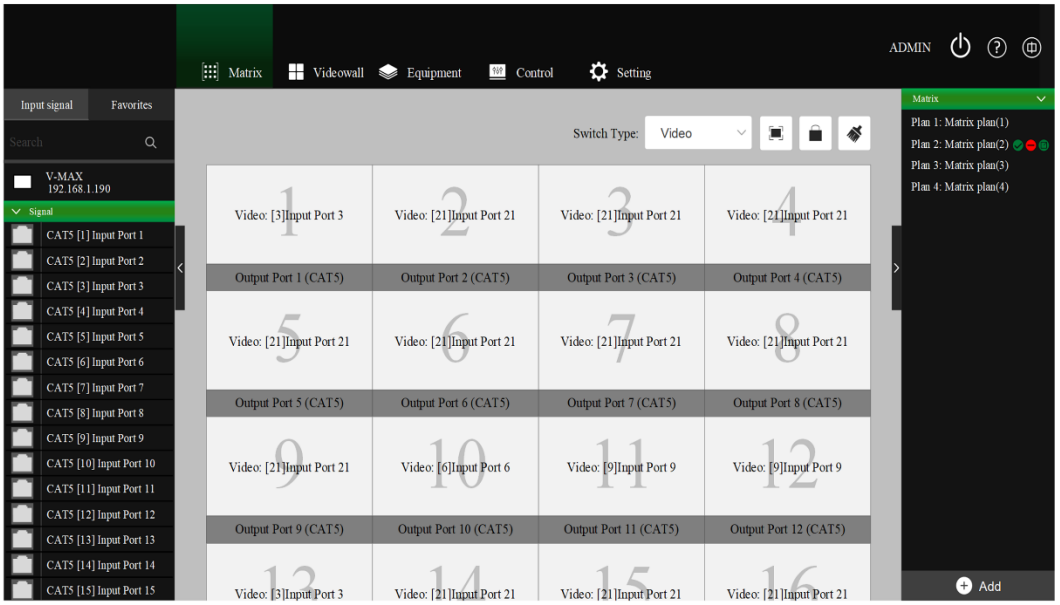
LDX-8/16/36/72

Web Browser Control Guide

User Manual

DIGITAL MODULAR MATRIX



Main Display Interface

For more information visit our website, or talk to one of our technical team
tel: +44 (0) 1306 628264 www.smart-e.co.uk

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Chapter 1 - LDX Web Browser login

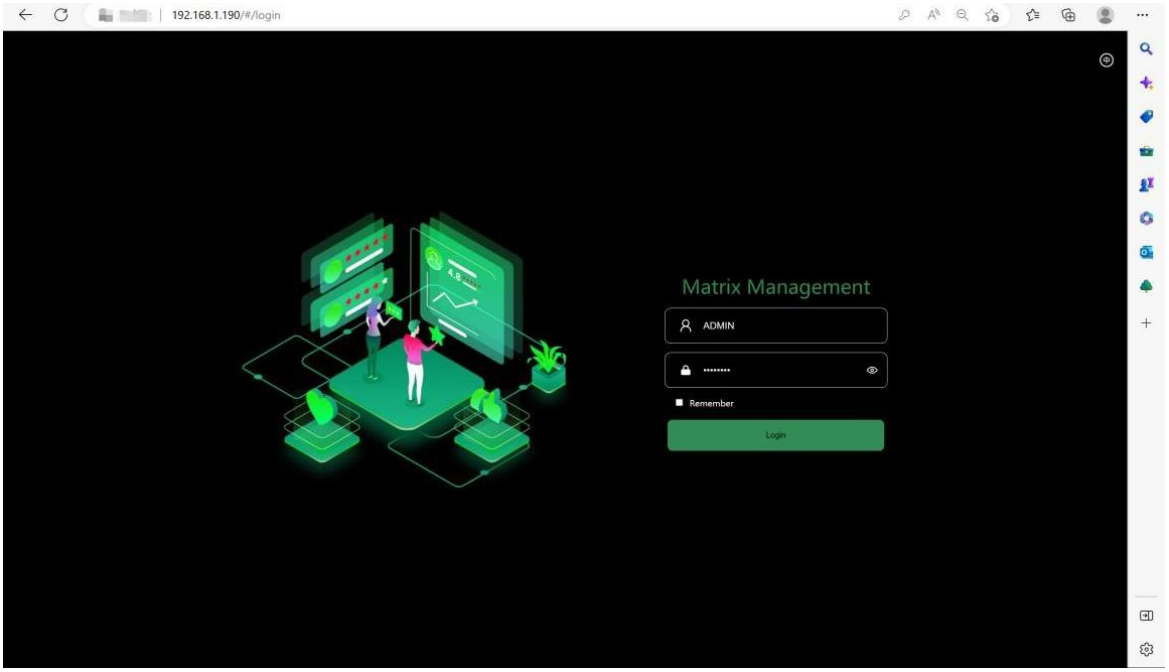
Web browser interface

Introduction

All the LDX series of switching matrices have an internal web browser enabling the user to control many functions of the matrix without the need for an external third-party control system. This powerful facility means the unit are self-contained providing the best price-performance ratio across the industry.

