

Model Numbers:	MX-1010-H2XC MX-1616-H2XC
Web UI Version:	V1.21
Document Rev:	1.0

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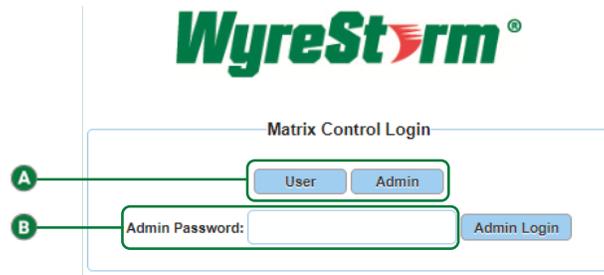
Overview

The following information outlines the features and how to use the web interface on the MX-1010-H2XC and MX-1616-H2XC matrix switchers. WyreStorm recommends reading through this guide before installing to ensure familiarity with the platform. For additional details on any of the following settings, please contact WyreStorm Technical Support.

Logging into the WebUI

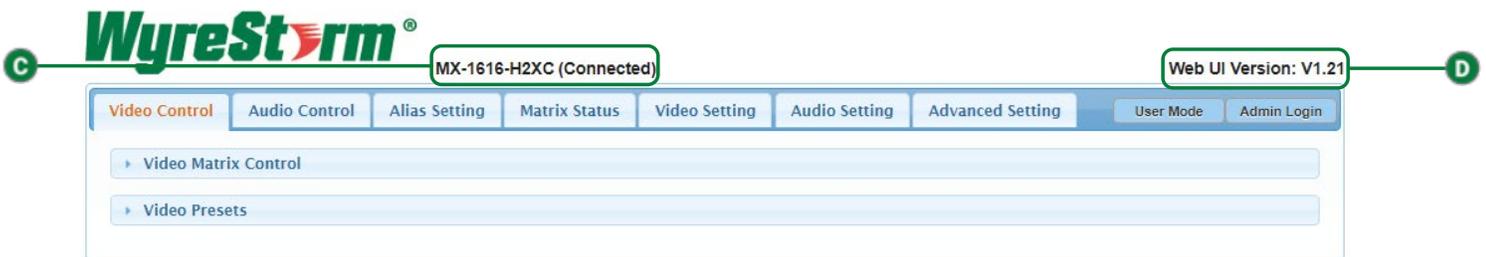
Out of the box, the matrix is set to a static IP address of **192.168.11.143**. It is advised to change this IP address to a preferred address or DHCP covered in the network configuration section of this guide.

Note: If at any point the WebUI does not display, load, or control properly, please ensure the device firewall is disabled and the browser cache and temp files are cleared. As a last resort, please open with a different browser.



- | | | |
|----------|-----------------------|---|
| A | User/Admin | User: The user option gives limited access to WebUI matrix settings and does not require password.
Admin: The Admin option gives full access to WebUI matrix settings and requires a password. |
| B | Admin Password | admin |

Upon logging into the matrix, the home page shows as followed:



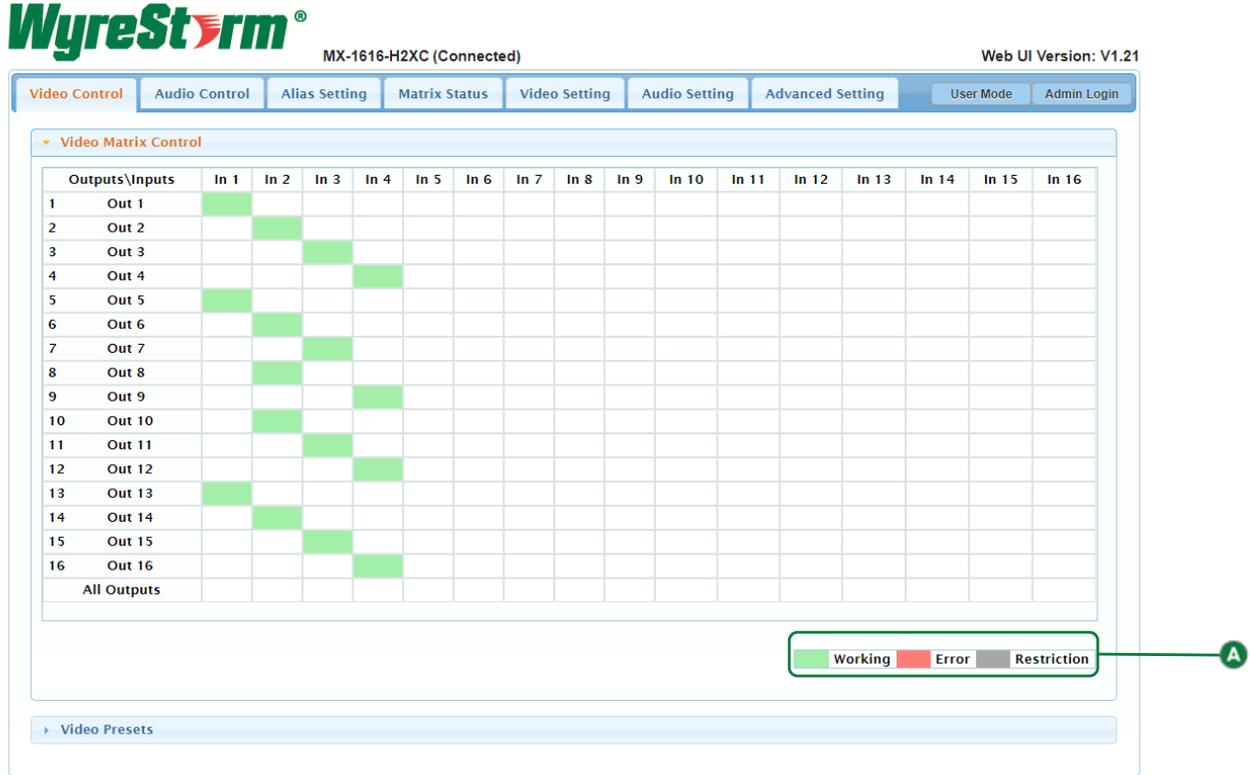
- | | | |
|----------|----------------------------|--|
| C | Matrix & Status | Displays the model matrix and connection status. |
| D | WebUI Version | Shows the current version of the matrix WebUI. |

