875770 HDBaseT/HDMI/Audio Matrix Manual

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

SURGE PROTECTION DEVICE RECOMMENDED

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lightning strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

SAFTY AND NOTICE

1. The transmission distances of HDMI over UTP cables are measured using TE CONNECTIVITY 1427071-6. **The recommended quality of cable is AWG 24/1.**
2. EIA/TIA-568-B termination (T568B) for CAT cables is recommended for better performance.
3. **DO NOT use 568A/568B standard mixed CAT cable (cross-over cable)** because there are 2 pairs swapped, this will make POE OVER-CURRENT and damage POE components. Please use straight-through CAT cable (both RJ45 headers are 568A or 568B standard).
4. It is recommended that power up the device after connections of source, sink and CAT cable.
5. To reduce the interference among the unshielded twisted pairs of wires in CAT cable, do not run HDBaseT / Zone Cat5e/6/6a cabling with or in close parallel proximity to mains power cables. Shielded CAT cables can be used to improve EMI problems, which is worsen in long transmission.
6. Because the quality of the CAT cables has the major effect on how long the transmission limit can achieve and how good is the received picture quality, the actual transmission range is subject to one's choice of CAT cables.
7. **Do not substitute or use any other Power Supply other than the enclosed unit**, or a TLS electronics GmbH approved Replacement Part. Doing so will void the warranty and potentially expose the user to dangerous voltages resulting in an electrical shock.
8. Do not disassemble the device for any reason. Doing so will void the manufacturer's warranty. Also, our unique case is an integral part of the design of this unit and is responsible for cooling and circuitry shielding. Any modifications to this case will potentially cause malfunction and product failure.
9. Do not expose the device to water, moisture, or liquids. Possible electric shock may result as well as failure of the unit to operate.

Table of Contents

Introduction:

HDBaseT/HDMI/Audio Matrix is a modular design 8x HDMI/HDBaseT and 8x HDMI and 8x HDBaseT matrix switcher together with 24x8 audio matrix switcher, supporting 1080p Full HD up to 4K plus all 3D formats, along with multichannel digital audio formats such as Dolby® True HD and DTS-HD® Master Audio™. Based on HDBaseT technology, the input or output distance can reach up to 100m via Cat5e/Cat6. Embedded Ethernet switcher provides flexible access to Ethernet for each zone. Each source can be routed to any display using the front-panel push buttons, IR remote control, RS-232 interface, or via TCP/IP.

Features:

- 2U modular design, flexible input and output cards selection.
- 24x8 stereo audio matrix supporting Audio Return Channel.
- HDBaseT chipset inside for input or output distance up to 100m.
- Matrix can power the remote receivers and transmitters, POH (power over HDBaseT), no power supply needed for the transmitters and receivers. **The maximum number of supplied transmitters and receivers is 8**. For additional devices you have to use the external power supply, which is delivered with the transmitter-receiver-set. **Do not mix with other manufacturers !**
- Supports resolutions up to 1080p@60Hz,4K@30Hz(4:4:4),4K@60Hz(4:2:0)
- Allows any source to be displayed on multiple displays at the same time
- Allows any HDMI display to view any HDMI source at any time
- Dolby TrueHD and DTS-HD master audio pass through HDMI output
- Advanced EDID management for rapid integration of sources and displays
- Front-panel LCD display for status feedback
- Multiple switching mode, push-in button, Windows Software, IR remote control, RS-232 control, and TCP/IP control
- Easy installation with rack-mounting ears
- Full 3D pass through.
- HDCP compliant

Panel Descriptions

Front Panel
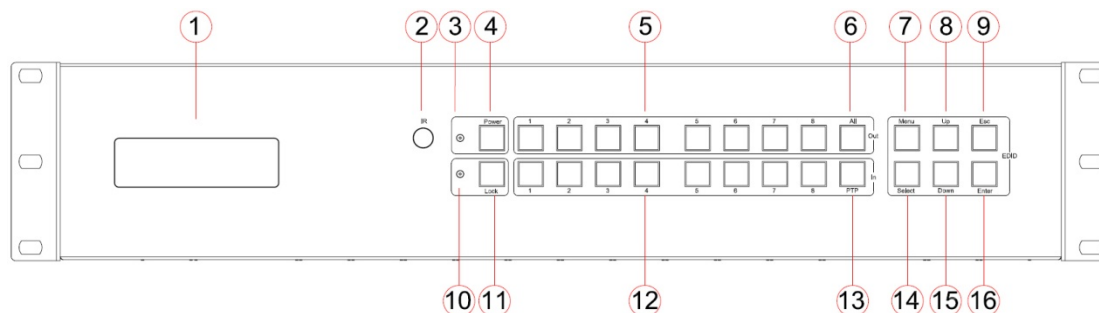
1. LCD display---Show the status of input-output selection, EDID info and so on.

2. IR receiver window----Receive the IR from the remote control of HDBASET/HDMI/AUDIO MATRIX.

3. Power LED indicator---Indicate the status of the power for the matrix.

4. Power button---Press to power on/off the matrix.

5. HDMI output selection button 1 to 8---Press to select the output from 1 to 8.

6. All button for HDMI outputs---Press to select all of the outputs from 1 to 8.

7. Menu button---Press to enter EDID set mode. Three 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 can be changed currently. Segment content items as below:

| INPUT	VIDEO	AUDIO	Note
IN1	1080I	2.0CH.	
IN2	1080P	5.1CH	
IN3	3D	7.1CH	
IN4	4K2K	NONE	
IN5	D1024		D1024=DVI 1024 x 768
IN6	D1080		D1080=DVI 1920 x 1080
IN7	D1200		D1200=DVI 1920 x 1200
IN8	OUT1		OUT1=Copy OUTPUT1 EDID to INPUTx
ALL	OUT2		ALL=Set EDID to ALL INPUTs OUT2=Copy OUTPUT2 EDID to INPUTx
	OUT3		OUT3=Copy OUTPUT3 EDID to INPUTx
	OUT4		OUT4=Copy OUTPUT4 EDID to INPUTx
	OUT5		OUT5=Copy OUTPUT5 EDID to INPUTx
	OUT6		OUT6=Copy OUTPUT6 EDID to INPUTx
	OUT7		OUT7=Copy OUTPUT7 EDID to INPUTx
	OUT8		OUT8=Copy OUTPUT8 EDID to INPUTx