Access to the LDX web browser is realized by first connecting to an Ethernet network. This is achieved through the Ethernet port on the control card located at the rear of the matrix. Once wired into a network you can access the web browser at address 192.168.1.190 port number 6666.

To access the application, open a web browser on your PC (connected to the same network) and enter the address 192.168.1.190 - you will see the login screen below appear.

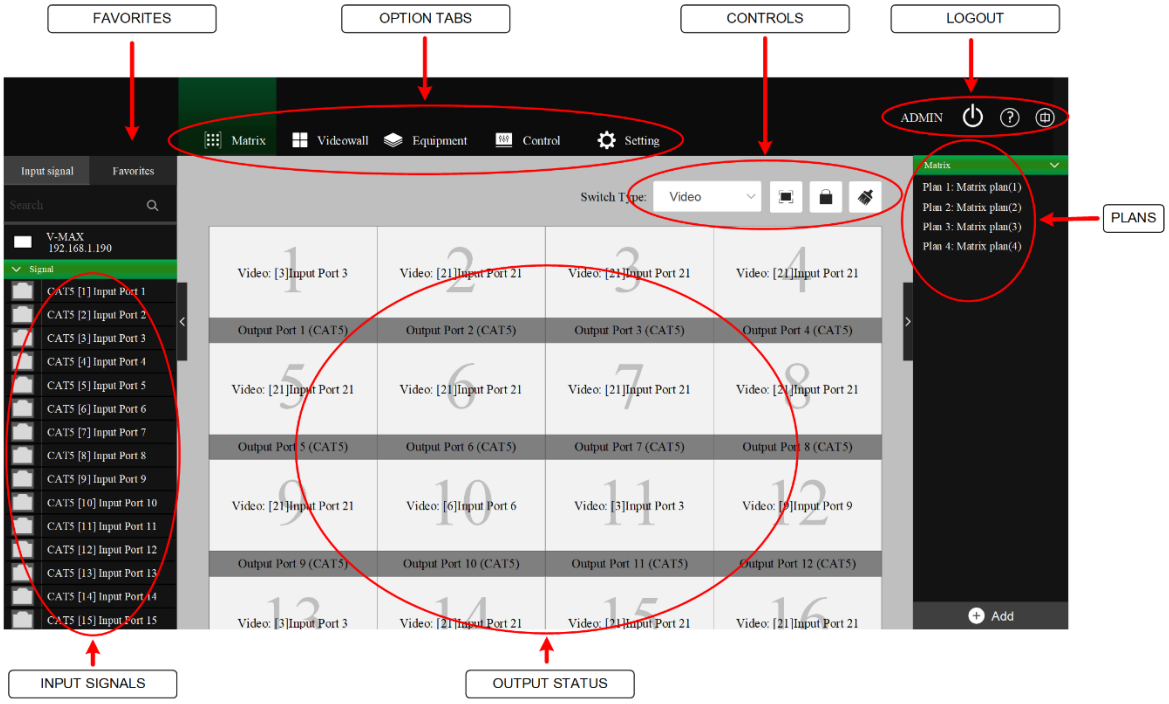


To gain access please enter the default administrator login details of:

Username: ADMIN
Password: admin123

Once through the login page you will see the main display interface.

Main Display Interface



The above diagram shows the areas of user interaction and their functions including:

i) Input signals
ii) Output status
iii) Favorites
iv) Option tabs
v) Controls
vi) Logout
vii) Plans

The following pages will explain these various functions and how to use them to control the matrix and all its features.

Option Tabs

Along the top of the main display there are 5 tabs to choose from allowing the user to access all the features of the web browser.

