User Manual

SCT-IPKVM-CX

IP Control Box

Version: V1.0.0

Important Safety Instructions

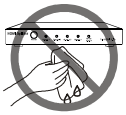
Note

In case of any content change, we are sorry for no further notice.

Warning

To reduce the risk of fire, electric shock or product damage:

1. Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

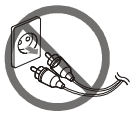


6. Clean this apparatus only with dry cloth.

2. Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure the unit is well ventilated.

7. Unplug this apparatus during lightning storms or when unused for long periods of time.

3. To prevent risk of electric shock or fire hazard due to overheating, do not obstruct the unit's ventilation openings with newspapers, tablecloths, curtains, and similar items.



8. Protect the power cord from being walked on or pinched particularly at plugs.

4. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Only use attachments / accessories specified by the manufacturer.

5. Do not place sources of naked flames, such as lighted candles, on the unit.

10. Refer all servicing to qualified service personnel.

Table of Contents

Introduction

Overview

SCT-IPKVM-CX is an Audio/Video control device to manage TX/RX detected on the local area network. It can automatically search and display TX/RX, perform operations on TX/RX, such as switching between multiple input sources, setting Video wall. This device can be controlled by web browser, a telnet client or a third- party control system.

Features

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

Package Contents

- 1 x TK-N006-000
- 1 x 5V/2A Power Supply
- 1 x Serial Port Cable
- 5 x Label

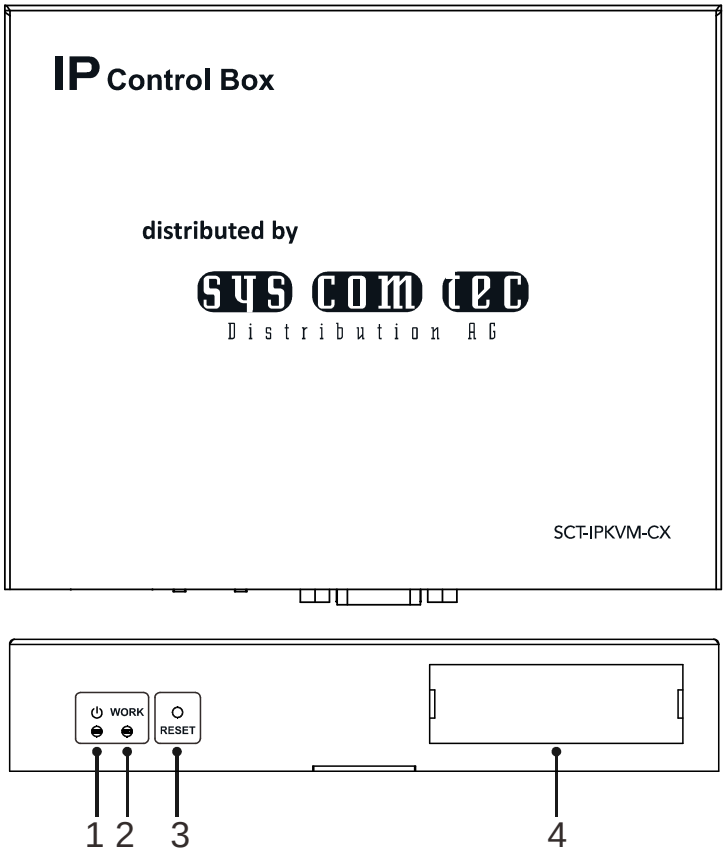
Specifications

Technical	
I/O Connections	1 x RJ45 Port 1 x RS232
LED	Power LED, Work LED
Button	1 x Reset Button
Power Supply	5V/2A DC, 5.5mm
Power Consumption	1.4Watts
Control Method	Web; Telnet; A Third-party Control System.
System Requirements	RS232 Cables Industry Standard CAT5e/6/7 Cables
Supported TX/RX	SCT-IPKVM-TX131, SCT-IPKVM-RX141
Operating Temperature	32°F to 95°F (0°C to 35°C) 10% to 90%, non-condensing
Storage Temperature	-4°F to 140°F (-20°C to 70°C) 10% to 90%, non-condensing
ESD Protection	Human Body Model: ±8kV (air-gap discharge) ±4kV (contact discharge)
Surge Protection	Voltage: ±1000 V (Tested ten times respectively for the positive and negative voltages)
General	

Dimension	Device: 141mmW×115mmD×26mmH /5.6''W×4.5''D×1''H
	Gift box: 390mmW×220mmD×92mmH /15.4''W×8.7''D×3.6''H
Weight	0.42kg (without accessories)
Certification	CE, FCC, RoHS

Panel

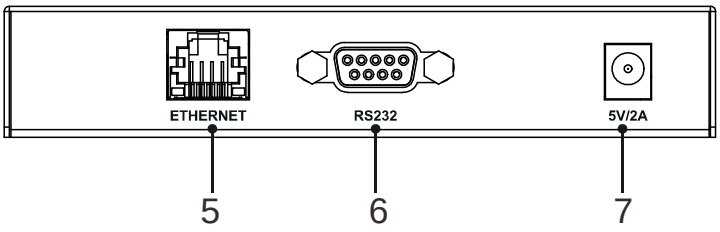
Front Panel



ID	Name	Description
1	Power	This LED glows steady red when the device is powered on.
2	WORK	This LED glows steady blue when the device is working properly. If red, that means the device is rebooting.
3	RESET	When the device is powered on, press and hold this button

ID	Name	Description
		for 5 seconds, it automatically restores to factory default settings.
4	Label	Write down the IP address of the device on the label comes with the device, then insert the label into the device.

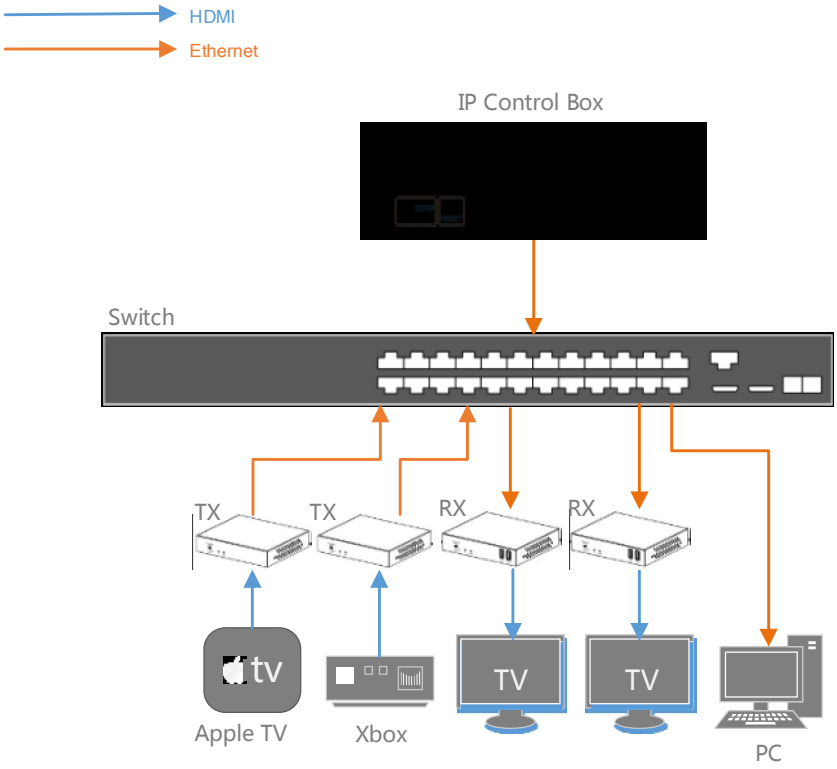
Rear Panel



ID	Name	Description
5	ETHERNET	RJ45 Port
6	RS232	Debug
7	Power	5V / 2A DC power supply input