Video Control

Under the **Video Control** tab, there are 2 dropdown options:

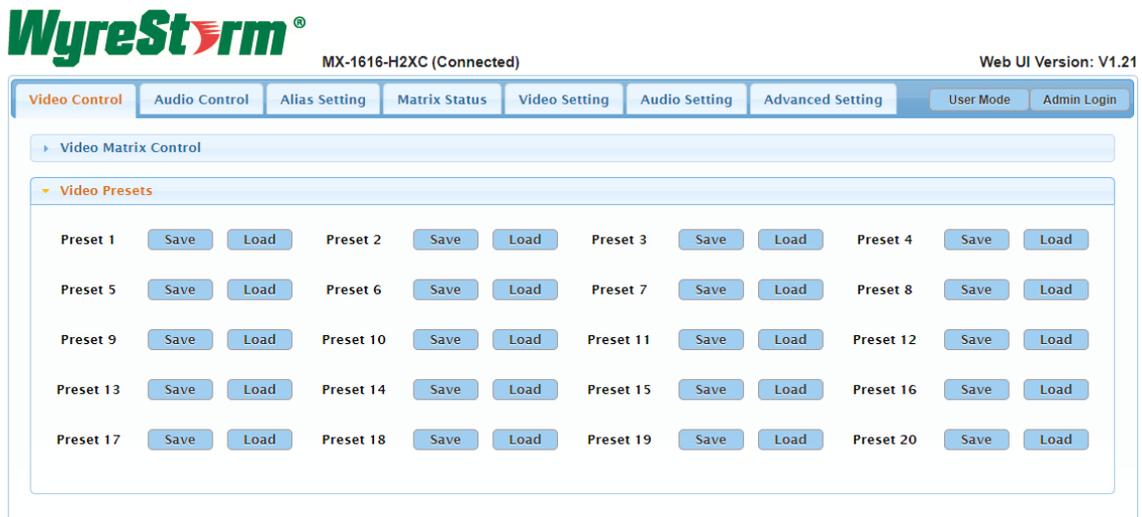
- Video Matrix Control
- Video Presets

Video Matrix Control is where matrix switching is performed. Simply choose the input and output combination you want and click the corresponding white block to switch.



- A** **Grid Indicator Status** Green indicates active input/output status. Red indicates unsuccessful input/output switch/inactive status. Gray indicates switch restriction set by the administrator.

The **Video Presets** dropdown is designed to allow user customization of up to 20 presets to be saved via the **Video Matrix Control** tab, then to be recalled via the load button or API command.