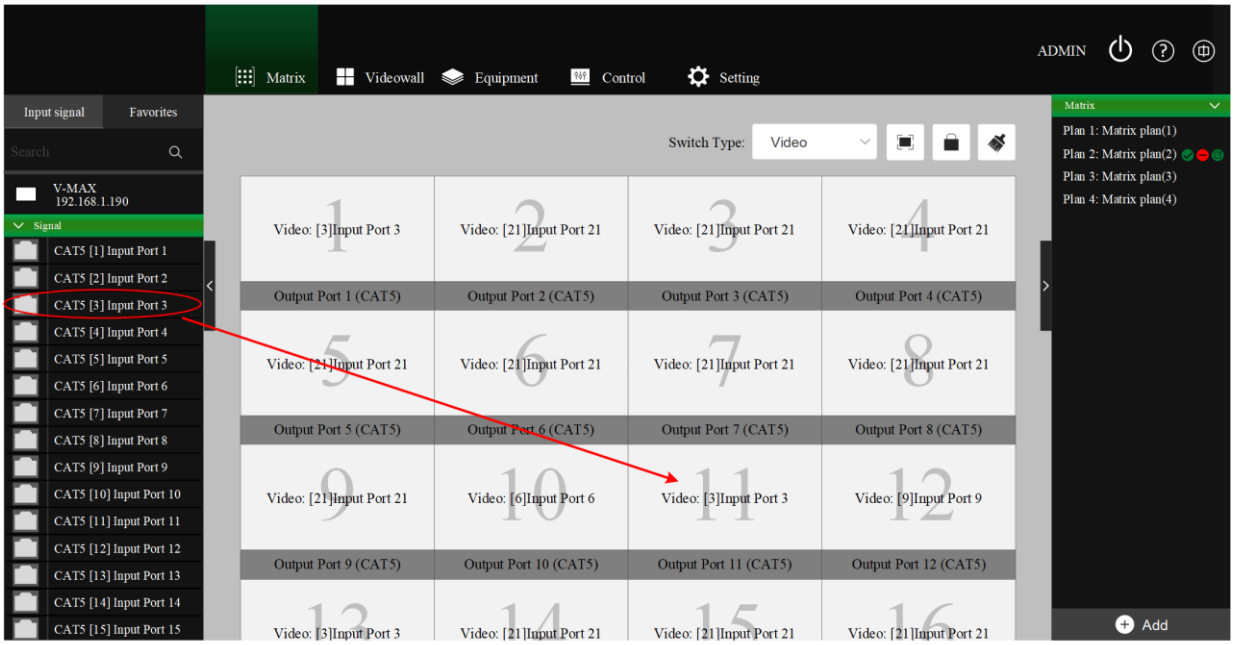
The tabs are as follows:

1) Matrix - Crosspoint status and selection, Plan creation and editing
2) Videowall - Videowall image configuration and source selection
3) Equipment - Card option configuration of matrix
4) Control - Programming third party control signals
5) Settings - Videowall setup, network config & User permissions

Chapter 2 – Tab Option – Matrix

Crosspoint setting

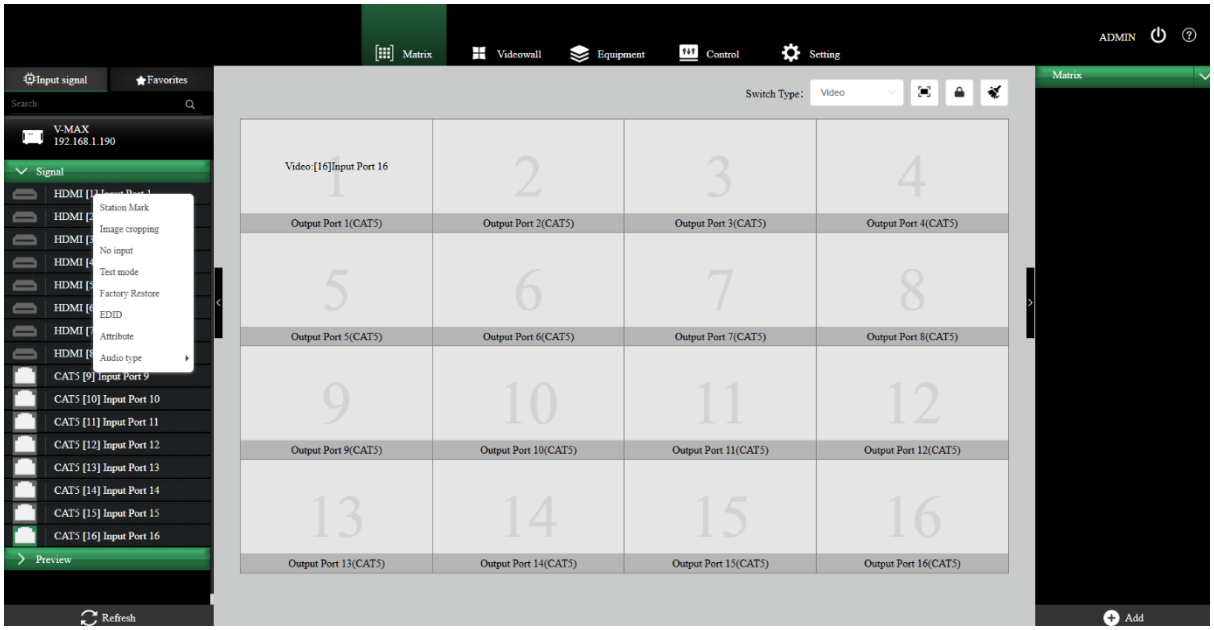
The basic function of the web browser is to allow the user to set crosspoints, i.e. allocate inputs to outputs of the matrix. Selecting inputs to specific outputs is achieved by dragging and dropping the required input in the left-hand column to the output in the main central display. As can be seen in the diagram below, input 3 is clicked and then dragged over to output 11 and then released, overriding the previous setting, and enabling the selection.