Hardware Installation

1. Connect PC, SCT-IPKVM-CX, and TX/RX to a Switch via CAT5e/6 cables.
2. Connect HDMI Source (such as Apple TV, Xbox or PS3) to TX.
3. Connect HDMI Sink (such as a plasma TV) to RX.
4. Power on all the devices.
5. Use Telnet or Web browser to manage SCT-IPKVM-CX.



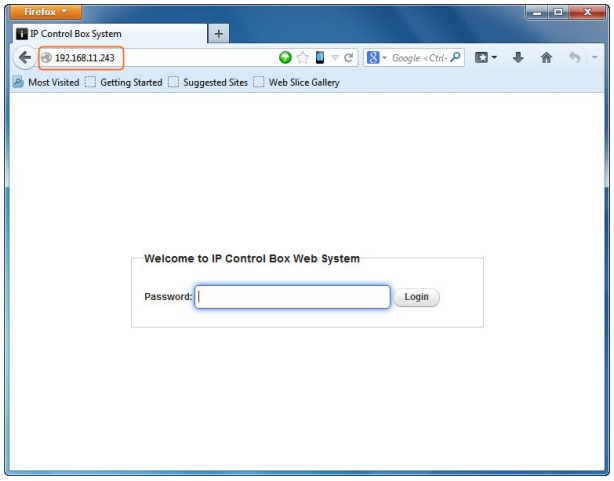
Access the Device

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.

Step 1. Enter **192.168.11.243** into a browser. We recommend you use, Firefox, Opera, Safari, Internet Explorer 11 or Chrome.



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

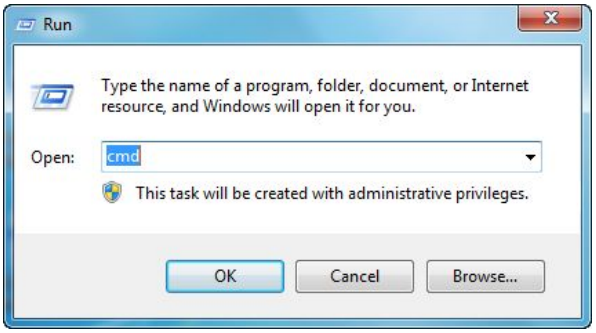
Note:

- 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.

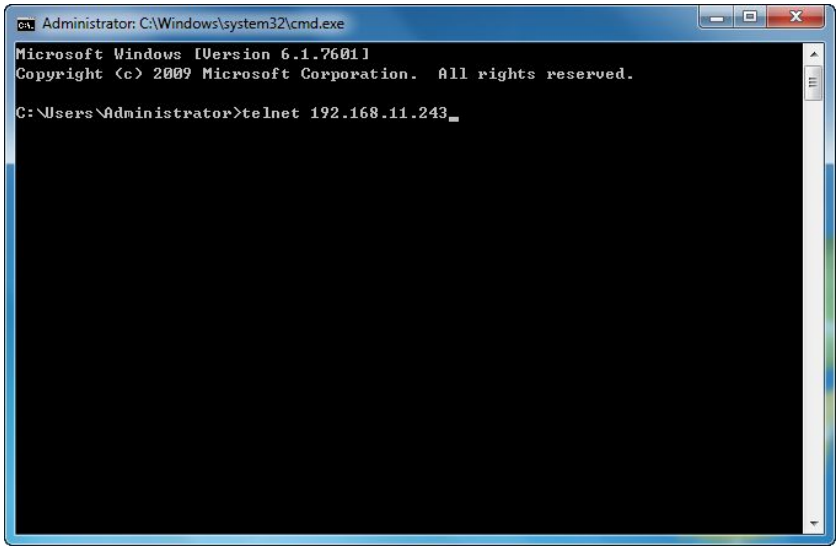
Telnet

To access the device through Telnet, follow these steps (here take Window 7 as an example).

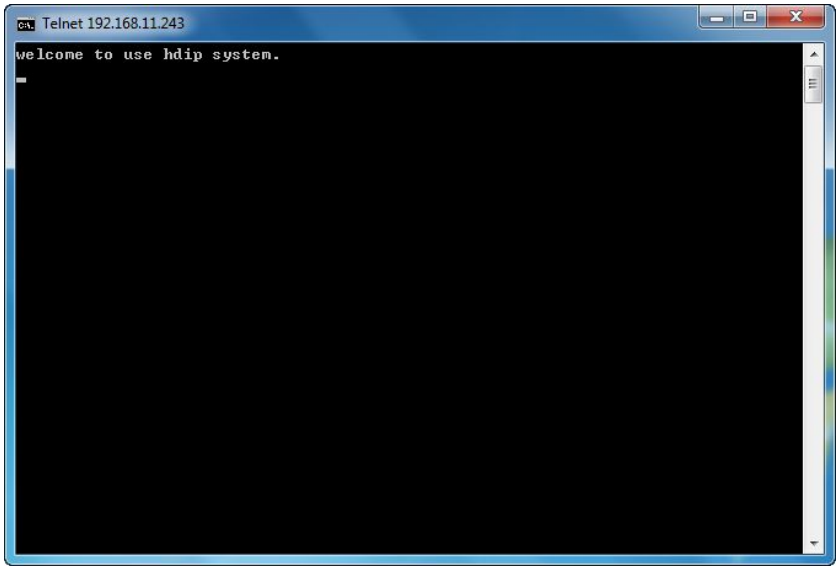
Step 1. Click **Start** menu, go to **Run**. Input **cmd**, click **OK**.



Step 2. Input **telnet 192.168.11.243**, press **Enter**.



Then you can see this window comes up.



Note:

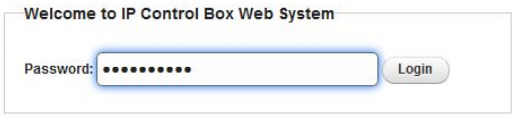
- The IP address of the computer and IP Control Box should be in the same network subnet. For example, if the IP address of IP Control Box is 192.168.11.243, then the computer should be 192.168.11.X.
- If you use a third-party controller, you can access the device refer to the document *API Command*.