Audio Control

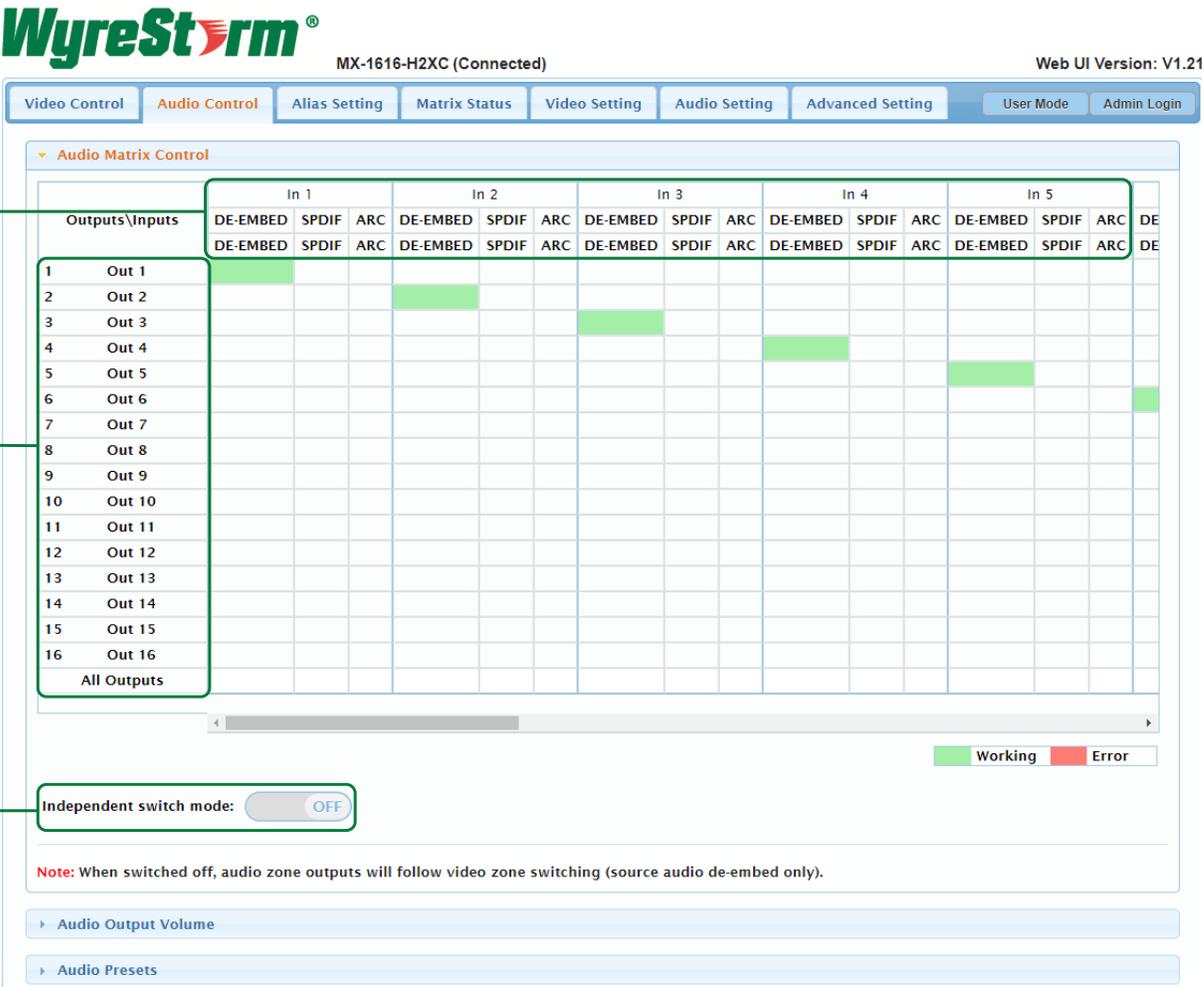
The **Audio Control** tab contains the H2XC's audio control and configuration options. In this tab resides 3 dropdowns:

- Audio Matrix Control
- Audio Output Volume
- Audio Pre-sets

The **Audio Matrix Control** dropdown allows the user to choose the source of audio on a given output. Audio can be extracted from 3 types of audio inputs:

- HDMI Input
- S/PDIF Coax Input
- Audio Return Channel (ARC) from HDBaseT Zone

In a default configuration, the audio outputs of the matrix will always follow the video. However, by enabling **Independent Switch Mode**, you can route any of the 3 audio inputs listed above to any of the audio outputs, discretely from the video.



WyreStorm MX-1616-H2XC (Connected) Web UI Version: V1.21

Video Control **Audio Control** Alias Setting Matrix Status Video Setting Audio Setting Advanced Setting User Mode Admin Login

▼ Audio Matrix Control

Outputs\Inputs	In 1			In 2			In 3			In 4			In 5		
	DE-EMBED	SPDIF	ARC	DE-EMBED	SPDIF	ARC	DE-EMBED	SPDIF	ARC	DE-EMBED	SPDIF	ARC	DE-EMBED	SPDIF	ARC
1 Out 1	Working														
2 Out 2				Working											
3 Out 3							Working								
4 Out 4									Working						
5 Out 5										Working					
6 Out 6											Working				
7 Out 7												Working			
8 Out 8													Working		
9 Out 9														Working	
10 Out 10															Working
11 Out 11															
12 Out 12															
13 Out 13															
14 Out 14															
15 Out 15															
16 Out 16															
All Outputs															

Working Error

Independent switch mode: OFF

Note: When switched off, audio zone outputs will follow video zone switching (source audio de-embed only).

Audio Output Volume

Audio Presets

- A Audio Inputs** Allows selection of the 3 different audio inputs available on the matrix
- B Audio Outputs** The output of the matrix in which audio will be routed. *Its important to note that the H2XC platform does not downmix Dolby or DTS audio formats. To send analog audio out of the 3-pin phoenix connector, the source will need to be sending a 2ch PCM signal.*
- C Independent switch mode** On: Allows discrete audio routing separate from the video
Off: Audio and Video will follow the same route.

The **Audio Output Volume** dropdown is used to control, test, and configure volume related functions of the H2XC.

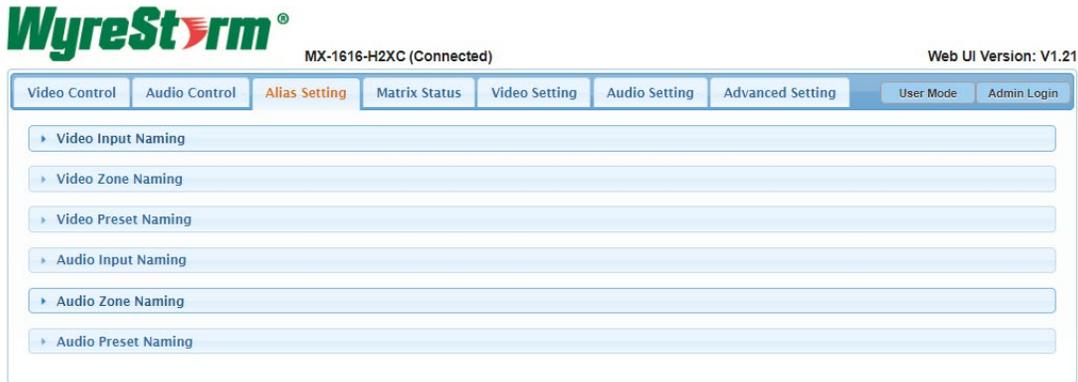
Note: To utilize audio output volume, be sure that the **Fixed Line Level Audio Output** (found in the **Audio Setting** tab) is unchecked for the output desired for adjustment.