8. Up selection button--- Press to change segment's value.

9. ESC---Press to quit EDID set mode.

10. Lock LED indicator---Indicate the status of Lock.

11. Lock button---Press to lock the buttons of the front panel.

12. HDMI input selection button 1 to 8---Press to select the input from 1 to 8.

13. PTP button---Press to mirror all inputs and outputs (e.g. output 1 to input1, output 2 to input2 and so on).

14. Selection button---Press to select segment to change setting. Selected segment will be blinking.

15. Down selection button---Press to change segment's value.

16. Enter button--- Press to set EDID to specified INPUT or copy EDID from specified OUTPUT to specified INPUT.

Back Panel
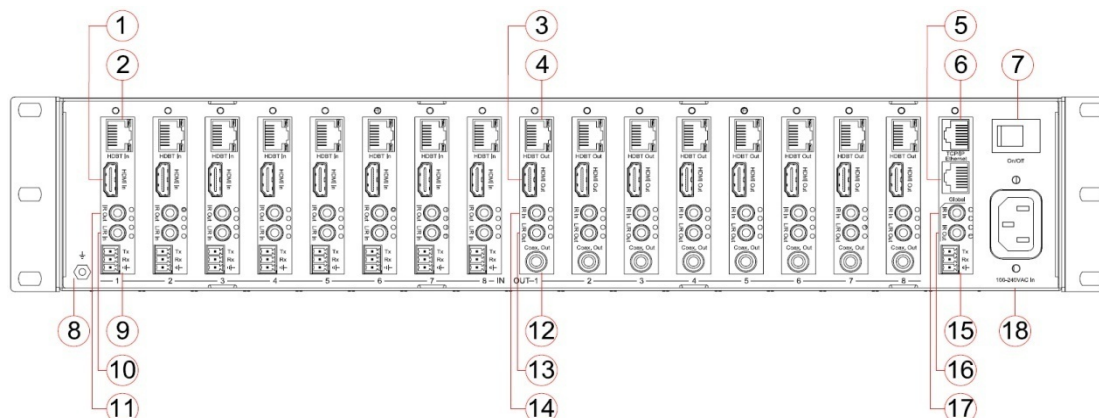
1. HDMI inputs 1 to 8 --- Connect HDMI sources

2. HDBT inputs 1 to 8 --- Work with remote HDBT transmitter

3. HDMI outputs 1 to 8--- Output for displays, AVR etc.

4. HDBT outputs 1 to 8--- Work with remote receivers for long distance transmission.

5. Ethernet--- Connect to the LAN switch for Ethernet access, embedded 1x16 Ethernet switch for remote 8x HDBT transmitter and 8x HDBT receiver

6. RJ45 ---TCP control

7. Power switch--- Power on/off the unit.

8. GND---Connect to ground.

9. RS232 port--- 1x 3-pin phoenix terminal connector

10. L/R In 1 to 8--- 3.5mm stereo phone-jack.

11. IR Out 1 to 8---3.5mm mono phone-jack, connect to IR transmitter cable.

12. Coaxial Output 1 to 8 ---RCA connector.

13. L/R Output 1 to 8 ---3.5mm stereo phone-jack.

14. IR In 1 to 8 ---3.5mm stereo phone-jack, work with control processor.

15. Master RS232---1x 3-pin phoenix terminal connector

16. Global IR Out--- 3.5mm mono phone-jack,

17. Global IR In--- 3.5mm stereo phone-jack.

18. AC power input---100-240V power input.

Remote Control Description
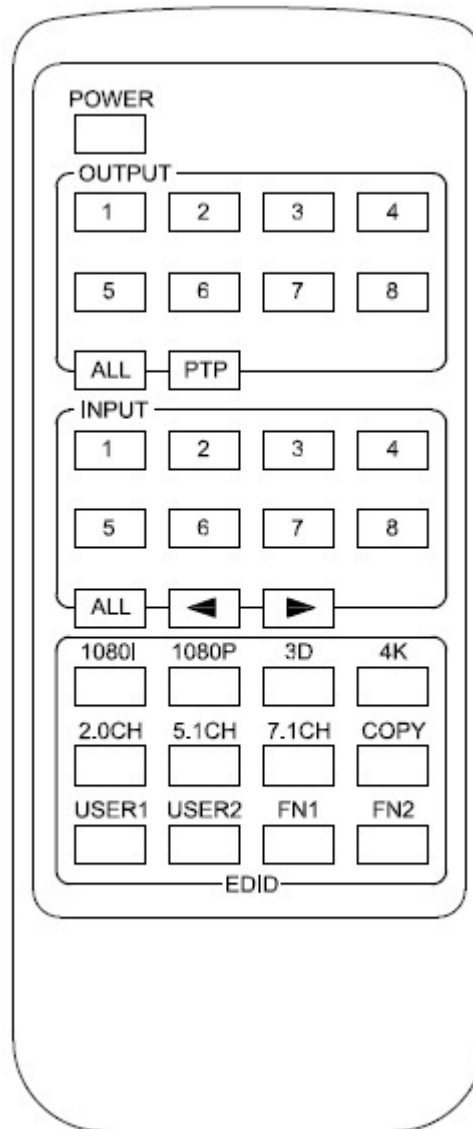
Output and Input select

A. OUTPUT-X select INPUT-Y:
    1. Press OUTPUT-X (X means 1 to 8 of outputs)→Press INPUT-Y (Y means 1 to 8 of inputs)
    2. Press OUTPUT-X (X means 1 to 8 of outputs)→ press the left and right arrow buttons to select the input.

B. All outputs select INPUT-Y: Press ALL button in zone OUTPUT→Press INPUT-Y button (Y means 1 to 8 of inputs), then INPUT-Y switched to ALL OUTPUTS

C. Mirror all inputs and outputs (Ex. Input 1 to output 1, input 2 to output 2, etc): Press PTP button in Zone OUTPUT

EDID Set Up

A. Fixed EDID to INPUT-Y/ALL
    Press 1080I/1080P/3D/4K→
    Press 2.0CH/5.1CH/7.1CH→
    INPUT-Y/ALL button in Zone INPUT
B. Copy EDID of OUTPUT-X to INPUT-Y/ALL
    Press COPY button→Press OUTPUT-X button→Press INPUT-Y/ALL button
C. User defined EDID to INPUT-Y/ALL
    Press USER1/USER2 button→Press INPUT-Y/ALL

NOTE: Pressing button sequence should be finished in 5 seconds, otherwise, operation discarded.