Web Configuration

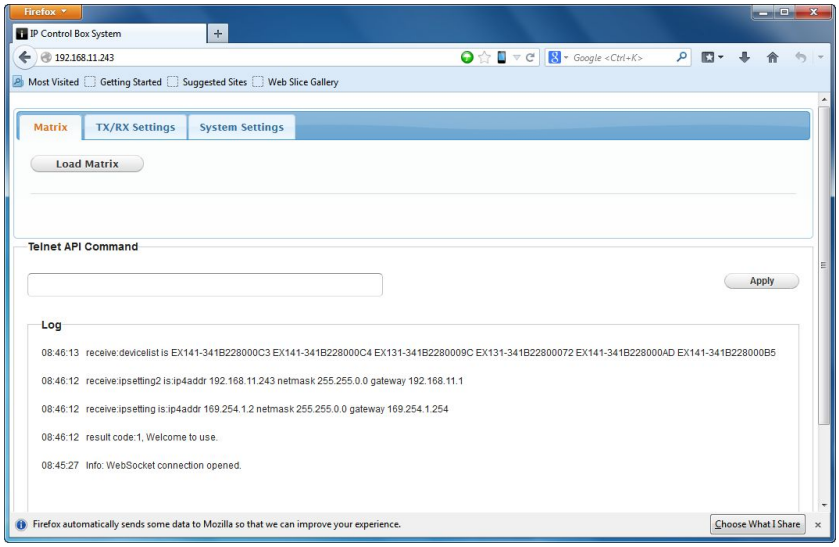
The Web Management Page is designed to perform the functions to control the device in a user-friendly interface.

Home Screen

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



The home screen comes up.



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

Matrix

Click **Load Matrix** button, a table comes up.

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

Icon	Description
	The device is online.
	The device is offline.
	The green bar represents correspondence TX and RX are linked. Click the green bar; it changes into blank, which means the correspondence 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

Click **TX/RX Setting**s tab, **TX/RX Settings page** comes up. Select a device you want to configure.

IP Setup

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

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

Note:

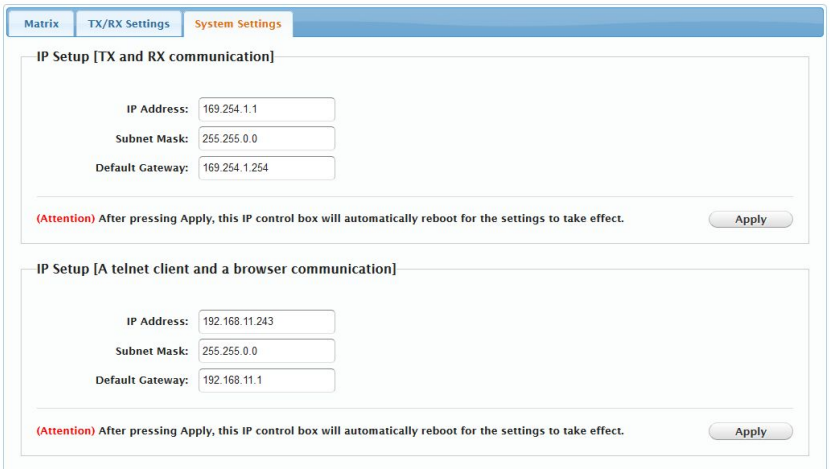
Alias cannot contain ',' ';' '_' '@', '*', '&', 'EX131', 'EX363', 'EX373', 'EX383', 'EX393', 'TX', 'EX141', 'EX403', 'RX'.

Commands

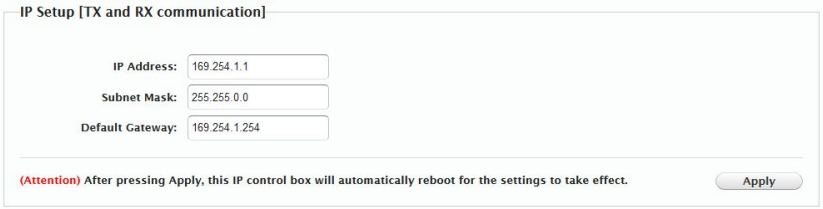
GUI Element	Description
Factory Default	Restore the TX/RX to factory default settings.
Reboot	Reboot the TX/RX.

System Settings

Click **System Settings** tab, **System Settings page** comes up. In this page, you can configure the IP Control Box.

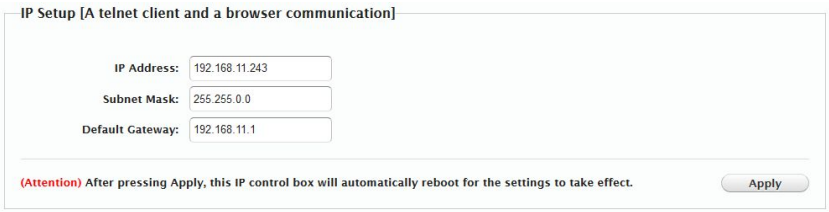


IP Setup (TX and RX communication)



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 (Telnet /browser communication)



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

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. We recommend you use 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-BBBBBBBBBBBB tx2

config set device alias EX131-CCCCCCCCCCCC tx3

config set device alias EX131-DDDDDDDDDD tx4

config set device alias EX141-EEEEEEEEEEEEEE rx1

config set device alias EX141-FFFFFFFFFFFFFFFF rx2

config set device alias EX141-GGGGGGGGGGG rx3

config set device alias EX141-HHHHHHHHHHH 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"?

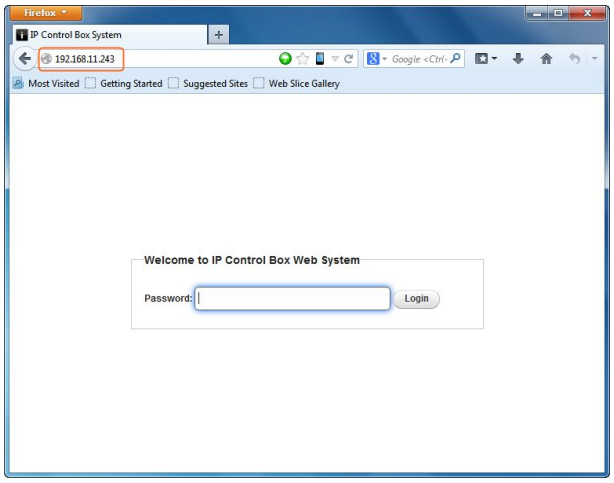
A: This command is used for adjusting screen display. The range of Tearing-delay is 10000 ~ 16000 and unit is us.

Access the Device

Users can send API command through **Web** or **Telnet**.

Web

Step 1. Enter **192.168.11.243** into a browser. We recommend you use, Firefox, Opera, Safari, Internet Explorer 11 or Chrome.

