

TECHCONNECT TC2-MATRIXBRIDGE

OWNERS MANUAL



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

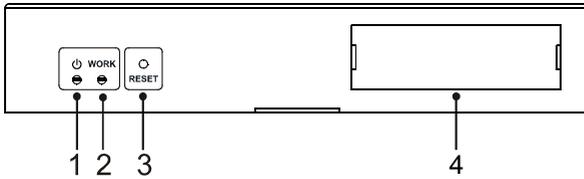
This product is a protocol exchange device which allows 3rd party software to control the Techconnect Matrix devices.

Only one of these devices is required per system.

- Provides built-in web server and Telnet API (used in a third-party controller)
- Detects TX/RX automatically
- Supports matrix switching
- Supports Video Wall
- Standards and protocols: HTTP, TCP/IP, Multicast

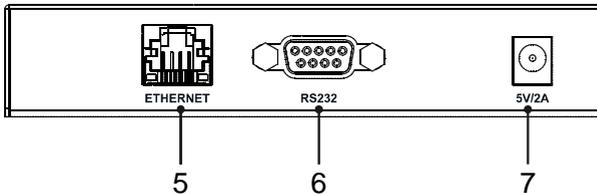


FRONT PANEL



1. Power LED - steady red when the device is powered on
2. WORK LED - steady blue when the device is working properly. If red the device is rebooting.
3. RESET button - When the device is powered on, press and hold this button for 5 seconds to restore to factory default settings.
4. Label - Write down the IP address of the device on the label which comes with the device.

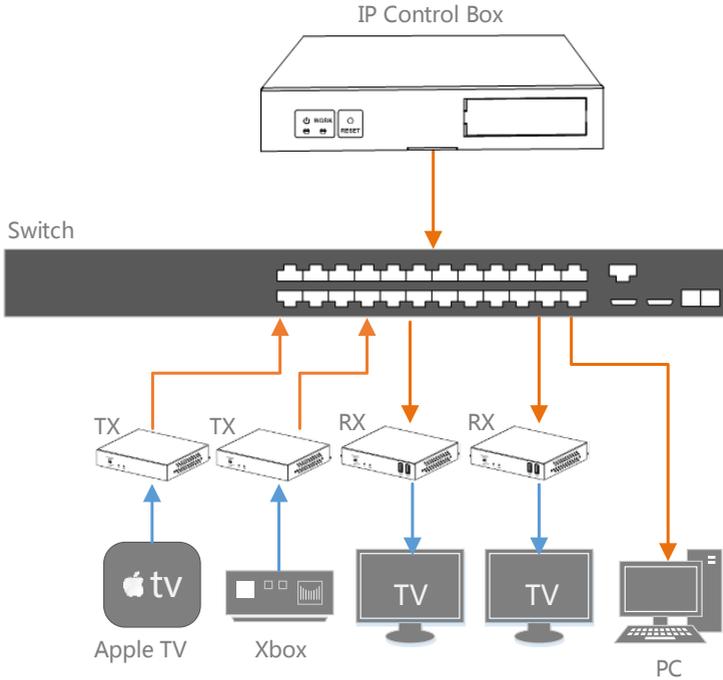
REAR PANEL



5. ETHERNET - RJ45 Port
6. RS232 – For debugging
7. Power 5V / 2A DC power supply input

HARDWARE INSTALLATION

1. Connect all transmitters, receivers, and the bridge to the network.
2. Connect Source to TX
3. Connect Displays to RX
4. Power on all the devices
5. Use Telnet or Web browser to manage bridge.



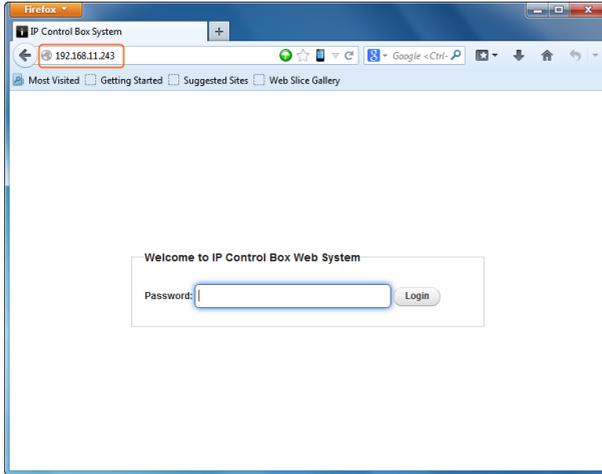
SETUP

Users can access the device through Web, Telnet or a Third-party controller.

