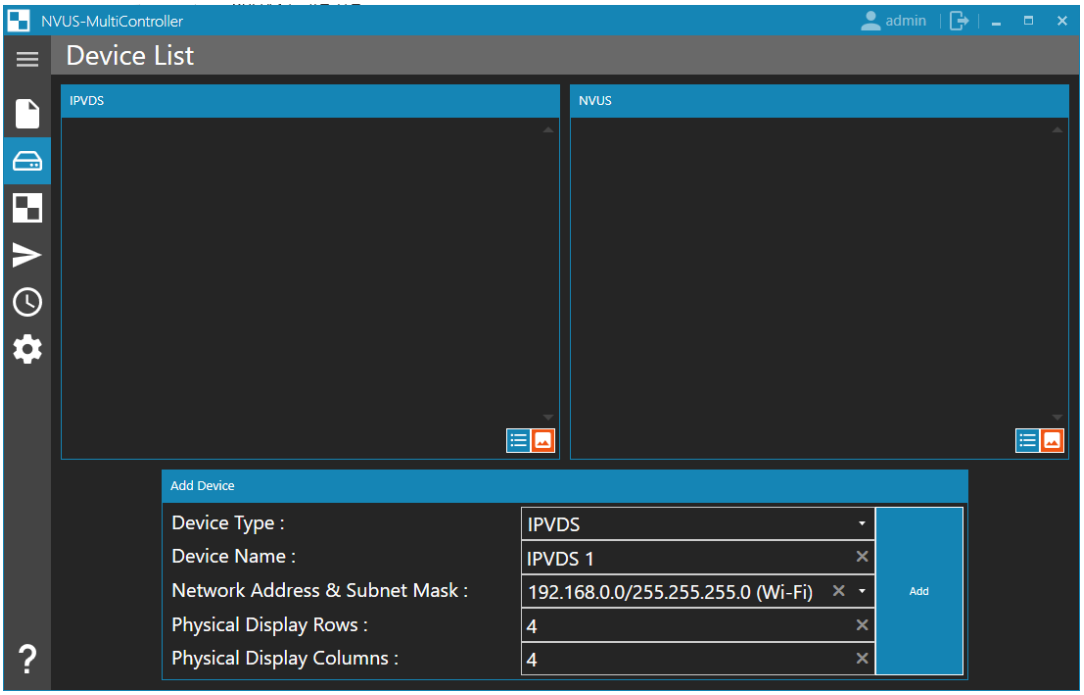
NVUS-MultiController

User Manual

[IPVDS-700-ED]

Ver. 1.1



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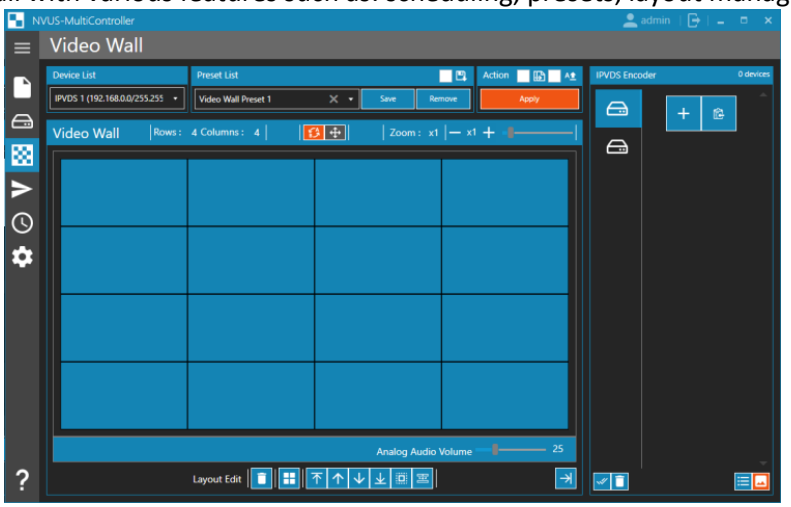
1. Control Software

1.1 Introduction

This software allows control of IPVDS, NVUS and other IP based devices through the usage of network. It is designed with user-friendly configurations for the convenience of the customers. By using this software, customer can have a control over the Video Wall with various features such as: scheduling, presets, layout management, etc..



- Controls Video Wall and individual displays
- Support easy drag and drop operation for host allocation.
- Offers allocate, merge, split, overlay (PIP) functions as layout management.
- Shows preview screen before applying it to actual displays
- Provides limitless presets for user defined layouts (no limits on save/load).
- Enables control via RS-232 and IP network.
- Presets scheduling function: sequential mode (dwell time based) and weekly mode (hourly/weekly based)
- Applications: Control room / Traffic Control System / Security and Education / Digital Signage / Pro AV Field

1.2 Recommended Specification of the Controlling Device

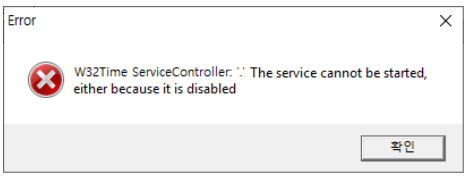
NVUS MultiController	
OS	Windows 7 32bit or above
CPU	Intel Core i3 or above
Memory	2GB or above
HDD	10GB or above

1.3 Installation of the Software

1. Install “NVUS-MultiController.msi”
2. Follow the message from the Windows
3. In the case for an upgrade or reinstallation, use Control Panel to uninstall first.

※ Only available in Windows 7 32 bit or above

※ If a warning alert pops up as below, initiate Windows Time manually. It is required process for the Time Synchronization.

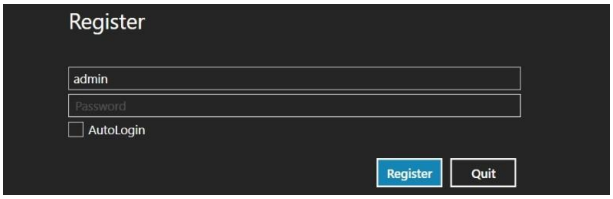


1) Go Service tab on Task Manager, right click on “W32Time” → Select “Open Services”
2) In the list of the items, right click on “Windows Time” then click Properties → Under General Tab, change the Startup type to “Automatic (Delayed Start) → click OK
3) Verify in the Task Manager that W32Time is running.

1.4 Run program and Log in

1. Run the program

2. For the first time running, a license is required (refer to page 22).
3. For the first time logging, set a password. ID is determined as admin.



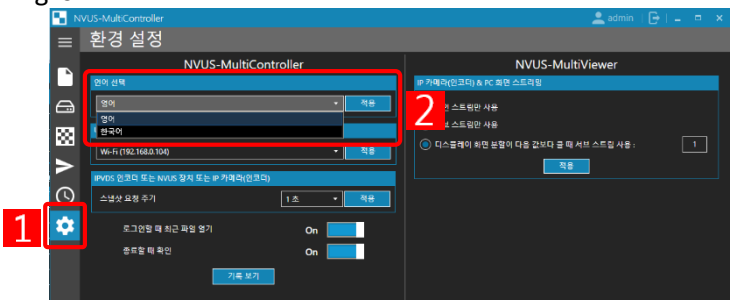
4. Run the program and log in with the default ID (admin) and password that you have set.

   ※ **Note** Your password must be more than 8 characters and must contain at least three factors among uppercase/ lowercase / numbers / special characters.

   ※ **Note** Click on the checkbox for the auto log in in the case you need.
5. If you need to log in to different account, you need to restart the program or click on log out button on the right upper tab.

1.5 Language selection

The language of the program should automatically be selected based on the language of the Window OS.
But, in the case that the language of the program is set as Korean, please follow the image below to change it to English.

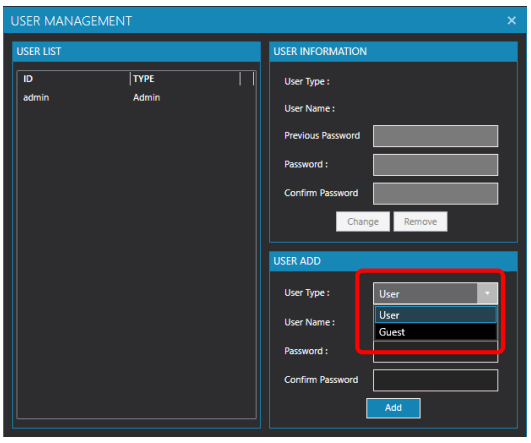


[1] Go to the Configuration Tab. The first section on the left side [2] is where to select language. The first option that appears on the bar is English. Select English, then click on the blue bottom on the right side to apply.

