Over IP Control system

AVP-CBS2K-101

User Manual

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Overview

HDMI over IP Console is an easy-to-use, user-friendly, yet comprehensive Windows-based PC configurator that allows users to configure and operate a wide range of IP-based products, including H.264 codecs. It provides an integrated environment for defining AV control system functionality from an easy-to-use and intuitive graphical user interface. It's simple enough to use to configure a single AV device, yet powerful enough to facilitate building a Web-based resource management and remote monitoring system for multiple AV devices in different locations

Notes:

- This guide is developed based on the following software version, for more information about later software versions, see their guides.
  - ✓ For PC configurator: HDMI over IP Console HDMIoverIPConsoleV9.2.30
  - ✓ For control box V1.28 is API version. V10.1.12 is web console version. V10.1.8 is service version.
- All functions and pictures in this guide are for your reference only. The actual software may vary. In case of any content change, we are sorry for no further notice.

Unless otherwise noted, the word "device", when used in this guide, refers to a codec

Before Using PC Configurator

Before using PC configurator, ensure the IP address of your computer installed with this software, codec and IP control box (if required) are in the same network segment. Otherwise, this software cannot communicate with the codec in the network.

The following table shows the default protocol for different devices:

Model	Default Protocol	Remark
AVP-2K	Auto IP	IP address: 169.254.X.X Subnet mask: 255.255.0.0
	DHCP	If the network is in an absence of DHCP server, set a static IP address and subnet mask for the codec as required.
AVP-CBS2K	Static IP	IP address: 169.254.1.1 Subnet mask: 255.255.0.0

Configuring Your Operating System Firewall

Your operating system firewall may block some features of the PC configurator

You can configure the firewall when starting the PC configurator. If the **Windows Security Alert** window is displayed, select a network you allow this software to communicate on with administrator privileges. For example, select both private and public networks, and then click **Allow access.**

Starting PC Configurator

1. Decompress the zip file of the PC Configurator.
2. Locate the **HDMIoverIPConsole.exe**.
3. Double-click **HDMIoverIPConsole.exe** to start PC configurator.

Searching for the Devices

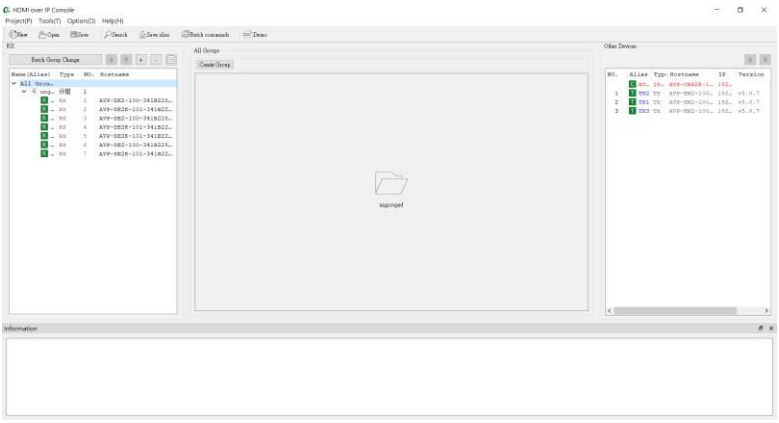
1. Start PC Configurator.
2. Click **Search** to start searching for online devices. It may take

a few seconds, please wait.

3. Click **OK**. When the search is completed the discovered devices are displayed in the **RX** and **Other Devices** area.

   ✓ Decoders appear at the left of the Console, encoders and other devices appear at the right.

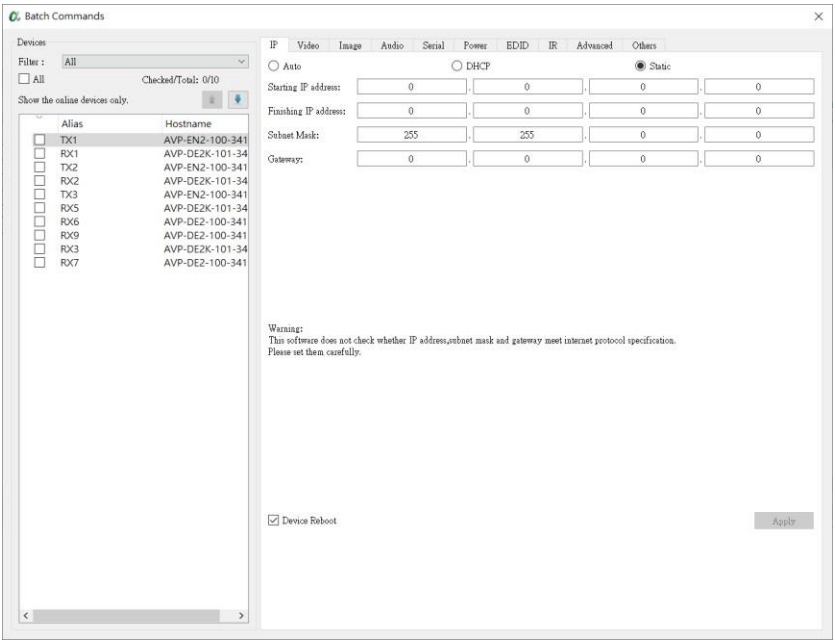
   ✓ If the devices are online, the square icons next to them turn green; otherwise, the icons turn white.