- A** **Output Volume** Allows decibel adjustments for the analog or S/PDIF audio outputs.
- B** **Volume Muting** Allows for muting of the analog or S/PDIF output along with the method in which mute takes effect.

The **Audio Presets** dropdown is designed to allow user customization of up to 20 presets which can be saved via the Audio Matrix Control tab, then recalled via the load button or API command.

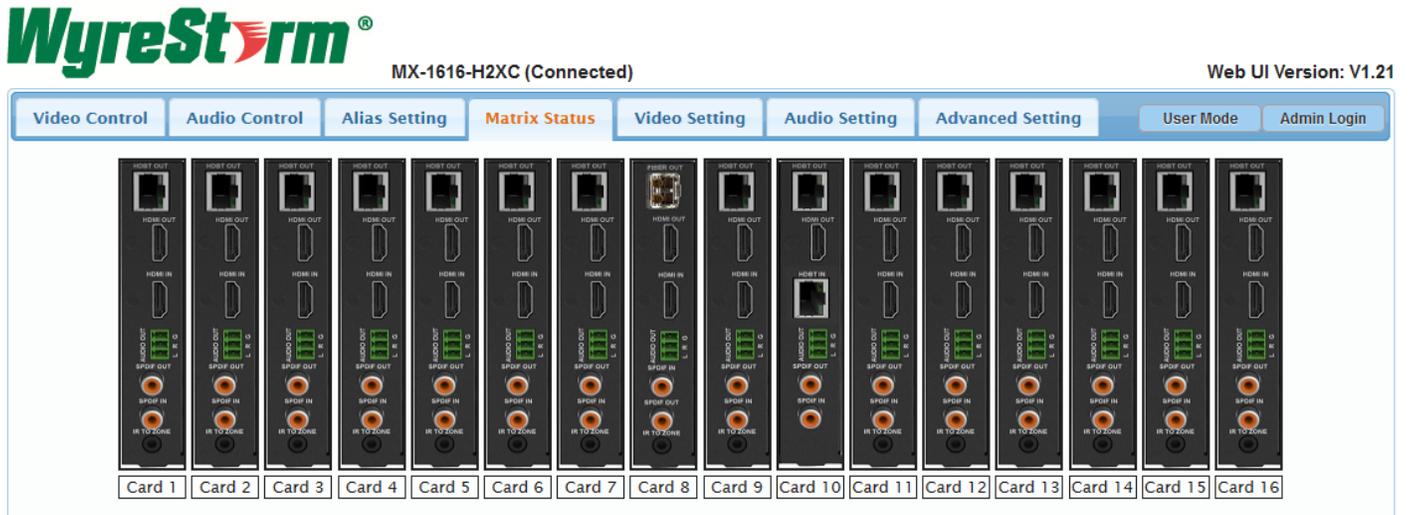
Alias Settings

The **Alias Settings** tab allows the user to define specific input/output names for: Video Input, Video Zone, Video Preset, Audio Input, Audio Zone and Audio Pre-set.