1.6 User Manager

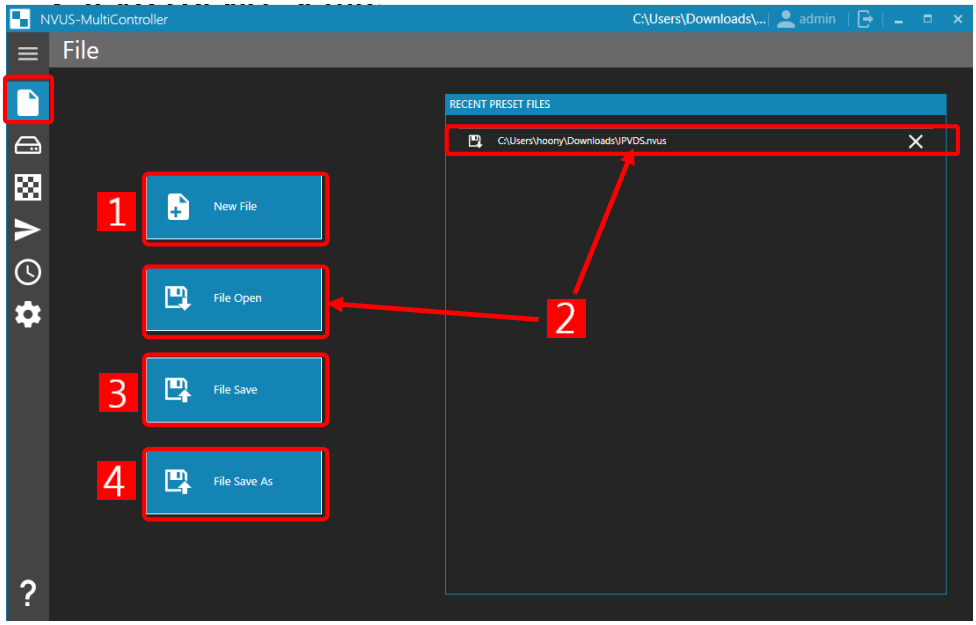
1. ID/PW can be modified or added on User Manager after logging in to your admin account.

2. User Type:
   A. User: Users authorized for all functions including User Manager
   B. Guest: Users that are only authorized for pre-set selection and apply function.



2 IPVDS Device Setup

2.1 Files



1 **New Preset File:** Create new preset

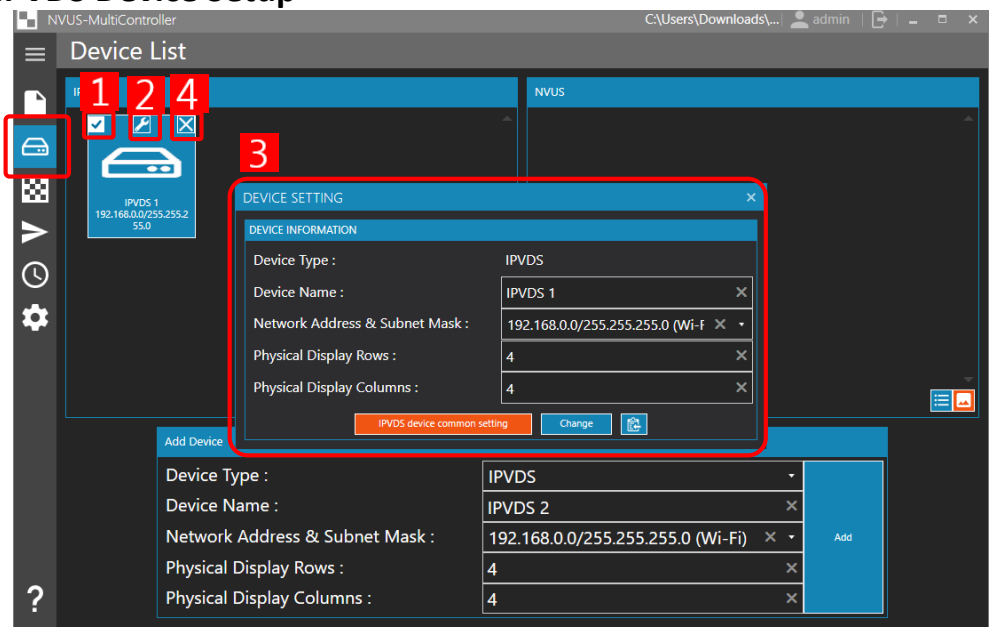
2 **Open Preset File**: Open saved preset.

3 **Save Preset File**: Save current preset as a file.

4 **Save Preset File as**: Save current preset as a different file name.

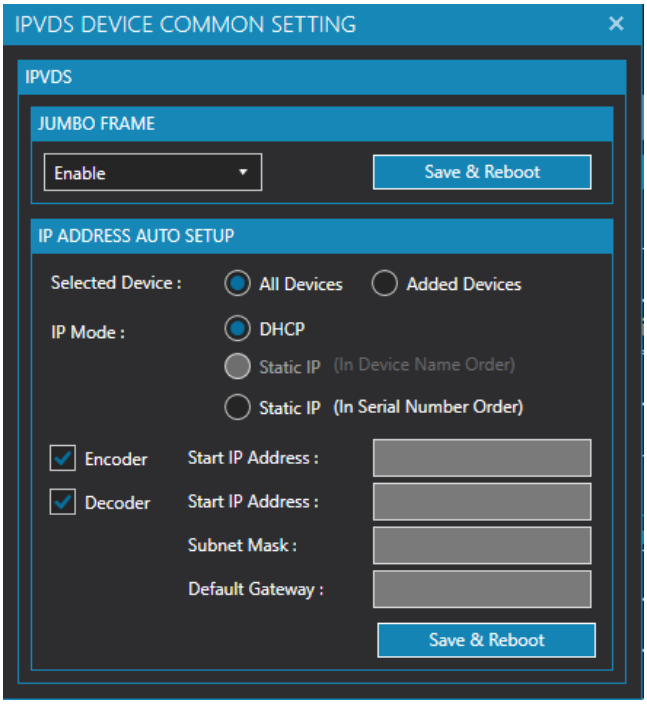
※ **Note.** All works done by this software must be saved through “Save Preset File” or “Save Preset File as” in order to reopen after closing the program.

2.2 IPVDS Device Setup



1 Enables to edit or delete the device selected by checking the box. When clicked 2, 3 panel will pop up for the configuration of the device. At the bottom, you can apply the configuration to all the devices connected by clicking “IPVDS device common setting’ or you can click “Change” to apply the changed setting to selected device. By clicking 4, you can delete the selected device from the list.

2.3 Common Setting for IPVDS

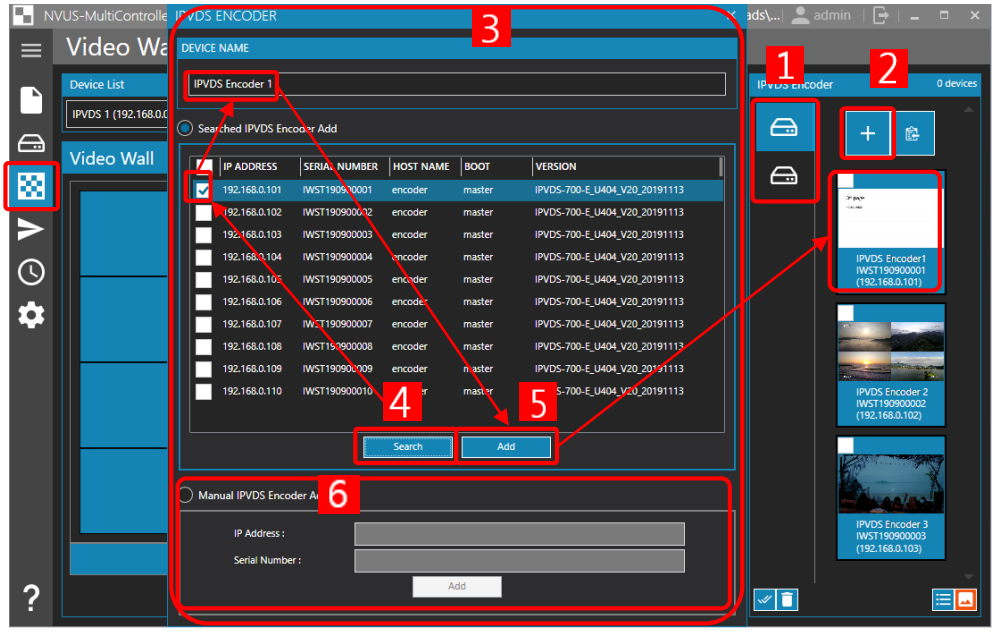


- Jumbo Frame: Select enable or disable Jumbo Frame
- IP Address Auto Setup
  1. Selected Device
     - All Devices: apply to all devices connected
     - Added Devices: in case if the setup is only for the recently added devices
  2. IP Mode:
     - DHCP: When using with IP that is delivered through DHCP, not static IP.
     - Static IP (In Device Name Order): Detect IP in alphabetic order of the device's name.
     - Static IP (In Serial Number Order): Detect IP in numerical order of the device's serial number.

3 IPVDS Video Wall

Menu for configuring the Video Wall. Allows allocation, addition of sources, preset save and delete, etc.