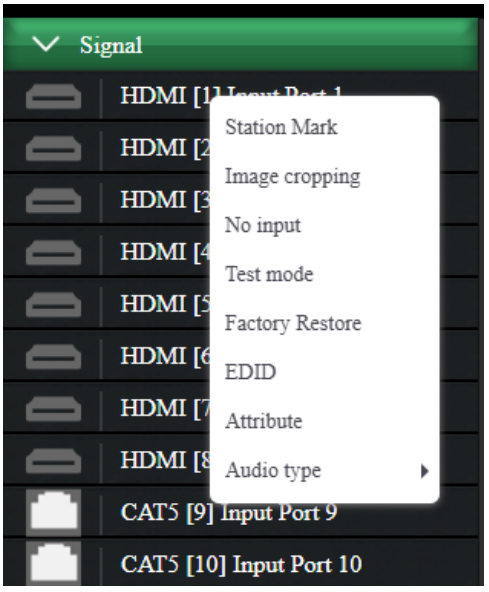
This method can be used to configure all the required outputs. If frequent configurations are used, then a Plan can be created to recalled at any time – see Chapter 3 for more details.

i) Input Signals

Right clicking on a particular input name will bring up some options specific to that signal type. Although the majority of the options are similar for all the input signal types, there a few difference.



Right clicking the HDMI input blade will bring up the following options below:

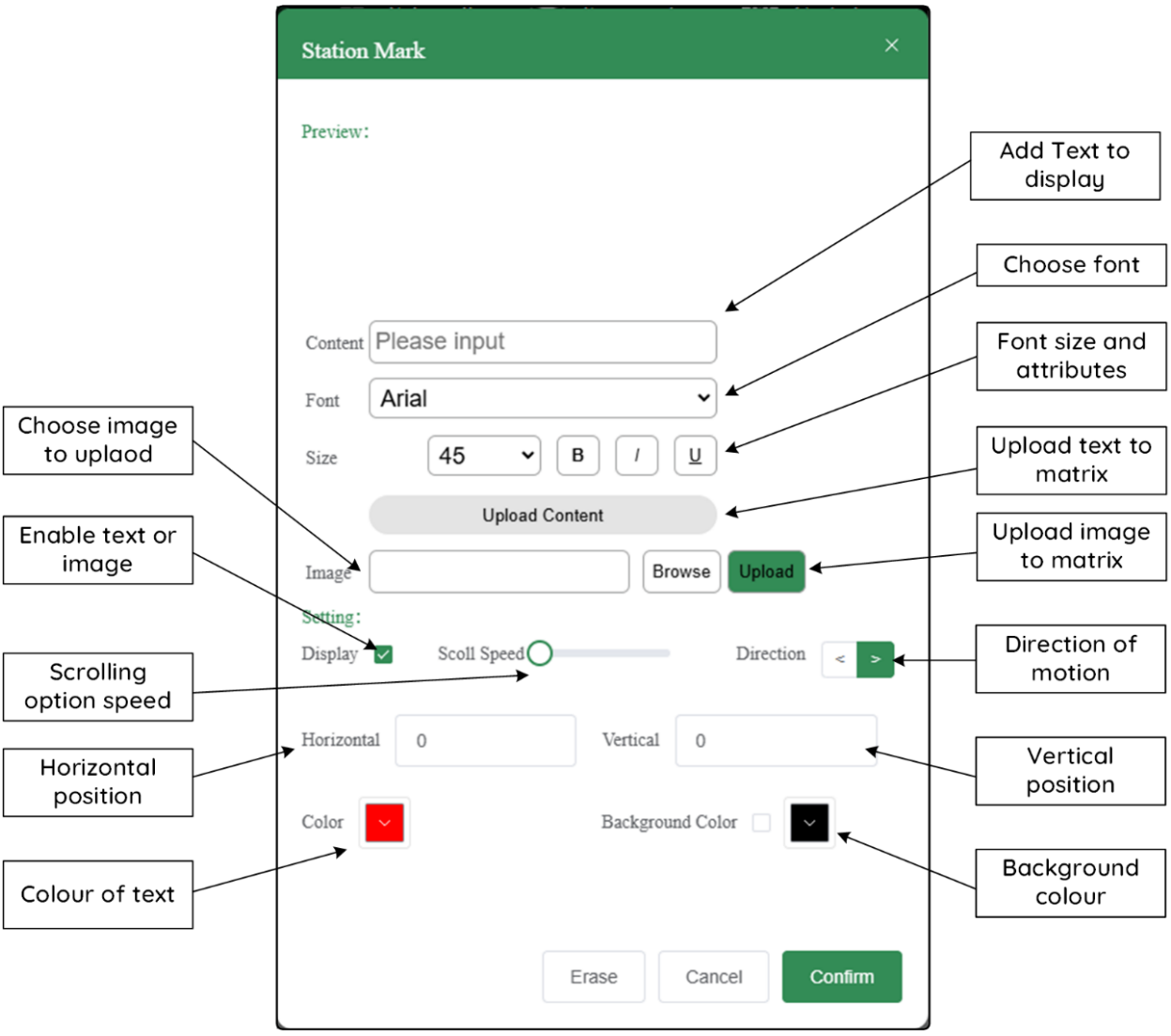


a) Station Mark
b) Image cropping
c) No input
d) Test mode
e) Factory Restore
f) EDID
g) Attribute
h) Audio Type/Infrared Port Set