Configuring IP address

Configuring IP Address in Batch Commands

1. Press the Batch Commands button and select the IP address Tab.
2. Filter to a specific device type using the filter dropdown menu.
3. Select the All checkbox in Devices area.
4. Enter the required starting IP address of the encoders and decoders and the highest address IP address in the Finishing IP address field.
5. Click “Apply”.

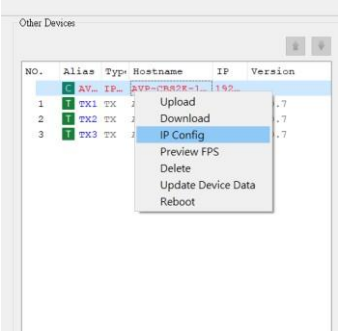


Note: All devices and the IP control box must be assigned new IP addresses within the same IP address range.

To change the IP address of the IP control box, perform the following.

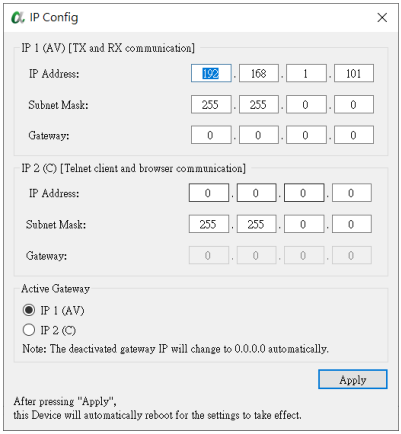
1. Right click the IP control box in the **Other Devices** section and

choose **IP Config**.



2. Enter the IP information for the LAN 1 (AV) and LAN 2 (C) Ports, and click Apply. The control box will then reboot.

Note: Both the LAN ports cannot be on the same subnet and must be on independent subnets, even if only one



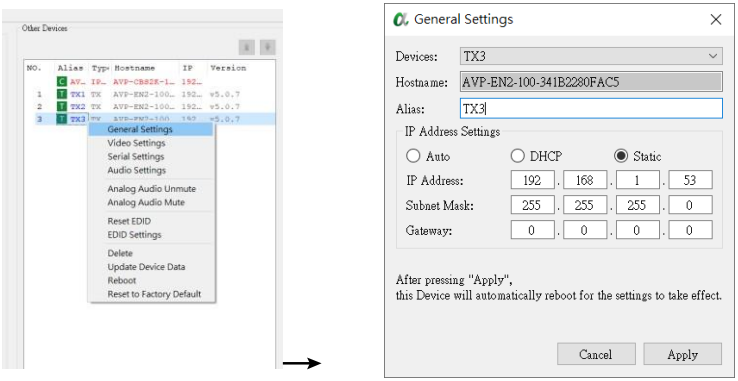
network interface is physically connected.

Creating Aliases

By default, each device listed in PC configurator is with a name that includes the corresponding hostname and Mac address. You can create aliases for the devices with easy-to-remember names.

To configure aliases for devices, perform the following.

1. Right click a decoder or encoder and select General Settings.
2. Enter in the desired alias.
3. Click Apply.



Video Settings

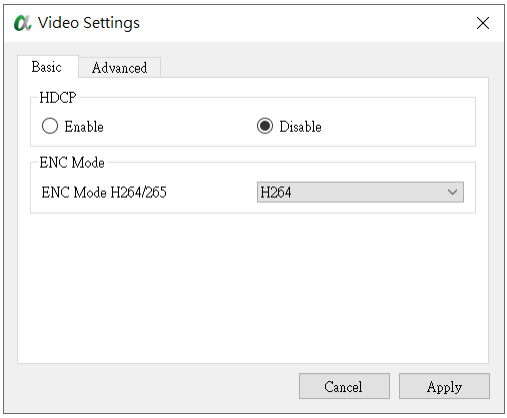
Video Settings allows for video-related adjustments.