3.1 Add Encoder and Decoder



Go to the Video Wall Tab, [1] select either encoder or decoder. Click [2] in order to add the device. When [3] pops up, click [4] to search and see list of devices detected. From the retrieved list, select desired encoder or decoder and enter the name of the device, then click [5] "add" button. If you already know the IP address and the serial number of the device, you can add manually in [6]. The list of added devices will be shown in the IPVDS encoder list on the right side of the screen.

※ **Note.** You can select all the retrieved devices through the check box at the top of the list

※ **Note.** You can also sort by clicking the column in the search list table.

※ **Note.** When you add the multiple devices, a consequential number will be added automatically on its name.

3.1.1 Icon Instruction for Encoder

(1) : There is no device detected → check if the network is connected properly or if the network bandwidth is different.

(2) : There is device detected but the network bandwidth is different → Need to change the IP of the PC or the device.

(3) : Failure to bring the snapshot → Reboot the encoder or check the setting for the snapshot.

(4)

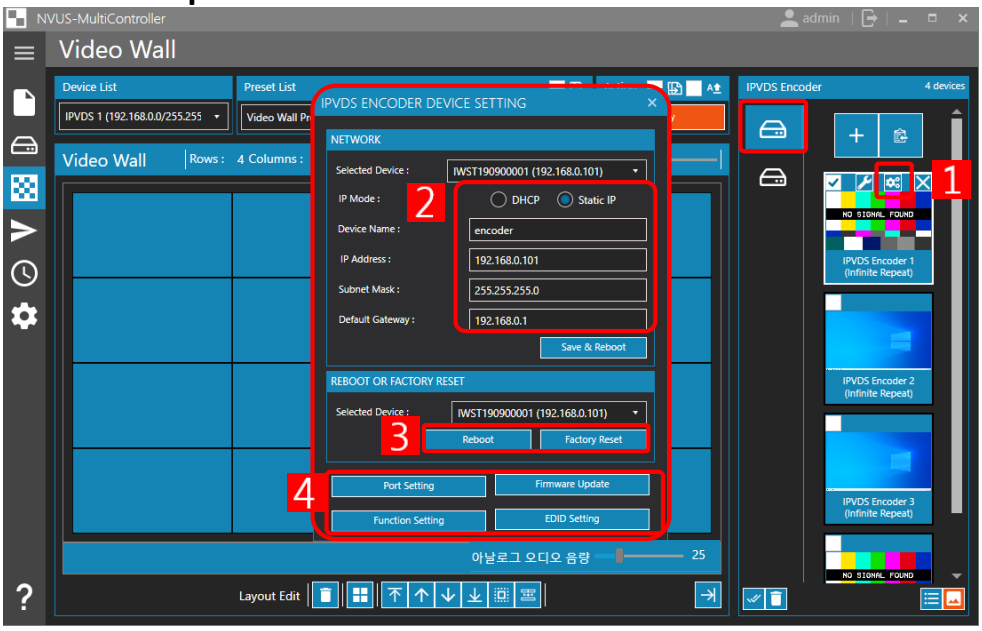
: No video transmission in the device → Check the connection of HDMI cable and the output of the source

3.1.2 Icon Instruction for Decoder

(1) : There is no device detected → check if the network is connected properly or if the network bandwidth is different.

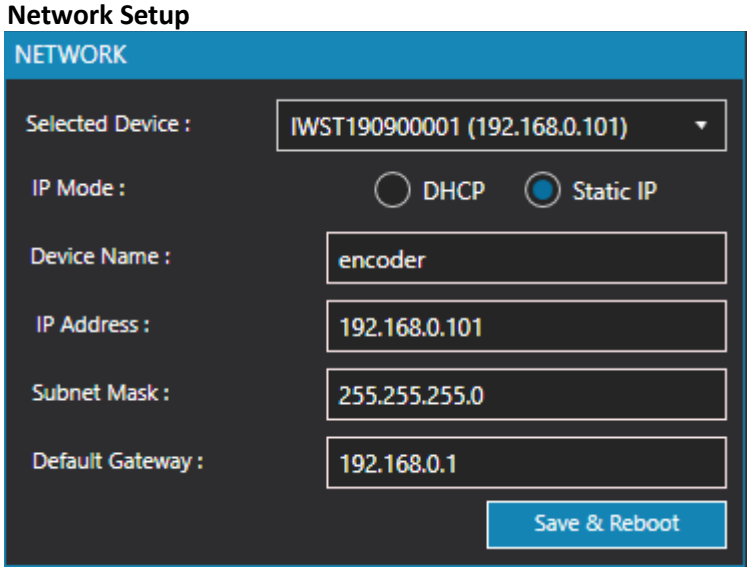
(2) : There is device detected but the network bandwidth is different → Need to change the IP of the PC or the device.

3.2 Encoder Setup



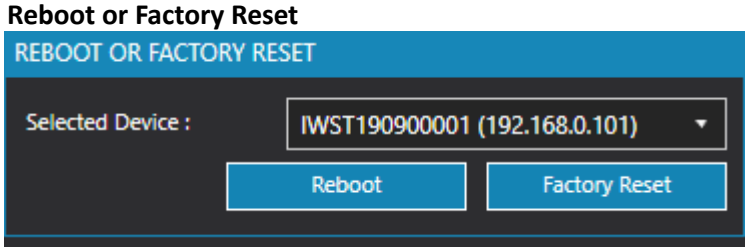
Click [1] of the device that needs to be modified. This panel enables you to modify [2] network setup, [3] reboot of the device / factory reset, and it allows following features [4]: Port / Functions / EDID setup / firmware update.

3.2.1 Network Setup



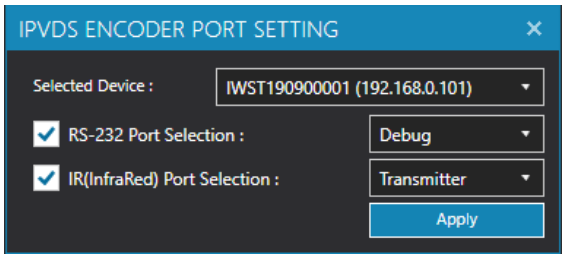
※Refer to Page 6.

3.2.2 Reboot or Factory Reset



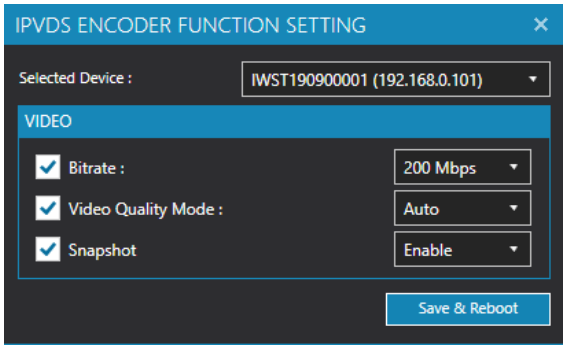
(1) Reboot: select all or individual encoders to reboot.
(2) Factory Reset: Select all or individual encoders to apply factory reset.

3.2.3 Port



(1) RS-232: For serial device control, DID power control, and debugging purposes.
(2) IR Port: TBD

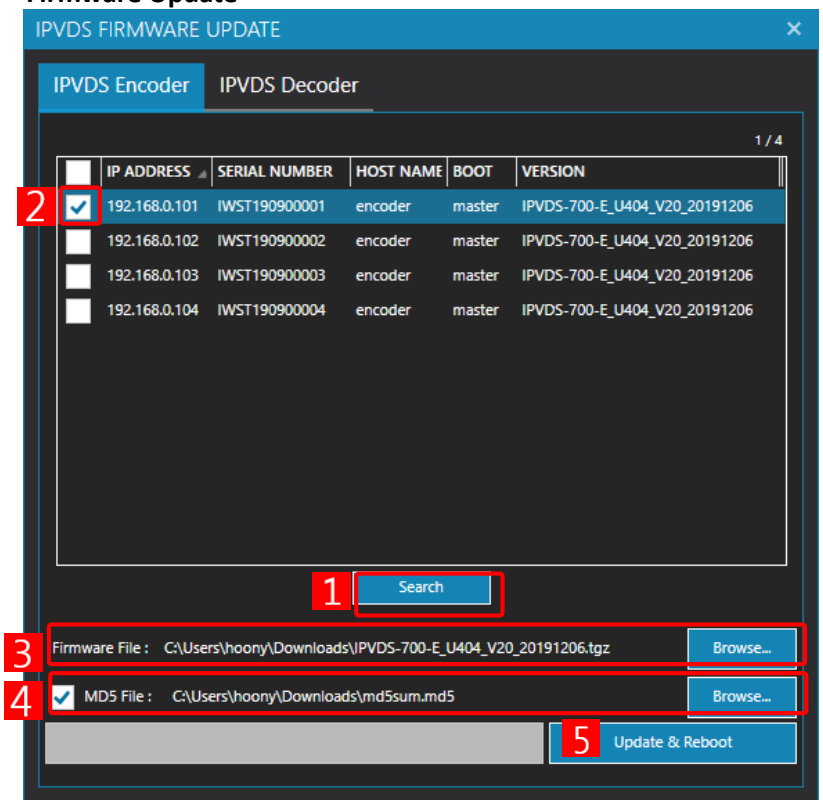
3.2.4 Function



(1) Bitrate: Select Bitrate speed depends on the image quality and network condition.
- 50/100/150/200(Default)/Best (no limits) [Mbps]
- The higher the resolution, the higher the bandwidth

