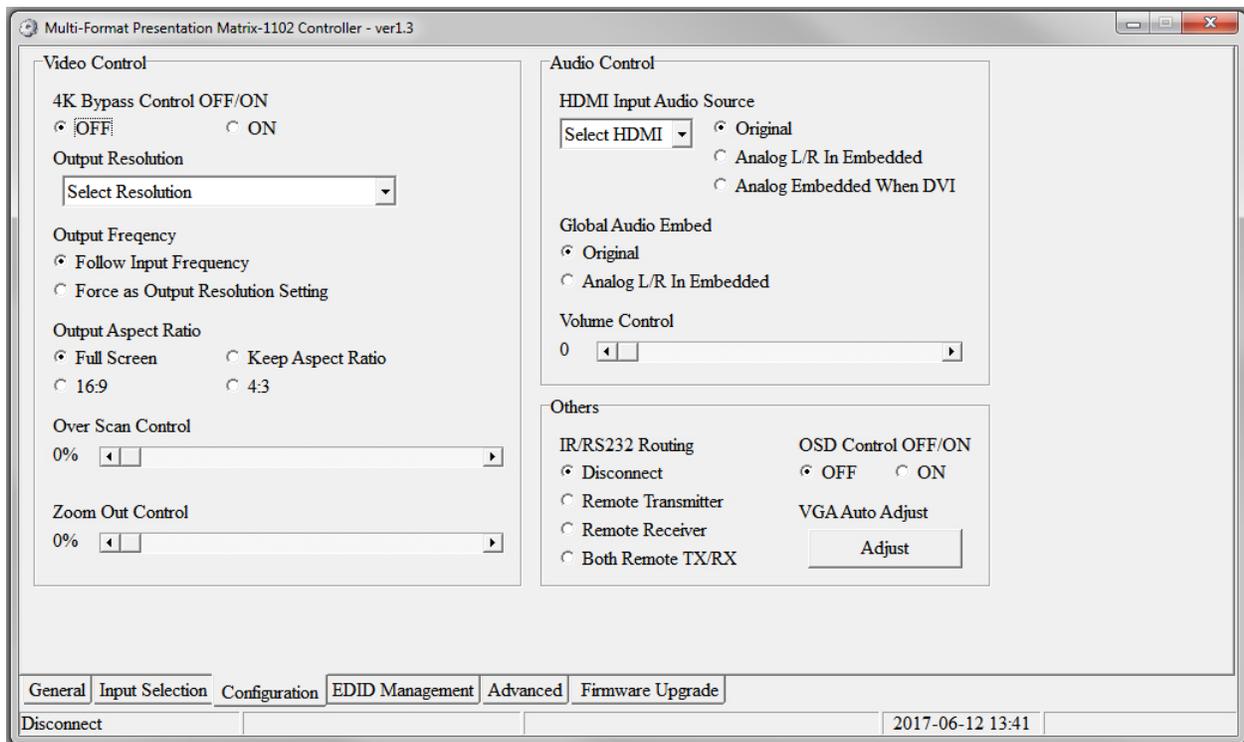
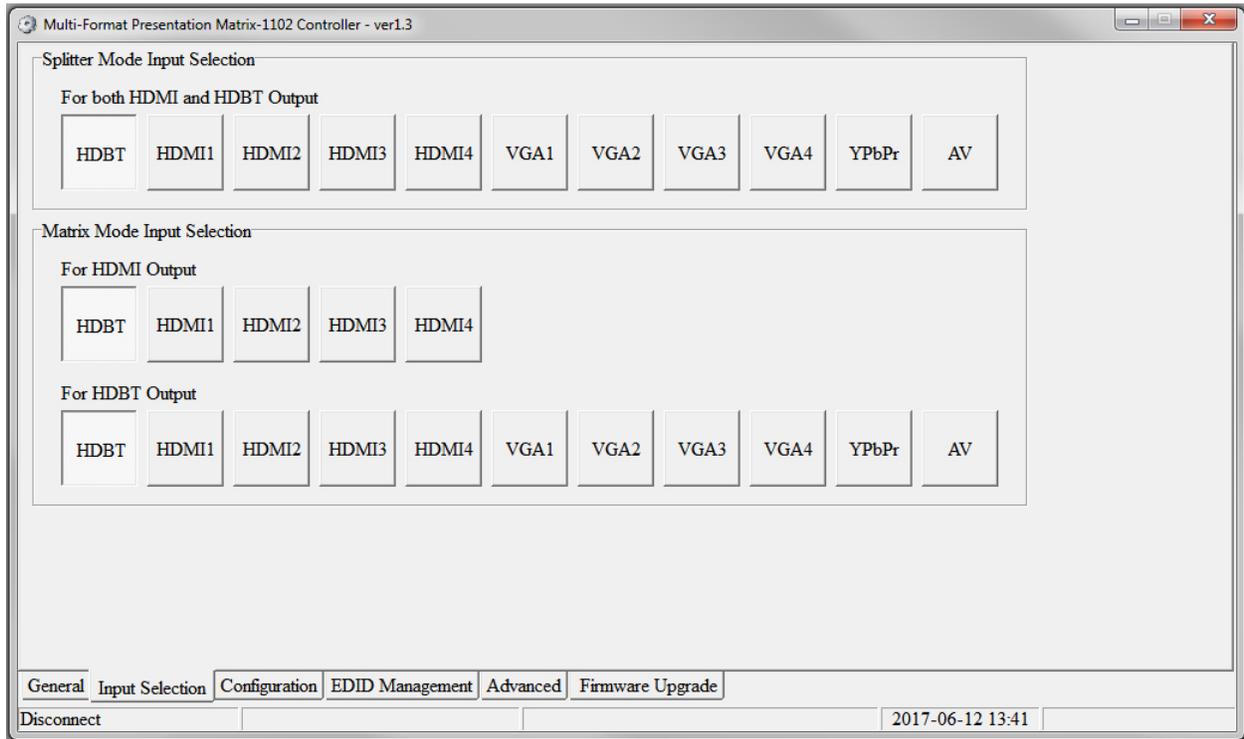


