



**AC7860**  
**4x4 HDMI Matrix**

**en**

Manual

# AC7860 - 4x4 HDMI Matrix

## Table of contents

1.0 Introduction .....	2
1.1 Packing contents .....	2
2.0 Device overview .....	3
Front Panel.....	3
Rear panel.....	3
3.0 Remote Control Description.....	4
4.0 IP Control .....	5
4.1 Port Set .....	5
4.2 EDID Config .....	6
4.3 IP Config .....	6
4.4 Firmware upgrade .....	9
5.0 Restore to factory defaults.....	9
6.0 RS232 config.....	10
7.0 Frequently Asked Questions and other related information.....	12
8.0 Service and support.....	12
9.0 Warning and points of attention .....	13
10.0 Warranty conditions .....	14

## 1.0 Introduction

Congratulations with the purchase of this high-quality ACT product! This product has undergone extensive testing by ACT's technical experts. Should you experience any problems with this product, you are covered by ACT warranty. Please keep this manual and the receipt in a safe place.

*Register your product now on [www.act-connectivity.com](http://www.act-connectivity.com) and receive product updates!*

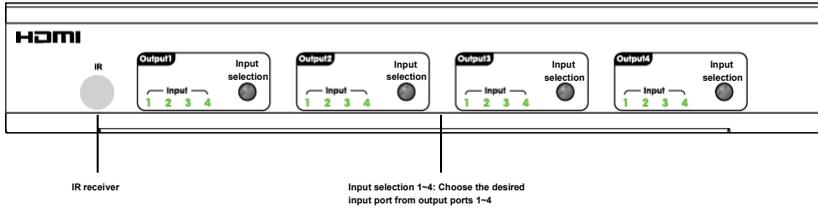
### 1.1 Packing contents

The following parts need to be present in the packing:

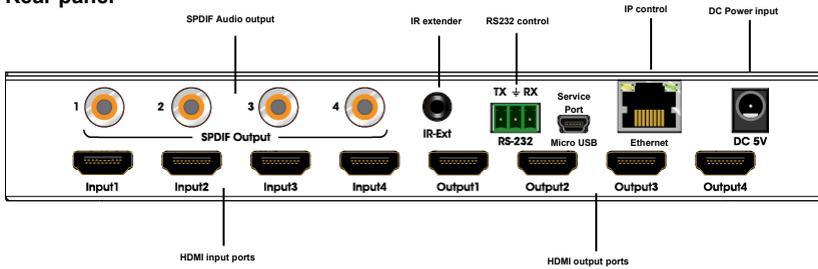
- AC7860 4x4 HDMI Matrix
- CD-ROM
- 5V Power adapter
- IR-RX cable
- Phoenix plug for RS232 cable
- Mounting kit with screws