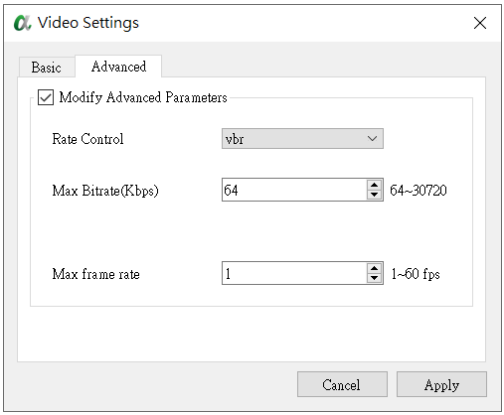
To perform video settings, right click an encoder or decoder and select “Video Settings” within the context menu.

Note: The Video Settings function may vary depending on different series of devices.

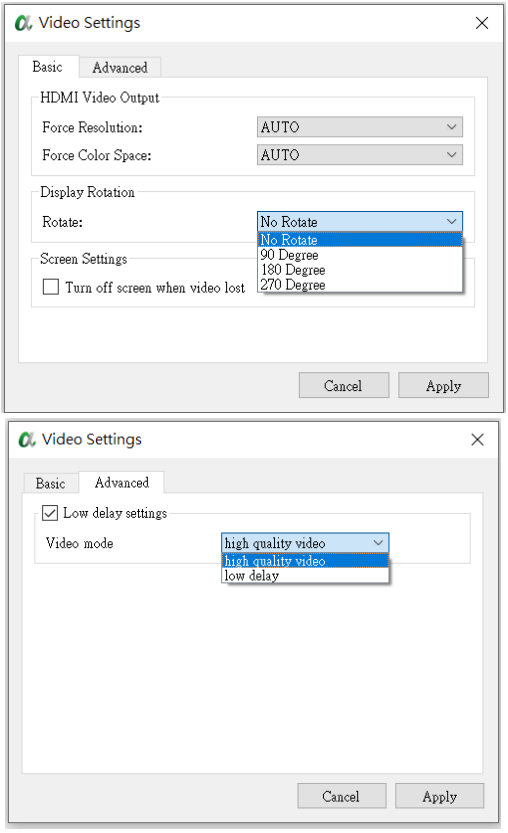
H.264 Video Settings

1) H.264 Encoder Video Settings


Video Settings
Basic
Advanced
HDCP
Enable
Disable
ENC Mode
ENC Mode H264/265
H264
Cancel
Apply


Video Settings
Basic
Advanced
Modify Advanced Parameters
Rate Control
vbr
Max Bitrate(Kbps)
64
64~30720
Max frame rate
1
1~60 fps
Cancel
Apply

2) H.264 Decoder Video Settings



H.264 decoders offer either high quality or low delay modes.

a) High quality mode (default setting): High quality video will be output to display, while source to display latency will increase.

b) Low delay mode: this mode will decrease the source to display latency as well as the video quality so to achieve a lower latency.

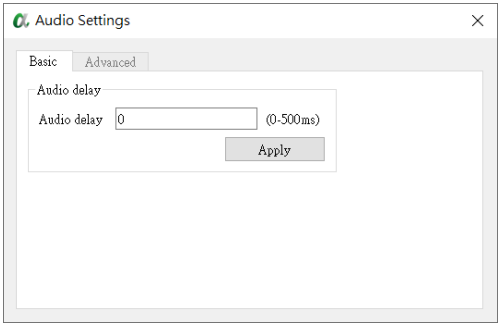
Audio Settings

Audio Settings allows for audio-related adjustments.

To perform audio settings, right click an encoder or decoder and select “Audio Settings” within the context menu.

Note: The Audio Settings function may vary depending on different series of devices.

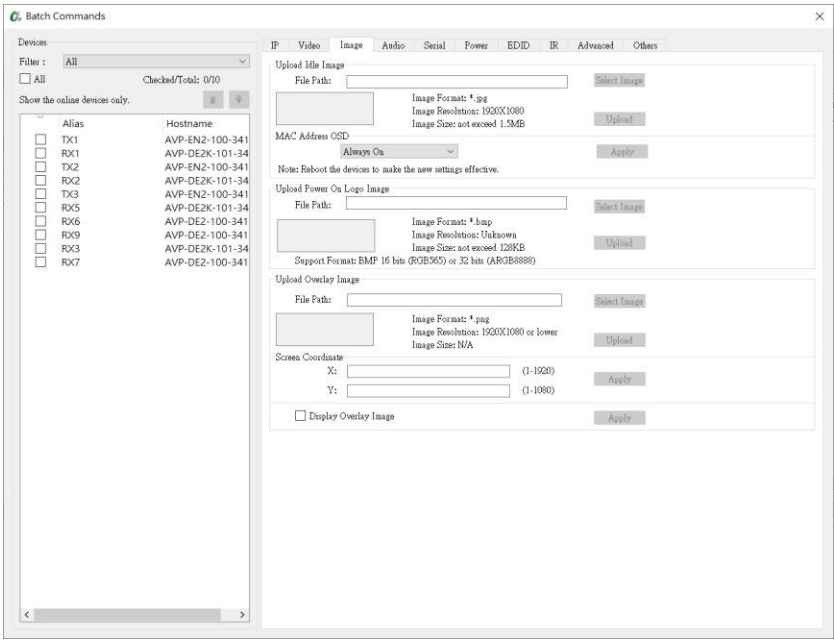
H.264 Encoder and Decoder Audio Settings



H.264 Series encoders and decoders offer an audio delay adjustment to be implemented. The total delay of the audio from source to display will be the sum of the values entered in the encoder and decoder.

