

# TECHCONNECT TC2-MATRIX

## OWNERS MANUAL




[www.visionaudiovisual.com/techconnect/tc2-matrix](http://www.visionaudiovisual.com/techconnect/tc2-matrix)

## DECLARATION OF CONFORMITY


Where applicable Vision products are certified and comply with all known local regulations to a 'CB Certification' standard. Vision commits to ensure all products are fully compliant with all applicable certification standards for sale in the EU and other participating countries.

The product described in this owner manual is in compliance with RoHS (EU directive 2002/95/EC), and WEEE (EU directive 2002/96/EC) standards. This product should be returned to the place of purchase at the end of its useful life for recycling.


## WARNINGS




**CAUTION**  
RISK OF ELECTRIC SHOCK  
DO NOT OPEN



**CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**

 The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

 The exclamation point within an equilateral triangle, is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

All products are designed and imported into the EU by 'Vision' who is wholly owned by 'Azlan Logistics Ltd.', Registered in England Nr. 04625566 at Lion House, 4 Pioneer Business Park, Clifton Moor, York, YO30 4GH. WEEE Registration: GD0046SY



## DECLARATION OF ORIGIN

All Vision products are made in the People's Republic of China (PRC).

## **USE ONLY DOMESTIC AC OUTLETS**

Connecting the unit to an outlet supplying a higher voltage may create a fire hazard.

## **HANDLE THE POWER CORD WITH CARE**

Do not disconnect the plug from the AC outlet by pulling the cord; always pull the plug itself. Pulling the cord may damage it. If you do not intend to use your unit for any considerable length of time, unplug the unit. Do not place furniture or other heavy objects on the cord, and try to avoid dropping heavy objects on it. Do not tie a knot in the power cord. Not only could the cord be damaged, but a short circuit could also be caused with a consequent fire hazard.

## **PLACE OF INSTALLATION**

Avoid installing this product under the following conditions:

- Moist or humid places
- Places exposed to direct sunlight or close to heating equipment
- Extremely cold locations
- Places subject to excessive vibration or dust
- Poorly ventilated places

Do not expose this product to dripping or splashing. **DO NOT PLACE OBJECTS FILLED WITH LIQUIDS ON OR NEAR THIS PRODUCT!**

## **MOVING THE UNIT**

Before moving the unit, be sure to pull out the power cord from the AC outlet and disconnect the interconnection cords with other units.

## **WARNING SIGNS**

If you detect an abnormal smell or smoke, turn this product off immediately and unplug the power cord. Contact your reseller or Vision.

## **PACKAGING**

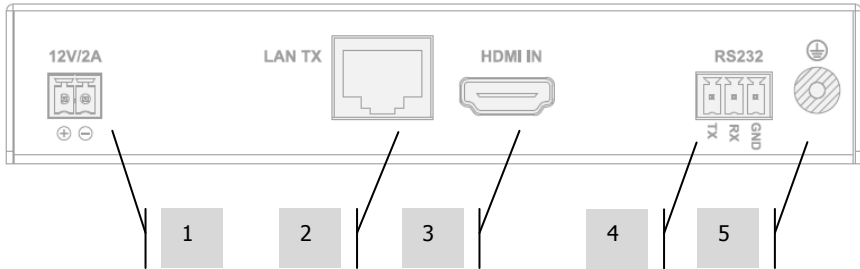
Save all packing material. It is essential for shipping in the event the unit ever needs repair.

**IF ORIGINAL PACKAGING IS NOT USED TO RETURN THE UNIT TO THE SERVICE CENTRE, DAMAGE IN TRANSIT WILL NOT BE COVERED BY WARRANTY.**

## **OVERVIEW**

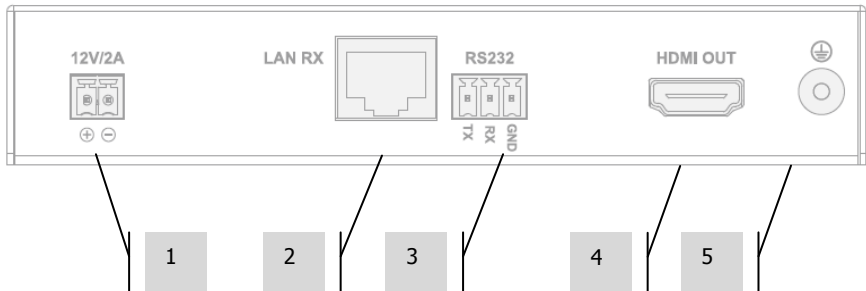
This product converts HDMI signal into native ethernet signal and allows the signal to be routed through a normal local area network.