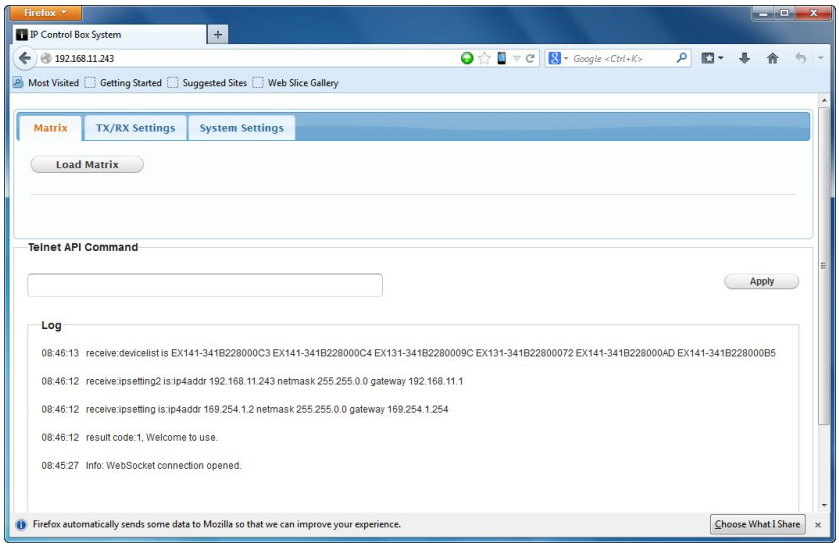


Step 2. Enter a password (admin by default), click **Login** to access the device.

Note:

- 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.

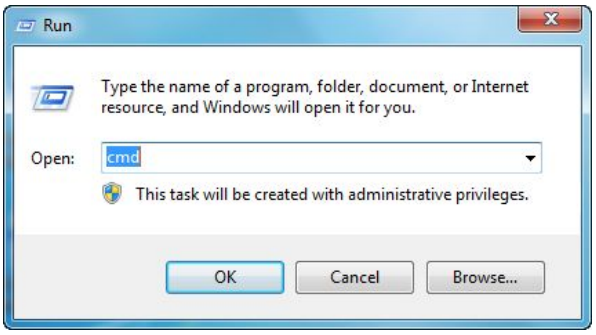
Step 3. The home screen comes up. You can enter the API command in **Telnet API Command** box.



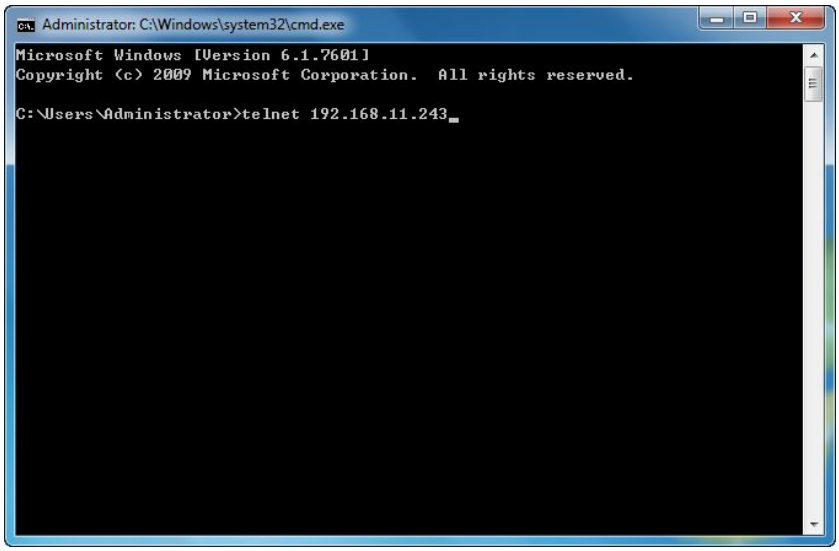
Telnet

To access the device through Telnet, follow these steps (here take Window 7 as an example).

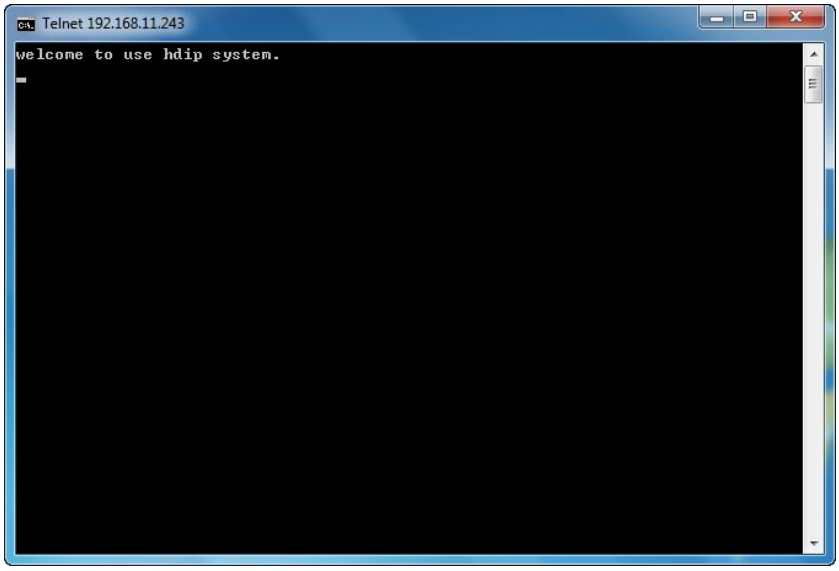
Step 1. Click **Start** menu, go to **Run**. Input **cmd**, click **OK**.



Step 2. Input **telnet 192.168.11.243**, press **Enter**.



Then you can see this window comes up.



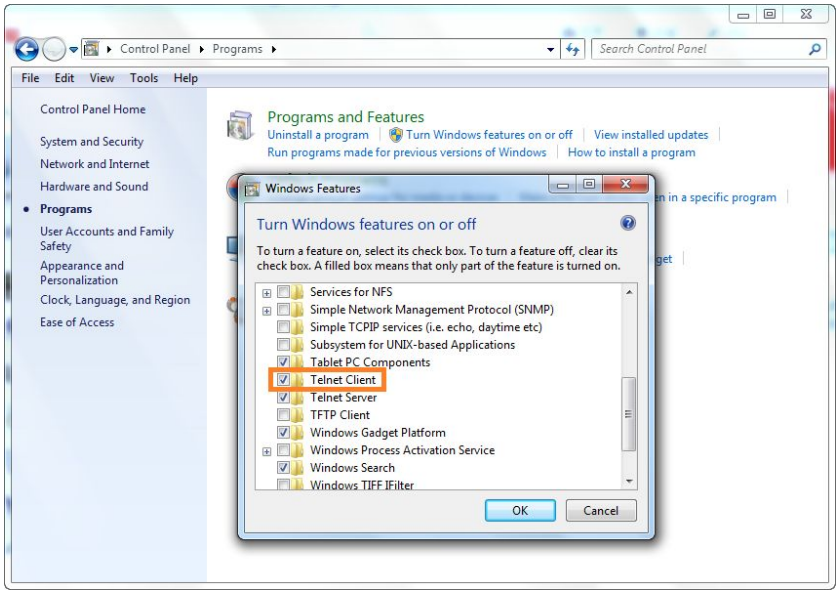
Note:

- 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.

Step 3. You can enter the API command.

Note:

The telnet client is disabled by default on window 7. To enable this client, open **Control Panel**>**Programs**>**Turn Windows features on or off**, fill the box of **Telnet Client**, and then click **OK**.