Application Diagram

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Specifications:

Bandwidth :	10.2Gbps
Video Input Connectors:	8x HDMI Type A, 8x RJ-45 connector
Video Output Connectors:	8x HDMI Type A, 8x RJ-45 connector
Audio Input Connectors:	8x 3.5mm stereo jack
Audio Output Connectors:	8x 3.5mm stereo jack,8x RCA (SPDIF)
Ethernet Input:	1x RJ-45
RS-232 serial port:	9x 3-pin phoenix terminal connector
TCP/IP Control:	1x RJ-45
IR Input ports:	9x 3.5mm stereo jack
IR Output ports:	9x 3.5mm mono jack
Rack-Mountable:	2 U rack height, rack ears included
Dimensions (W x H x D):	440mm x 358mm x 87mm , without feet
Shipping Weight:	8.8Kg
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:	100V-240V

Package Contents:

1. 1x 875770 HDBaseT/HDMI/Audio Matrix XxX
2. 1x AC power cord
3. 1x Remote control
4. 9x IR Transmitter,
5. 9x IR Receiver.
6. 1x mounting kit.
7. 2x RS232 to Philex Cable

RS-232 Pin Assignment

HDBASET/HDMI/AUDIO MATRIX		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	NC
9	NC	9	NC

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

RS232 and Telnet Commands

No.	Command	Action
1	?	Print Help Information
2	HELP	Print Help Information
3	STATUS	Print System Status And Port Status
4	PON	Power On, System Run On Normal State Reply: Set system power ON, please wait a moment… Done
5	POFF	Power Off, System Run On Power Save State Reply: Set system power OFF
6	IR ON/OFF	Set System IR Control On Or Off
7	KEY ON/OFF	Set System KEY Control On Or Off
8	DBG ON/OFF	Set Debug mode on or off
8	LCD ON/OFF	Set LCD always on or Auto Turn Off in power on state
9	BEEP ON/OFF	Set Onboard Beep On Or Off
10	RESET	Reset System To Default Setting (Should Type "Yes" To Confirm, "No" To Discard)
11	MXIR xx FR yy Output Port IR:xx From Local IR:yy	xx=[00]: All Output IR, [01...08]: Output IR yy=[01...08] Local IR
12	MXIR GI (+-)xx Global IR_IN Signal To Input/Output IR:xx	xx=[01...08]: Input IR, [09...16]: Local IR xx=[17...24]: Output IR +: Add xx To Current Setting -: Remove xx From Current Setting
13	MXIR GO (+-)xx Global IR_OUT Signal From Input/Output IR:xx	xx=[01...08]: Input IR, [09...16]: Local IR xx=[17...24]: Output IR, [25]: Global IR In +: Add xx To Current Setting -: Remove xx From Current Setting
14	MXUART xx TO yy Local UART:xx Connect To Input/Output	xx=[01...08]: Local UART, [09]: Global UART

	UART:yy	yy=[00]: Disconnect With Any Uart
		yy=[01...08]: Input UART, [09...16]: Output UART
15	MXSTA	Print Matrix IR And UART Connect State
16	AUD TX xx STE yy	Output Port:xx Audio From Input Port:yy Stereo
17	AUD TX xx EXT yy	Output Port:xx Audio From Input Port:yy Extract
18	AUD TX xx ARC tt	Output Port:xx Audio From Output Port:tt ARC
19	AUD TX xx FOSTE	Output Port:xx Audio From Select Video Input Stereo
20	AUD TX xx FOEXT	Output Port:xx Audio From Select Video Extract
21	AUD TX xx DL ss	Set AUDIO:xx Delay zz ms
22	AUD STA	Print Input/Output Port Audio Setting State
		xx=[00]: All Output Audio, [01...08]: Output Audio
		yy=[01...08]: Input Port Audio
		tt=[01...08]: Output ARC Audio
		zz=00 ~ 500ms Delay, 50ms per Step
23	AUD RX xx BPS	Input Port:xx Bypass Receive HDMI/DVI Signal
24	AUD RX xx STE	Input Port:xx Insert Stereo To HDMI/DVI Signal
25	AUD RX xx AUTO	Input Port:xx Insert Stereo To DVI Signal Only
		xx==[00]: All Input Port, [01...08]: Input Port
26	IN xx FO yy	INPUT:xx Force Select Source:yy, Stop Auto Detect
27	IN xx AU yy	INPUT:xx Auto Detect Source, Source:yy High Priority
		xx=[00]: All INPUT Port, [01...08]: INPUT Port
		yy=[01]: HDMI, [02]: HDBT
28	OUT xx ON/OFF	Set OUTPUT:xx On Or Off
29	OUT xx FR yy	Set OUTPUT:xx From INPUT:yy
		Reply: Set output xx connect from input yy
30	OUT xx EH/ET yy	Set OUTPUT:xx Use HDMI/HDBT EDID
		xx=[00]: All OUTPUT Port, [01...08]: OUTPUT Port
		yy=[01...08]: INPUT Port

GUI Control

PC System: Microsoft Windows Operation System

Installation

8x8 HDMI Matrix controller is a green software. You just need to copy "8x8 HDMI Matrix Controller vx.x.exe" to the PC which is used to control the Matrix by RS232 COM or TCP to complete installation.
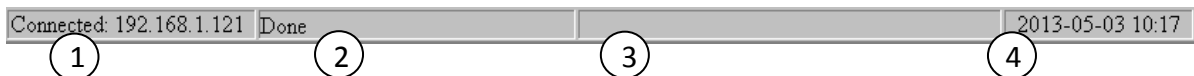
Preparation

1. Connect PC and Matrix by RS232 cable or UTP cable
2. Power up Matrix (It will take about 5 seconds to be ready with "Di" beep sound)
3. Double click "8x8 HDMI Matrix Controller vx.x.exe" icon to run it

How to control Matrix

Common information

| General | Port Tag | Matrix control | Input/Output setting | IR/RS232 setting | EDID control | Advanced | FW upgrade |