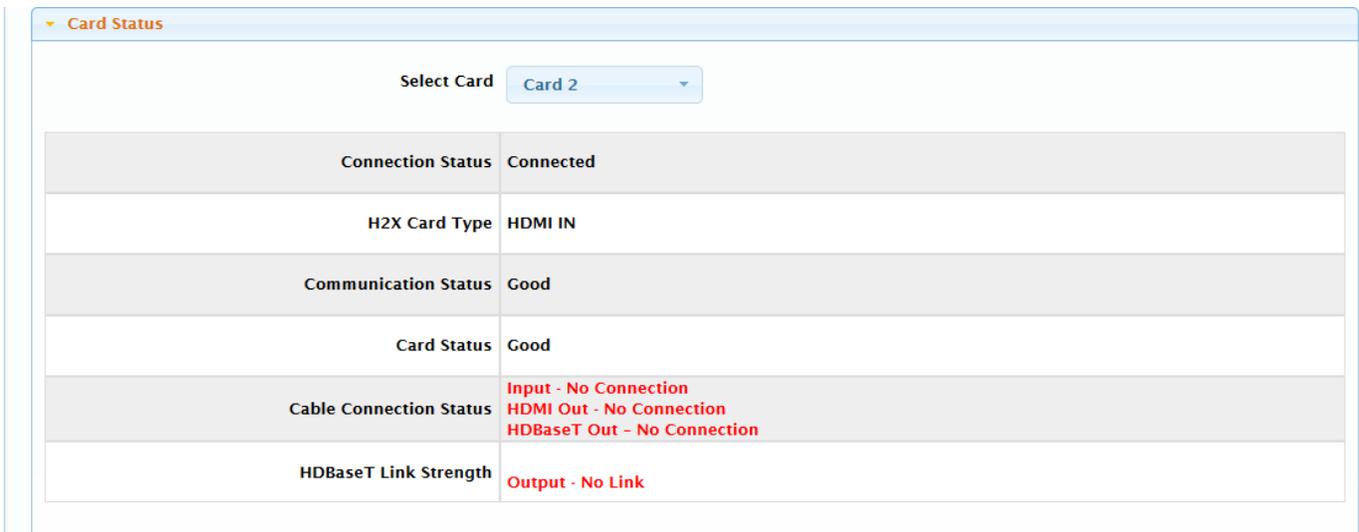


Matrix Status

The **Matrix Status** tab is where the H2XC's diagnostic tools reside. Upon clicking this tab, a descriptive visual is presented showing the current modular cards installed into the H2XC.



The **Card Status** drop down gives a health status of the selected transmission card.



The H2XC contains 4 chassis fans that cool the transmission cards once the temperature has reached the threshold. The **Fan Status** page will report operating status of the fans.

Fan Status	
Fan 1	working
Fan 2	working
Fan 3	working
Fan 4	working

Video Setting

The **Video Setting** tab contains many troubleshooting and compatibility tools. This tab consists of 7 drop down features: EDID Preset, EDID Read, QuickSync Mode, CEC Control, HDCP Support, AVR Priority Mode, and Source/Zone User Restriction.

Note: EDID Dip switches must be set to the WebUI position (see Quick Start Guide for Dip position and instructions).

To write an EDID to a matrix input simply select the input and choose the desired EDID from the list.

Input	Preset	Input	Preset
In 1	EDID Write	In 2	4K@30 7.1CH HDR
In 5	Copy From Out1 Copy From Out2 Copy From Out3 Copy From Out4 Copy From Out5 Copy From Out6 Copy From Out7 Copy From Out8 Copy From Out9 Copy From Out10 Copy From Out11 Copy From Out12 Copy From Out13 Copy From Out14 Copy From Out15 Copy From Out16		
In 9			
In 13			
All			
Note: If DIP			
Fix 1080P 2CH 1080P 5.1CH 1080P 7.1CH 4K@30 2CH 8BIT 4K@30 5.1CH 4K@30 7.1CH 4K@30 2CH HDR 4K@30 5.1CH HDR 4K@30 7.1CH HDR 4K@60 2CH 4K@60 5.1CH 4K@60 7.1CH 1920x1200 2CH 1920x1200 NO AUDIO			
Other			
Smart EDID EDID Write			

Smart EDID: The matrix will automatically adjust EDID information based on connected devices.

EDID Write: Custom EDID bin files can be uploaded to the H2XC for expanding control of EDID information. Choose the EDID Write option from the Preset list, upload your bin file and click Save.

Under the **QuickSync Mode** dropdown is the option to enable or disable "QuickSync". QuickSync can improve the speed of source to display handshake by over driving the signal. It is advised to only use if needed, as overdriving the signal may result in loss of handshake on other displays. QuickSync by default is set to Off.

▼ **QuickSync Mode**

QuickSync Mode OFF

The **CEC Control** dropdown gives the ability to manually send a CEC Power On/Off command to a display. This can be used for testing purposes or be sent via API command as a way to power the display On/Off. Additionally, the matrix can auto power off a display if no sync is detected. This can be enabled/disabled along with programming the delay time to power of a display.

▼ **CEC Control**

Output	Port	Manual		Auto	
				On/Off	Delay Time(0~30min)
Out 1	HDMI	<input type="button" value="Display On"/>	<input type="button" value="Display Off"/>	<input type="checkbox"/> ON	2
	HDBT	<input type="button" value="Display On"/>	<input type="button" value="Display Off"/>	<input type="checkbox"/> ON	2
Out 2	HDMI	<input type="button" value="Display On"/>	<input type="button" value="Display Off"/>	<input type="checkbox"/> ON	2
	HDBT	<input type="button" value="Display On"/>	<input type="button" value="Display Off"/>	<input type="checkbox"/> ON	2

If HDCP issues occur on a system, you can turn on/off HDCP on each input. This setting may assist in proper signal transmission.

▼ **HDCP Support**

Input 1 <input type="checkbox"/> ON	Input 2 <input type="checkbox"/> ON	Input 3 <input type="checkbox"/> ON	Input 4 <input type="checkbox"/> ON
Input 5 <input type="checkbox"/> ON	Input 6 <input type="checkbox"/> ON	Input 7 <input type="checkbox"/> ON	Input 8 <input type="checkbox"/> ON
Input 9 <input type="checkbox"/> ON	Input 10 <input type="checkbox"/> ON	Input 11 <input type="checkbox"/> ON	Input 12 <input type="checkbox"/> ON
Input 13 <input type="checkbox"/> ON	Input 14 <input type="checkbox"/> ON	Input 15 <input type="checkbox"/> ON	Input 16 <input type="checkbox"/> ON

Note: HDCP support should remain enabled unless conflicts with HDCP are experienced like when connecting devices such as MacBooks to the input.

AVR Priority Mode tells the H2XC that an output has a multichannel AVR in-line. Enabling this option will prioritize the EDID to the AVR rather than a display to encourage proper audio transmission.