API Command Table

config set	
Command	**Description**
config set ip4addr xx.xx.xx.xx netmask xx.xx.xx.xx gateway xx.xx.xx.xx	Change the IP address which is used for communicating with TX and RX.
config set ip4addr2 xx.xx.xx.xx netmask xx.xx.xx.xx gateway xx.xx.xx.xx	Change the IP address which is used for Telnet/Web.
config set webloginpasswd xxxxxx	Change the login password of web.
config set restorefactory	Reset the IP Control Box.
config set shutdown	Shutdown the IP Control Box.
config set reboot	Reboot the IP Control Box.
config set debuglog {on | off}	Enable or disable the debug log.
config set device alias hostname xxxx	Set the Alias of the TX/RX
config set device remove hostname1 hostname2 ...	Remove the record of hostname1, hostname2…
config set device ip hostname1 {autoip|dhcp|static} ip4addr netmask gateway, hostname2 ...	Set the IP address mode.
config set device reboot hostname1 hostname2 ...	Reboot TX/RX.
config set device restorefactory hostname1 hostname2 ...	Reset TX/RX.
config set device info key1=value1 key2=value2 key3=value3 key4=value4 hostname1 hostname2 ...	Set the volume, gain of the device. It can set the same parameters for multiple devices.
config set device standby hostname1 hostname2 ...	Set the display which is connected to hostname device to standby mode. The display must support CEC control.

	Supported by N373 only.
config set device onetouchplay hostname1 hostname2 ...	Turn on the display which is connected to hostname device. The display must support CEC control. This command is supported by N373 only.

config get	
Command	**Description**
config get version	Obtain API version and system version.
config get devicelist	Obtain device list.
config get ipsetting	Obtain IP information which is used for communicating with TX and RX. The default IP is 169.254.1.1.
config get ipsetting2	Obtain the IP information which is used for Telnet/Web. The default IP is 192.168.11.243.
config get name {alias | hostname}	List hostname based on alias, or list alias based on hostname.
config get device hostname	Obtain TX/RX information with hostname.
config get device info hostname1 hostname2….	Obtain device information

Matrix	
Command	**Description**
matrix set TX1 RX1 RX2,TX2 RX3 RX4,...	Set matrix
matrix get	Obtain matrix information.

Videowall Command	Description
vw add vw-name n m tx	Create a video wall configuration, and assign a TX.
vw rm vw-name	Remove video wall configuration.
vw add vw-name tx1 position1 rx2 position2	Configure the video wall vw-name, add the correspondence of RX and Displays, can set up many RX and their displays correspondence by once.
vw add vw-name layout n m TX RX11 RX12 RX13 RX1m RX21 ... RXnm	Add a video wall layout n*m, subsequently the RX based on display order.
vw change rx tx	Set RX full-screen display TX.
vw change vw-name tx	Set all rx display tx.
vw bezelgap vw-name ow oh vw vh	Set the size of TV frame (video edge).
vw pictureparam vw-name h-shift v-shift h-scale v-scale teraring-delay rx1 rx2 rx3 ...	configure the rx1/rx2/rx3 ... image shift (Unit: 8 pixels, a negative number indicates to move left or up) / scale (Horizontal scale units: 1/Columns ; Vertical scale units: 1/ Rows) / delay(Unit: s, 10000~16000 in general)
vw get	Obtain video wall information.

Scene	
Command	**Description**
scene get	Displays all current scenes
scene active scene name	Active a certain scene.
scene set scenename posX posY tx1…	Change the source of a certain rx.

Serial	
Command	**Description**
serial -b param –r {on|off} “command-string” hostname1 hostname2 ...	Pass through the serial command. Use the true name only.

Note:

If you send the command through web, it displays the alias of the device.

For telnet, it only display the true name of the device.

API Command Sets

Configure Set Parameter

Set IP Address

Syntax	config set ip4addr xx.xx.xx.xx netmask xx.xx.xx.xx gateway xx.xx.xx.xx
Response	ip setting will change to: ipaddr xx.xx.xx.xx netmask xx.xx.xx.xx gateway xx.xx.xx.xx
Note	Change the IP address which is used for communicating with TX and RX. The default IP is 169.254.1.1. It takes effect immediately after receiving the command.

Example:

Command:

config set ip4addr 169.254.1.254 netmask 255.255.0.0 gateway 169.254.1.1

Response:

ip setting will change to: ipaddr 169.254.1.254 netmask 255.255.0.0 gateway 169.254.1.1

Set IP Address 2

Syntax	config set ip4addr2 xx.xx.xx.xx netmask xx.xx.xx.xx gateway xx.xx.xx.xx
Response	ip2 setting will change to: ipaddr xx.xx.xx.xx netmask xx.xx.xx.xx gateway xx.xx.xx.xx
Note	Change the IP address which is used for Telnet/Web. The default IP is 192.168.11.243. It takes effect immediately after receiving the command.

Example:

Command:

config set ip4addr 192.168.11.1 netmask 255.255.0.0 gateway 192.168.11.243

Response:

Ip2 setting will change to: ipaddr 192.168.11.1 netmask 255.255.0.0 gateway 192.168.11.243

Set Password for Web

Syntax	config set webloginpasswd xxxxxx
Response	password for web modified
Note	Change the login password of web.

Example:

Command:

config set webloginpasswd 123456

Response:

password for web modified

Reset IP Control Box

Syntax	config set restorefactory
Response	system will restore to factory settings now
Note	Reset the IP Control Box.

Example:

Command:

config set restorefactory

Response:

System will restore to factory settings now

Shutdown IP Control Box

Syntax	config set shutdown
Response	system will shutdown now
Note	Shutdown the IP Control Box.

Example:

Command:

config set shutdown

Response:

System will shutdown now

Reboot IP Control Box

Syntax	config set reboot
Response	System will reboot now
Note	Reboot the IP Control Box.

Example:

Command:

config set reboot

Response:

System will reboot now

Enable/Disable Debug log

Syntax	config set debuglog {on | off}
Response	debuglog will switch on/off
Note	Enable or disable the debug log.

Example:

Command:

config set debuglog on

Response:

debuglog will switch on

Set Alias

Syntax	config set device alias hostname xxxx
Response	hostname's alias is xxxx
Note	Set the Alias of the TX/RX. Alias can't use following delimiter like ',' '、' '@' '*' '&' '_' ' '(space)

Example:

Command:

config set device alias EX383-341B22FFFFB3 MYDVD

Response:

EX383-341B22FFFFB3's alias is MYDVD

Remove Device's Record

Syntax	config set device remove hostname1 hostname2 ...
Response	The following device's record will be removed: hostname1 hostname2 ...
Note	Remove the record of hostname1, hostname2…, Hostname can be alias.

Example:

Command:

config set device remove EX363-AABBCCEEDDFF EX373-ABCDEFGHIJKL

Response:

the following device's record will be removed:

EX363-AABBCCEEDDFF

EX373-ABCDEFGHIJKL

Set IP Address Mode

Syntax	config set device ip hostname1 {autoip|dhcp|static} ip4addr netmask gateway, hostname2 ...
Response	Devices' ipsetting will change to: EX363-mac1 autoip EX373-mac2 static ip4addr netmask gateway mytv dhcp ...
Note	Set the IP address mode. If it's a static IP, then followed by IP address/netmask/gateway. It can set up multiple devices, use "," comma to separate. It doesn't take effect until the device reboot. mytv is an alias of a Rx here.