Click to select tab page

| Connected: 192.168.1.121 | Done | | | 2013-05-03 10:17 |
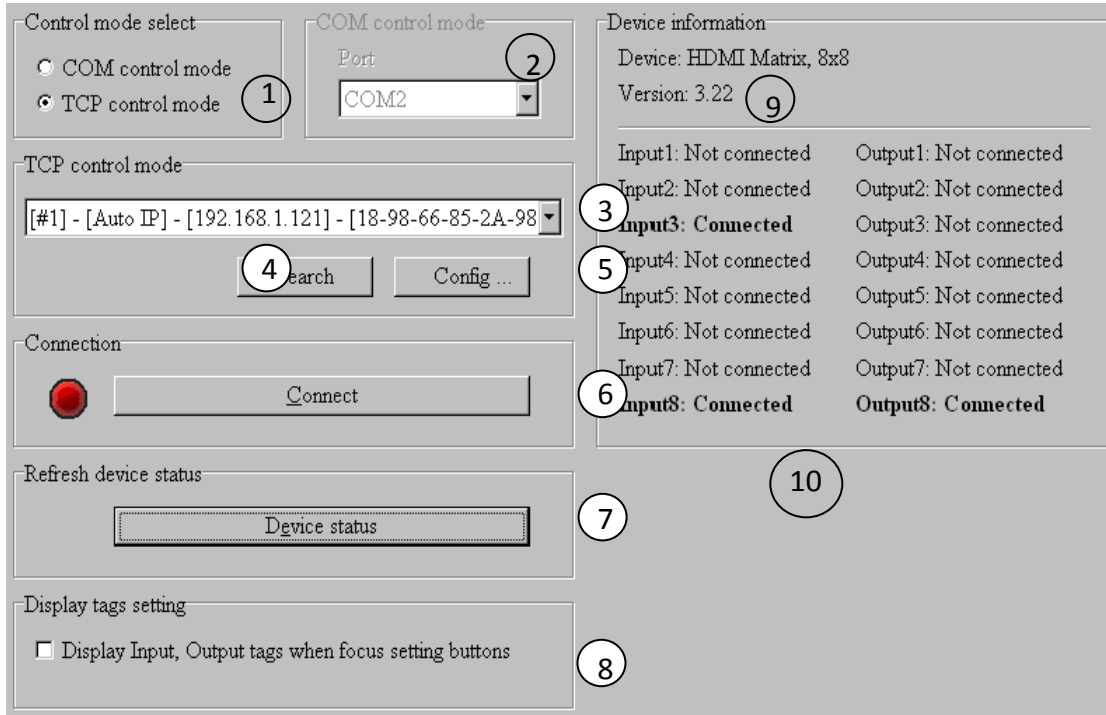
1. COM port or TCP connect status
2. Control command process status
3. Prompt message display area
4. Date and Time display

"General" page

Select control mode: RS232 COM mode (Auto COM ports detected) or TCP mode

1. List detected COM ports
2. List all Matrix devices after search operation
3. Click to search all Matrix devices that connected in same subnet
4. Click to configuration the selected Matrix's TCP control configurations
5. Click to connect or disconnect PC and Matrix (Connection will be established automatically before control commands sending)

6. Click to refresh device status: include device information displayed in ⑨ area

   and Input/output port connection status in ⑩ area.

NOTE: Tab pages cannot be changed during control command is processing.

7. To enable or disable Input/output tags displaying when setting buttons on "Setting" page focused
8. Device information display area
9. Input/output port connection status

Set TCP control configuration
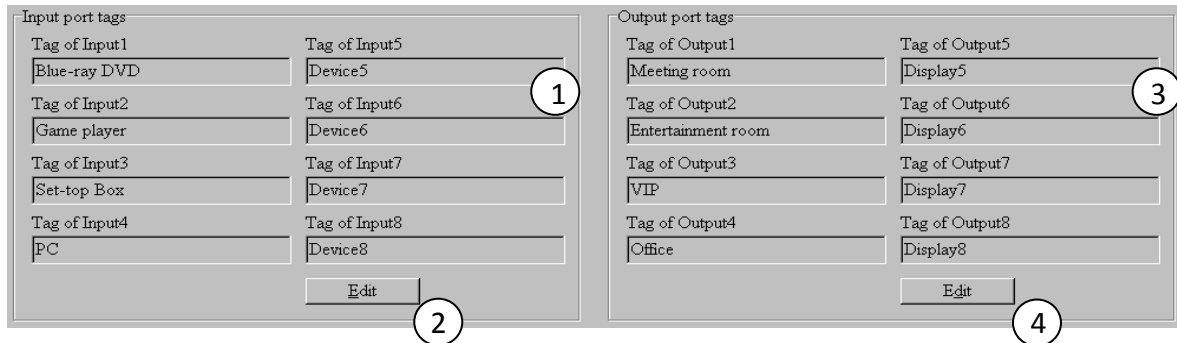
Click Config button to show TCP configuration window.
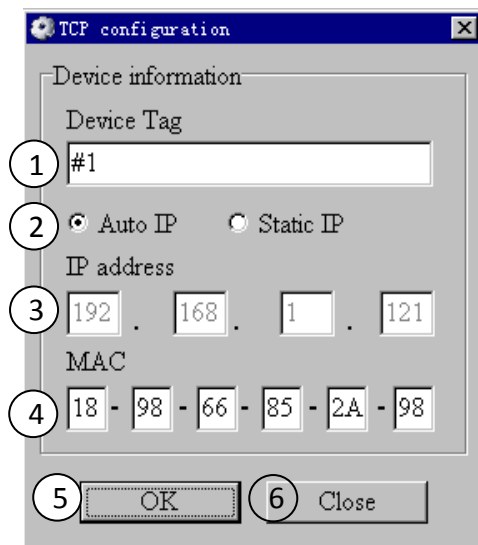
1. Set tag to identify Matrix device
2. Set IP mode: Subnet should support DHCP protocol when set Auto IP mode, then Matrix device will obtain IP automatically. Otherwise, set Static IP mode and designate a useable IP for Matrix device
3. Set IP address, not editable when Auto IP mode selected. Note: The last IP BYTE's range is 2-252.
4. Matrix device MAC address
5. Click OK to set configuration. If configuration is set OK, Matrix devices will be searched out again
6. Click to Close the window and configuration cancelled

"Port Tag" page

1. Input port tags
2. Click to edit Input port tags
3. Output port tags
4. Click to edit Output port tags
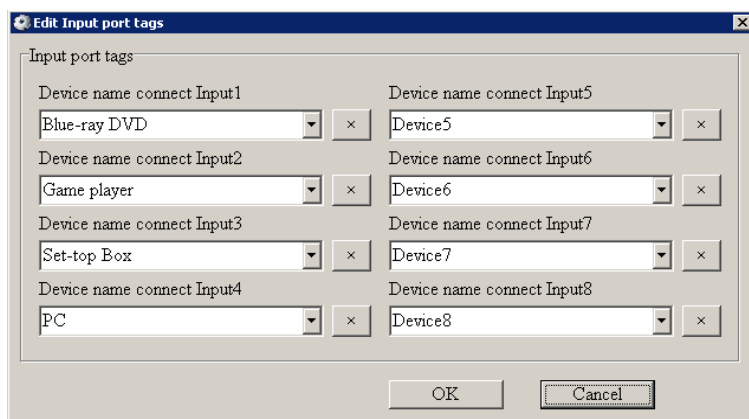
NOTE: Edit boxes are read only, click "Edit" button to pop up window to edit the tags.

One set of Input/output port tags can be set for Matrix device when COM control mode selected.

Input/output port tags can be set for respective Matrix device according to device's MAC address.