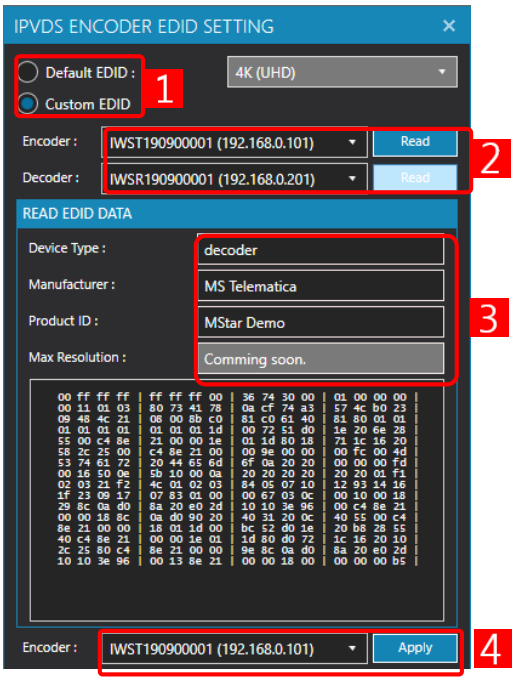
(2) Video Quality Mode: Select the Quality (resolution) of the video
(3) Snapshot: Enable or Disable.

3.2.5 Firmware Update



1 Search for the device that needs to be updated. 2 check the devices and 3 browse the firmware file. In order to check the integrity of the firmware, click the check box right next to MD5 file 4 to select the provided MD5 file. Firmware update can happen without checking the integrity with the MD5 file. Click 5 'Update & reboot' to start the update. There will be a pop up window when the update finishes.

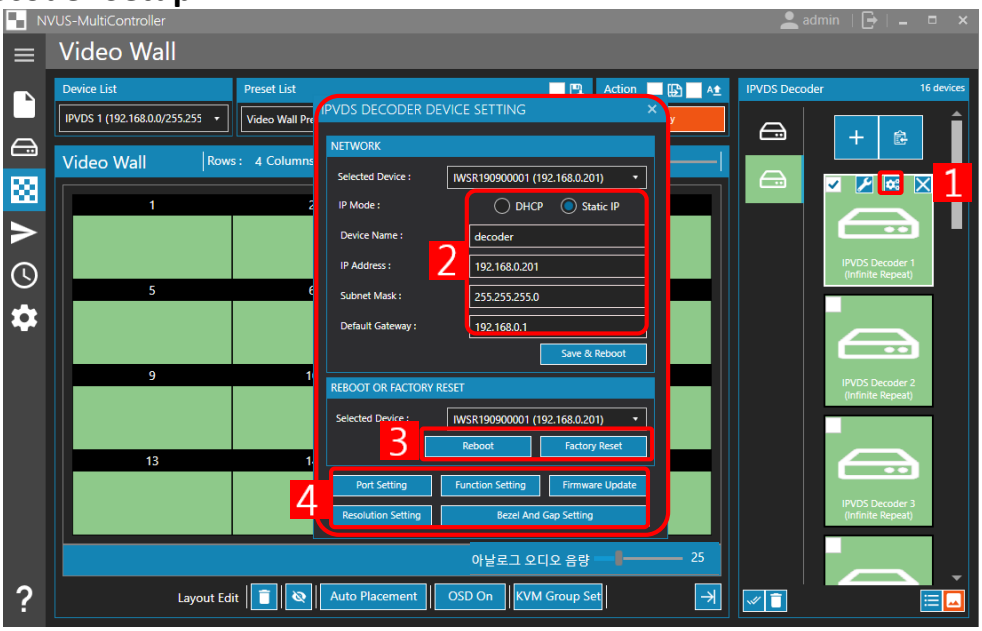
3.2.6 EDID Setting



1 Select between Default EDID and Custom EDID. When Custom EDID is selected, 2 will be enabled and loads EDID from the encoder database, or loads EDID of the monitor that is connected to the decoder. Detected EDID info will be 3 shown into four different aspects. Select the encoder with a source to the selected decoder and click 4 to apply the EDID.

※ **Note.** A problem with the display connected to the decoder may be solved by the EDID setup of the encoder.

3.3Decoder Setup

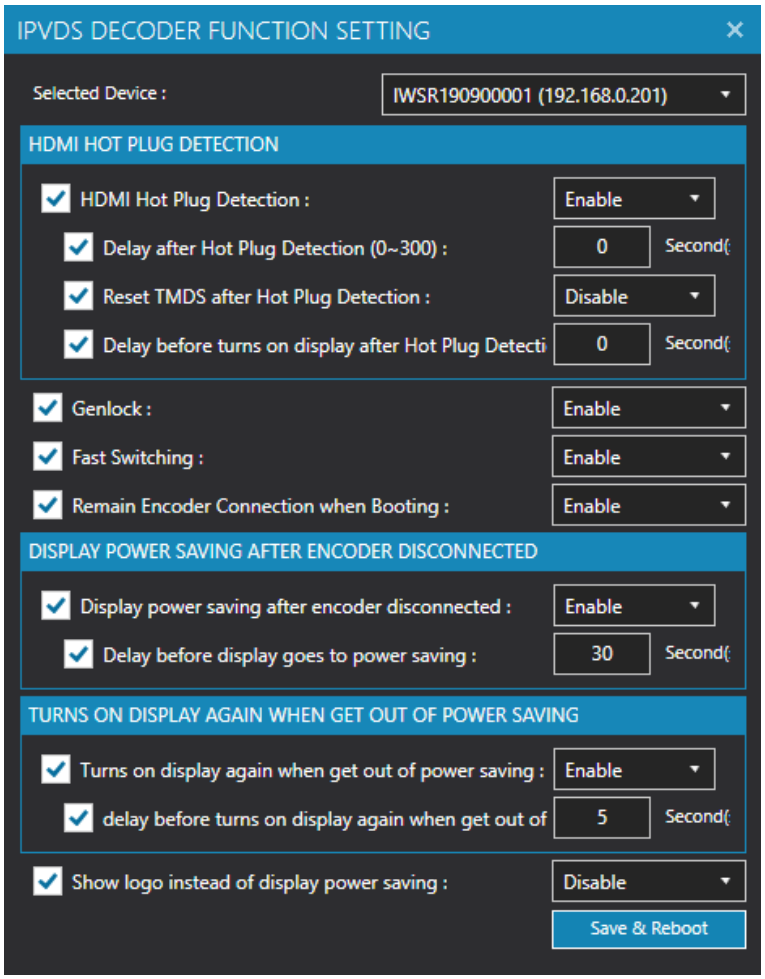


Click [1] of the device that needs to be modified. This panel enables you to modify [2] network setup, [3] reboot of the device / factory reset, and it allows following features [4]: Port / Functions / firmware update / Resolution / Bezel.

3.3.1 Network Setup / Reboot and Factory Reset / Port / Firmware Update

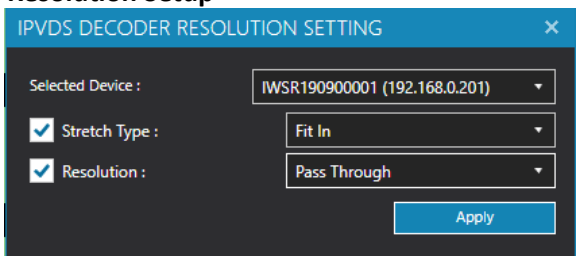
※ **Refer to page 11**

3.3.2 Functions



(1) HDMI Hot Plug Detection: Enable/Disable (refer page 21)
(2) Genlock: Enable/Disable (refer page 21)
(3) Fast Switching: Enable or disable fast transitions when switching screens
(4) Remain Encoder Connection when Booting: Enable or disable the retention of previously connected encoders when rebooted.
(5) Display power saving after encoder disconnected: allows to schedule the time when choose 'Enable'.
(6) Turns on display again when get out of power saving: allows to schedule the time when choose 'Enable'.
(7) Show logo instead of display power saving: Enable or disable logo screen showing on the display at boot time instead of a black screen when power saving mode is entered.

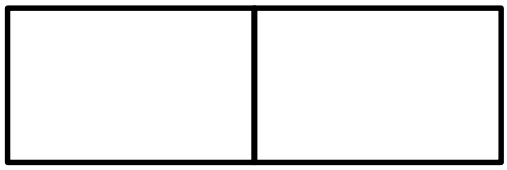
3.3.3 Resolution Setup



(1) Stretch Type
- Fit in: Reduce or increase the ratio of original source to fit in to the display
- 'Stretch out': Maintain original ratio and allows the cut off of the image to cover the display.