Example:

Command:

config set device ip EX383-341B22FFFFB3 autoip, EX383-341B22FFFFB4 static 169.254.2.110 255.255.0.0 169.254.0.254, mytv dhcp

Response:

Devices' ipsetting will change to:

EX383-341B22FFFFB3 autoip

EX383-341B22FFFFB4static 169.254.2.110 255.255.0.0 169.254.0.254

mytv dhcp

Reboot Device

Syntax	config set device reboot hostname1 hostname2 ...
Response	the following device will reboot now: hostname1 hostname2 ...
Note	Reboot TX/RX.

Example:

Command:

config set device reboot EX383-341B22FFFFB3 EX383-341B22FFFFB4

Response:

the following device will reboot now:

EX383-341B22FFFFB3

EX383-341B22FFFFB4

...

Reset Device

Syntax	config set device restorefactory hostname1 hostname2 ...
Response	the following device will restore to factory setting now: hostname1 hostname2 ...
Note	Reset TX/RX.

Example:

Command:

config set device restorefactory EX383-341B22FFFFB3 EX383-341B22FFFFB4

Response:

the following device will restore to factory setting now:

EX383-341B22FFFFB3

EX383-341B22FFFFB4

Set Device Info

Syntax	config set device info key1=value1 key2=value2 key3=value3 key4=value4 hostname1 hostname2 ...
Response	config set device info key1=value1 key2=value2 key3=value3 key4=value4 hostname1 hostname2 ...
Note	Set the volume and gain of the device.

Example:

Command:

config set device info mic_volume=20 audio.mic1.gain=12 audio.lineout1.volume=20 EX143-AABBCCDDEEFF”

Response:

config set device info mic_volume=20 audio.mic1.gain=12 audio.lineout1.volume=20 EX143-AABBCCDDEEFF”

This means set the mic volume of EX143-AABBCCDDEEFF to 20, set the gain to 12 and set the lineout 1 volume of EX143-AABBCCDDEEFF to 20.

Set Device Standby

Syntax	config set device standby hostname1 hostname2 ...
Response	config set device standby hostname1 hostname2 ...
Note	Set the display which is connected to hostname device to standby mode. (The display must support CEC control). This command is supported by N373 only.

Example:

Command:

config set device standby EX373-AABBCCDDEEFF

Response:

config set device standby EX373-AABBCCDDEEFF

Set the display which is connected to EX373-AABBCCDDEEFF to standby mode.

Set Device Onetouchplay

Syntax	config set device onetouchplay hostname1 hostname2 ...
Response	config set device onetouchplay hostname1 hostname2 ...
Note	Turn on the display which is connected to hostname device (The display must support CEC control). This command is supported by N373 only.

Example:

Command:

config set device onetouchplay EX373-AABBCCDDEEFF

Response:

config set device onetouchplay EX373-AABBCCDDEEFF

Turn on the display which is connected to EX373-AABBCCDDEEFF

Configure Get Parameter

Get Version

Syntax	config get version
Response	API version: Vx.x System version: Vx.x.x
Note	Obtain API version and system version.

Example:

Command:

config get version

Response:

API version: v1.2

System version: v3.0.2 (v1.5.4)

Get Device List

Syntax	config get devicelist
Response	devicelist is hostname1 hostname2 ...
Note	Obtain device list.

Example:

Command:

config get devicelist

Response:

devicelist is EX363-341B228000BC EX373-341B22800490

Get IP Setting

Syntax	config get ipsetting
Response	ipsetting xx.xx.xx.xx netmask xx.xx.xx.xx gateway xx.xx.xx.xx
Note	Obtain IP information which is used for communicating with TX and RX. The default IP is 169.254.1.1.

Example:

Command:

config get ipsetting

Response:

Ipsetting is : ipaddr 169.254.1.1 netmask 255.255.0.0 gateway 169.254.1.254

Get IP Setting 2

Syntax	config get ipsetting2
Response	ipsetting2 xx.xx.xx.xx netmask xx.xx.xx.xx gateway xx.xx.xx.xx
Note	Obtain the IP information which is used for Telnet/Web. The default IP is 192.168.11.243.

Example:

Command:

config get ipsetting2

Response:

Ipsetting2 is : ipaddr 192.168.11.243 netmask 255.255.0.0 gateway 192.168.11.1

Get Alias

Syntax	config get name {alias | hostname}
Response	hostname'alias is xxxx
Note	List hostname based on alias, or list alias based on hostname. No parameter means to list all devices with corresponding alias and hostname. If list all devices, it would display in multiple lines.

Example:

Command:

config get name qweasd

Response:

EX383-341B22FFFFB3's alias is qweasd

Get Device Info

Syntax	config get device hostname
Response	hostname information is: Ipmode{autoip/dhcp/static}

	Ip4addr xx.xx.xx.xx netmask xx.xx.xx.xx mac xx.xx.xx.xx.xx.xx gateway xx.xx.xx.xx sink xxxx sink devices connected
Note	Obtain TX/RX information with hostname. The feedback information varies with different devices.

Example:

Command:

config get device EX383-341B22FFFFB3

Response:

EX383-341B22FFFFB3 information is:

Ipmode autoip

Ip4addr 169.254.11.110

netmask 255.255.0.0

mac 34:1b:22:ff:ff:d1

gateway 169.254.0.254

sink Manufacturer: SAM ProductCode: 2684 SerialNumber: 0

Get Device Json Info

Syntax	config get device info hostname1 hostname2….
Response	devices json info: { devices: [{ name:"MX143-341B22FFFF11", ip_mode:"autoip", ip4addr:"169.254.7.174", netmask:"255.255.0.0", mac:"34:1b:22:ff:ff:11", gateway:"169.254.0.254", mic_volume:60, mic_mute:false, audio: [{ name:"mic1", gain:0, phantom:true, }, { name:"mic2", gain:0, phantom:true, }, { name:"mic3",

```
                gain:0,
                phantom:true,
            },
            {
                name:"mic4",
                gain:0,
                phantom:true,
            },
            {
                name:"mic5",
                gain:0,
                phantom:true,
            },
            {
                name:"mic6",
                gain:0,
                phantom:true,
            },
            {
                name:"lineout1",
                volume:60,
                mute:false,
            },
            {
                name:"lineout2",
                volume:60,
                mute:false,
            }
        ],
        hdcp:false,
```

	sourcein:"hdmi1", enc_rc_mode:"vbr", profile:"hp", cbr_avg_bitrate:10000, vbr_max_bitrate:2000, vbr_min_qp:0, vbr_max_qp:51, fixqp_iqp:25, fixqp_pqp:25, enc_gop:60, enc_fps:60, transport_type:"raw" }] }
Note	Obtain device information. The feedback information varies with different devices. For detail information about the parameter description, please refer to Device json info description

Example:

Command:

config get device info EX383-341B22FFFFB3

Response:

devices json info:

{

devices:

[

{

name:" EX383-341B22FFFFB3",

version:"v1.2.3",

ip_mode:"autoip",

```
                ip4addr:"169.254.22.245",
                netmask:"255.255.0.0",
                mac:"34:1b:22:ff:ff:b3",
                gateway:"169.254.0.254",
                hdcp:false,
                sourcein:"341B22FFFFC2;341B22FFFFC3;341B22FFFFC9",
                audio:
                [
                    {
                        name:"lineout1",
                        mute:false
            }
        ]
}
```

Matrix Parameter

Set Matrix

Syntax	matrix set TX1 RX1 RX2,TX2 RX3 RX4,...
Response	matrix set: TX1 RX1 RX2,TX2 RX3 RX4,...
Note	Represent one or Multiple TX was displayed by one or Multiple RX. Each TX and its connected RX compose a record, and separated by a commas. Set TX to NULL, the followed RX disconnected from TX.