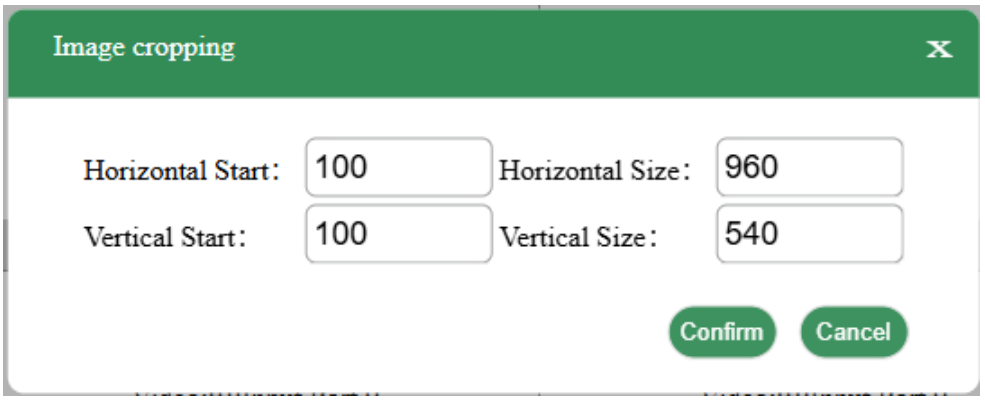
The first 7 (a - g) choices are generic to all input signal type whilst option 'h' has different functions depending on the specific blade. The description of each option is as follows:

a) Station Mark - The feature allows text or images to be uploaded and added to that particular input.

i) Adding text – First type the required text in the content window then choose the font from the drop-down selection followed by the font size and whether it is needs to be in bold, italics or underlined. When you are happy with the choice then click the 'Upload Content' button to save.
ii) Adding an image – Select the required image by browsing the PC for the file and then click the 'Upload' to store in the matrix.
iii) Display enable – To show the text or image on the video input signal click the relevant box.
iv) Scrolling text – Text can be scrolled across the video image at variable speeds and direction by selecting the these two controls.
v) Text position – It is also possible to set the position of the text by adding a horizontal and vertical co-ordinate value in pixels.
vi) Text colour – The colour of the text can be chosen from a drop-down list together with a different background colour to help with visual identification.

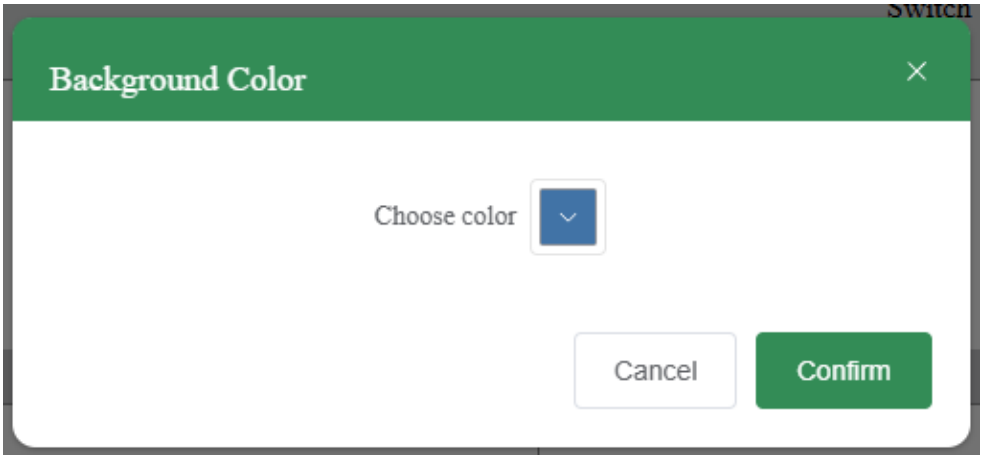


b) Image cropping - Allows the input video to be cropped to a particular portion and size by entering values in the boxes.