## TRANSMITTER



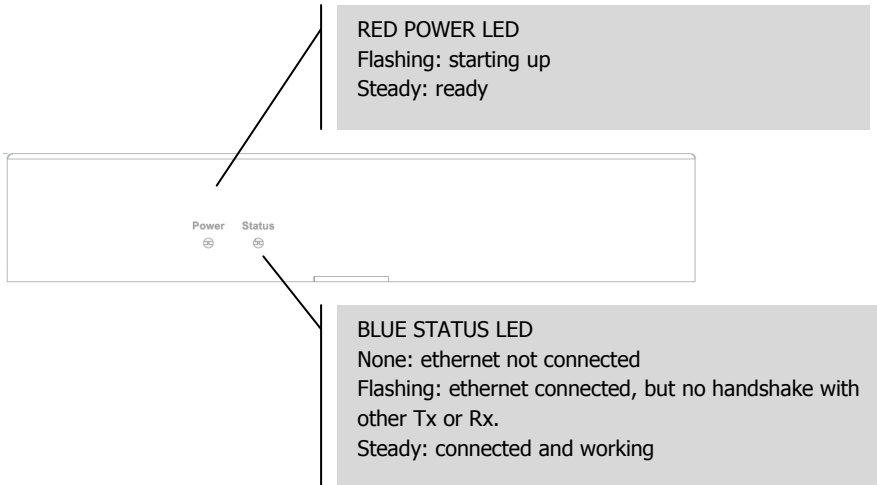
1. 12V 2A Power input (note device can also receive power via Power Over Ethernet (POE))
2. CAT5e/6 Output
3. HDMI Input
4. RS-232 phoenix terminal block
5. Earth discharge screw (for excess static situations)

## RECEIVER



1. 12V 2A Power input (note device can also receive power via Power Over Ethernet (POE))
2. CAT5e/6 Input
3. RS-232 phoenix terminal block
4. HDMI Output
5. Earth discharge screw (for excess static situations)

## DEVICE STATUS LIGHTS



## INSTALLATION

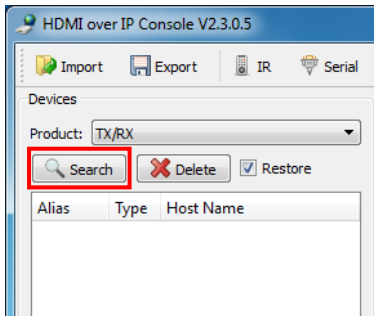
1. **CONNECT HARDWARE TO NETWORK** Connect all transmitters and receivers to a network.
2. **DOWNLOAD SETUP SOFTWARE** Download configuration software from [www.visionaudiovisual.com/techconnect/tc2-matrix](http://www.visionaudiovisual.com/techconnect/tc2-matrix)
3. **RUN SOFTWARE** Un-compress and double-click **HDMIoverIP.exe** file. This application does not need to be installed.

NOTE: The OS must be Windows XP or newer. It does not work for Mac.

4. **SEARCH FOR DEVICES** Click **Search** in the **Devices** area.

NOTE: If amending programmed devices check **Restore** before searching so previous configuration can be automatically restored.

If you forget to do this delete the devices from the list and Search again with Restore checked.

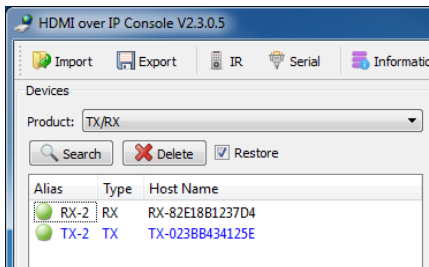


The first time you press search the **Windows Security Alert** may be displayed. Select both check boxes in the dialog box and click **Allow access**.



## SUCCESS

When complete authenticated devices are displayed in the device list.