Example) When original video source is applied to 1x2 display

Original Source



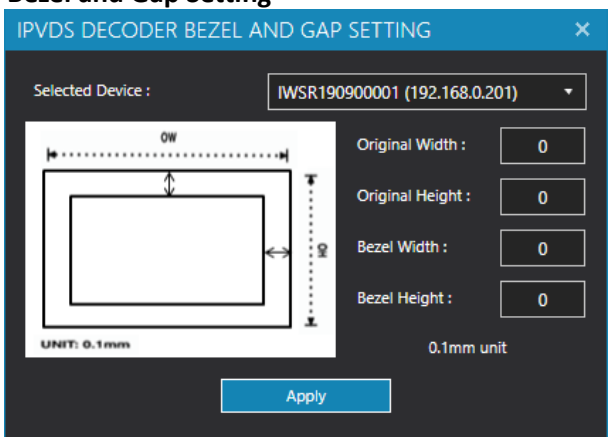
Display that the source will be applied

'Fit In' – Stretches sideways to fit into the display

'Stretch Out' – cuts the bottom part of the source in order to maintain the ratio of the image, yet to cover all the area of the display.

(2) Resolution
- Set the resolution of the output of the decoder as "Pass through" with the encoder or "fixed resolution".

3.3.4 Bezel and Gap Setting



- By compensating bezel gap that surrounds display panels, it enables to demonstrate natural visuals on the screen.
- Select “All Decoders”, “All Encoders” or IP address of designated device. Then type bezel value in 0.1mm unit. Click “Change” to apply.
  - Original Width : General width of display (OW)
  - Original Height : General height of display (OH)
  - Bezel Width : Width of bezel
  - Bezel Height : Height of bezel

3.4 Decoder Arrangement

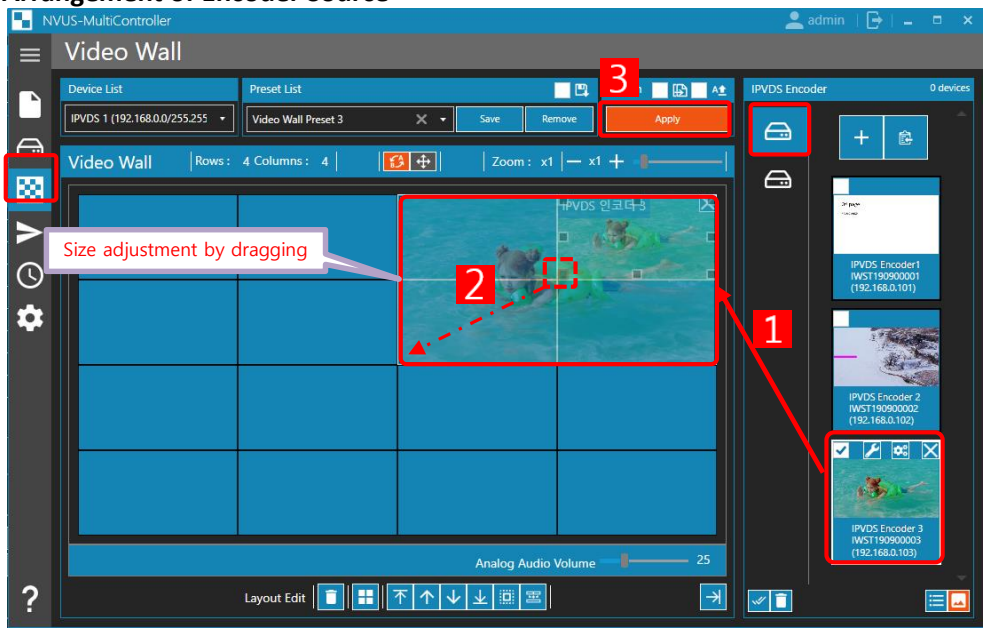
Go to the Video Wall Tab and find the device list for Decoder. Select screens that you do not want to connect with the decoders and click [1] ‘Disable/Enable layout’. Disabled screen will not show any videos since no decoders can be assigned to disabled screen. Select the decoders on the list at the right panel and drag & drop [2] to assign to the screen. [3] ‘Auto Placement’ Decoders will be assigned automatically by alphabetical order of their device name. If you click on [4] ‘Turn on OSD’, the order of the Decoders assigned in the Video Wall Tab will show on the actual displays as a number.

※ **Note.** Using OSD is recommended to use when video source is not connected to the decoder. This helps to arrange the desired displays to each Decoder.

3.5 Arrangement of Encoder Source and Editing Video Wall Layout

Each source will have their preview screen showing under the Encoder List.

3.5.1 Arrangement of Encoder Source



Select desired source on the list and [1] assign to the screen by drag & drop. When you click the assigned source, [2] drag box will show and it allows the size adjustment by dragging. To show the current preset screen to actual display, click [3] 'apply'.

3.5.2 Editing Video Wall Layout

(1) Layout Editing

Clear: Empty all the display that has been assigned.

split screen: Select (m x n) size Emerged display source and turn into (1 x 1) size.

Move layer: Place overlapped layers on forward/backward and front/back to others.

Copy All: Copy the selected source to all the screens.

Merge All: Merge all the screens and display the selected source.

Swap Mode: Replace the source.

Move Mode: Place the source on top of other source.

(2) Delete assigned source

Click "X" on the top right corner to delete the assigned source.

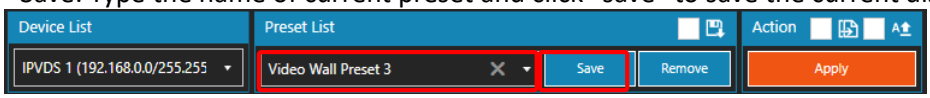
(3) Audio Setup

Control of the analogue audio is allowed through the icon at the bottom of the Video Wall Tab. This controls the audio from the Decoder's L-OUT(3.5mm Line Out).

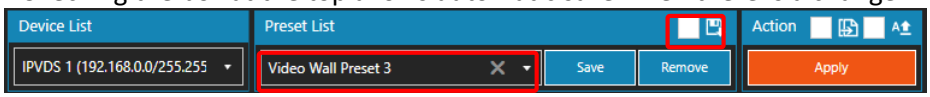
※ **Note.** The audio data that comes from the Decoder through the HDMI connection is a fixed output. Hence this audio data should be controlled separately by the source of the HDMI input.

3.6 Preset Save/Delete

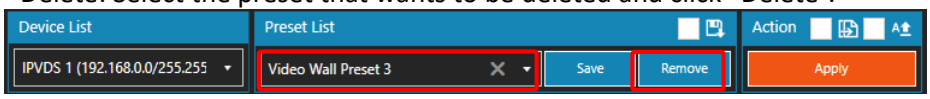
- Save: Type the name of current preset and click "save" to save the current display layout.



- Checking the box at the top allows automatic save when there is a change in the saved preset.

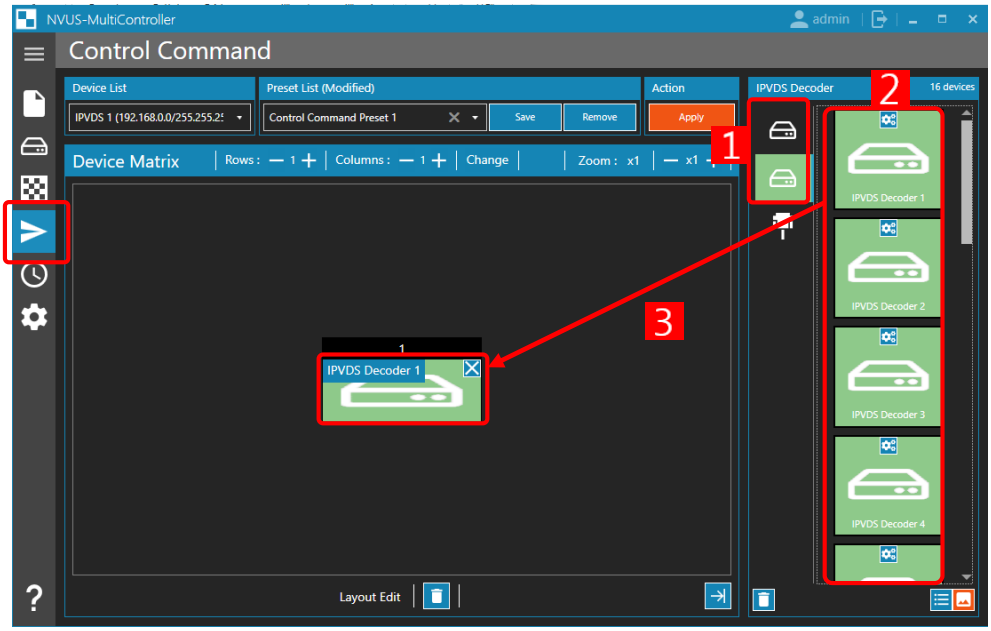


- Delete: Select the preset that wants to be deleted and click "Delete".