1. Set tag to identify the Matrix device.
2. **SET IP MODE:** Subnet should support DHCP protocols when set to Auto IP mode, then the Matrix device will obtain the IP automatically. Otherwise, set Static IP mode and designate a usable IP for the Matrix device.
NOTE: In Cross Subnet, this setting cannot be changed, only Static IP supported.
3. Set the IP address, cannot be edited when Auto IP mode is selected.
NOTE: The last IP BYTE's range is 2-252. In cross subnet this setting cannot be changed.
4. Matrix device MAC address, read only.
5. Click “**OK**” to set the configuration. If the configuration is set to **OK**, the Matrix devices will be searched out again.
6. Click to “**CLOSE**” the window and configuration will be cancelled.

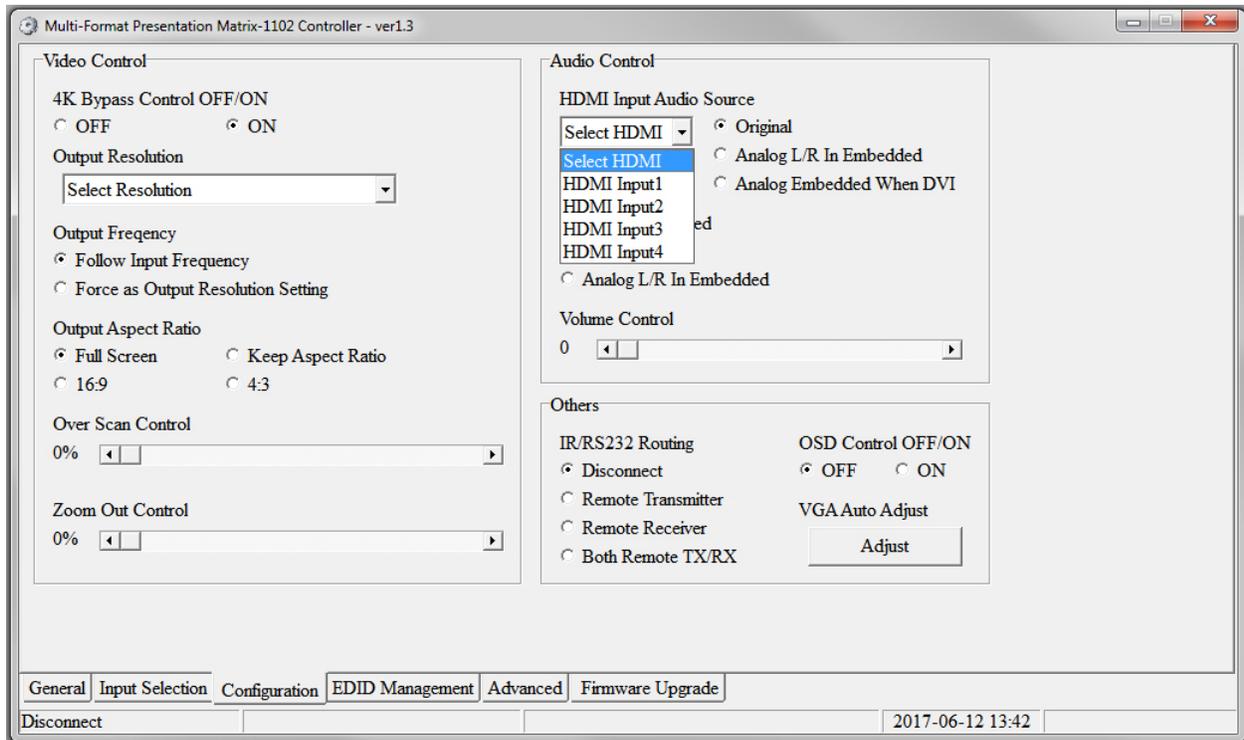