## 2.0 Device overview

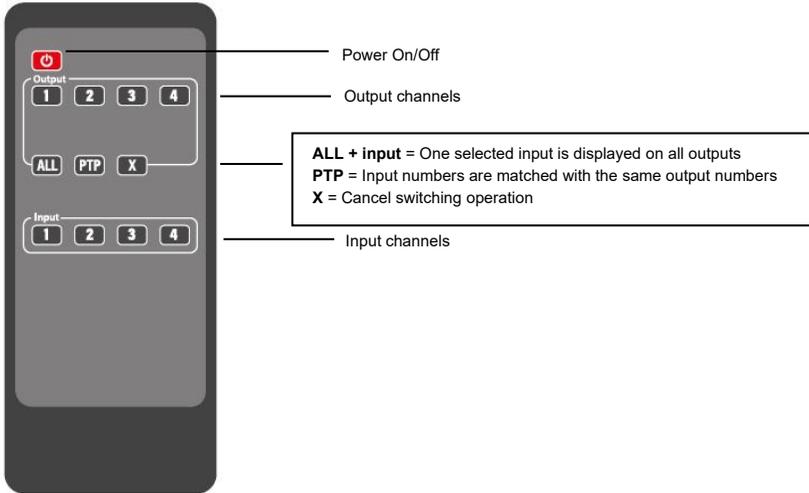
### Front Panel



### Rear panel



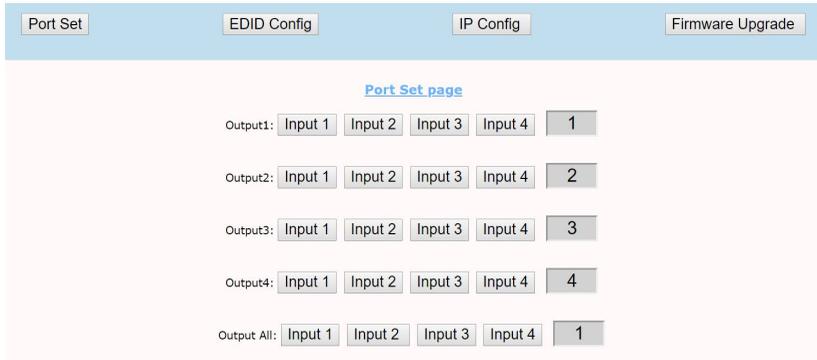
## 3.0 Remote Control Description



## 4.0 IP Control

The default IP Address of HDMI matrix is 192.168.1.168

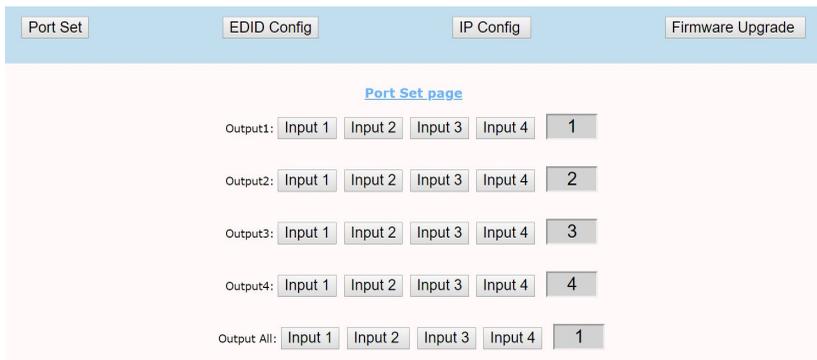
1. To access the matrix web interface, change your network adapter's IP-address to a static IP-address in range of 192.168.1.x.
2. Connect the HDMI matrix via LAN cable to your PC or laptop.
3. Open the web browser and enter the IP-address of the HDMI matrix: <http://192.168.1.168>. The following screen appears:



The web interface lets you control the HDMI Ports, EDID, IP config and firmware upgrade.

### 4.1 Port Set

In this section you are able to route between the connected HDMI signals or output directly all displays to a connected source.



## 4.2 EDID Config

The AC7860 is equipped with an EDID manager (Extended Display Identification Data). This ensures the digital handshake for the video signal between the HDMI source device and the HDMI output device. You can set up optimal video configurations via various EDID modes as shown in below picture. Click **"Apply"** to save your settings.

Port Set
EDID Config
IP Config
Firmware Upgrade

[EDID Set page](#)

Input HDMI1: Copy From TV1 Apply

HDR  3D 1080P
68bit  7.1Ch  5.1Ch  2.0Ch

4K2K@30Hz  4K2K@60Hz[YC420]  4K2K@60Hz[YC444]

Input HDMI2: Copy From TV1 Apply

HDR  3D Copy From TV2
68bit  7.1Ch  5.1Ch  2.0Ch

Copy From TV3  Copy From TV4

Input HDMI3: 4K2K@60Hz[YC420] Apply

HDR  3D  10Bit  12Bit  16Bit  7.1Ch  5.1Ch  2.0Ch

Input HDMI4: 4K2K@60Hz[YC420] Apply

HDR  3D  10Bit  12Bit  16Bit  7.1Ch  5.1Ch  2.0Ch

## 4.3 IP Config

Within this section you can change the IP-address settings and device name for the matrix. You can choose to change the default IP-address for the matrix or choose to enable DHCP so your router will automatically provide an IP-address to the matrix within the same range of your router's LAN. Click **"Apply"** to save your settings.

Port Set
EDID Config
IP Config
Firmware Upgrade

[IP Config page](#)