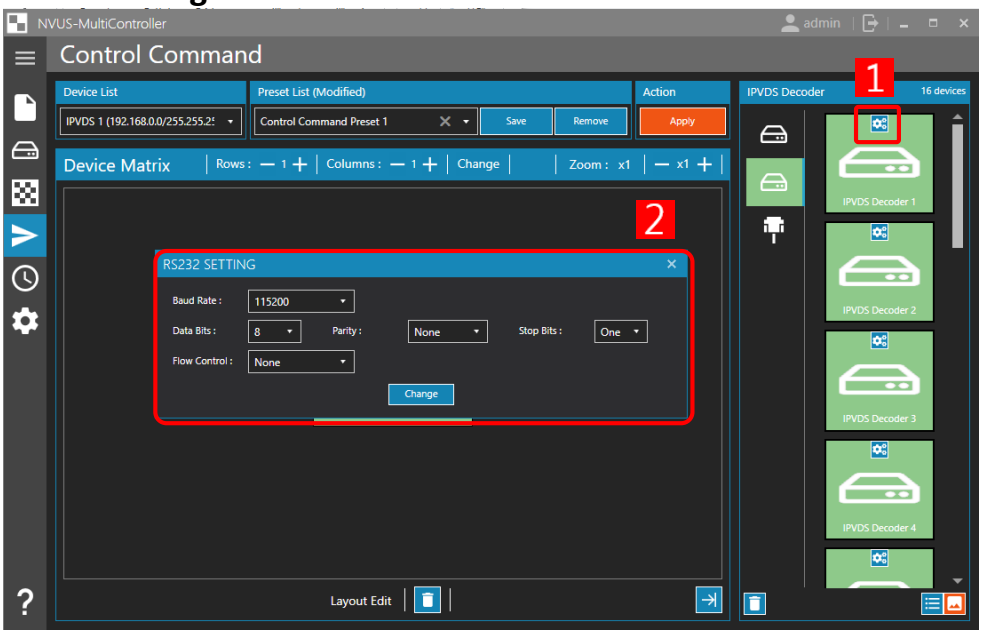
4 IPVDS Control Command

4.1 Device Selection



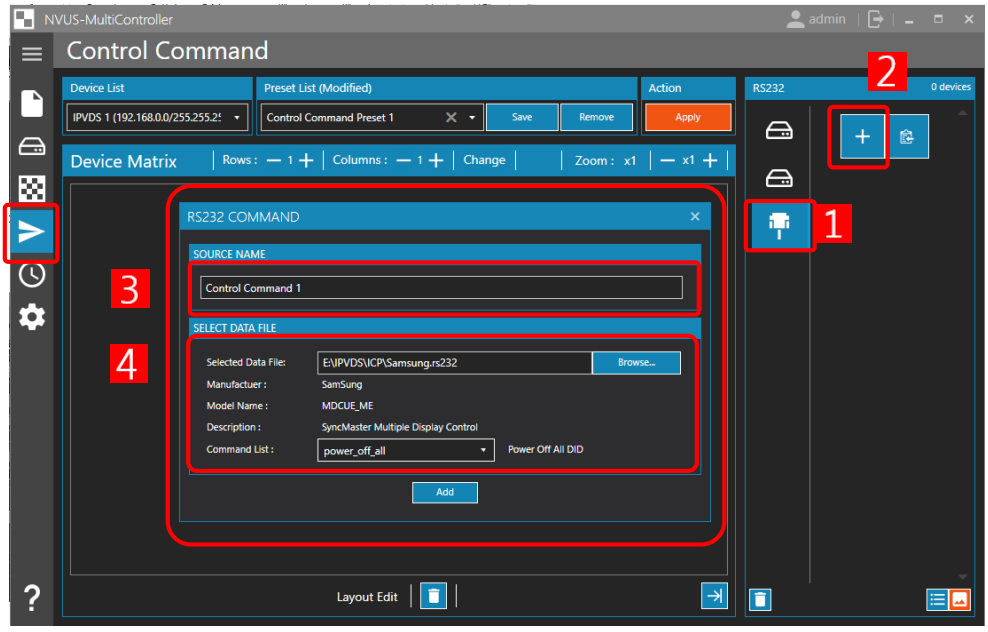
Go to Control Command Tab and select the [1] device that you want to control. Under the list [2], choose and drag the desired device to place it on [3].

4.2 RS-232 Setting



Click [1] of the device that needs to be modified. modify [2]

4.3 Add Control Source

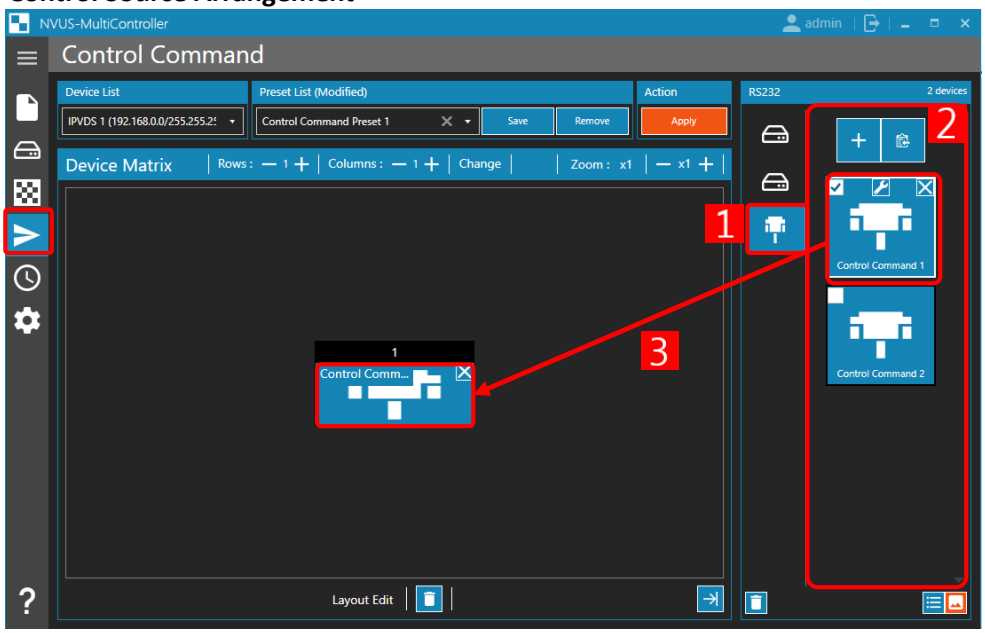


[1] Open RS-232 Tab and click [2] to add source. [3] Enter the name of the source and [4] browse control data file (.bin) on. click “add” at the bottom of the panel.

※ **Note.** The control data file (.bin) should be created by specific editor that support such file type.

4.4 Control Source Arrangement and Editing

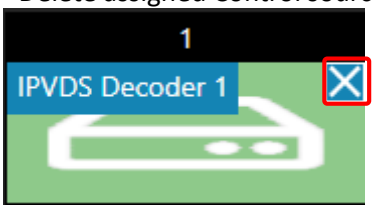
4.4.1 Control Source Arrangement



Click [1] RS-232 tab on the Control Tab. Under [2], select desired control source and drag to the screen [3].

4.4.2 Editing

(1) Delete assigned Control source



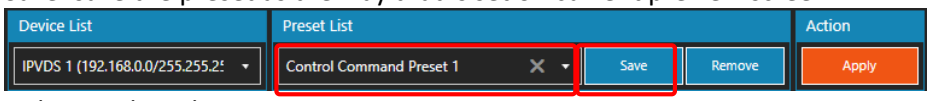
"X" button deletes the selected item.

(2) Editing Arrangement

Clear: Empty the control source that are assigned to the device.

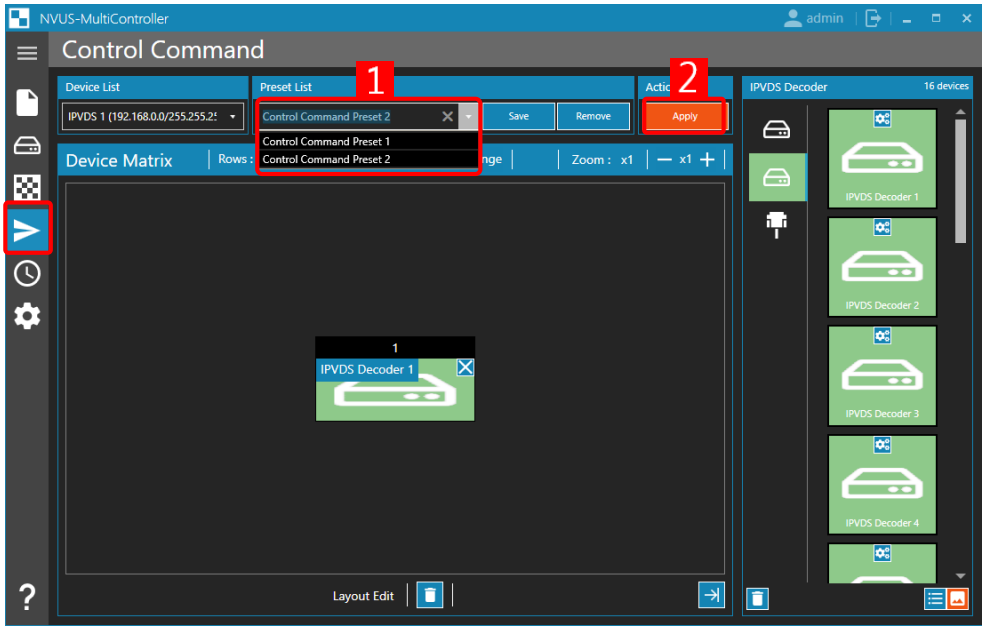
4.5 Control Source Preset Save/Delete

Save: save the preset as the way that is set on current preview screen.