AVR Priority Mode

HDMI Out 1	<input type="checkbox"/>	HDMI Out 2	<input type="checkbox"/>	HDMI Out 3	<input type="checkbox"/>	HDMI Out 4	<input type="checkbox"/>
HDMI Out 5	<input type="checkbox"/>	HDMI Out 6	<input type="checkbox"/>	HDMI Out 7	<input type="checkbox"/>	HDMI Out 8	<input type="checkbox"/>
HDMI Out 9	<input type="checkbox"/>	HDMI Out 10	<input type="checkbox"/>	HDMI Out 11	<input type="checkbox"/>	HDMI Out 12	<input type="checkbox"/>
HDMI Out 13	<input type="checkbox"/>	HDMI Out 14	<input type="checkbox"/>	HDMI Out 15	<input type="checkbox"/>	HDMI Out 16	<input type="checkbox"/>
HDBT Out 1	<input type="checkbox"/>	HDBT Out 2	<input type="checkbox"/>	HDBT Out 3	<input type="checkbox"/>	HDBT Out 4	<input type="checkbox"/>
HDBT Out 5	<input type="checkbox"/>	HDBT Out 6	<input type="checkbox"/>	HDBT Out 7	<input type="checkbox"/>	OM3 Out 8	<input type="checkbox"/>
HDBT Out 9	<input type="checkbox"/>	HDBT Out 10	<input type="checkbox"/>	HDBT Out 11	<input type="checkbox"/>	HDBT Out 12	<input type="checkbox"/>
HDBT Out 13	<input type="checkbox"/>	HDBT Out 14	<input type="checkbox"/>	HDBT Out 15	<input type="checkbox"/>	HDBT Out 16	<input type="checkbox"/>

Note: If multiple outputs have AVR Priority Mode selected on one input, the highest capable audio format between the active modes will take precedence.

Source/Zone User Restriction can limit the inputs and outputs that are shown on the Video Matrix Control page. This is useful if end-users will be accessing the web UI, so that a cleaner control interface can be shown. Or simply to just limit if a source can be routed to a zone.

Source/Zone User Restriction

All Outputs

<input checked="" type="checkbox"/> In 1	<input checked="" type="checkbox"/> In 2	<input checked="" type="checkbox"/> In 3	<input checked="" type="checkbox"/> In 4	<input checked="" type="checkbox"/> In 5	<input checked="" type="checkbox"/> In 6	<input checked="" type="checkbox"/> In 7	<input checked="" type="checkbox"/> In 8
<input checked="" type="checkbox"/> In 9	<input checked="" type="checkbox"/> In 10	<input checked="" type="checkbox"/> In 11	<input checked="" type="checkbox"/> In 12	<input checked="" type="checkbox"/> In 13	<input checked="" type="checkbox"/> In 14	<input checked="" type="checkbox"/> In 15	<input checked="" type="checkbox"/> In 16

All Apply

Out 1

<input checked="" type="checkbox"/> In 1	<input checked="" type="checkbox"/> In 2	<input checked="" type="checkbox"/> In 3	<input checked="" type="checkbox"/> In 4	<input checked="" type="checkbox"/> In 5	<input checked="" type="checkbox"/> In 6	<input checked="" type="checkbox"/> In 7	<input checked="" type="checkbox"/> In 8
<input checked="" type="checkbox"/> In 9	<input checked="" type="checkbox"/> In 10	<input checked="" type="checkbox"/> In 11	<input checked="" type="checkbox"/> In 12	<input checked="" type="checkbox"/> In 13	<input checked="" type="checkbox"/> In 14	<input checked="" type="checkbox"/> In 15	<input checked="" type="checkbox"/> In 16

All Apply

Audio Setting

The **Audio Setting** tab contains the H2XC's DSP functions, such as: Automatic Volume Control, Equalizer settings, Audio Delay settings, and Fixed Line Level Audio Output.

Under the **Automatic Volume Control** drop down, when activated, the user has the ability to adjust and create a custom fixed line level output, giving the option to adjust Decay Rate, Maximum Attenuation allowance, Maximum Gain allowance, overall Output Volume, and Freeze Level.

Note: Once activated, this disables the option to enable and disable the **Fixed Line Level Audio** of the specified output.

Output	On/Off	Decay Rate (1~10s)	Max Atten (11~18dB)	Max Gain (0~15dB)	Output Level (-18~-3dB)	Freeze Level (-36~-20dB)
Out 1	ON	1	18	15	-3	-36
Out 2	OFF	1	18	15	-3	-36

The **EQ** drop down allows for each audio output to be equalized independently via a 10-band equalizer.

Video Control Audio Control Alias Setting Matrix Status Video Setting Audio Setting Advanced Setting User Mode Admin Login

Automatic Volume Control

EQ

Select Audio Zone Output: Out 16

Enable EQ: Active Bypass

EQ Adjust

0dB	0dB	0dB	0dB	0dB	0dB	0dB	0dB	0dB	0dB
31Hz	62Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz

The **Audio Delay** drop down allows manual adjustment of the audio outputs. This setting is commonly used if a discrepancy in lip-sync occurs when using an external audio distribution system or DSP.