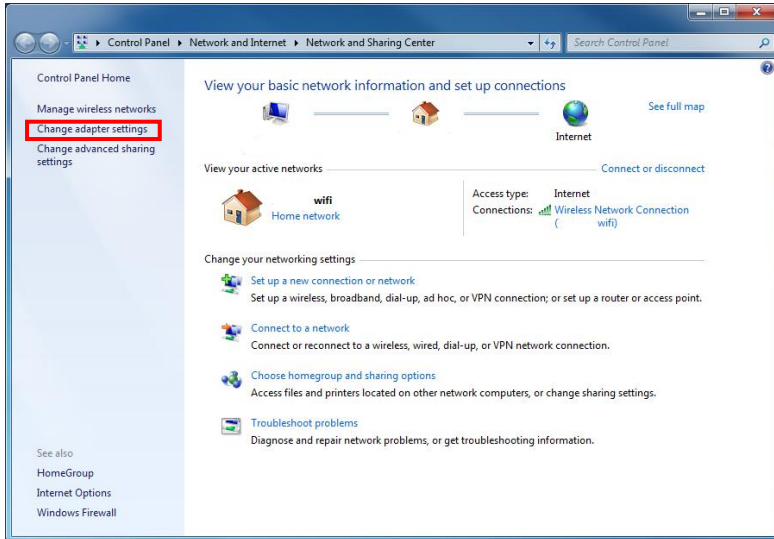
## FAILURE

Devices are assigned IP addresses in Auto IP mode by default. Their IP address is **169.254.x.x** and subnet mask is **255.255.0.0**. If no devices are found ensure the computer is on the same network address and subnet mask.

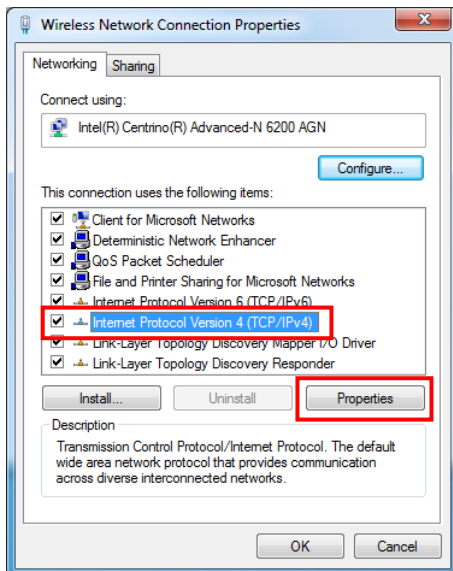
To change the IP address:

- a. Control Panel > Network and Internet > Network and Sharing Centre > Change Adaptor Settings.

You can also right click on the internet icon in the bottom-right task bar to go to the Network and Sharing Centre.



- b. In the new window right click on active connection and select Properties.
- c. Click on **Internet Protocol Version 4 (TCP/IPv4)** and select Properties.





- d. Enter correct IP and subnet details as below and select OK.

Internet Protocol Version 4 (TCP/IPv4) Properties

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

Obtain an IP address automatically

Use the following IP address:

IP address: 169 . 254 . 0 . 1

Subnet mask: 255 . 255 . 0 . 0

Default gateway: . . .

Obtain DNS server address automatically

Use the following DNS server addresses:

Preferred DNS server: . . .

Alternate DNS server: . . .

Validate settings upon exit

Advanced...

OK Cancel

5. **DEVICE PARAMETERS** Right click a device in the device list to modify the settings for that device.

The screenshot shows the 'HDMI over IP Console V2.3.0.5' interface. The 'Devices' table is as follows:

Alias	Type	Host Name
RX-2	RX	RX-82E18B1237D4
TX-2	TX	TX-0238B434125E

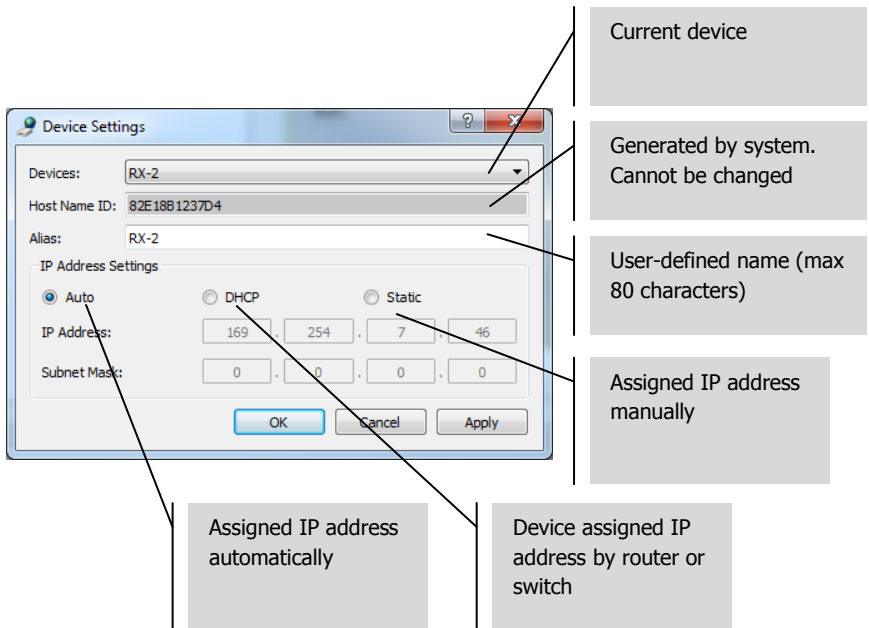
The context menu for the TX-2 device includes the following options:

- Config
- Update
- Delete
- Turn On OSD
- Turn Off OSD
- Reset
- Reset EDID
- Restart

Each menu item is linked to a descriptive text box on the right:

- Config**: Modifies Alias and IP address settings
- Update**: Re-Reads device settings in case they have changed. Can be applied to multiple devices at once.
- Delete**: Deletes devices from the device list. [Select Search to add them to the list again] Can be applied to multiple devices at once.
- Turn On OSD**: On Screen Display ON or OFF. By default the devices will display "123456" when powered on. Can be applied to multiple devices at once.
- Turn Off OSD**: On Screen Display ON or OFF. By default the devices will display "123456" when powered on. Can be applied to multiple devices at once.
- Reset**: Restores factory settings. You must restart the devices for this to take effect. Can be applied to multiple devices at once.
- Reset EDID**: Resets Transmitter EDID settings
- Restart**: Restarts devices. Can be applied to multiple devices at once.

6. DEVICE SETTINGS Selecting Config in the previous step will open this dialogue box:



The screenshot shows the 'Device Settings' dialog box with the following fields and callouts:

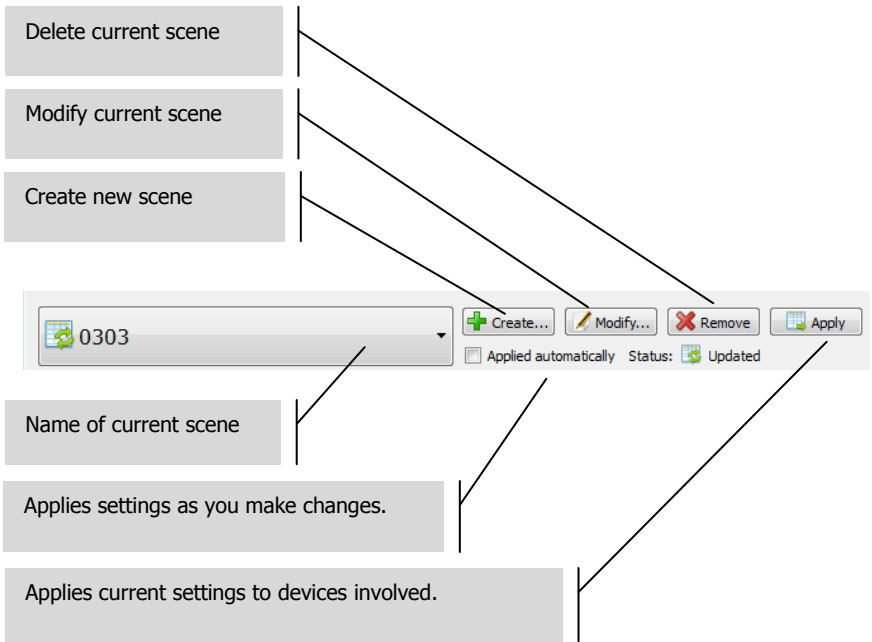
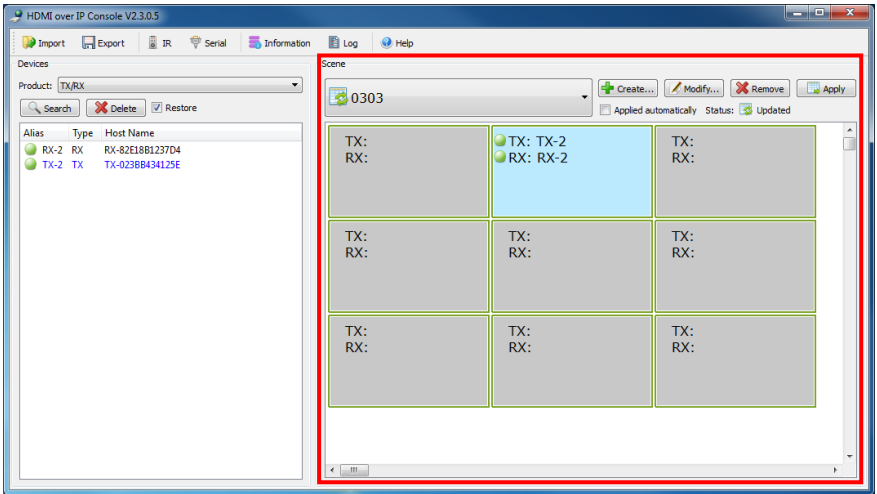
- Devices:** A dropdown menu showing 'RX-2'. Callout: 'Current device'.
- Host Name ID:** A text field containing '82E18B1237D4'. Callout: 'Generated by system. Cannot be changed'.
- Alias:** A text field containing 'RX-2'. Callout: 'User-defined name (max 80 characters)'.
- IP Address Settings:** A section with three radio buttons: 'Auto' (selected), 'DHCP', and 'Static'. Callout: 'Device assigned IP address by router or switch'.
- IP Address:** Four input fields containing '169', '254', '7', and '46'. Callout: 'Assigned IP address manually'.
- Subnet Mask:** Four input fields containing '0', '0', '0', and '0'. Callout: 'Assigned IP address automatically'.

Buttons at the bottom: 'OK', 'Cancel', and 'Apply'.





NOTE 1: OK applies settings and closes dialogue box.

NOTE 2: If you change IP address settings you need to restart device after applying changes and search for device again.

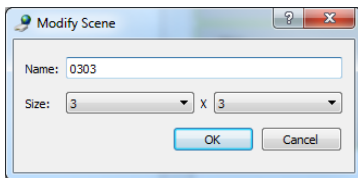
7. SCENE OVERVIEW The Scene window is where you setup the matrix. Each box ("cell") represents a receiver.



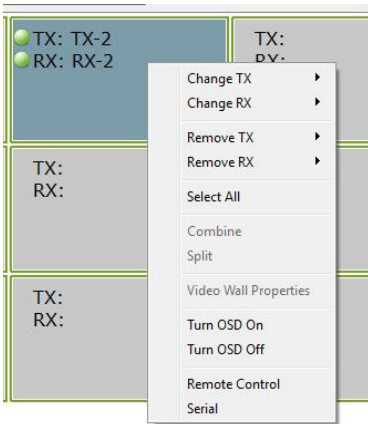
Status Indicator:

- a.  Scene is restored from devices
- b.  Scene settings are in progress
- c.  Scene settings are applied successfully
- d.  Scene settings failed to be applied

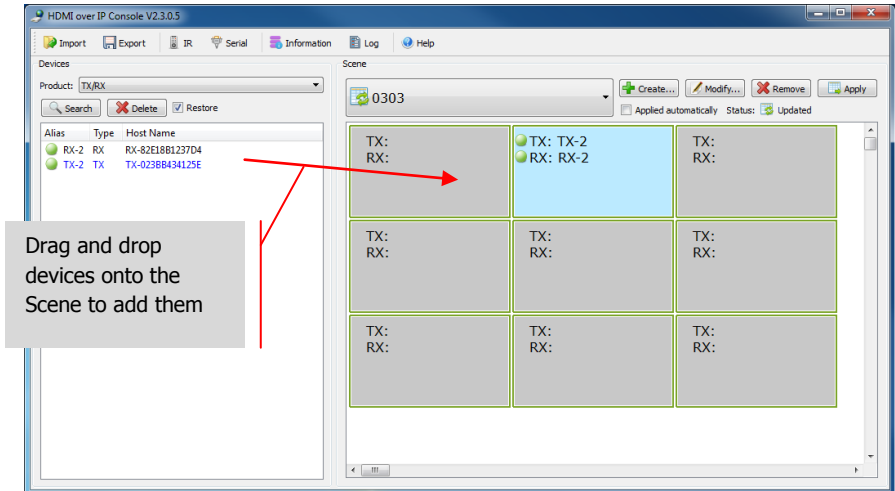
8. **CREATING OR MODIFYING SCENE** This dialog box lets you set a name (max. 80 characters) and change the cells for a scene:



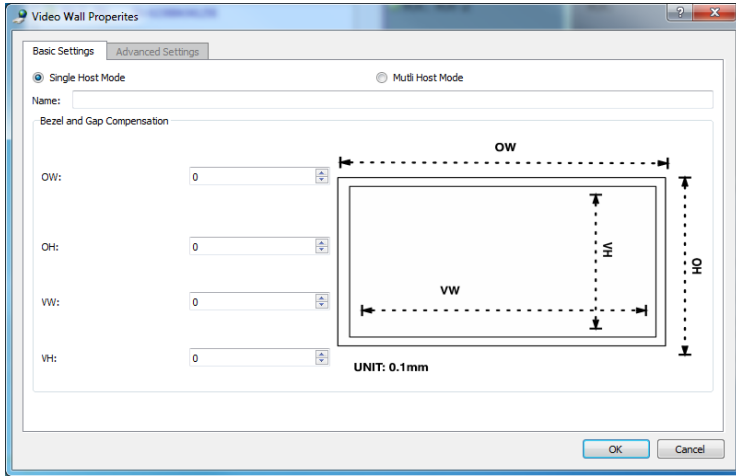
9. SCENE CELLS Each cell corresponds to a receiver e.g. ten receivers you need ten cells. To allocate devices to each cell right-click:



Or, drag from the device list:

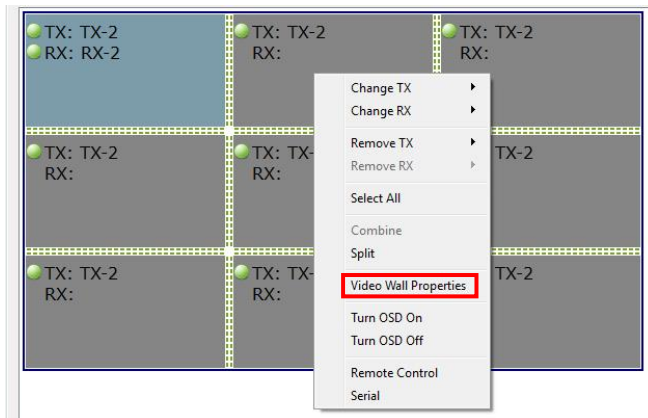


10. USING FOR VIDEO WALLS In the above menu select **Select All** then **Combine** to use for videos walls. This dialogue box will open.



- a. Name the video wall
- b. Adjust the bezel and gap compensation
- c. Select OK

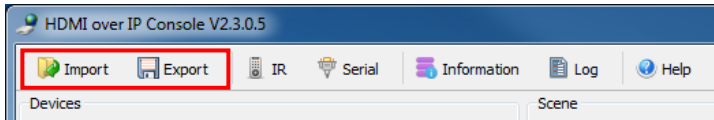
These settings and advanced settings can be accessed later by selecting **Video Wall Properties**.



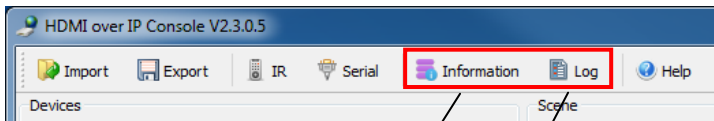
**Split** cancels the video wall.

11. CONFIGURATION FILES When you quit the software it saves an updated configuration file **default.hoi** to the computer.

Click **Export** in the software to save the configuration file for use on a different computer. **Import** allows you to use this configuration file on a different computer.