Idle and Overlay Images

The Batch Commands window offers an Image tab under



which various decoder image settings can be adjusted.

Upload Idle Images

The Idle image is presented to a decoder's connected display when the decoder detects no active signal input from an encoder. This could be for the following reasons:

1. The decoder is not assigned to an encoder.
2. The source device is not outputting video, e.g. it is in standby.
3. The decoder cannot reach the encoder due to a networking issue.

Upload Power On Logo Image

The Power On Logo image is presented to the decoder's connected display when the decoder boots up.

Note: Only the JPEG2000 series units support Power On Logo image.

Upload Overlay Image

An image can be uploaded to a decoder to be displayed on top of the main video stream.

Note: Overlay image are only supported on H.264 series units.

Configuring CEC & RS-232 Control

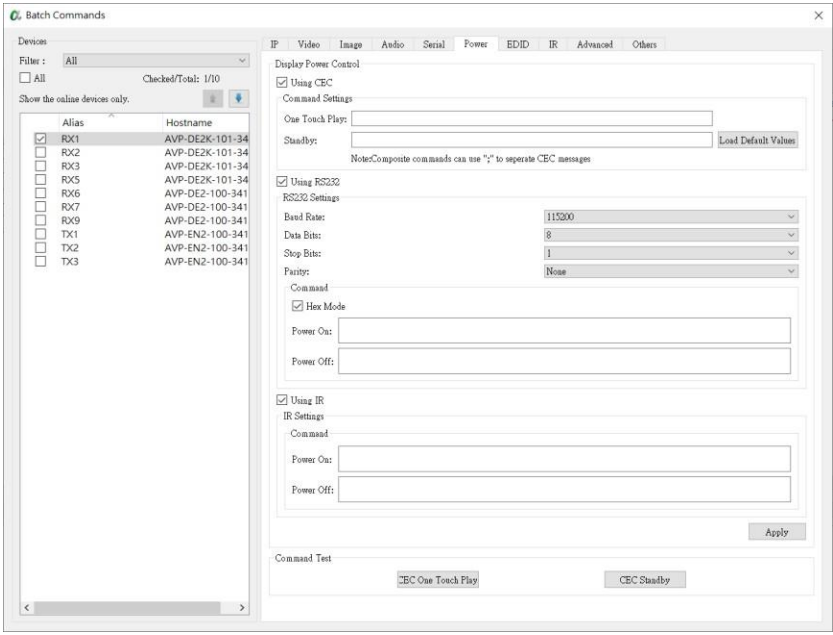
The Batch Commands window can be used to configure decoders to send CEC or RS-232 commands to the attached displays. These commands can be triggered from the VisualM app when the power on or off buttons are pressed.

CEC control can be found on most modern displays. If the

display being controlled doesn't have CEC capability, then RS-232 can be used as an alternative.

To configure CEC and RS-232 commands, do the following:

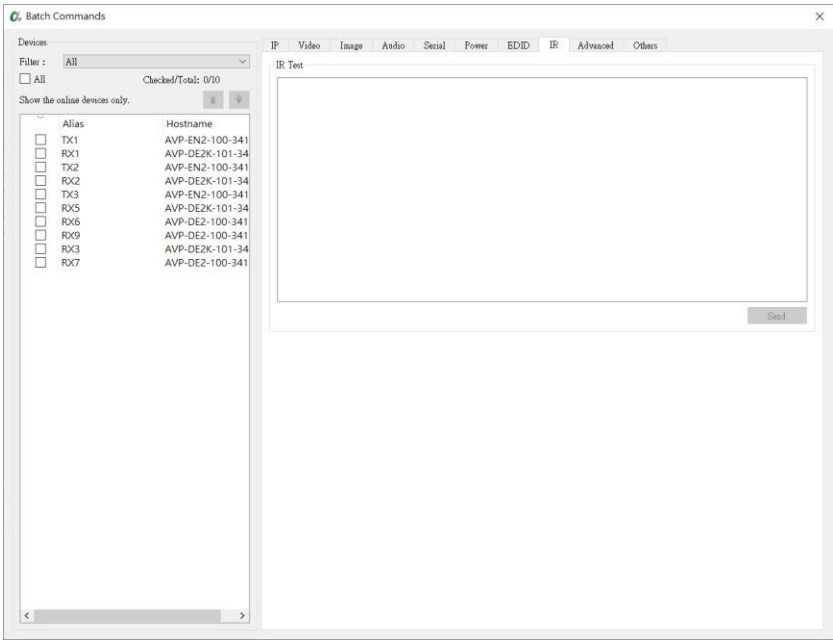
1. From the Batch Commands window select the Power tab.