Edit Input port tags

After action of ②, edit form will pop-up as below:
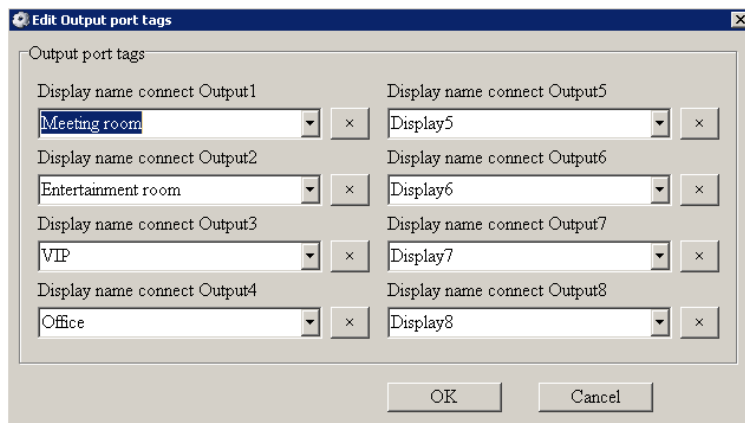
Define tags for respective Input port, then devices connect the Input ports can be easily remembered.

Click buttons with "×" caption to delete tag which is no use any more, if tag is still used by any other Input port, delete action will be discarded.

Edit Output port tags

After action of ④, edit form will pop-up as below:
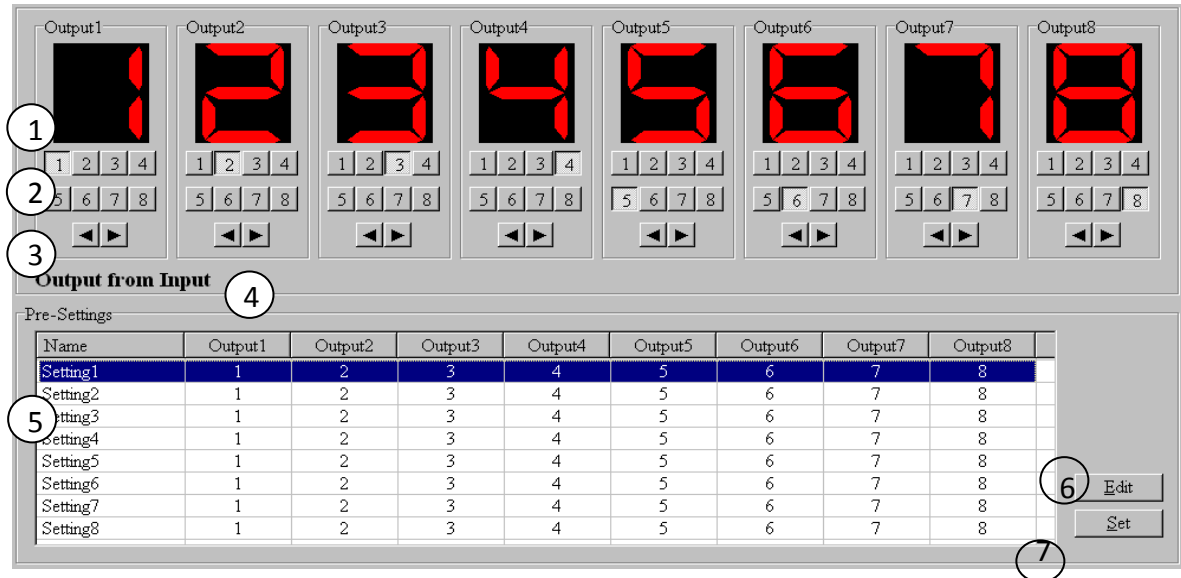
Define tags for respective Output port, then displays connect the Output ports can be easily remembered.

Click buttons with "×" caption to delete tag which is no use any more, if tag is still used by any other Output port, delete action will be discarded.

"Setting" page

1. LED which displays Input number for respective Output port
2. Click to select Input port for respective Output port
3. Click to select previous or next Input port for respective Output port
4. Display Output from Input with tag information when mouse moves over ②

    buttons
5. Pre-Setting items: Default is Port to Port
6. Click to edit selected pre-setting item
7. Set selected pre-setting item to Matrix

NOTE: When Change to this "Setting" page, software will try to refresh source selection status of Output port.

Pop-up tag messages

When "Display Input, Output tags when focus setting buttons" checkbox on "General" page is checked and Input/output port tag has been defined, tag messages will pop up like as:

Output1 - [Meeting room]
Output2 - [Entertainment room]
Output3 - [VIP]
Output4 - [Office]
Output5 - [Display5]
Output6 - [Display6]
Output7 - [Display7]
Output8 - [Display8]
Input1 - [Blue-ray DVD]
Input2 - [Game player]
Input3 - [Set-top Box]
Input4 - [PC]
Input5 - [Device5]
Input6 - [Device6]
Input7 - [Device7]
Input8 - [Device8]

Output4 - [Office] from Input2 - [Game player]

Name	Output1	Output2	Output3			Output7	Output8	
Setting1	1	2	3			7	8	
Setting2	1	2	3			7	8	
Setting3	1	2	3			7	8	
Setting4	1	2	3			7	8	
Setting5	1	2	3			7	8	
Setting6	1	2	3			7	8	Edit
Setting7	1	2	3			7	8	Set
Setting8	1	2	3			7	8	

Pop-up Menu

When mouse moves over ② setting buttons, and click mouse right button, menu will pop up like as:
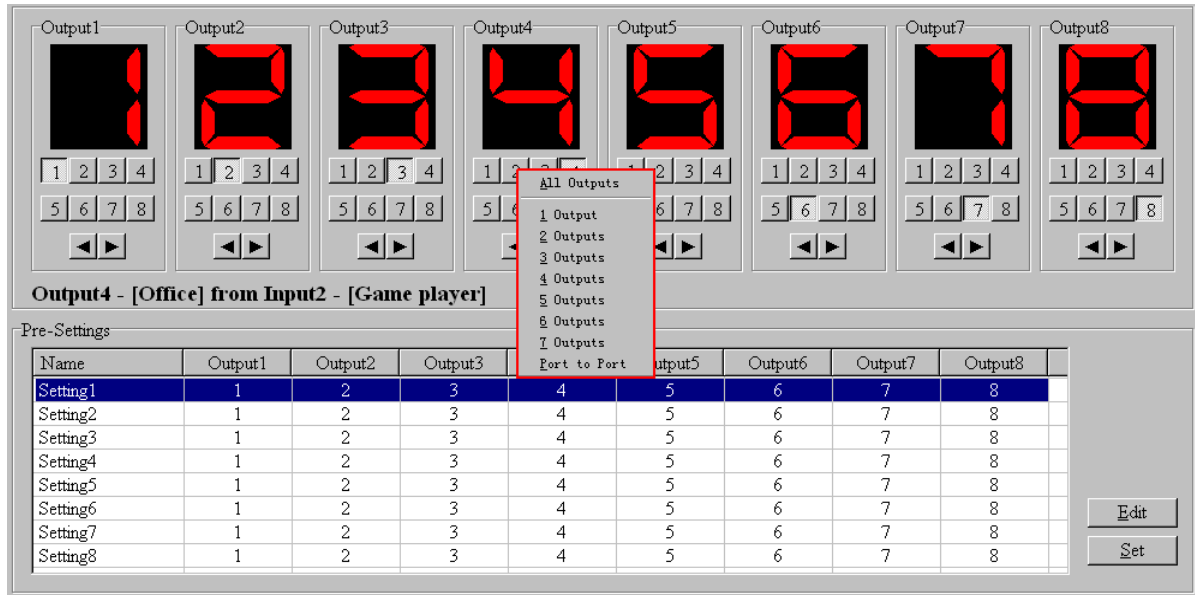
All Outputs: All Outputs from same Input