12. INFORMATION AND LOG WINDOWS The Information and Log windows show additional information for trouble-shooting.

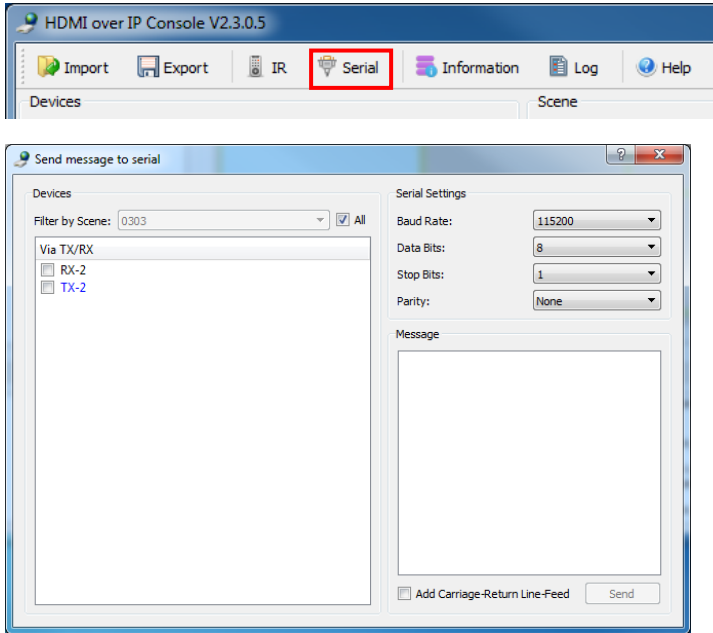


Shows device name and IP information

Shows sent and received messages log



13. SERIAL You can send an adhoc RS-232 control command to a connected source or display device. For example you can use it to turn an inaccessible flat-panel off.



NOTE: IR is not supported by the Techconnect Matrix.

## UPGRADE

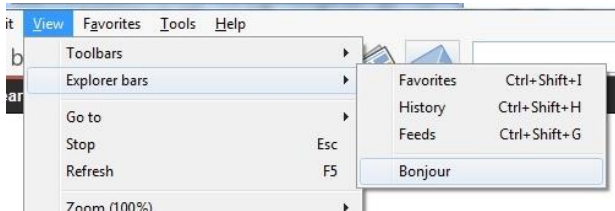
### Preparation

Note: Do not turn off power during upgrade processing. It may cause damage.

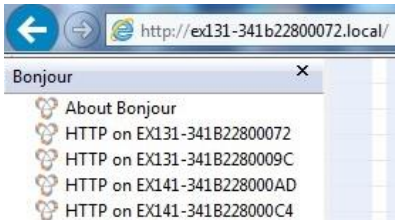
1. Install **BonjourSDKSetup.exe** on your computer.
2. Set a static IP address on your computer.  
Configure the IP address of host (see page 9). IP: 169.254.x.x subnet mask: 255.255.0.0  
Note: Check the IP address and subnet mask every time before you upgrade, otherwise the device may be unable to connect.

### Upgrade instructions

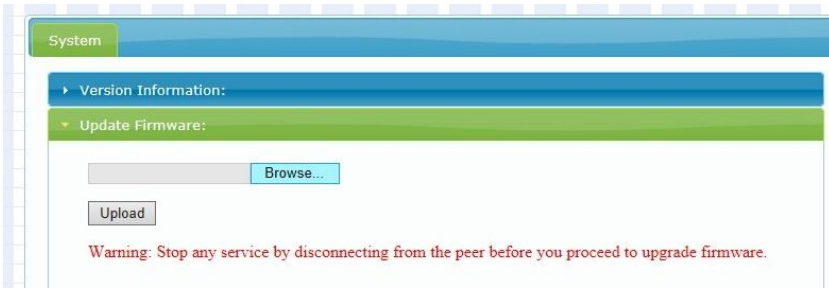
1. Connect the device to the host computer with an ethernet cable, or connect device to gigabit switcher, then connect the gigabit switch to the host.
2. In Internet Explorer go to View > Explorer bars > Bonjour