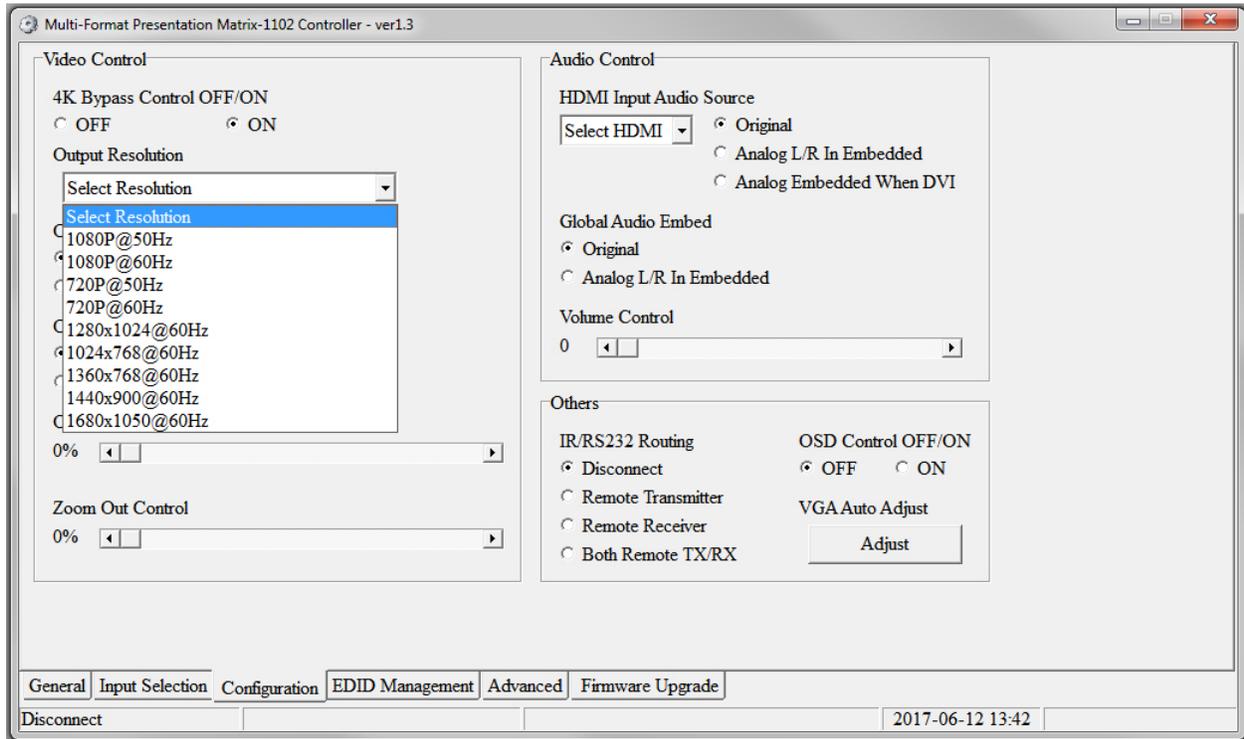
GUI SOFTWARE



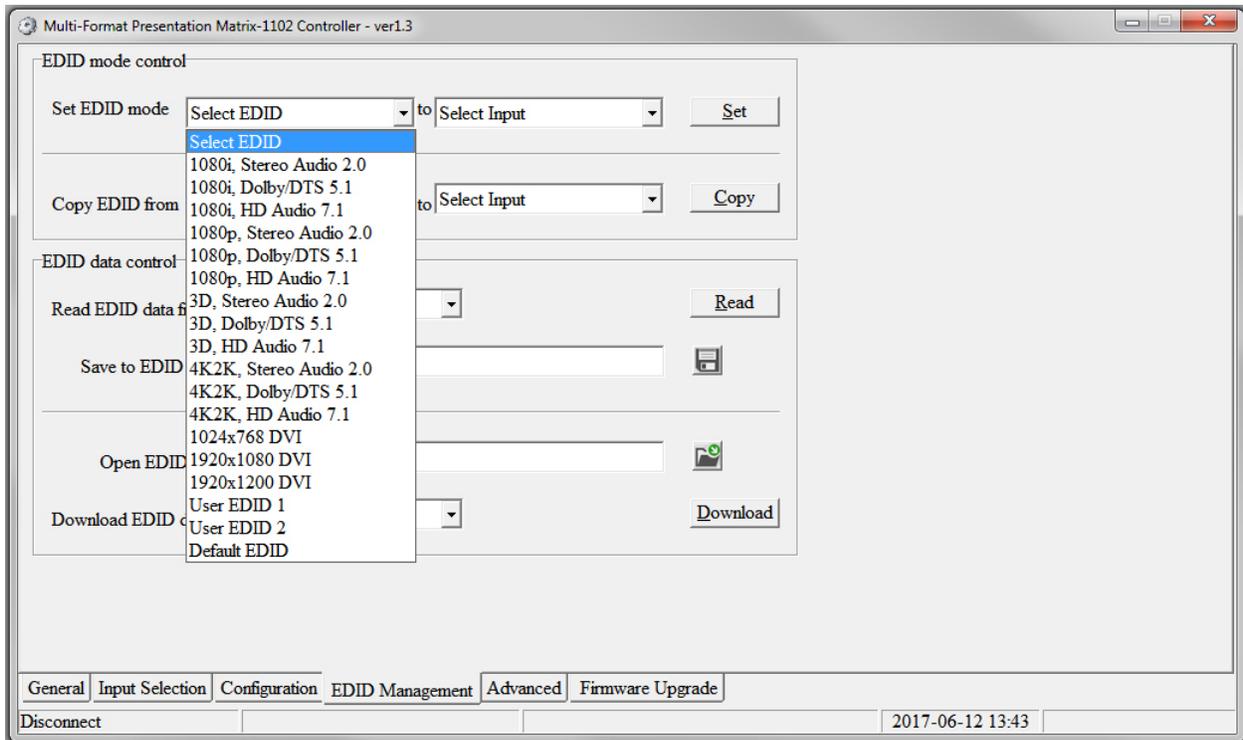
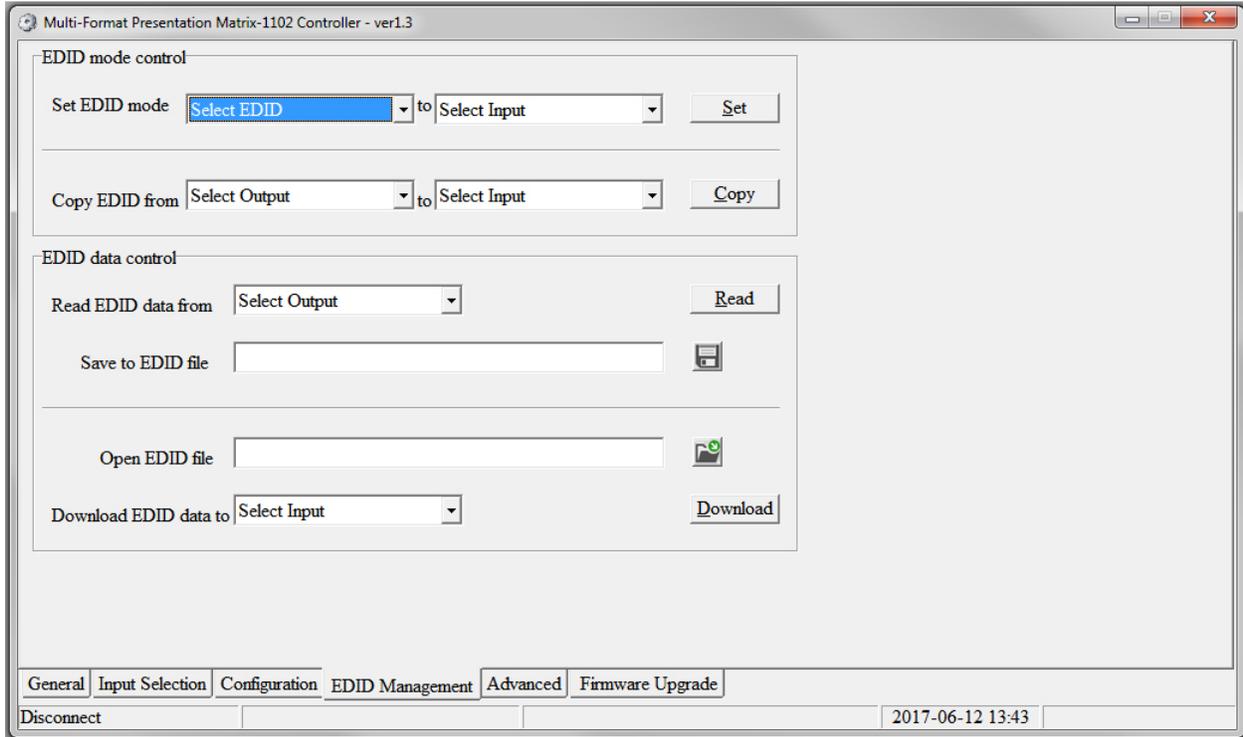
GUI SOFTWARE



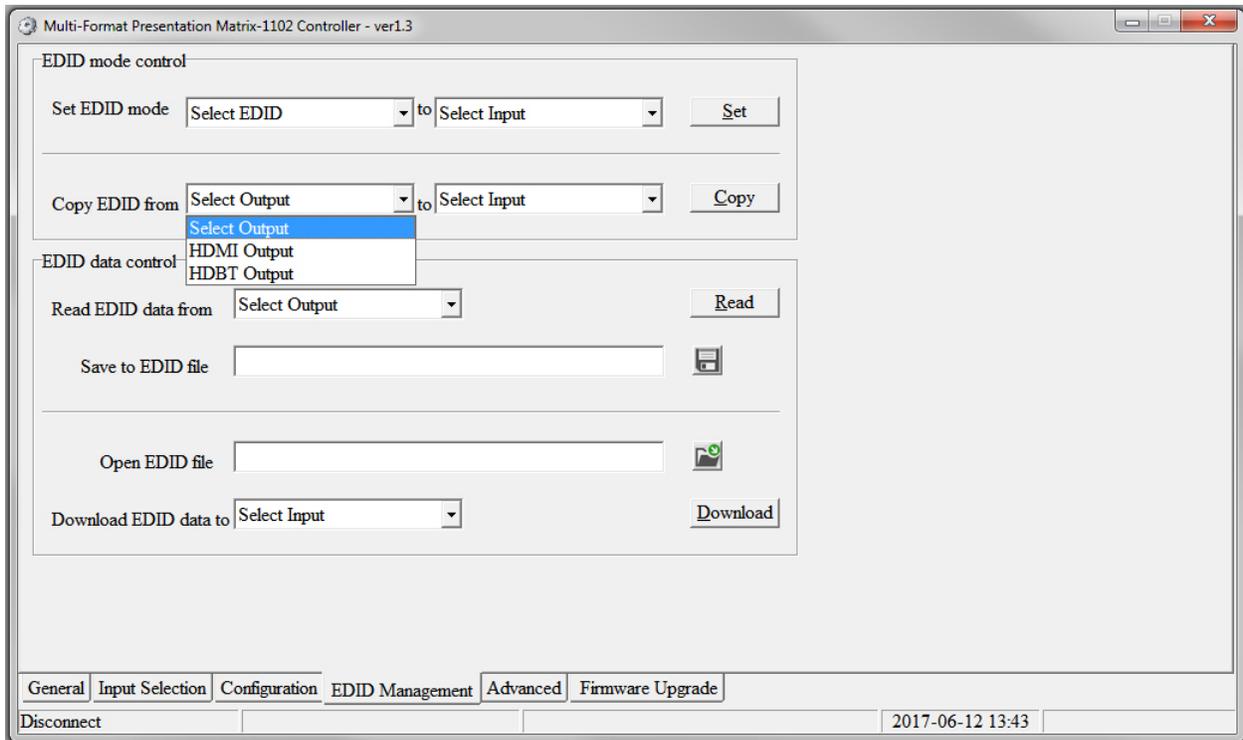