Delete: Delete the preset

4.6 Control Source Preset

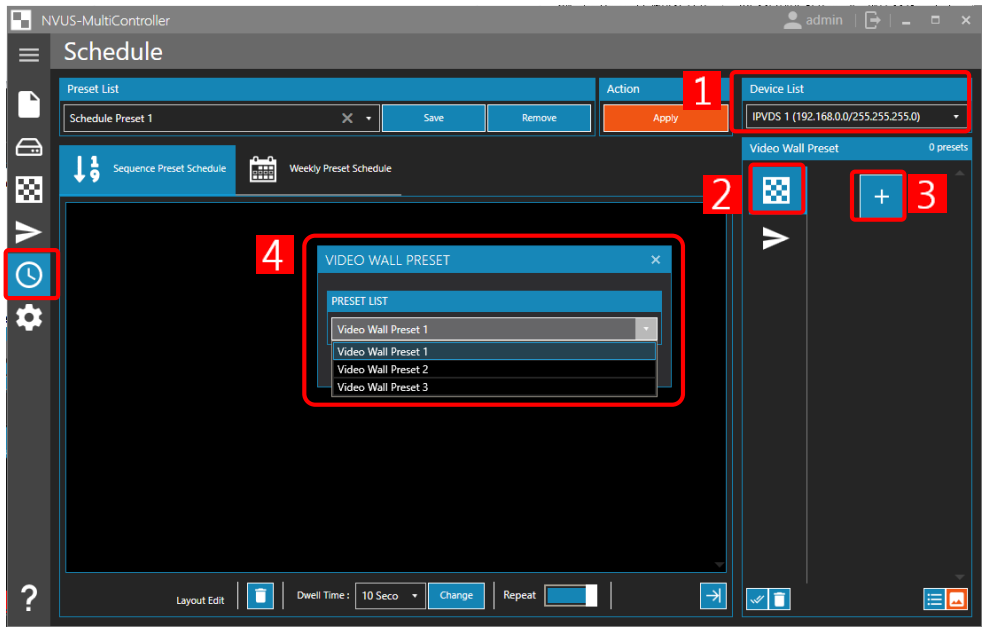


1 Click the list for the saved presets and select the one you wish to apply.

2 Click “Apply”.

5 Scheduling

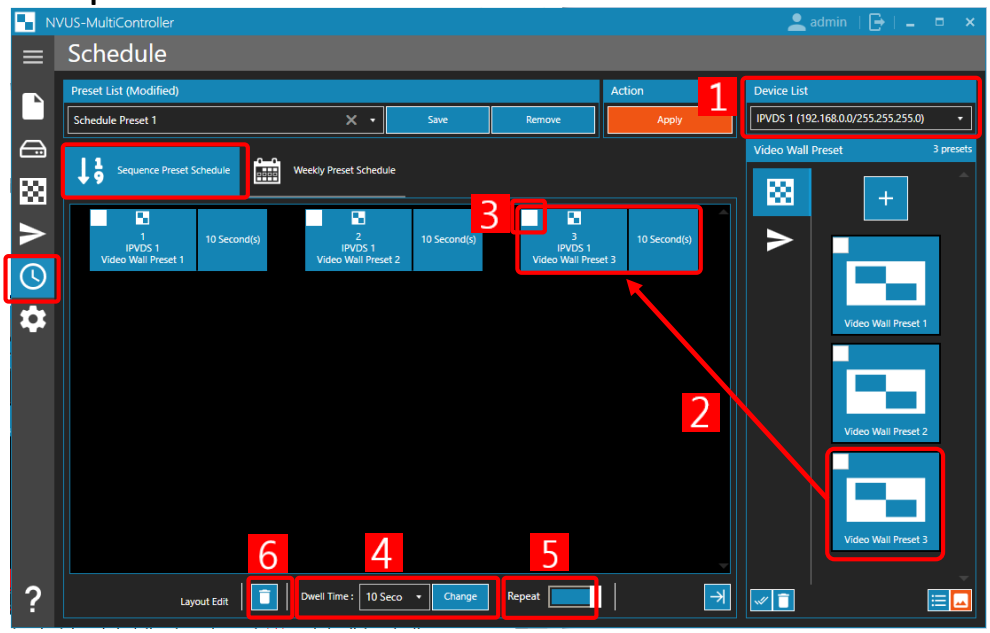
5.1 Schedule Source add



1 Select the device that needs scheduling. Under source list on the Preset Tab, select 2. Click 3 to add source. On the activated Video Wall Preset Command panel 4, select the preset that will be used for scheduling, and click “add”.

5.2 Scheduling Setting

5.2.1 Sequence Preset Schedule

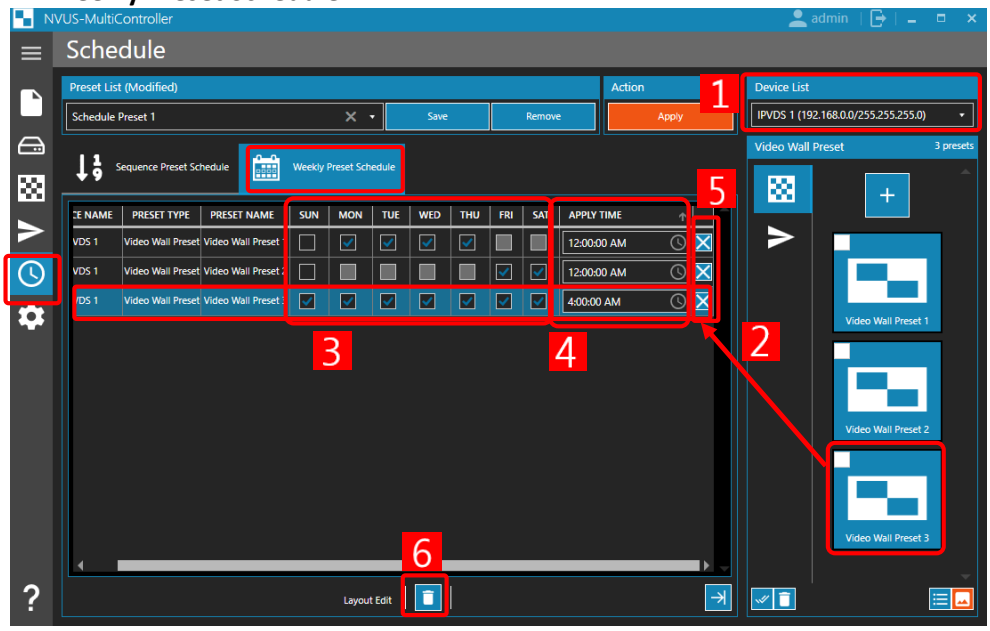


[1] Select the device that needs scheduling. Select the desired preset [2] and drag&drop to the main screen. [3] Check the box and customize duration of the source on the bottom panel [4]. Click [5] if you want the pattern to be repeated endlessly. Click [6] to empty all the assigned presets.

※ **Note.** There may be a slight delay in the transition when used sequential scheduling mode.

※ **Note.** One scheduling preset can be applied to multiple devices connected to the Video Wall.

5.2.2 Weekly Preset Schedule

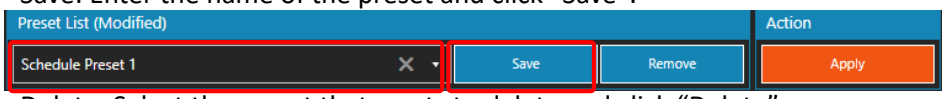


[1] Select the device and drag the control presets on the list to the main screen [2]. There are boxes for day of the week [3] and section for the time selection [4]. Click [5] to delete the source that was assigned. Click [6] to empty all the presets assigned.

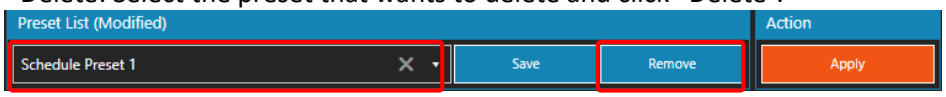
※ **Note.** One scheduling preset can be applied to multiple devices connected to the Video Wall.