"1 Output" to "7 Outputs": Set current Output (where mouse right clicked) and the next x-1 (x range is from 1 to 7, set total x Outputs at the same time) Output(s) from same Input

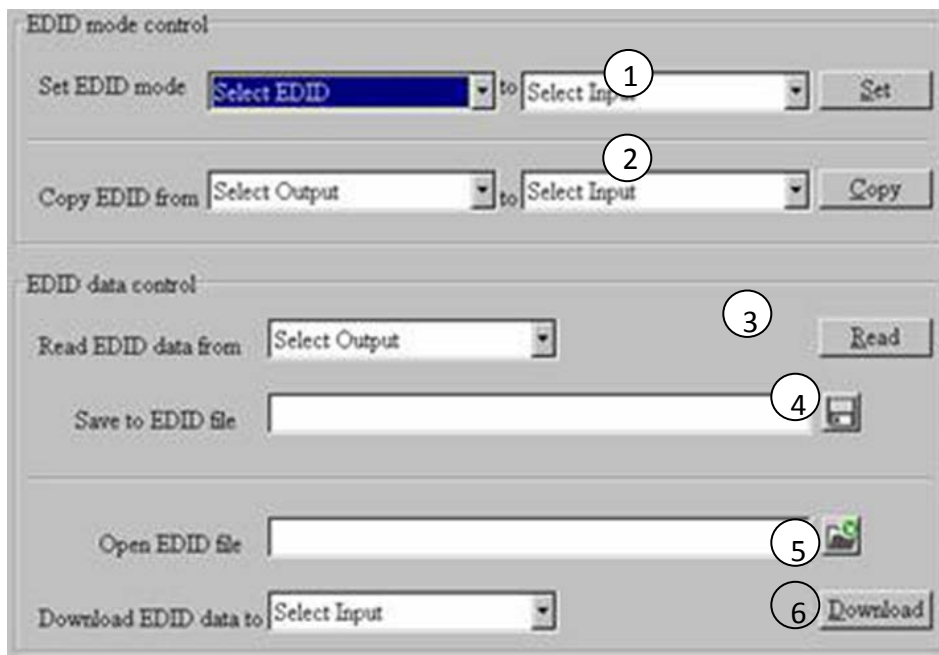Port to Port: Output1 from Input1, Output2 from Input2, Output3 from Input3, etc.

Edit selected pre-setting item

After action of ⑥, edit form will pop-up as below:
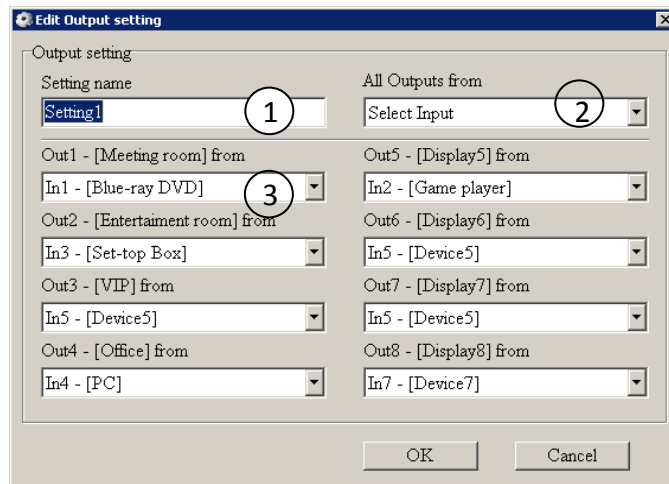
1. Pre-Setting name
2. Set all Output ports from same Input
3. Select Input for respective Output
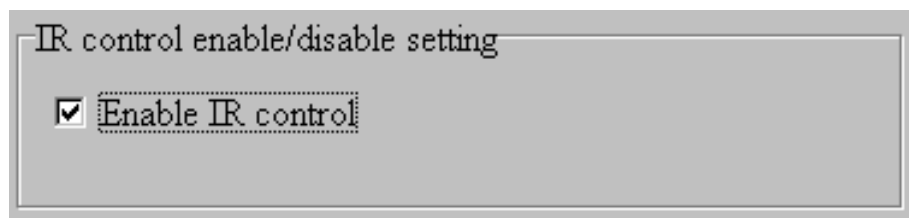
"EDID control" page

1. Set EDID mode for selected Input port or All Input ports, click "Set" button to complete action.

   NOTE: When set User1/User2 EDID mode, should Download EDID content to User1 Memory/User2 Memory first. User1/User2 default EDID content is 1080p, Stereo Audio 2.0.

2. Copy EDID from Output port to selected Input port or All Input ports, click
3. "Copy" button to complete action.
4. Read EDID content from Output port and display in grid, click "Read" button to complete action.
5. Save EDID content which displayed in grid to binary file (file extension is ".bin")

"IR Configuration" page

To enable or disable IR control function. When box checked, IR control function enabled, otherwise, IR control function disabled. This setting is not memorized. IR control function is always enabled after power up.