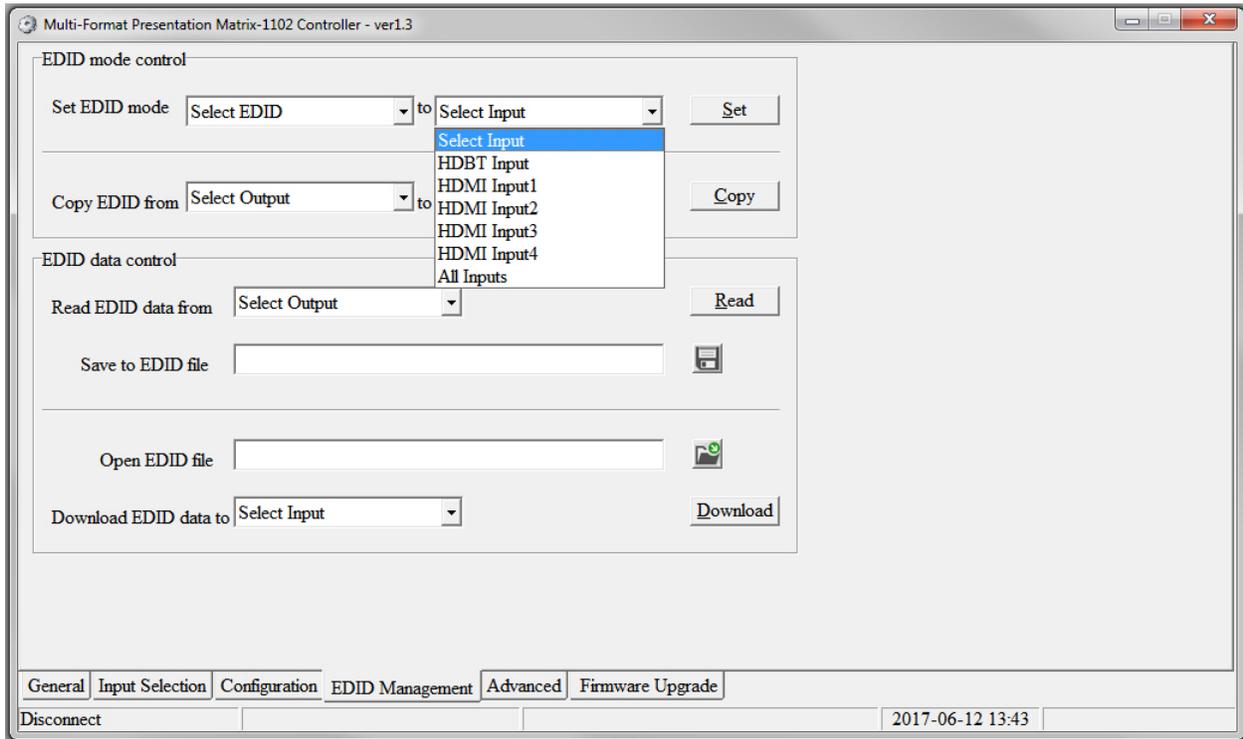
GUI SOFTWARE



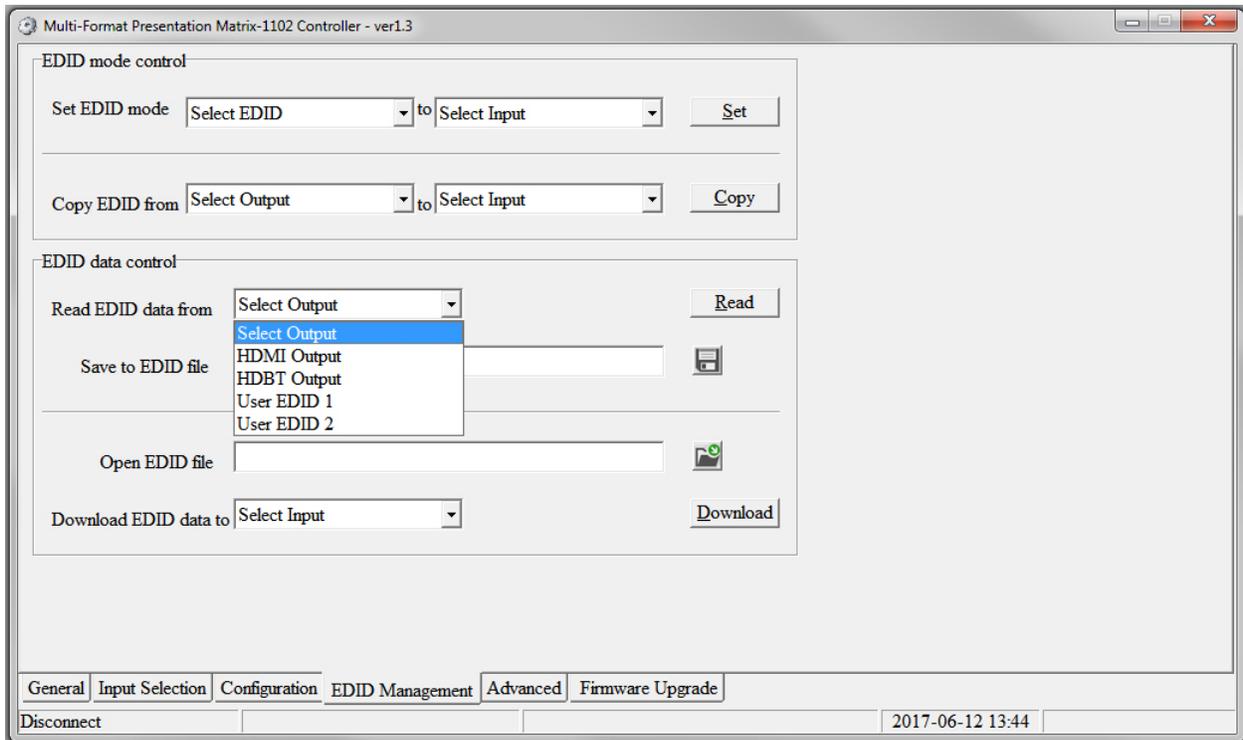
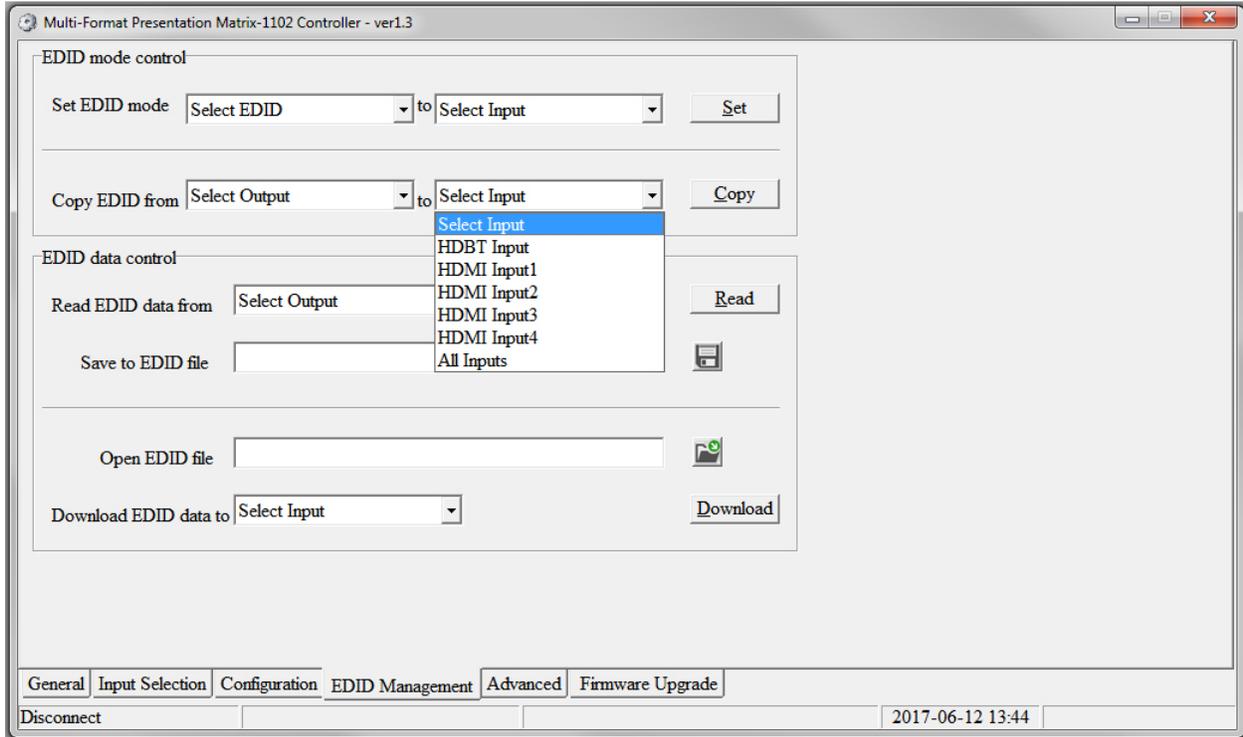
GUI SOFTWARE



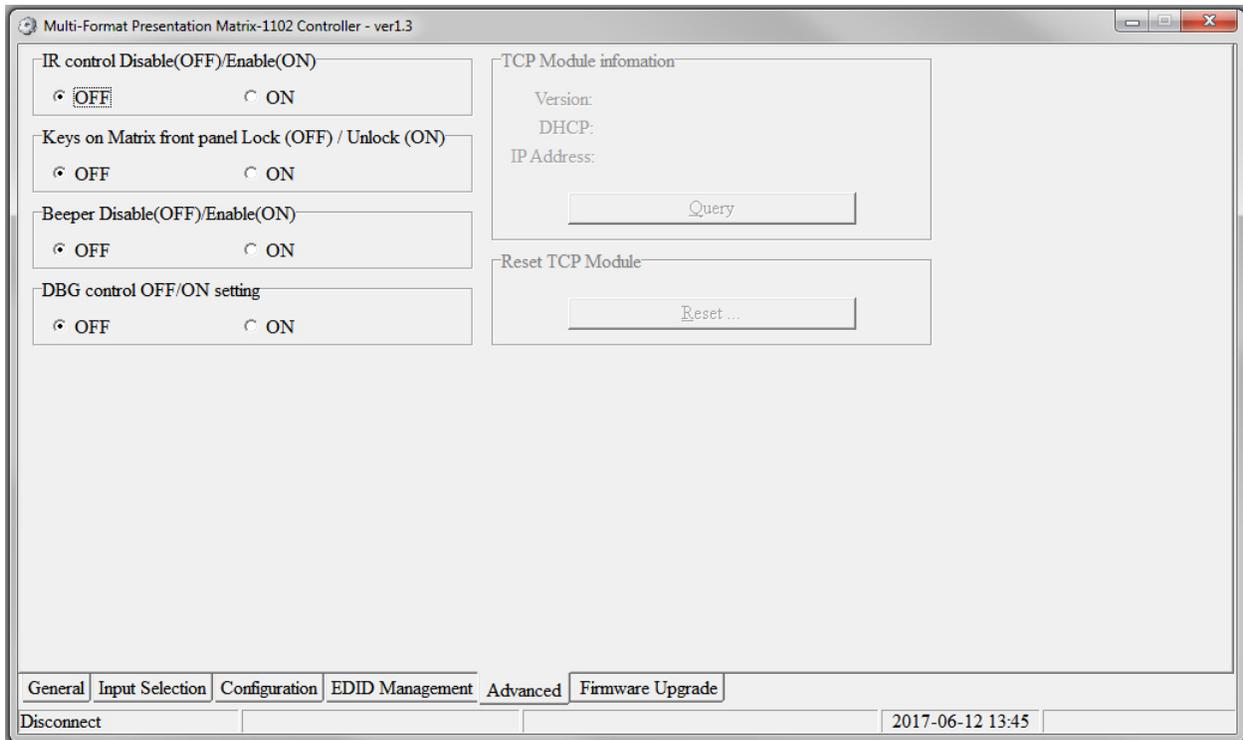