Example1:

Command:

matrix set MS501-341B22FFFFC2 EX373L-341B22800316, MS501-341B22FFFFC2 EX373-341B22800309, MS501-341B22FFFFC2 EX373-341B22800319, MS501-341B22FFFFC2 EX373-341B2280031A

Response:

matrix set MS501-341B22FFFFC2 EX373L-341B22800316, MS501-341B22FFFFC2 EX373-341B22800309, MS501-341B22FFFFC2 EX373-341B22800319, MS501-341B22FFFFC2 EX373-341B2280031A

Example 2:

"matrix set NULL RX1 RX2" means RX1 and RX2 are disconnected from TX.

Get Matrix

Syntax	matrix get
Response	the connected TX/RX information with below format matrix information: TX1 RX1 TX2 RX3

	TX2 RX4 ...
Note	Obtain matrix information. Based on current TX/RX in the network, re-construct the network topology and feedback to the third-party controller.

Example:

Command:

matrix get

Response:

matrix information:

MS501-341B22FFFFC2 EX373L-341B22800316

MS501-341B22FFFFC2 EX373-341B22800309

MS501-341B22FFFFC2 EX373-341B22800319

MS501-341B22FFFFC2 EX373-341B2280031A

Video-Wall

Create Video Wall Configuration

Syntax	vw add vw-name n m tx
Response	videowall item vw-name create and assign tx to it
Note	Create a video wall configuration, and assign a TX.

Example:

Command:

vw add vw1 1 2 tx1

Response:

videowall item vw1 create and assign tx1 to it

Create a 1 x 2 video wall, and assign a TX.

Remove Video Wall Configuration

Syntax	vw rm vw-name
Response	videowall item vw-name removed
Note	Remove video wall configuration.

Example:

Command:

vw rm vw1

Response:

videowall item vw1 removed

Configure Video Wall

Syntax	vw add vw-name tx1 position1 rx2 position2
Response	videowall item vw-name configuration added: rx1 posion1 rx2 posion2 ...
Note	Configure the video wall vw-name, add the correspondence of RX and Displays, can set up many RX and their displays correspondence by once. Position (format): x y, represents a location, such location is an n*m video-wall, x row, and y column.

Example:

Command:

vw add vw1 rx1 1 1 rx2 1 2

Response:

videowall item vw1 configuration added:

rx1 1 1

rx2 1 2

Before you send this command, you need to *add a video wall by "vw add vw1 1 2*

tx1" first. (From left to right, it is 1, 2, 3, 4 …)

Create a Video Wall Layout

Syntax	vw add vw-name layout n m TX RX11 RX12 RX13 RX1m RX21 ... RXnm
Response	videowall vw-name layout n*m tx rx11 rx12 rx13 rx1m rx21 ... rxnm
Note	Add a video wall layout n*m, subsequently the RX based on display order. The Parameter Rx could be character '0', indicates no need to change the corresponding RX.

Example:

Command:

vw add vw1 layout 2 2 tx1 rx1 rx2 rx3 rx4

Response:

*videowall item layout 2*2 tx1 rx1 rx2 rx3 rx4*

This command create a 2 x 2 video wall like below:

tx1 rx1	tx1 rx2
tx1 rx3	tx1 rx4

Change the Source of a Certain RX

Syntax	vw change rx tx
Response	videowall config change: rxhostname moved from vw-name and connect to txhostname
Note	Set RX full-screen display TX. Mainly used for: RX displays a partial area of TX before, now need to display the TX full-screen. If the tx is null, that means the video wall configuration of tx is removed.

Example:

Command:

vw change rx4 tx2

Response:

videowall config clear: rx4 and connect to tx2

Change the Source of All RX

Syntax	vw change vw-name tx hostname
Response	videowall vw-name tx connect to txhostname
Note	Set all rx display tx.

Example:

Command:

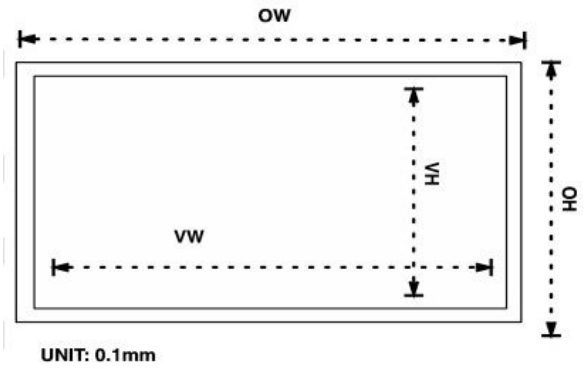
vw change vw1 tx2

Response:

videowall vw1 tx connect to tx2

Set the Size of TV Frame

Syntax	vw bezelgap vw-name ow oh vw vh
Response	videowall vw-name's bezelgap: xx xx xx xx
Note	Set the size of TV frame (video edge). The unit is 0.1mm.



Set the Image Shift

Syntax	vw pictureparam vw-name h-shift v-shift h-scale v-scale teraring-delay rx1 rx2 rx3 ...
Response	set videowall vw-name's pictureparam: xx xx xx xx xx to rx1 rx2 rx3 ...
Note	configure the rx1/rx2/rx3 ... image shift (Unit: 8 pixels, a negative number indicates to move left or up) / scale (Horizontal scale units: 1/Columns ; Vertical scale units: 1/ Rows) / delay(Unit: s, 10000~16000 in general)

Get Video Wall Info

Syntax	vw get
Response	video wall information: vw-name1 TX1 row-number1 RX11 RX12.. row-number2 RX21RX22 … ... vw-name2 TX2

	row-number1 RX11 RX12… …
Note	Obtain video wall information. Based on current TX/RX in the network, re-construct the network topology and feedback to the third-party controller.

Example:

Command:

vw get

Response:

Video wall information:

11-12_fanzhuan MS501-341B22FFFFC2

Row 1: EX373-341B22FFFFD1 EX373-341B22800309

Row 2: EX373-341B2280031A EX373-341B22800319

11-11_liuxijun MS500-341B22FFFFC9

Row 1: EX373-341B2280031A EX373-341B22800319

Row 2: EX373-341B22FFFFD1 EX373-341B22800309

Multiple View

Get Multiple View Info

Syntax	mv get
Response	mv information: Rx1 tx1 tx2… txn Rx2 tx3 tx4…txm
Note	Obtain all information of EX383.