MAC Address: 00-14-5C:9A:37-02

Host IP Address: 192.168.1.168

Net Mask Address: 255.255.255.0

Router IP Address: 192.168.1.1

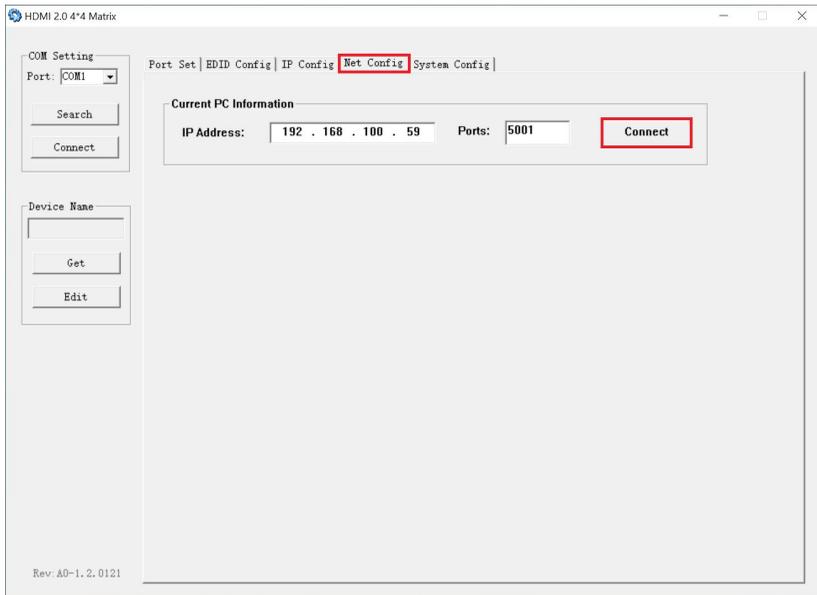
Device Name: 4\*4HDMI2.0Matrix

DHCP

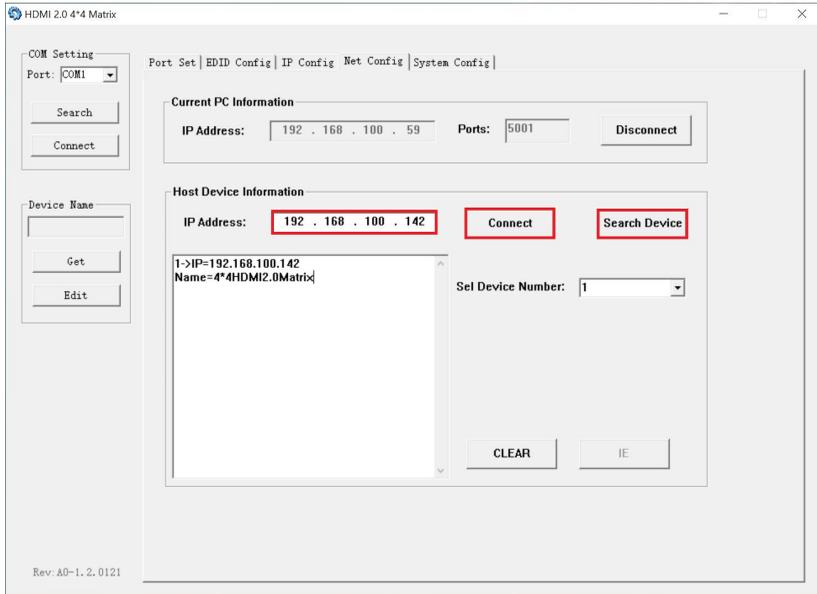
Apply

Please note that the IP-address from your matrix has changed to an IP-address in your router's LAN range. To check which IP-address has been provided, please use the following instructions.

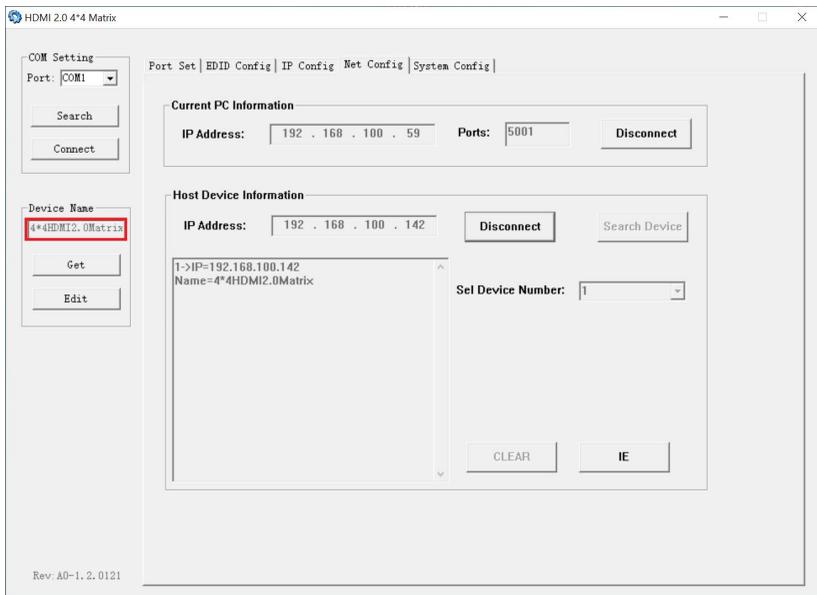
1. Start the PC\_Tool on your Windows PC or laptop. You can use this software via the included CD-ROM or download the software from our Eminent website.
2. Select "**Net Config**" and click on "**Connect**".