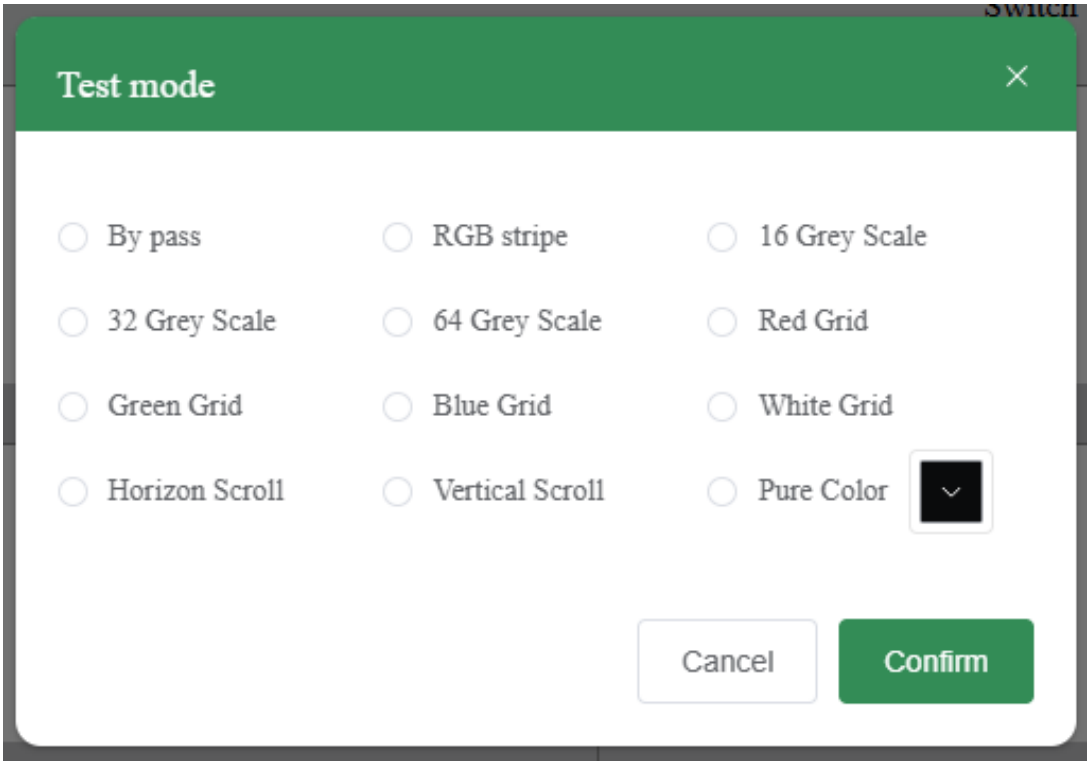


Variables to be entered correspond to horizontal pixels and vertical lines. Above example samples a quarter of the image with a 100 pixel, 100 line starting offset

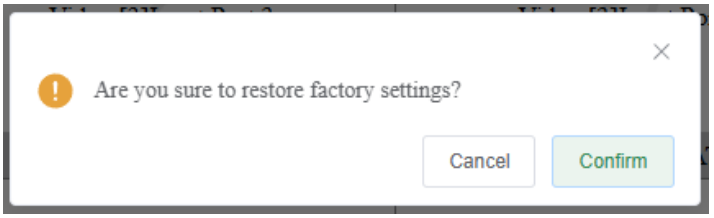
c) No input - Allows the user to define inputs with no input signal with a specific colour. This chosen colour will be displayed when there is no video input signal for that particular input.



a) Test mode – Enables the user to display an internal test signal generator instead of the incoming video. Allows the user to force the particular input to a test pattern, ideal for helping fault find installation cabling and calibration of the system and displays.



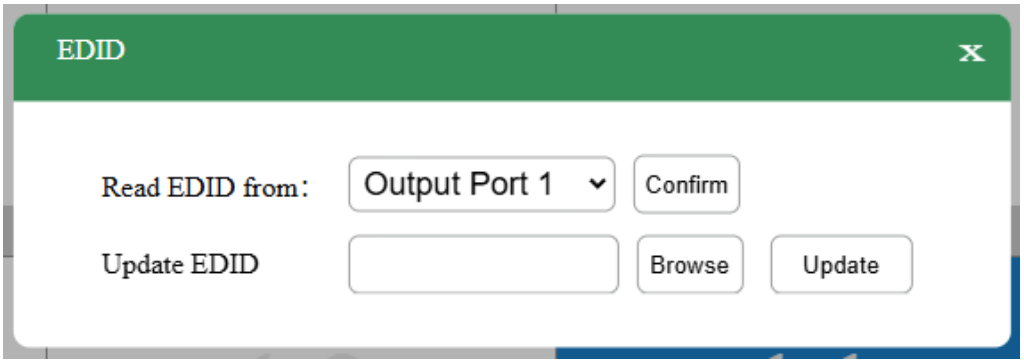
d) Factory restore – Selecting this option resets all variables back to factory defaults for all inputs.