"FW upgrade" page
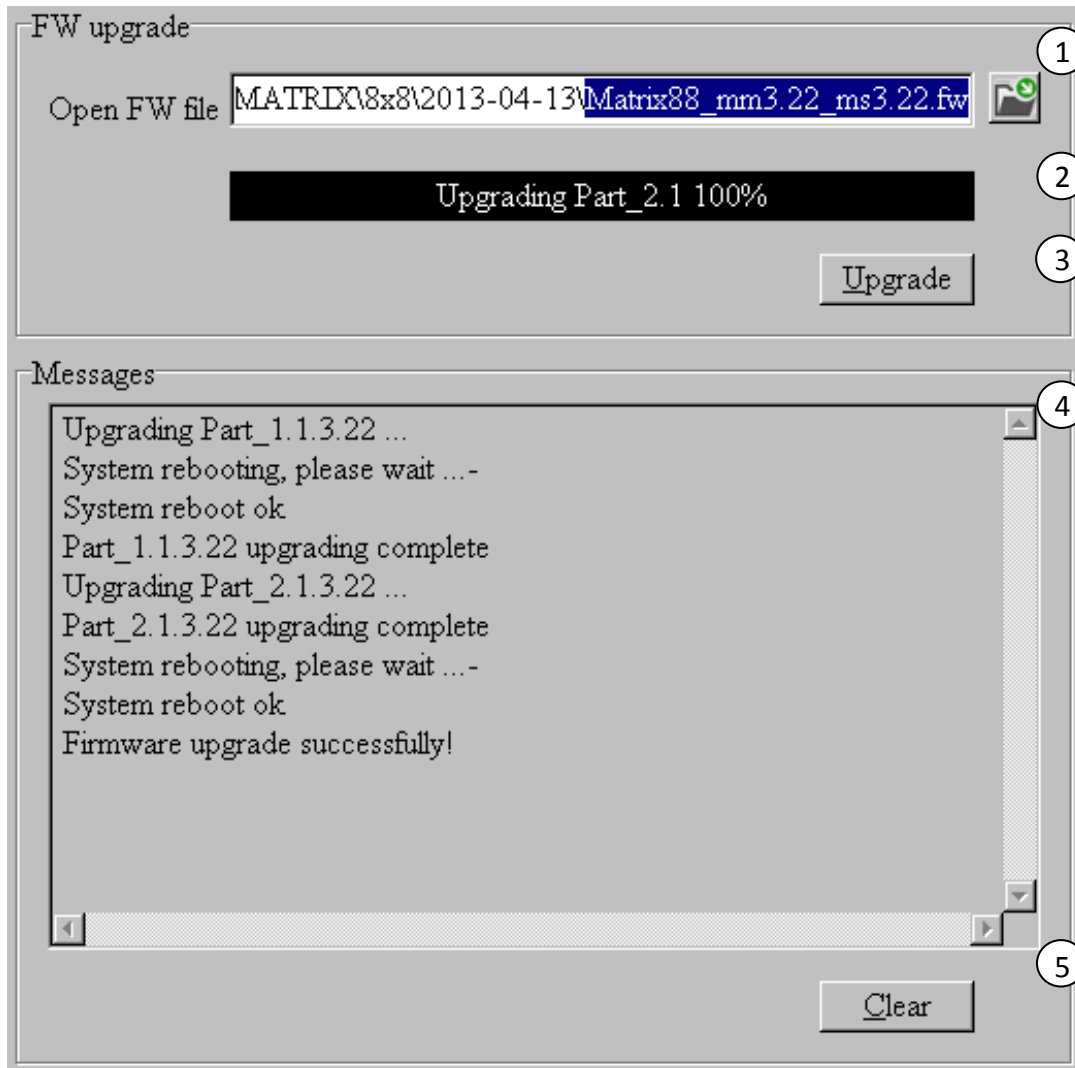
Click to open firmware file (file extension is ".fw").
Firmware upgrade progress
Click the button to upgrade firmware.

NOTE: If failure occurs during upgrading firmware process, the following steps SHOULD be done sequentially to establish next upgrading procedure:

1. Power down the Matrix
2. Close the 8x8 HDMI Matrix Controller
3. Re-power up the Matrix, then wait for 10 seconds to ensure the Matrix is ready
4. Run 8x8 HDMI Matrix Controller, open firmware file and upgrade again

Firmware upgrading messages display
Click to clear the messages displayed in the memo box.

Each input can be from HDMI or HDBaseT chosen via the pop-up menu under each Input port.
1. Choose HDMI, then the HDMI input will be enabled; the HDBT input will be disabled.
2. Choose HDBT, then the HDBT input will be enabled; the HDMI input will be disabled.
3. Choose Auto, the input will auto-scan the inputs between HDMI and HDBT. For example, if Input 1 chooses HDBT and Auto, the input 1 will auto-scan from HDBT to HDMI, if the HDBT input has signal detected, input will stay to HDBT input, if not, it will scan the HDMI input and stay there when signal detected.

Each input audio source can be from the original HDMI/HDBT input, analog L/R embedded or Analog embedded when DVI.
1. Choose original, the audio will be from the HDMI/HDBT input.
2. Choose Analog L/R In embedded, the local L/R In will remove the original audio from the HDMI/HDBT input and be embedded.
3. Choose Analog embedded when DVI, when DVI signal is detected, it will embed the L/R In.

There is a 24x8 audio matrix inside.
8xAnalog L/R In (number 1 to 8),
8x Extracted from Input (number 1 to 8) ,
8x audio via ARC from the TV (number 1 to 8) ,
Total 24x audio in;
8x digital audio out (number 1 to 8)
8x analog audio out (number 1 to 8)
(The digital and analog audio out are from the same audio source)
Note: Only PCM audio can be converted to analog audio output.

Each audio output can be delayed from 50ms to 500ms (each step is 50ms)

Remote HDBT Receiver IR output control

Remote RX1 IR output from	Remote RX2 IR output from	Remote RX3 IR output from	Remote RX4 IR output from
Local IR In1 ▾	Local IR In2 ▾	Local IR In3 ▾	Local IR In4 ▾
Remote RX5 IR output from	Remote RX6 IR output from	Remote RX7 IR output from	Remote RX8 IR output from
Local IR In5 ▾	Local IR In6 ▾	Local IR In7 ▾	Local IR In8 ▾

It provides the flexibility to the IR path from local IR in to the IR output of each Remote HDBT receiver. The default setting will be each local IR in to the IR output of corresponding remote HDBT receiver. For example: Local IR in 1 to IR output of remote HDBT receiver 1 and local IR in 8 to IR output of remote HDBT receiver 8.

Global All IR In goes to

Remote HDBT Transmitter(x) IR output

☑ 1 ☑ 2 ☑ 3 ☑ 4 ☑ 5 ☑ 6 ☑ 7 ☑ 8 ☑ All

Local IR Out(x)

☑ 1 ☑ 2 ☑ 3 ☑ 4 ☑ 5 ☑ 6 ☑ 7 ☑ 8 ☑ All

Remote HDBT Receiver(x) IR output

☑ 1 ☑ 2 ☑ 3 ☑ 4 ☑ 5 ☑ 6 ☑ 7 ☑ 8 ☑ All

Global All IR In can be set flexibly to any specific IR output or all of the IR outputs.