3. Click on "**Search Device**". Your matrix has now been found and is ready to connect to your LAN. The tool will also show you the matrix's IP-address.



#### 4. Now click on “Connect”.



#### 5. You will notice that the Device name of the matrix has filled out and all other fields are greyed out, which means that the matrix is now connected and can be

accessed by IP using the new provided IP-address. In the picture example the provided IP-address is 192.168.100.142.

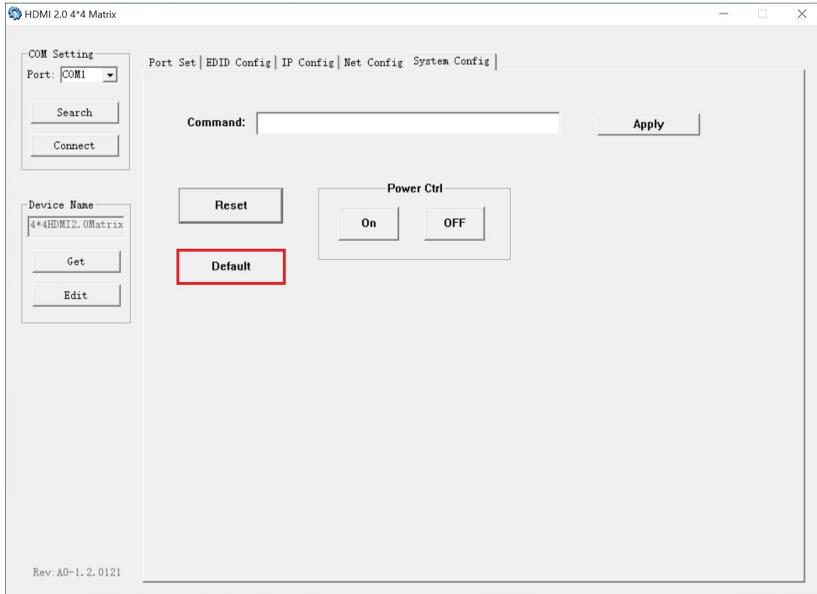
## 4.4 Firmware upgrade

Once a new firmware is available from our website you can download and unzip the file. Simply browse the file where you have downloaded the new firmware file and press **“Start upgrade”**.



## 5.0 Restore to factory defaults

1. Start the PC\_Tool on your Windows PC or laptop. You can use this software via the included CD-ROM or download the software from our Eminent website.
2. Make sure that your PC or laptop can communicate and send commands to the matrix. To do so follow the steps described in chapter 4.3.2 up to 4.3.5.
3. Click on "System Config".
4. Now click on "Default". A window appear which will ask if you are sure to restore the system to default settings. Click on "Yes" to proceed. You will notice that the LEDs at the front panel start to flash. The complete process will take approx. 20 seconds.



## 6.0 RS232 config

If you desire to control the matrix via RS232 it is important to first prepare a RS232 cable. To prepare this cable please use the included phoenix plug and below pin assignment:

Matrix	Remote Control Console	
	PIN	Assignment
	1	NC
Tx	2	Rx
Rx	3	Tx
	4	NC
GND	5	GND
	6	NC
	7	NC
	8	NC
	9	NC

The controller's serial port should be configured as follows:

Baud Rate: 115200 bps  
 Parity: None  
 Data Bits: 8 bit  
 Stop Bits: 1 bit

Control the matrix via ethernet by sending commandos via RS232 or over IP via your favorite controller software, like for example Hercules ( freeware ): <https://www.hw-group.com/software/hercules-setup-utility>

Command	Function
@W 04 00 01 02 03 #	Mirror all inputs and outputs
@W 50 #	Reboot
@W 51 #	Restore Factory Setting
@W 0F 00 #	Standby

#### HDMI input / HDMI output

First 00 = Output 1

Second 00 = Input 1

Example: **@W 00 00 #**: Output 1 display Input1

Command	Function
00	Output 1 / Input 1
01	Output 2 / Input 2
02	Output 3 / Input 3
03	Output 4 / Input 4
04	All Output