2. Select decoders from the list at the left.
3. For CEC control either load the default CEC commands or insert a custom CEC byte string.
4. For RS-232 control adjust the RS-232 Settings for the target display(s) and enter in the serial commands in the One Touch Play and Standby boxes respectively. If the format of the display's command should be represented with Hex, mark the Hex Mode checkbox.
5. Click Apply.

Configuring IR Control

From the Batch Commands IR Tab, IR commands data can be entered and sent to series IR TX (emitter) port for testing. IR



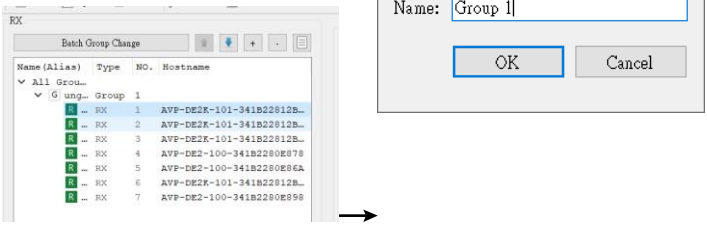
command must be entered in hex format.

Creating Groups

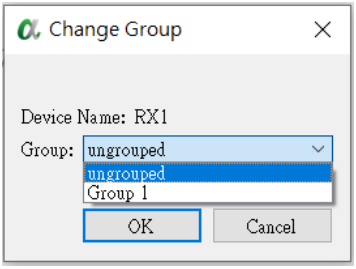
Decoders can be organized in groups.

By default, all devices are added to the Ungrouped Group.

1. Create a group by pressing All Groups in the RX area and click Create Group in the central area. In the pop-up window, enter a name and click OK.



2. Add decoders to the group by right clicking them, select Change

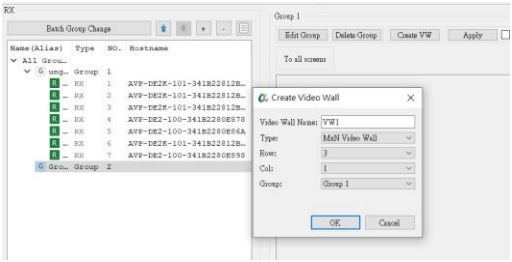


Group and then select the desired group.

Creating Video Walls

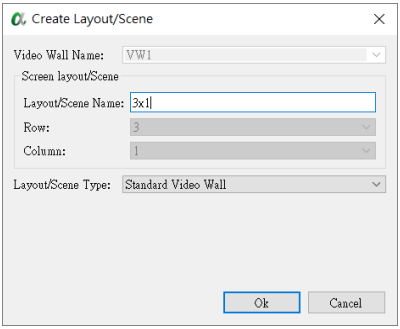
The decoders assigned to a video wall must be a member of a group.

1. Create a group.
2. Select a group and press the Create VW button.
3. Give the video wall a name and choose its size.



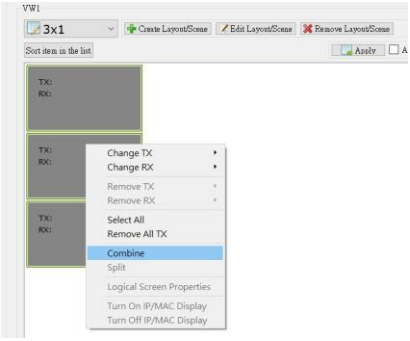
Each video wall can create multiple scenes

4. To create a scene within the video wall, press the "+Create Layout/Scene" button and name it.



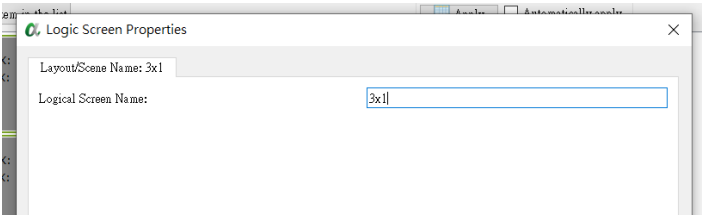
Note: Scene names must be alphanumeric and cannot include spaces or special characters.

5. Once a Scene has been created screens can be combined to create the video wall. For example, to create a 3 x 1 image in a video wall hold the PC's Ctrl button and select 3 displays.
6. Right click one of the selected displays and choose "Combine".