Global All IR Out comes from

Remote HDBT Transmitter(x) IR input

☑ 1 ☑ 2 ☑ 3 ☑ 4 ☑ 5 ☑ 6 ☑ 7 ☑ 8 ☑ All

Local IR In(x)

☑ 1 ☑ 2 ☑ 3 ☑ 4 ☑ 5 ☑ 6 ☑ 7 ☑ 8 ☑ All

Remote HDBT Receiver(x) IR input

☑ 1 ☑ 2 ☑ 3 ☑ 4 ☑ 5 ☑ 6 ☑ 7 ☑ 8 ☑ All

Global All IR Out can be set flexibly from any specific IR output or all of the IR inputs.

Global All IR In loop to Global All IR Out

☐ Loop

Global All IR In can be set to loop to Global All IR Out.

Global RS-232(Tx,Rx,Gnd) route

Remote HDBT Transmitter1 ▼

Global RS232 can be flexibly set to any of the RS232 port, whether remote transmitter side or the local side.

Local RS-232(Tx,Rx,Gnd) route

Local1 route	Local2 route	Local3 route	Local4 route
Remote HDBT Receiver1 ▼	Remote HDBT Receiver2 ▼	Remote HDBT Receiver3 ▼	Remote HDBT Receiver4 ▼
Local5 route	Local6 route	Local7 route	Local8 route
Remote HDBT Receiver5 ▼	Remote HDBT Receiver6 ▼	Remote HDBT Receiver7 ▼	Remote HDBT Receiver8 ▼

Local RS232 can be flexibly set to any of the RS232 port, whether the remote transmitter or the remote receiver.
The default setting will be each local RS232 to the RS232 of corresponding remote HDBT receiver. For example: Local RS232 1 to RS232 of remote HDBT receiver 1, and local RS232 8 to RS232 of remote HDBT receiver 8.

Manual setting of input detection of video source

First press:

First you have to select the input you wish to change:

Input 1 to input 8

Then the following screen appears on the LCD display:

Second press:

The image means that there are 4 input channel modes which can be selected after you press the output keys no.1 to no. 4:

"1FH" means "Force HDMI In",
"2FT" means "Force HDBT In"
"3Ah" means "Auto HDMI In"
"4At" means "Auto HDBT In"

Maintenance

Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner or benzene to clean this unit.

Warranty Policy

TLS electronics GmbH products are warranted against defects in material and workmanship for two years from the date of shipment. During the warranty period, TLS electronics GmbH will, at its option, repair or replace products that prove to be defective. Repairs are warranted for the remainder of the original warranty or a 90 day extended warranty, whichever is longer.

For equipment under warranty, the owner is responsible for freight to TLS electronics GmbH and all related customs, taxes, tariffs, insurance, etc. TLS is responsible for the freight charges only for return of the equipment from the factory to the owner. TLS electronics GmbH will return the equipment by the same method (i.e., Air, Express, Surface) as the equipment was sent to TLS.

All equipment returned for warranty repair must have a valid RMA number issued prior to return and be marked clearly on the return packaging. TLS electronics GmbH strongly recommends all equipment be returned in its original packaging.

TLS electronics GmbH's obligations under this warranty are limited to repair or replacement of failed parts, and the return shipment to the buyer of the repaired or replaced parts.

Limitations of Warranty

The warranty does not apply to any part of a product that has been installed, altered, repaired, or misused in any way that, in the opinion of TLS electronics GmbH, would affect the reliability or detracts from the performance of any part of the product, or is damaged as the result of use in a way or with equipment that had not been previously approved by TLS electronics GmbH.

The warranty does not apply to any product or parts thereof where the serial number or the serial number of any of its parts has been altered, defaced, or removed.

The warranty does not cover damage or loss incurred in transportation of the product.

The warranty does not cover replacement or repair necessitated by loss or damage from any cause beyond the control of TLS electronics GmbH, such as lightning or other natural and weather related events or wartime environments.

The warranty does not cover any labor involved in the removal and or reinstallation of warranted equipment or parts on site, or any labor required to diagnose the necessity for repair or replacement.

The warranty excludes any responsibility by TLS electronics GmbH for incidental or consequential damages arising from the use of the equipment or products, or for any inability to use them either separate from or in combination with any other equipment or products.

A fixed charge established for each product will be imposed for all equipment returned for warranty repair where TLS electronics GmbH cannot identify the cause of the reported failure.

Exclusive Remedies

TLS electronics GmbH's warranty, as stated is in lieu of all other warranties, expressed, implied, or statutory, including those of merchantability and fitness for a particular purpose. The buyer shall pass on to any purchaser, lessee, or other user of TLS electronics GmbH's products, the aforementioned warranty, and shall indemnify and hold harmless TLS electronics GmbH from any claims or liability of such purchaser, lessee, or user based upon allegations that the buyer, its agents, or employees have made additional warranties or representations as to product preference or use.

The remedies provided herein are the buyer's sole and exclusive remedies. TLS electronics GmbH shall not be liable for any direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any other legal theory.

RMA Policy

When returning product to TLS electronics GmbH for any reason, the customer should fill out the official RMA form to obtain a RMA number. Without the permission or approval, TLS electronics GmbH will be no responsible for any return.

This can be initiated by emailing or calling your related sales.

All requests are processed within 48 hours.

Standard Replacement

For customers that agree to return defective product to TLS electronics GmbH first, a Standard Replacement option is available.

An RMA number must first be issued by sales. This RMA number will need to be referenced on the outside of the return shipment.

Upon receipt of the defective product, TLS electronics GmbH will, at its discretion, either repair or replace the product and ship it out in the most expeditious manner possible. Subject to availability, the replacement product will be shipped on the business day following receipt of the defective product.

In the event the product returned to TLS electronics GmbH has been discontinued (i.e. the product is no longer being manufactured by TLS electronics GmbH but is still under warranty), TLS will, at its discretion, either repair or replace with recertified product.

Once you have obtained an RMA number

After obtaining an RMA number from TLS electronics GmbH, you must send the product - freight prepaid - to TLS electronics GmbH. The TLS RMA number must be prominently displayed on the outside of your package. If you send your product to TLS electronics GmbH without the RMA number prominently displayed on the outside of the package, it will be returned to you unopened.

Please use a shipping company that can demonstrate proof of delivery. TLS electronics GmbH does not accept responsibility for any lost shipments unless proof of delivery to TLS is provided.

Please note:

Product shipped to TLS electronics GmbH must be properly packaged to prevent loss or damage in transit.

Shipping your RMA to TLS electronics GmbH using regular mailing envelopes is not acceptable, as they do not protect the product from damage during shipping.

TLS electronics GmbH will not repair or replace a module that is shipped in such a way that the product is not properly protected.

TLS electronics GmbH will not accept any product that has been damaged as a result of accident, abuse, misuse, natural or personal disaster, or any unauthorized disassemble, repair or modification.