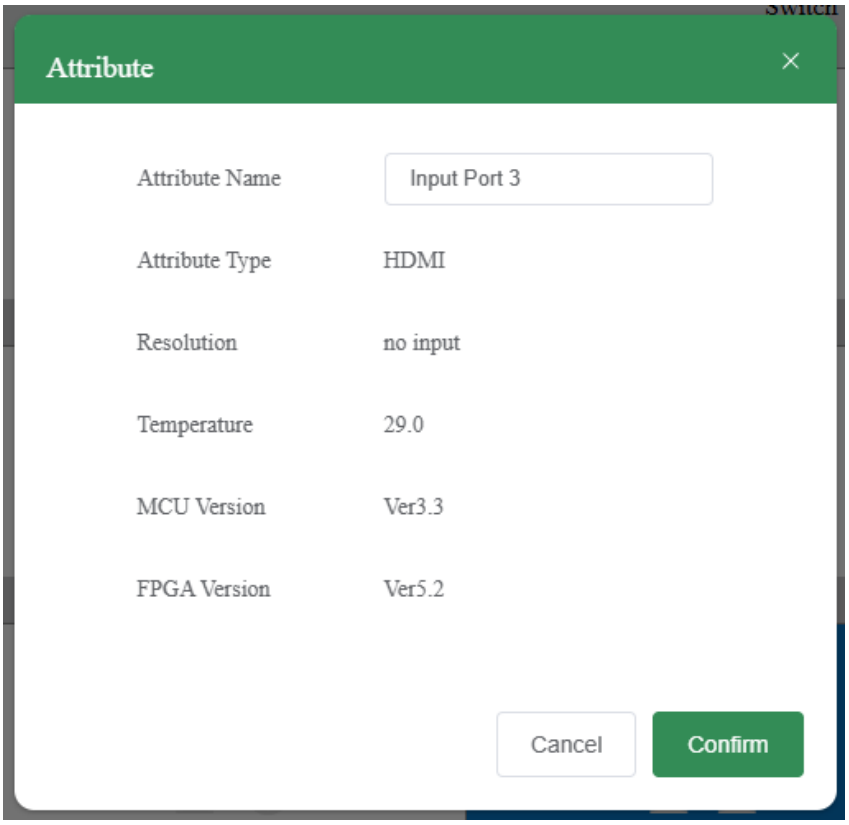
e) EDID management – Allows the EDID of the specific input to be changed. This feature enables the system to read the EDID from a particular output display and store in back into the EPROM for that particular input. This EDID information is then available for source devices like DVD players, PCs and video servers to read and set their own parameters accordingly. This facility is used when the default EDID is not compatible with the display screens connected to the matrix outputs.

There are 2 options:

i) Read EDID from a particular output by selecting from the drop-down window and then clicking on the Confirm button.
ii) Updating the EDID from a pre-defined file by browsing to find the relevant file and then updating the matrix.



f) Attribute – Lists the relevant characteristics of the input card. Also allows the name of the input to be changed to help the user identify a particular input source.

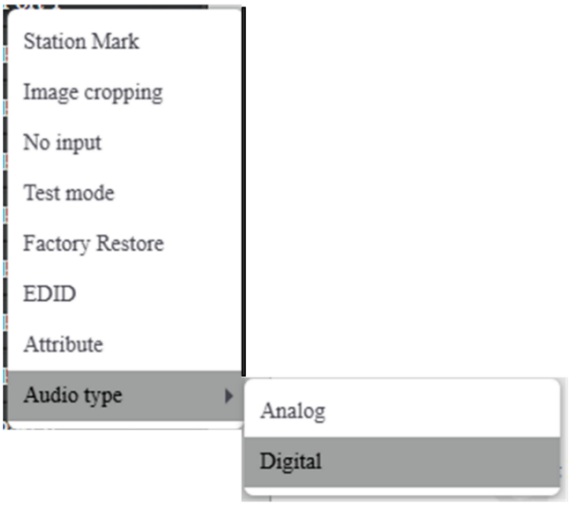


g) This option varies with the different signal input types:

i) HDIM input card

i. Audio type – Allows the user to decide whether the audio channel associated with that input is the embedded audio within the HDMI or the external sound source connected to the 3.5mm stereo jack socket.

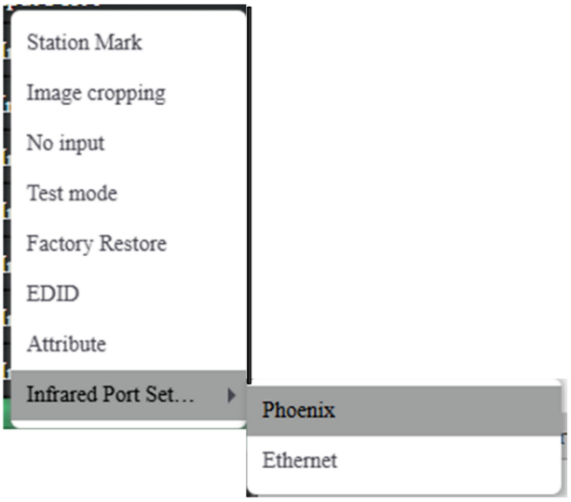
1. Analog – External jack input
2. Digital – Embedded in the HDMI signal