5.3 Scheduling Preset Save/ Delete

- Save: Enter the name of the preset and click “Save”.



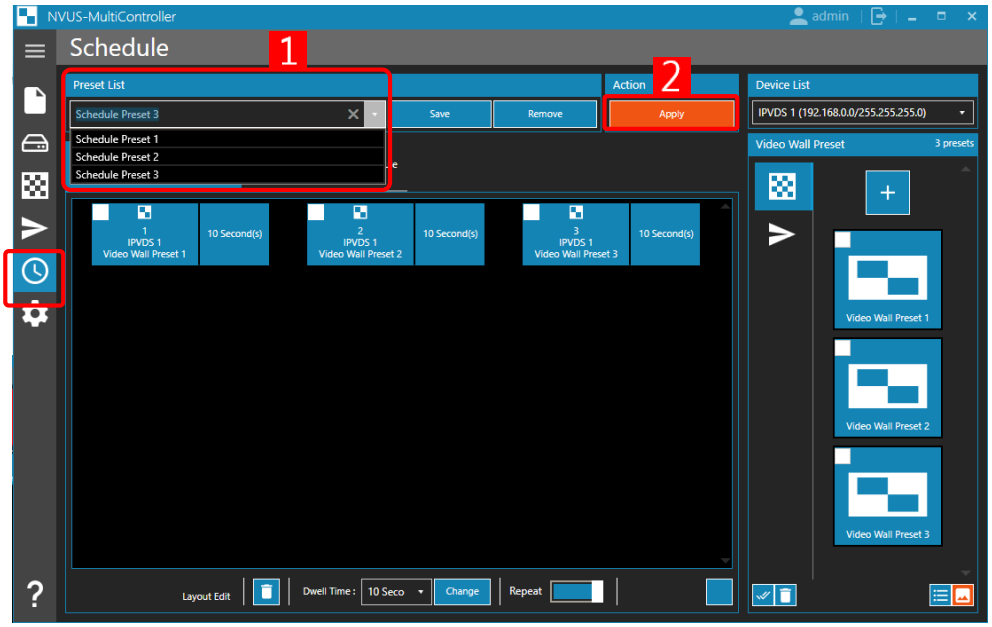
- Delete: Select the preset that wants to delete and click “Delete”.



※ **Note.** Sequence Preset and Weekly Presets must be saved and deleted separately.

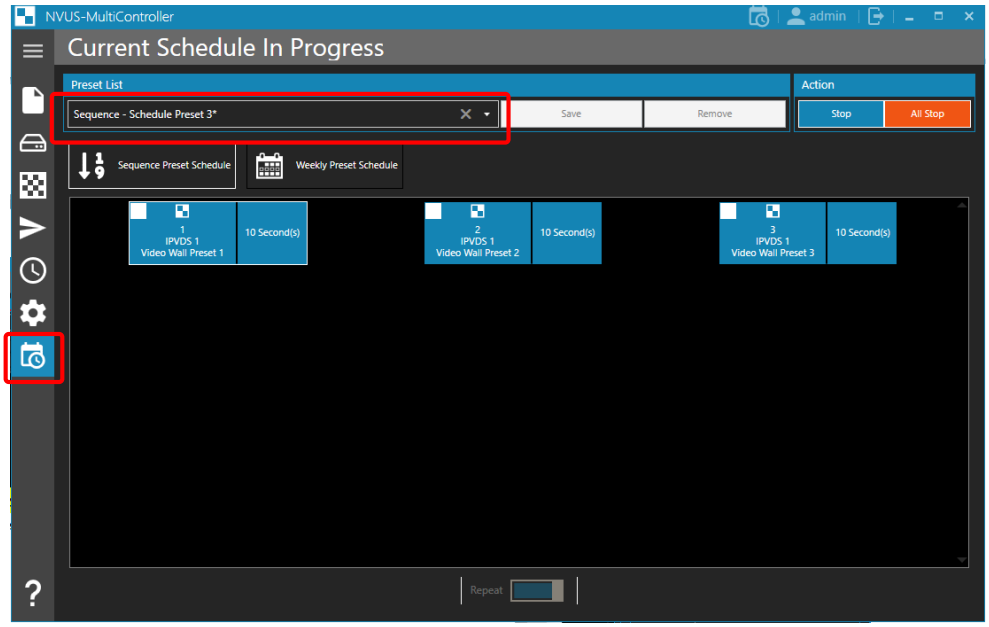
i.e.) Sequence Preset 1, 2, 3 / Weekly Preset 1, 4, 5 → the name for Sequence/Weekly preset can be same.

5.4 Apply Scheduling Preset



Browse the list of Scheduling Preset by clicking [1]. Click [2] “Apply” to apply changes.

※ **Note.** Once the Preset Scheduling is activated, there will be a new tab on top part of the program with “Current Schedule in Progress” and an icon will blink until the scheduled preset ends.



※ **Note.** Under the ‘Current Schedule in Progress’ bar, the preset list will show the name of the saved preset.

In the case of non-saved preset, it will appear as “Sequence/Weekly Preset*”.

6. Actions to take for Deficiency

6.1 LED instruction for Encoder

Status LED

Power LED	'Flickering' booting, resetting, further action needed if lasts long. 'On' Normal. 'Off' Power OFF. Further Action needed.
Link LED	'On' Connected to the Link. 'Off' Failure in the Network. Further Action needed 'Slow Flickering' waiting for the connection between Decoder and Network 'Fast Flickering' No Source Detected

Network LED

Green LED	'On' Connected to the 1G Network Link 'Off' Error in the Network Link, Further Action needed.
Yellow LED	'Flickering' '2/s' Waiting for the source to be assigned '10/s' Transferring the Video source. 'Off' Error in the Network Link, Further Action needed.

6.2 LED instruction for Decoder

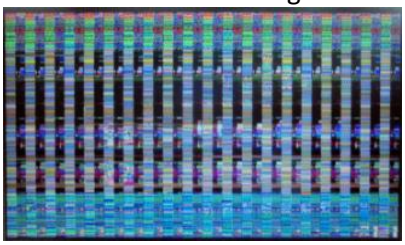
Status LED

Power LED	'Flickering' booting, resetting, further action needed if lasts long. 'On' Normal. 'Off' Power OFF. Further Action needed.
Link LED	'On' Connected to the Link and Transmitting video signal. 'Off' Failure in the Network. Further Action needed Slow Flickering' waiting for the connection between Encoder and Network 'One time Fast Flickering' No connection with HDMI. Check HDMI cable connection. 'Two times Fast Flickering' No Source Detected

Network LED

Green LED	'On' Connected to the 1G Network Link 'Off' Error in the Network Link, Further Action needed.
Yellow LED	'Flickering' '2/s' Waiting for the source to be assigned '10/s' Transferring the Video source. 'Off' Error in the Network Link, Further Action needed.

6.3 Type of Deficiency and Recommended Actions to Take

Type	Symptom	Cause	Action
Network	Screen flickering 	1) Switch Jumbo Frame not configured. 2) Switch Jumbo Frame unsupported 3) Error in the LAN cable connected to the Decoder (should support 1G/100Mbps)	1) Switch Jumbo Frame change to Enable. 2) Under Common Setting → Jumbo Frame Disable 3) Replace with new LAN Cable or change the Switch Port.
	Malfunctioning in Screen when connected to 4+ encoders.	1) Switch IGMP snooping not configured 2) Switch IGMP snooping unsupported	1) Enable Switch Setting→ IGMP Snooping, IGMP Querier 2) Change Switch
Setting	Frequency Out of Range	Transmitting high resolution video source to low resolution display	1) Change encoder EDID setting from Default EDID to Custom EDID
Compatibility	Flickering, Noise, No transmission, Black out when turned On or Off	Compatibility issue with Monitor	1) Disable Genlock 2) Disable HDMI Hot Plug Detection

7. License

After the installation of the program, license registration is mandatory.

Please contact Opticis to obtain IPVDS-Wall Controller software license key.

After the first registration, it is valid for two years. Henceforth, a renewal of the license is required annually. Renewal Alert message will be displayed a month prior to the license expiration.

With expired license, function of preset save/load will be limited but existing saved presets are allowed to use.

8. Warranty

Opticis warrants IPVDS-700-ED to be free from defects in workmanship and materials, under normal use and service, for a period of one (1) year from the date of purchase from Opticis or its authorized resellers.

When requesting for the repair, do not break down any component of the product. Opticis shall provide full support by only checking the serial number of the device.

If a product does not work as warranted during the applicable warranty period, Opticis shall, at its option and expense, repair the defective product or part, deliver to customer an equivalent product or part to replace the defective item or refund to customer the purchase price paid for the defective product.

All products that are replaced will become the property of Opticis.

Replacement products may be new or reconditioned.

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For order support, please contact your Distributor or Reseller.

For technical support, check with the our website www.vigillink.com
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Doc. No.: IPVDS-700-ED NVUS-WallController-EN ver. 1.1