Note: Video walls must be a complete shape – i.e. 2x2, 3x1, etc. They cannot be L or T shaped etc. It is recommended that walls have the same number of columns as rows so that video stretching does not occur.

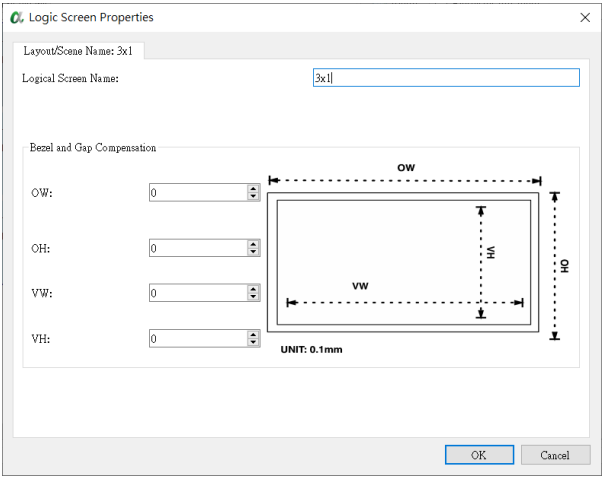
7. The following window will appear asking for a Layout name. Enter a name and click OK button.



8. To configure display bezels, right click on the video wall, select "Logic Screen Properties".

   The following window will appear. Measure the OW (outer width), OH (outer height), VW (viewable width) and VH (viewable height) of a single screen which is part of the video wall. Measurements should be recorded in millimeters and then multiplied by 10. For example, if the OW (outer width) of a display is 900mm, 900x10=9000.

9000 would be entered into the OW field. Repeat this process for all dimensions.



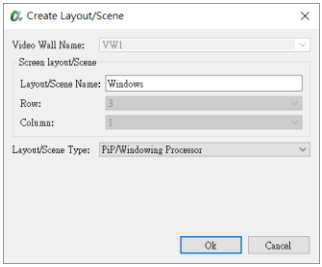
9. Select a decoder and enter a value in the appropriate field. All values entered will be multiplied by 8.
10. Drag decoders and encoders to the layout to build the video wall.

Configuring Window Roaming

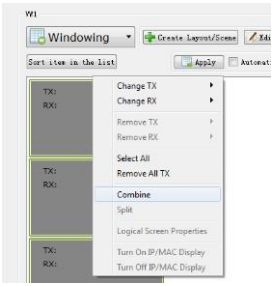
codecs to perform window roaming for up to 6 video sources within a video wall layout.

To configure window roaming, perform the following:

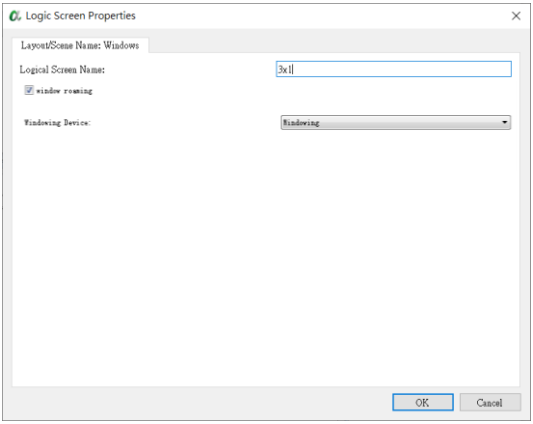
1. Create a video wall.
2. Select the video wall, and click “+ Create Layout/Scene” in the central area.
3. The following window will appear. Enter a layout name and select “PiP/Windowing Processor” as Layout/Scene type.



4. Right click on the video wall layout and select “Combine”.



5. In the pop-up window, give a logical screen name > mark the window roaming checkbox > select the desired windowing device AVP-CBS2VW-100 from

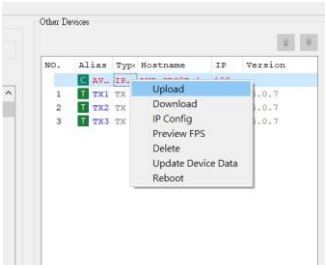


the dropdown menu > Click OK.

6. Drag and drop the decoders and encoders to the layout to perform window roaming. You can also use AGS-iTOUCH app to perform video switching and window roaming.

Uploading Configurations to IP Control Box

When creating groups, configuring video wall and layouts are completed, you can upload the configuration to the IP control box in the Other Devices section and press Upload.



After the configuration file is uploaded to the IP control box, you can use the AGS-iTOUCH to realize visual control on codecs

Frequently Asked Questions

Why **PC Configurator** cannot find any devices?

1) Check the Windows firewall.