▼ Audio Delay							
Output	Delay Time (0~200ms)	Output	Delay Time (0~200ms)	Output	Delay Time (0~200ms)	Output	Delay Time (0~200ms)
Out 1	0	Out 2	0	Out 3	0	Out 4	0
Out 5	0	Out 6	0	Out 7	0	Out 8	0
Out 9	0	Out 10	0	Out 11	0	Out 12	0
Out 13	0	Out 14	0	Out 15	0	Out 16	0

In the Audio Settings tab is the **Fixed Line Level Audio Output** dropdown. With an output enabled, this will disable **Volume Output Control** and it will be forced to be enabled (grayed out checkbox) when **Automatic Volume Control** is active for that particular output.

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Video Control | Audio Control | Alias Setting | Matrix Status | Video Setting | **Audio Setting** | Advanced Setting | User Mode | Admin Login

▶ Automatic Volume Control

▶ EQ

▶ Audio Delay

▼ **Fixed Line Level Audio Output**

Out 1 Out 2 Out 3 Out 4 Out 5 Out 6 Out 7 Out 8
 Out 9 Out 10 Out 11 Out 12 Out 13 Out 14 Out 15 Out 16

Advance Settings

The **Advance Settings** tab contains options such as: Network Settings; Save and Load Matrix Configuration; Change Admin Login Password; and System Updates; if changed accidentally may result in failure or require factory resetting.

By default, **IR Callback (from display zone)** is enabled, allowing a user to discretely change inputs from a remote zone. However, in scenarios where input sources share the same IR codes, IR Callback can be disabled to prevent IR switching issues from occurring.

▼ **IR Callback (from display zone)**

ON

When sources up to 1080p are being used, **Long Cable Mode** can be used to boost HDBaseT transmission distances up to 140 meters (459 feet) by reducing the pixel clock to 148MHz. In order to fully use this feature, an automatic EDID of 1080p will be used.

▼ **Long Cable Mode**

All HDBT Output OFF

Note: With this mode enabled, source pixel clock will be limited to 148MHz (1080p/60Hz) and transmission distance will reach 140m/459ft.(Enable 1080p EDID when activated)

In the **API Control** dropdown, the user can test and send **API Commands** that control the matrix, as well as send routed serial commands to a discrete output via the **Serial Command Routing** line.

The screenshot shows the 'API Control' section of the interface. It contains two main input areas: 'API Command' with a text box and a 'Send' button, and 'Serial Command Routing' with an 'Enter' button.

To send a routed serial command, first select the **Output Channel** that the display is connected to, the **Baud Rate** of the display, **Parity Bits**, and whether there is a **Terminator** at the end of the command string. If the display serial command is Hexadecimal make sure to check the **HEX** box. If the format is ASCII, leave HEX unchecked.

The screenshot shows the 'API Control' section with a 'Serial Route' dialog box open. The dialog box has the following fields: 'Channel' (dropdown menu showing 'Out 1'), 'Baud Rate' (dropdown menu showing '110'), 'Parity Bits' (dropdown menu showing 'NONE'), and 'Terminator' (dropdown menu showing 'none'). Below these fields is a 'Command:' text box, a checkbox for 'HEX', and a 'Send' button.

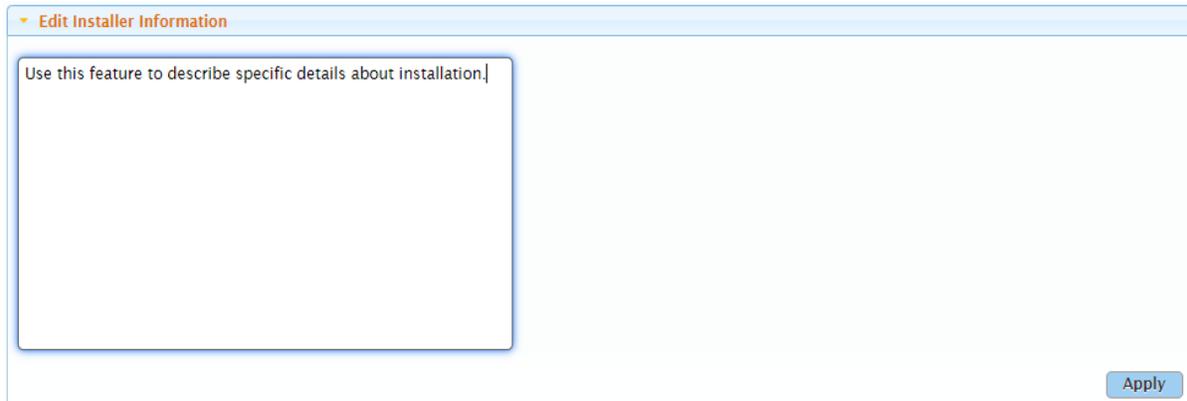
The **Save/Load Matrix Configuration** takes a full backup of the matrix including all custom configuration. This file can then be used to deploy similar settings across multiple installations.

The screenshot shows the 'Save And Load Matrix Configuration' section. It contains two buttons: 'Save Settings' and 'Load Settings'.

Change Admin Login Password: It is advised that before a matrix is deployed, to change the default password of the matrix and to have it in safe keeping. If the password is forgotten, the matrix must be reset using the API command.

The screenshot shows the 'Change Admin Login Password' section. It contains three text input fields: 'Old Password', 'New Password', and 'Confirm New Password'. Below the fields is a red note: 'Note: Password must be 4 to 16 characters in length, alphanumeric only.' and a 'Save' button.