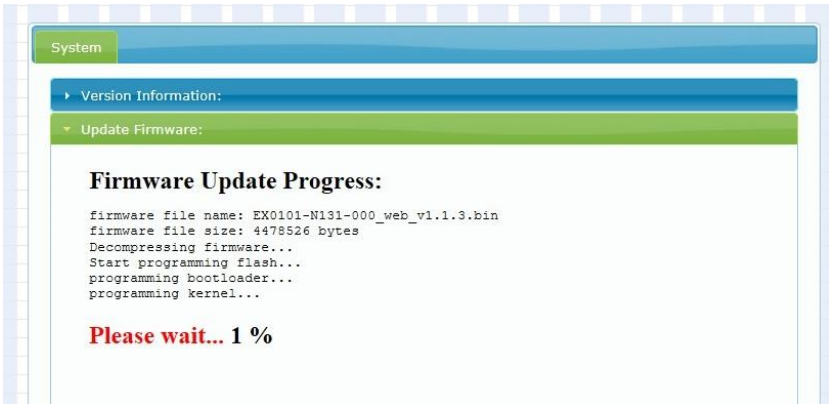
3. Click the device name on the left. The web management page opens. 131 is the transmitter. 141 is the receiver.



4. On the "Update Firmware" section, select "Browse".



5. Browse for the .bin file and start upload. The web interface will show the progress. The upgrade may take several minutes. Once complete the device will reboot.



6. Repeat the process for each Transmitter and Receiver in the system.

## RESET

1. In Internet Explorer, go into the web management page.
2. In the Utilities select "Factory Default". When Rebooting disappears, it means the device successfully restores to factory default settings.



## **SPECIFICATIONS**

PRODUCT DIMENSIONS: 141 x 115 x 26 mm (length x width x height)

PRODUCT WEIGHT: 440g

CONSTRUCTION MATERIAL: Metal

COLOUR: White

TECHNICAL DETAILS:

Input Video Signal: 0.5-1.0 volts p-p

Input DDC Signal: 5 volts p-p (TTL)

Maximum Video Format Supported: 1920×1200 / 1080P

Output Video: HDMI 1.3 with HDCP

Output Audio: Stereo only

Operating Temperature Range: -5 to +35°C

Operating Humidity Range: 5 to 90 % RH (no condensation)

Power Consumption: 5 watts

Maximum distance (if connected peer-to-peer directly): 100m

CONNECTIVITY:

1 x HDMI (type A)

1 x RS-232 (3-port phoenix)

1 x Ethernet (RJ45)

1 x DC Power (2-port phoenix)

1 x Ground (for cases of excess static discharge)

2 x POWER SUPPLY: 100-240v 50/60Hz AC 12 volt / 2 amp

Transformer integrated into plug. Includes interchangeable plugs: UK/EU/US/AU. DC tail length: 1.8m. Transformer dimensions: 81 x 52 x 38mm

COMPLIANCES: RoHS, WEEE, CE/EMC

## **ACCESSORIES INCLUDED:**

Mounting ears

## **WARRANTY**

This product comes with a 2-year return to base warranty, effective from the date of purchase. This warranty applies only to the original purchaser and is not transferable. For the avoidance of doubt, this will be taken from the information held by the appointed national distributor at the point of sale. If the product is DOA (dead on arrival), you have 21 days from purchase date to notify the national distributor via your AV reseller. The liability of the manufacturer and its appointed service company is limited to the cost of repair and/or replacement of the faulty unit under warranty, except for death or injury (EU85/374/EEC). This warranty protects you against the following:

- Failure of any components, including the power supply.
- Damage when the product is first removed from its packaging if reported within 24 hours of purchase.

If you find you do have a problem with this product, you should contact the AV reseller you purchased this product from. The original purchaser is responsible for shipment of the product to the manufacturer's appointed service centre for repair.

We will endeavour to return repaired units within 5 working days, however this may not always be possible, in which case it will be returned as soon as practicably possible. In line with our WEEE commitments, the manufacturer endeavours to replace the faulty parts of the product rather than replacing the whole unit. This warranty does not protect this product against faults caused by abuse, misuse, incorrect installation, unstable or faulty power input, which might be caused by ignoring the guidelines set out in this manual.

*LEGAL DISCLAIMER: Because we are committed to improving our products, the details above may change without prior warning. This User Manual is published without warranty and any improvements or changes to the User Manual necessitated by typographical errors, inaccuracies of current information, or improvements to programs and/or equipment, may be made at any time and without notice. Such changes will be incorporated into new editions of the User Manual.*