   Taking Windows 7 as an example: Click **Start**, go to **Control Panel** > **System and Security** > **Windows Firewall** > **Allowed Programs**, highlight **Configuration tool for HDMI over IP**, select **Home/Work (Private)** and **Public**.

2) Check the IP address and subnet mask of your computer.

   In the network, if the codec's IP address is 169.254.x.x and subnet mask is 255.255.0.0, the computer and codec should be in the same network segment.

3) Check that the switch is configured properly and that IGMP snooping function is enabled.

APP Overview

AGS-*i* Touch is an easy-to-use AV control system app that gives users

quick access to IP control box (referred to AVP-CBS2K-101) directly from an iPad. After a quick initial setup, the iPad connects to IP control box, allowing for a seamless, highly-responsive control experience. All button presses are kept in sync between the app and your IP control box. This provides convenient and easy access to the IP distributed matrix system.

Before Using AGS-*i* Touch

Before using the AGS-i Touch, perform the following:

- ✓ IP streaming system is correctly configured;
- ✓ Ethernet switch, wireless network router (or access point) are correctly configured;
- ✓ Windows PC running Windows 7 or higher;
- ✓ PC configurator (referred to IP Console) Version: v9.2.30 or higher;
- ✓ iPad running iOS8 or higher;
- ✓ **AGS-i Touch** (V3.7.13 1.0 or higher) is downloaded in Apple store;
- ✓ The IP control box is employed [V10.1.12(V10.1.8) or higher)];

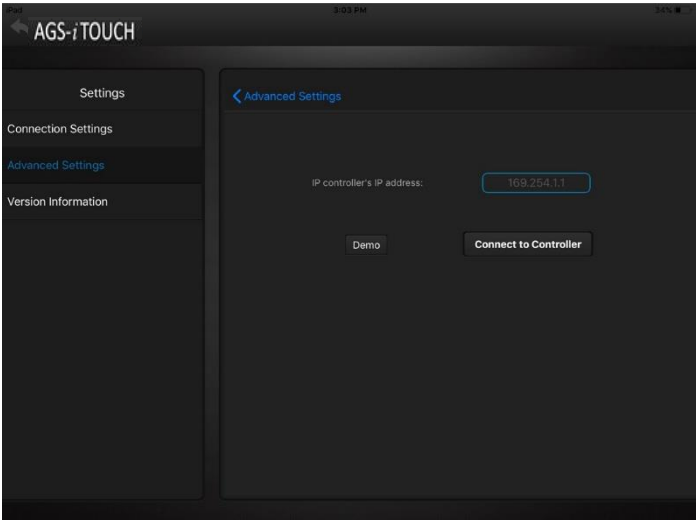
Ensure your PC with PC configurator installed, IP control box and iPad are in the same network segment

Operating AGS-*i* Touch

On first startup, you need to enter the IP address of IP control box in AGS-i Touch:

1. Select “Advance Settings”, the default password is **admin**.

Enter the IP control box’s IP address in the textbox > click “Connect to Controller”



When connection succeeds, AGS-i Touch downloads configuration information from control box. Navigate back to the main screen, you can see any groups that have been configured along with all encoders listed at the bottom.

Introduction to AGS-*i* Touch UI

AGS-i Touch user interface may vary based upon different configurations for a group, such as Matrix, Video Wall and Multi-view.

Main Screen UI

No.	UI Element	Description
1	Logo icon	Indicate the image of this app name **AGS-i Touch**, which is uploaded to IP control box configuration web from your local computer and then is downloaded from control box to

		AGS-i Touch.
2	Connected and Disconnected	Indicate the connection status between AGS-i Touch and control box.
3	System configuration button	Used to configure the system settings.
4	Source List	Shows the live preview IP stream from source device.
5	To all screens	Drag a source from source list over this button means the switching of this source to the screens in all groups, including single screens and video walls.
6	Display On/Off	• **Display On**: Turn on the displays in all groups. • **Display Off**: Set these displays to standby state.

Matrix UI

No.	UI Element	Description
1	Matrix Preview	Shows a live preview of current matrix assignments. Drag and drop from the Source List to a display to change content.

2	Preset Settings	• Save: save the current link relationship between decoder and encoder in a group as preset option. • Preset 1-3: save the current link relationship to preset 1 to 3.
3	Back Button	Go back to the main screen.