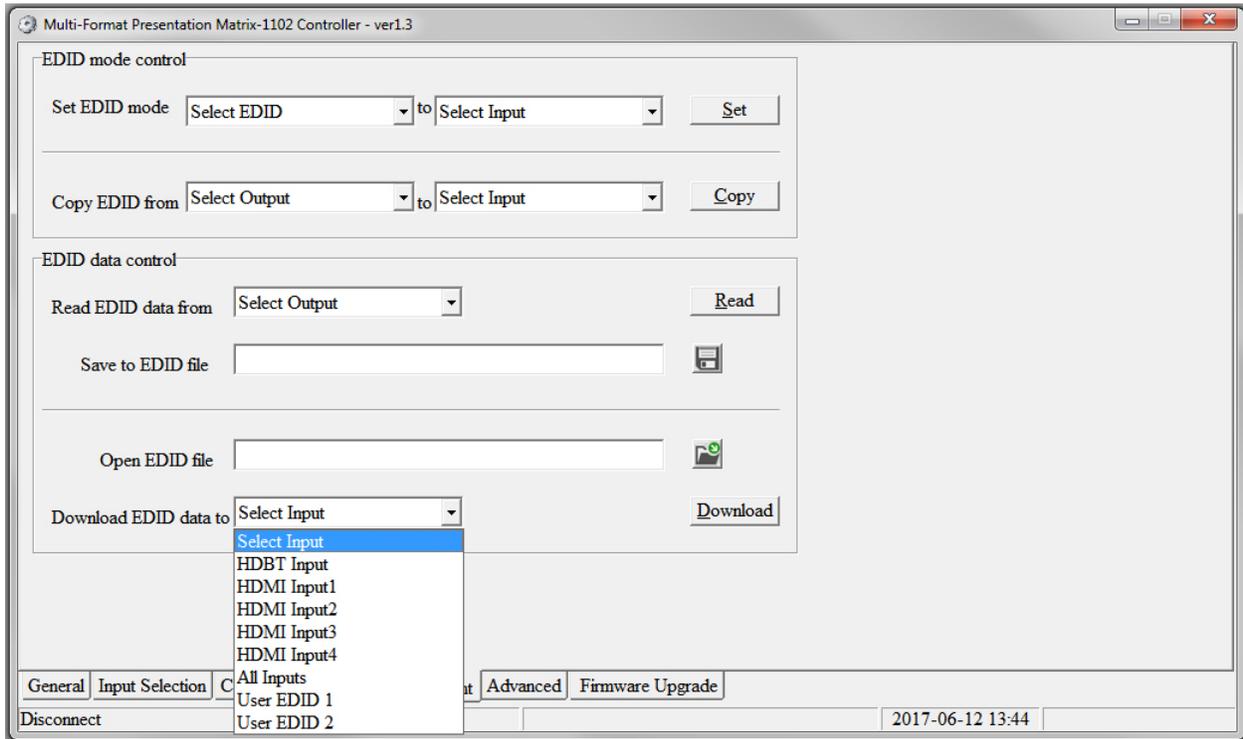
GUI SOFTWARE



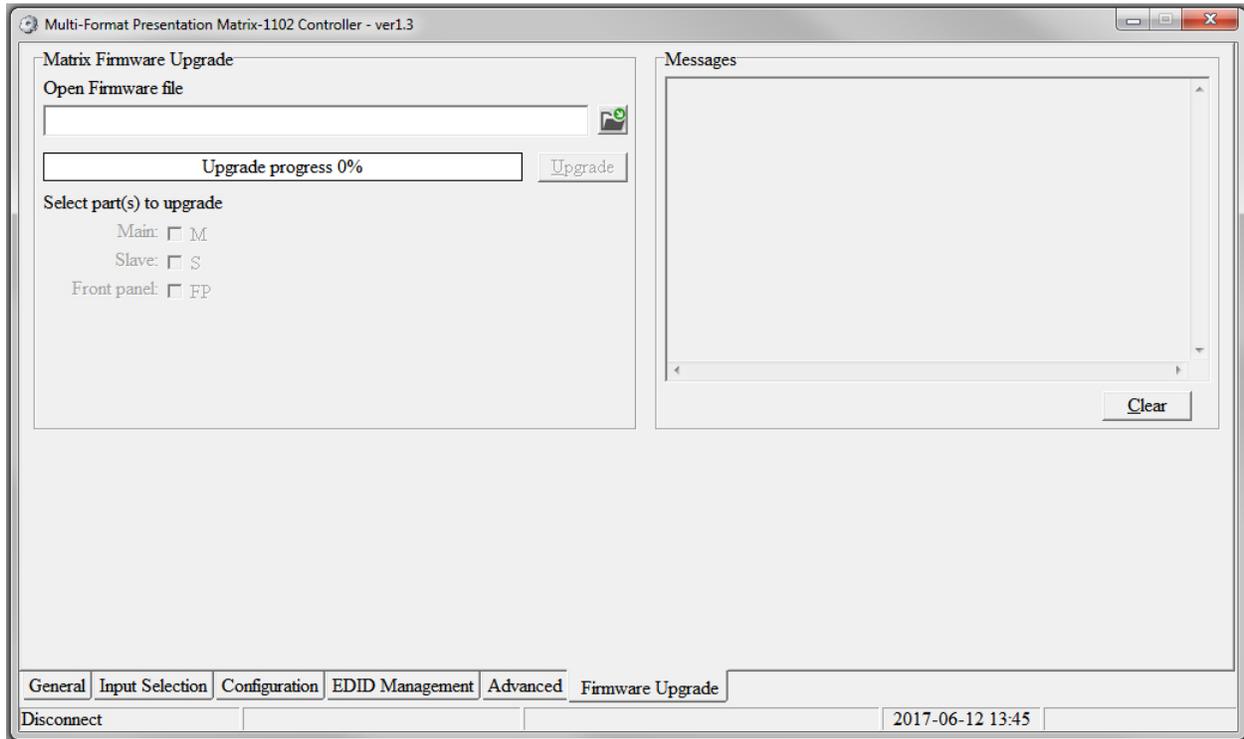
GUI SOFTWARE



GUI SOFTWARE



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