Example:

Command:

mv get

Response:

mv information:

EX383-341B22FFFFB3 tx1 tx2

MS501-341B22FFFFC9 MS501-341B22FFFFC2

Set Multiple View

Syntax	mv set rx tx1 tx2 txn
Response	rx1 tx1 tx2 tx3…
Note	One tx to multiple tx, supports 1, 4, 9, 16 displays, the numbers of display is up to the tx number.

Example:

Command:

mv set rx tx1 tx2

Response:

rx tx1 tx2

Scene

Display the current scenes, change the scene and perform the scene.

Get Scene

Syntax	scene get
Response	scene list: scene1 scene2
Note	Displays all current scenes.

Example:

Command:

scene get

Response:

scene list:

Office-meeting room

Office-training room

Active a Scene

Syntax	scene active scenename
Response	scene scenename active success
Note	Active a certain scene.

Example:

Command:

scene active Office-meeting room

Response:

scene Office-meeting room active success

Change the Source of a Certain RX

Syntax	scene set scenename posX posY tx1…
Response	scene scenename's source in [posX,posY] change to tx1
Note	Change the source of a certain rx.

Example:

Command:

scene set Office-meeting room 1 2 tx1

Response:

Scene Office-meeting room's source in [1 2] change to tx1

Serial

Pass through the serial command.

Syntax	serial -b param –r {on|off} “command-string” hostname1 hostname2 ...
Response	serial command received: serial -b param –r {on|off} “command-string” hostname1 hostname2 ...
Note	Configure devices hostname1, hostname2 to pass through serial command. After receiving the command-string, TX/RX pass through the command directly to peripherals through RS232 port. command-string can’t contain symbol “ and ”. -b param, configure the RS232 parameter of TX/Rx and connected peripherals, including Baud rate、Data bits、Parity and Stop bits. *E.g.: -b 115200-8n1.* Parameters optional, it is 115200-8n1 by default. -r {on|off}, to add “Enter” or not following the command-string to final peripherals. Parameters optional, it is on by default. hostname1 hostname2 ..., indicates the destination, could be multiple.

Example:

Command:

serial -b 115200-8n1 -r on“KA WE 4E CC” hostname

Response:

serial command received：erial -b 115200-8n1 -r on“KA WE 4E CC” hostname

Device Json Info Description

Property Name	Description	Usage
name	Device true name	read-only
mac	like AA:BB:CC:DD:EE	read-only
ip_mode	autoip/static/hdcp	ip_mode=static
ip4addr	like 192.168.11.243	ip4addr=192.168.11.1
netmask	like 255.255.0.0	netmask=255.255.0.0
gateway	like 192.168.11.1	gateway=192.168.11.1
hdcp	true/false	hdcp=true

The following parameters are supported by MX143 and MS500 only.

Property Name	Description	Usage
mic_volume	[0,100] step 10	mic_volume=10
mic_mute	true/false	mic_mute=false
audio.name	such as mic1 mic2 mic3 mic4 mic5 mic6 mic7 mic8 linein1 linein2 lineout1 lineout2	read-only
audio.gain	[6,24] step 6	audio.mic1.gain=6
audio.phantom	true/false	audio.mic1.phantom=fal

		se
audio.volume	[0,100] step 10	audio.lineout1.volume=10
audio.mute	true/false	audio.lineout1.mute=false EX373, EX383, EX373L support to change lineout1 mute or not
enc_rc_mode	cbr/vbr/fixqp	enc_rc_mode=cbr
sourcein	vga1/vga2/cvbs1/cvbs2/hdmi1/hdmi2/hdmi3/hdmi4	sourcein=hdmi1

The following parameters are supported by MX143,MX153,MS500,MS501 and EX363

Property Name	Description	Usage
profile	bp/mp/hp bp: base profile mp: middle profile hp: high profile	profile=bp
cbr_avg_bitrate	[2,40960]	cbr_avg_bitrate=20
vbr_max_bitrate	[2,40960]	vbr_max_bitrate=40
vbr_min_qp	[0,51]	vbr_min_qp=10

vbr_max_qp	[0,51]	vbr_max_qp=50
fixqp_iqp	[0,51]	fixqp_iqp=10
fixqp_pqp	[0,51]	fixqp_pqp=20
enc_gop	[1,65535]	enc_gop=50
enc_fps	[1,60]	enc_fps=30
transport_type	raw/ts	transport_type=ts

Product Service

Maintenance

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

Provided Service

1. **Damage Requiring service:** The unit should be serviced by qualified service personnel if:
   - The DC power supply cord or AC adapter has been damaged;
   - Objects or liquids have gotten into the unit;
   - The unit has been exposed to rain;
   - The unit does not operate normally or exhibits a marked change in performance;
   - The unit has been dropped or the cabinet damaged.
2. **Servicing Personnel:** Do not attempt to service the unit beyond that described in these operating instructions. Refer all other servicing to authorized servicing personnel.
3. **Replacement parts:** When parts need replacing ensure the service uses parts specified by the manufacturer or parts that have the same characteristics as the original parts. Unauthorized substitutes may result in fire, electric shock, or other hazards.
4. **Safety check:** After repairs or service, ask the service to perform safety checks to confirm that the unit is in proper working condition.

Mail-In Service

When shipping the unit, carefully pack and send it prepaid, adequately insured and preferably in the original carton. Include a letter detailing the complaint and provide a daytime phone and/or email address where you can be reached.

If repair is needed during the limited warranty period the purchaser will be required to furnish a sales receipt/proof of purchase indicating date of purchase, amount paid and place of purchase. Customer will be charged for the repair of any unit received without such proof of purchase.

Warranty

If your product does not work properly because of a defect in materials or workmanship, Grandbeing Company (referred to as “the warrantor”) will, for the length of the period indicated as below, （Parts (1) Year， Labor(90) Days）which starts with the date of original purchase (“Limited Warranty period”), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

During the “Labor” Limited Warranty period there will be no charge for labor. During the “Parts” warranty period, there will be no charge for parts. You must mail-in your product during the warranty period. This Limited Warranty is extended only to the original purchaser and only covers product purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

Warranty Limits and Exclusions

1. **This Limited Warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage.** The Limited Warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, maladjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or service by anyone other than a Factory Service Center or other Authorized

Service, or damage that is attributable to acts of God.

2. **There are no express warranties except as listed under "limited warranty coverage". The warrantor is not liable for incidental or consequential damages resulting from the use of this product, or arising out of any breach of this warranty**. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, travel to and from the service location, loss of or damage to media or images, data or other recorded content. The items listed are not exclusive, but are for illustration only.)
3. **Parts and service, which are not covered by this limited warranty, are your responsibility.**

Glossary

Acronym	Complete Term
API	Application Programming Interface
DHCP	Dynamic Host Configuration Protocol
DTV	Digital Television
HDMI	High Definition Multimedia Interface
RX	Receiver
TX	Transmitter
VW	Video Wall

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