Video Wall UI

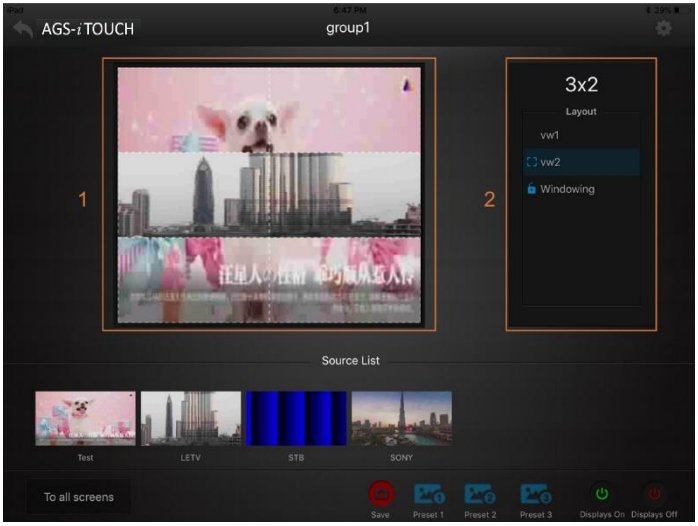
Standard Video Wall

The following layout “vw1” is a standard video wall layout, which can be set through the PC configurator. For more information, please refer to the user guide of PC configurator.

No.	UI Element	Description
1	Video Wall Preview	Shows a live preview of current video wall and screen layout. Drag and drop from the Source List to the video wall to change content.
2	Layout Selection	Indicates all video wall layouts, which can be used to switch among layouts. The layouts can be adjusted from the PC configurator.

Video Wall within Video Wall

The following layout “vw2” is a “video wall within video wall” layout, which also referred as “Picture in Picture”, i.e. one N x M physical video wall has a layout where multiple combination screens overlap each other. This layout can be set through the PC configurator. For more information, please refer to the user manual of PC configurator.



As shown in the picture below, a 3 x 2 big wall has a layout where two combination screens overlap each other. One 1 x 2 combination screen

overlaps the other 3 x 2 combination screen

Window Roaming

The following layout “Windowing” is a window roaming layout, i.e. one physical video wall has a layout within which multiple windows can be adjusted at any size and roam at any position. This layout can be set

through the PC configurator. For more information, please refer to the user guide of PC configurator.

No.	UI Element	Description

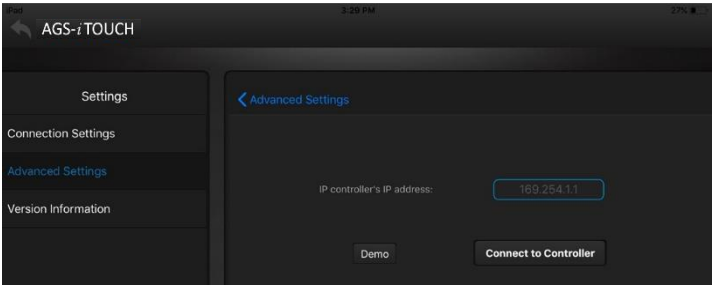
1	Video Wall Preview	Shows a live preview of current video wall and screen layout. • Drag and drop from the Source List to the video wall to change content. You can drag a video preview window to any position within the video wall. • You can zoom in/out a video preview window with two fingers to make it smaller and larger within the video wall.
2	Layout Selection	Indicates all video wall layouts, which can be used to switch among layouts. The layouts can be adjusted from the PC configurator

System Configuration Screen

You can click the Settings button to access the system configuration screen to perform the following functions.

a) Change IP address of IP control box.

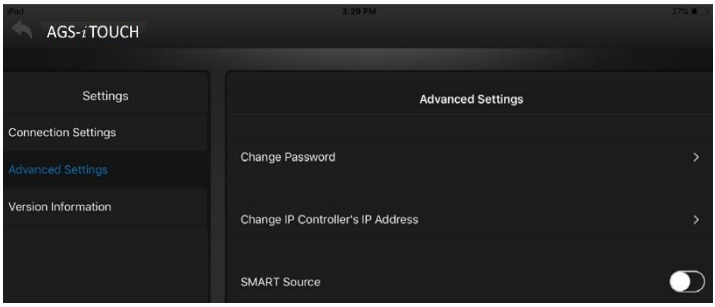
Navigate to Settings > Select “Advanced Settings” > “Change IP controller’s IP address” > Enter the control box IP address.

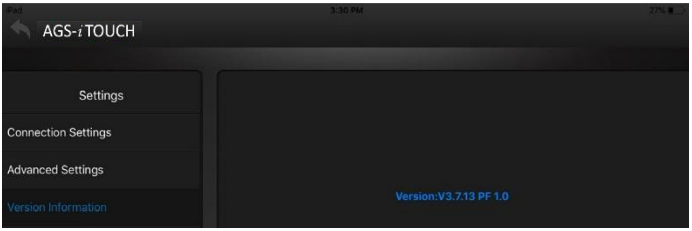


b) Enable and disable Smart Source.

Select “Advanced Settings” > “Smart Source” > click the toggle switch to enable or disable Smart Source.

The Smart Source function allows AGS-i Touch to maintain a displayed



source when screen layouts are changed.

c) View software version in “Version Information” Tab.