In the **Edit Installer Information** dropdown, the installer can write descriptive notes about the particular installation. This feature is useful for the installer or anyone with granted access to log and view important notes or details pertaining to the matrix and installation.



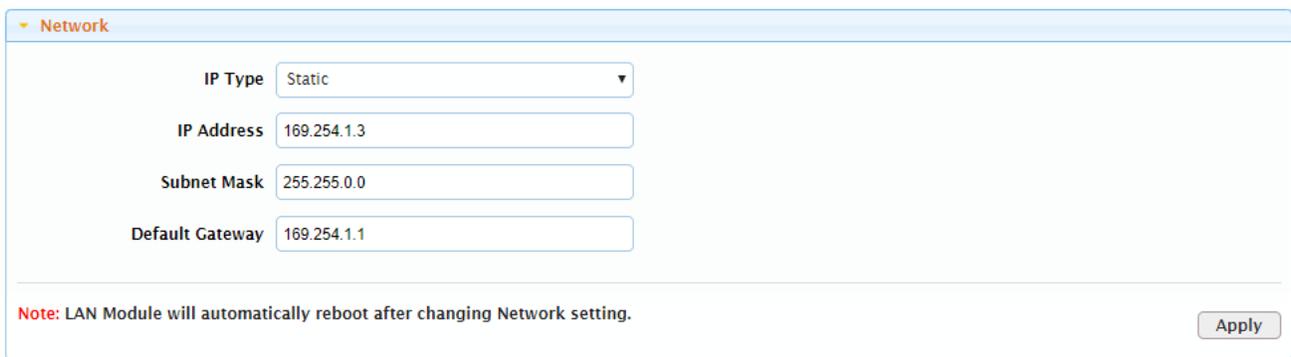
▼ Edit Installer Information

Use this feature to describe specific details about installation.

Apply

In the **Network** dropdown, IP settings can be configured. By default, the matrix is set to **192.168.11.143**.

Note: The LAN module will automatically reboot after applying network settings and can take up to 2 minutes to fully apply.



▼ Network

IP Type: Static

IP Address: 169.254.1.3

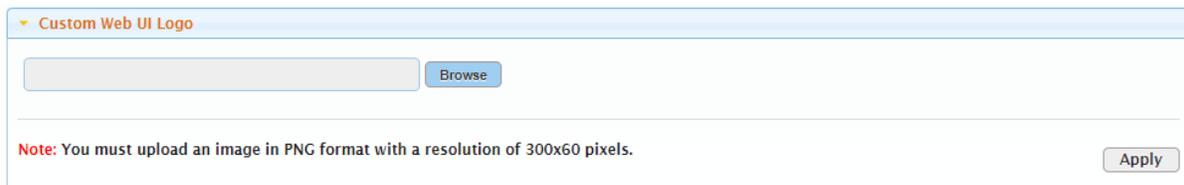
Subnet Mask: 255.255.0.0

Default Gateway: 169.254.1.1

Note: LAN Module will automatically reboot after changing Network setting.

Apply

If desired, the WyreStorm logo in the web interface can be changed to a custom image, for custom branding.



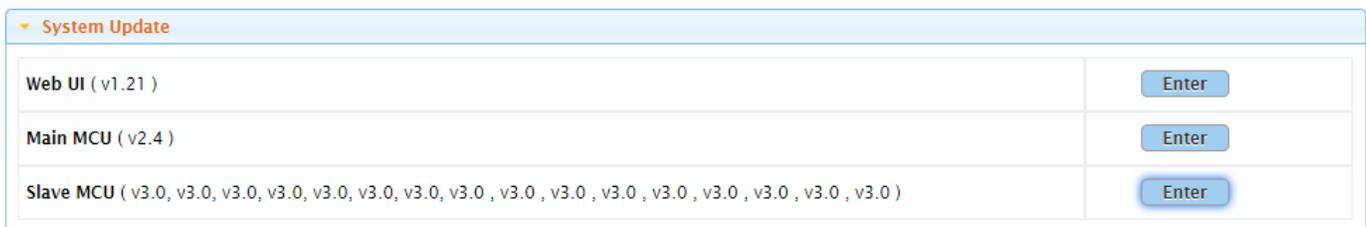
▼ Custom Web UI Logo

Browse

Note: You must upload an image in PNG format with a resolution of 300x60 pixels.

Apply

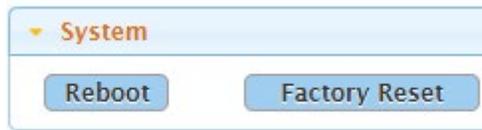
System Updates can easily be done via WebUI, However, it is advised to contact WyreStorm technical support for assistance to prevent possible update errors. This utility is also used to help troubleshoot by showing current version updates present on the matrix.



Component	Version	Action
Web UI	(v1.21)	Enter
Main MCU	(v2.4)	Enter
Slave MCU	(v3.0 , v3.0)	Enter

Under the **System Settings** dropdown, the user can reboot or factory reset the matrix.

Note: Reboot will take the LAN module up to 2 minutes to refresh. Also, please note that factory reset will only reset WebUI settings and **will not** roll back firmware. The matrix will revert back to default IP address of 192.168.11.143.



For diagnostic purposes, the matrix stores a recent **Log** of send and receive feedback.