**EDID****@W XX AA BB #****XX = Input EDID**

Command	05	06	07	08
Function	Input 1	Input 2	Input 3	Input 4

**AA = Video mode**

Command	00	01	02	03
Function	1080P	4K2K 30	4K2K 60(YC420)	4K2K 60(YC444)

**BB** for selecting below function. 1 = Enable – 0 = Disable.

Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
HDR	48Bit	36Bit	30Bit	7.1CH	5.1CH	2CH	3D
1	1	1	1	1	1	1	1
0	0	0	0	0	0	0	0

For example: **11001001** = HDR, 48Bit, 7.1CH, 3D enabled.Change Binary code "**11001001**" to hexadecimal format "**C9**"For example: **@W 05 03 C9 #**

The EDID of input 1 is: 4K2K\_60(YC444)、HDR、48Bit、7.1CH、3D.

## 7.0 Frequently Asked Questions and other related information

The latest Frequently asked questions for your product can be found on the **support** page of your product. ACT will update these pages frequently to assure you have the most recent information. Visit [www.act-connectivity.com](http://www.act-connectivity.com) for more information about your product.

## 8.0 Service and support

This user manual has been carefully written by ACT's technical experts. If you have problems installing or using the product, please check the **support** link at the website [www.act-connectivity.com](http://www.act-connectivity.com).

## 9.0 Warning and points of attention



Due to laws, directives and regulations set out by the European parliament, some (wireless) devices could be subject to limitations concerning its use in certain European member states. In certain European member states the use of such devices could be prohibited. Contact your (local) government for more information about this limitations.

Always follow up the instructions in the manual\*, especially where it concerns devices which need to be assembled.

Warning: In most cases this concerns an electronic device. Wrong/improper use may lead to (severe) injuries!

When you connect the device to the mains, make sure it will not be damaged or subject to (high) pressure.

A power socket is needed which should be close and easy accessible from the device.

Repairing of the device should be done by qualified ACT staff. Never try to repair the device yourself. The warranty immediately voids when products have undergone self-repair and/or by misuse. For extended warranty conditions, please visit our website at [www.act-connectivity.com](http://www.act-connectivity.com)

Dispose of the device appropriately. Please follow your countries regulation for the disposal of electronic goods.

Please check below safety points carefully:

- Do not apply external force on the cables
- Do not unplug the device by pulling the power cable
- Do not place the device near heating elements
- Do not let the device come in contact with water of other liquids
- If there is any strange sound, smoke or odor, remove the device immediately from the power outlet.
- Do not put any sharp objects into the venting hole of a product
- Do not use any damaged cables (risk of electric shock)
- Keep the product out of reach of children
- Wipe off the product with soft fabric, not water mop.
- Keep the power plug and outlet clean
- Do not unplug the device form the power outlet with wet hands
- Unplug the device when you don't use it for a long time
- Use the device at a well ventilated place

*\*Tip: ACT manuals are written with great care. However, due to new technological developments it can happen that a printed manual does not longer contain the most recent information. If you are experiencing any problems with the printed manual or*

*you cannot find what you are looking for, please always check our website [www.act-connectivity.com](http://www.act-connectivity.com) first for the newest updated manual.*

*Frequently asked questions (FAQ). Consult **support** on our website [www.act-connectivity.com](http://www.act-connectivity.com) and see if you can find the right information about your product here. It is highly advisable to consult the FAQ section first, the answer is often here.*

## 10.0 Warranty conditions

The ACT warranty applies to all ACT products. After buying a second-hand ACT product the remaining period of warranty is measured from the moment of purchase by the product's initial owner. ACT warranty applies to all ACT products and parts, indissolubly connected or mounted to the product it concerns. Power supply adapters, batteries, antennas and all other products not directly integrated in or connected to the main product or products of which, without reasonable doubt, can be assumed that wear and tear during use will show a different pattern than the main product, are not covered by the ACT warranty. Products are not covered by the ACT warranty when exposed to incorrect/improper use, external influences or when opening the service parts of the product by parties other than ACT. ACT may use refurbished materials for repair or replacement of your defective product. ACT cannot be held responsible for changes in network settings by internet providers. We cannot guarantee that the ACT networking product will keep working when settings are changed by the internet providers. ACT cannot guarantee the working of web services, apps and other third party content that is available through ACT products

### **When my product gets defective**

Should you encounter a product rendered defective for reasons other than described above: Please contact your point of purchase for taking care of your defective product.