Web

To access the device through Web Management Page, follow these steps.

1. Enter 192.168.11.243 into a browser.



2. Enter a password ("admin" by default), click Login to access the device.

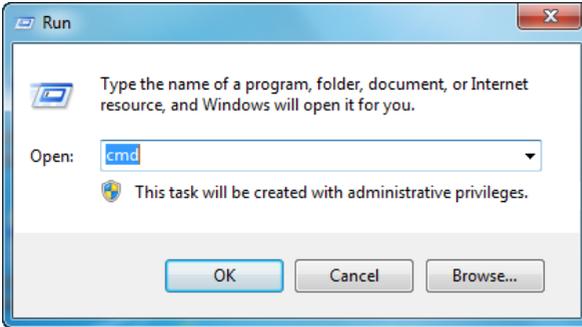
Notes:

- The IP address of the computer and IP Control Box should be in the same network subnet. For example, if the IP address of IP Control Box is 192.168.11.243, then the computer should be 192.168.11.X.
- The IP address of the IP Control Box can be changed through Web Management Page or Telnet.
- If the Web Management Page cannot be displayed, please refer to FAQ.

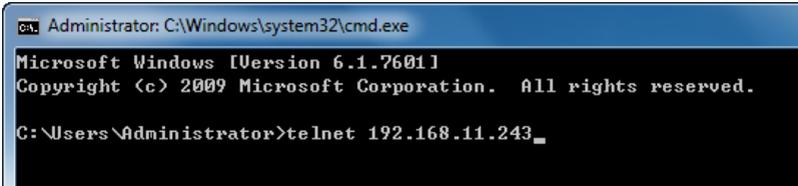
Telnet

To access the device through Telnet, follow these steps.

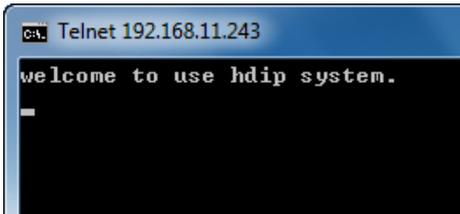
1. Click Start menu, go to Run. Input cmd, click OK.



2. Input telnet 192.168.11.243, press Enter.



This window will come up:



Notes:

- The IP address of the computer and IP Control Box should be in the same network subnet. For example, if the IP address of IP Control Box is 192.168.11.243, then the computer should be 192.168.11.X.
- If you use a third-party controller, you can access the device refer to the document API Command.

WEB CONFIGURATION

The Web Management Page is designed to perform the functions to control the device in a user-friendly interface.

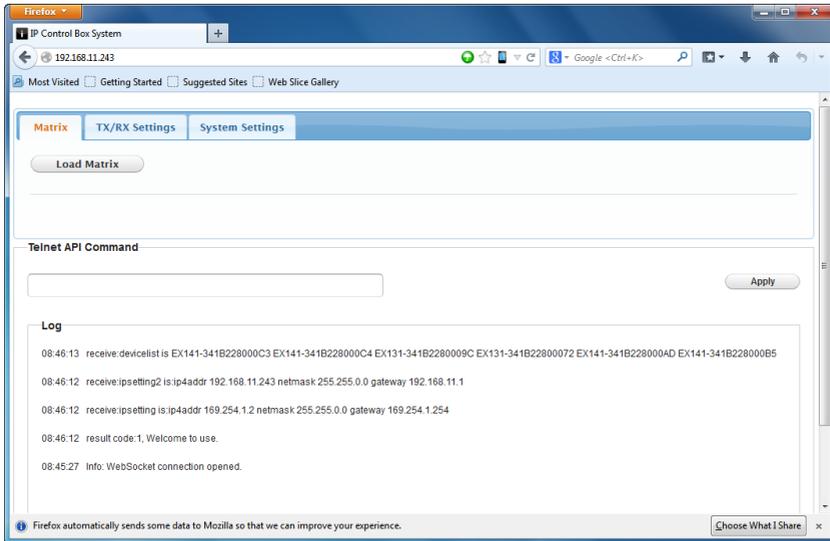
Home Screen

Open your browser, enter 192.168.11.243 in the address bar, and input the password (admin by default), click Login.

Welcome to IP Control Box Web System

Password:

This window will open:



It includes three parts: Matrix, TX/RX Settings and System Settings.

Matrix

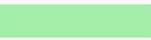
Click Load Matrix button, a table comes up.



The screenshot shows a web interface with three tabs: "Matrix", "TX/RX Settings", and "System Settings". The "Matrix" tab is active. Below the tabs is a "Load Matrix" button. The main area displays a table with the following structure:

RX\TX	EX131-341B2280009C	EX131-341B22800072
EX141-341B228000C3	Green bar	White bar
EX141-341B228000C4	White bar	Green bar
EX141-341B228000AD	White bar	Green bar
EX141-341B228000B5	Green bar	White bar

The first row shows TX, the first column shows RX.

Icon	Description
	device is online.
	device is offline.
	Shows TX and RX are linked. Click the green bar; it changes into blank, which means TX and RX are disconnected.
	The red bar represents TX/RX connecting is in processing.
	The white bar represents correspondence TX and RX are not linked. You can link them by clicking this white bar.

TX/RX Settings

Select a device you want to configure.

Matrix TX/RX Settings System Settings

Device Settings

Devices: EX141-341B228000C3 EX141-341B228000C4 EX131-341B22800072 EX141-341B228000AD EX141-341B228000B5

Select a device you want to configure. (If the device list is empty, it means no device is available online.)

Matrix TX/RX Settings System Settings

Device Settings

Devices: EX141-341B228000C3 EX141-341B228000C4 EX131-341B22800072 EX141-341B228000AD EX141-341B228000B5

Select a device you want to configure. (If the device list is empty, it means no device is available online.)

IP Setup

IP Mode: Auto IP DHCP Static

IP Address:

Subnet Mask:

Default Gateway:

GUI Element	Description
Auto IP	Obtain the IP address automatically.
DHCP	The IP address is assigned by a DHCP server.
Static	The IP address is manually configured.
IP Address	The IP address of the TX/RX.
Subnet Mask	The subnet mask of the TX/RX.
Default Gateway	The default gateway of the TX/RX.

Alias

Apply

GUI Element	Description
Alias	Give the TX/RX a different name which would be easier to remember.

Note:

Alias cannot contain ', ' ; ' _ '@', '*', '&', 'EX131', 'EX363', 'EX373', 'EX383', 'EX393', 'TX', 'EX141', 'EX403', 'RX'.

Commands

Factory Default Reboot

GUI Element	Description
Factory Default	Restore the TX/RX to factory default settings.
Reboot	Reboot the TX/RX.

System Settings

In this page, you can configure the IP Control Box.

Matrix TX/RX Settings **System Settings**

IP Setup [TX and RX communication]

IP Address:

Subnet Mask:

Default Gateway:

(Attention) After pressing Apply, this IP control box will automatically reboot for the settings to take effect.

IP Setup [A telnet client and a browser communication]

IP Address:

Subnet Mask:

Default Gateway:

(Attention) After pressing Apply, this IP control box will automatically reboot for the settings to take effect.

IP Setup [TX and RX communication]

IP Address:

Subnet Mask:

Default Gateway:

(Attention) After pressing Apply, this IP control box will automatically reboot for the settings to take effect.

GUI Element	Description
IP Address	The IP address for TX and RX communication.
Subnet Mask	The subnet mask for TX and RX communication.
Default Gateway	The default gateway for TX and RX communication.

IP Setup [A telnet client and a browser communication]

IP Address:

Subnet Mask:

Default Gateway:

(Attention) After pressing Apply, this IP control box will automatically reboot for the settings to take effect.

GUI Element	Description
IP Address	The IP address for Telnet client and web.
Subnet Mask	The subnet mask for Telnet client and web.
Default Gateway	The default gateway for Telnet client and web.

Web Password

GUI Element	Description
Web Password	Login password for Web Management page. The default password is admin.

Debug Log

ON OFF

If Debug Log is enabled, a file will be saved in the IP Control Box when some unexpected problem happened.

Commands

GUI Element	Description
Factory Default	Restore the IP Control Box to factory default settings.
Reboot	Reboot the IP Control Box.
Shutdown	Shutdown the IP Control Box.

FAQ

1. Why I cannot login the Web Management Page?

- 1) Check the IP address of your computer. The default IP address of the IP Control Box is 192.168.11.243, so the IP address of the computer should be 192.168.11. X.
- 2) Check the Web browser. It will work with Firefox, Opera, Safari Internet Explorer 11 or Chrome. If the problem persists, try to upgrade you browser to the latest version.

2. How do I set the addressing type of the Transmitters and Receivers?

A: The IP address of Transmitters and Receivers are obtained automatically, the default method is Auto IP.

3. When I send matrix commands, how do I specify TX and RX? IP address, Alias or Hostname?

A: You can specify them by Alias or Hostname. They are unique.

4. What is the format of the command? Simple ASCII terminated with a <CR>?

A: Yes, exactly.

5. It looks like to create a video wall I would use the command "add vw-name". Once a video wall is created, how do I turn it on and off? I should be able to create multiple video wall configurations and then recall a configuration? Is this possible? I would like to use the PC software to create a video wall configuration and then save the configuration as a video wall name. I would then send a telnet command to recall a video wall name. This command could be "set vw-name".

A: Except "add vw-name tx", other add commands of VW are effective instantly. (The screen would change based on the commands). Create and store multiple video-wall configuration, or recall the configuration effective are decided by your Third-party software. Any Third-party party software could recall a specific configuration, based on this API protocol and repeat corresponding add commands.

6. How to add a 2*2 video wall?

A: Before you use video wall, you can assign an alias name to it.

just like this:

if you have 4 tx and 4 rx,

```
config set device alias EX131-AAAAAAAAAAAA tx1
```

```
config set device alias EX131-BBBBBBBBBBBBBB tx2
```

```
config set device alias EX131-CCCCCCCCCCCC tx3
config set device alias EX131-DDDDDDDDDDDD tx4
config set device alias EX141-EEEEEEEEEEEEEEEE rx1
config set device alias EX141-FFFFFFFFFFFFFFFF rx2
config set device alias EX141-GGGGGGGGGGGG rx3
config set device alias EX141-HHHHHHHHHHHH rx4
```

The first solution:

1)"vw add vw1 2 2 tx1". This command means add a video wall with two rows and two columns and assign a name vw1. The blue one means row, the green one means column.
2)"vw add vw1 rx1 1 1 rx2 1 2 rx3 2 1 rx4 2 2". This command means add some devices to the video wall vw1, and assign the position to it.

The second solution:

```
vw add vw1 layout 2 2 tx1 rx1 rx2 rx3 rx4
```

this command is the most simple to add a video wall. Just need one line of command.

Both solutions are effective.

7. How to use command "vw bezelgap vw-name ow oh vw vh"?

A: This command is incorrect. The correct one is "vw bezelgap vw-name vw ow vh oh".

If your TV vw is 90.01 cm, ow is 91.01 cm, vh is 40.52 cm and oh is 42.52 cm. First you need to change the unit to 0.1mm, means 90.01cm=9001(0.1mm), you just need to send "vw bezelgap vwname 9001 9101 4052 4252".

8. How to use the command "vw pictureparam vw-name h-shift v-shift h-scale v-scale tearing-delay"?

A: This command is used for adjusting screen display. The range of Tearing-delay is 10000 ~ 16000 and unit is us.

SPECIFICATIONS

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

PRODUCT WEIGHT: 420g

CONSTRUCTION MATERIAL: Metal

COLOUR: Black

TECHNICAL DETAILS:

Control Method: Web, Telnet, Third-party control system

ESD Protection:

±8kV (air-gap discharge)

±4kV (contact discharge)

Surge Protection: ±1000 V

(Tested ten times respectively for the positive and negative voltages)

Operating Temperature Range: -0 to +35°C

Operating Humidity Range: 10 to 90 % RH (no condensation)

Power Consumption: 1.4 watts

CONNECTIVITY:

1 x RS-232 (3-port phoenix)

1 x Ethernet (RJ45)

1 x DC Power

1 x POWER SUPPLY: 100-240v 50/60Hz AC 5 volt / 2 amp

COMPLIANCES: RoHS, WEEE, CE/EMC, FCC

ACCESSORIES INCLUDED:

Serial cable

5 x Labels

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.