ii) HDBaseT input card

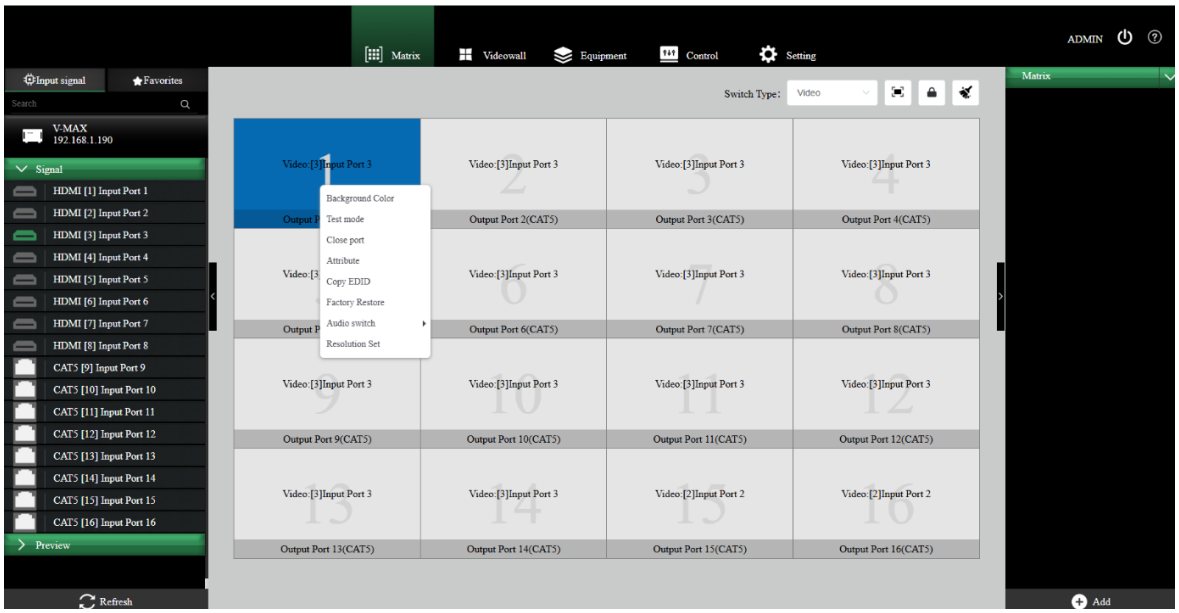
i. Infrared Port Set - The LDX series of matrices allow serial and infrared control signals to be switched and transmitted along the HDBaseT cabling. Connection to these control signals are available both on the input card and also on the HDBaseT transmitter unit connected to the HDBaseT cable. This window allows the user to select between these options.

1. Phoenix – External IR and RS232 signals to be inputted to the matrix
2. Ethernet – Selection of IR and RS232 with the HDBaseT connection

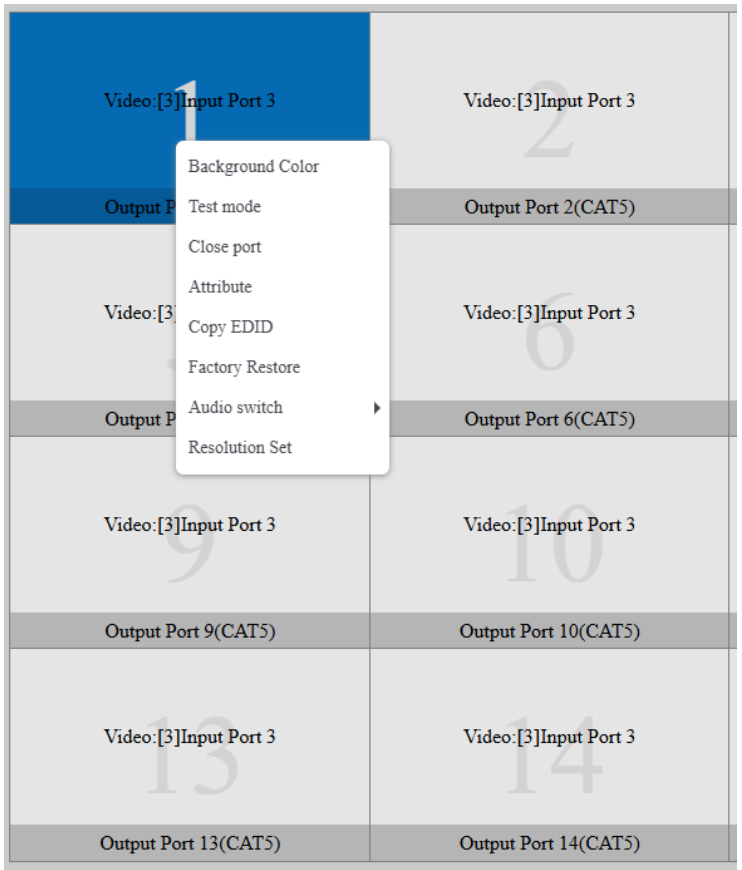


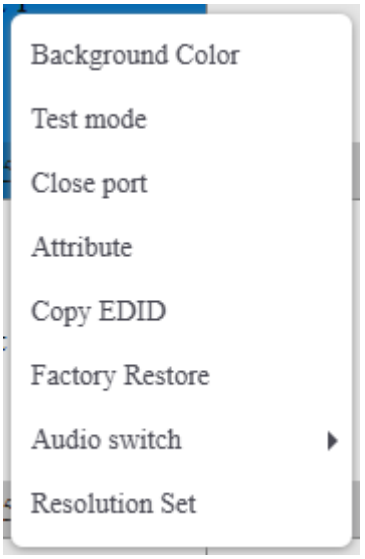
iii) Output Status

Right clicking the output block will bring up some options specific to that output. Although the majority of the options are similar for all the input signal types, there a few differences.



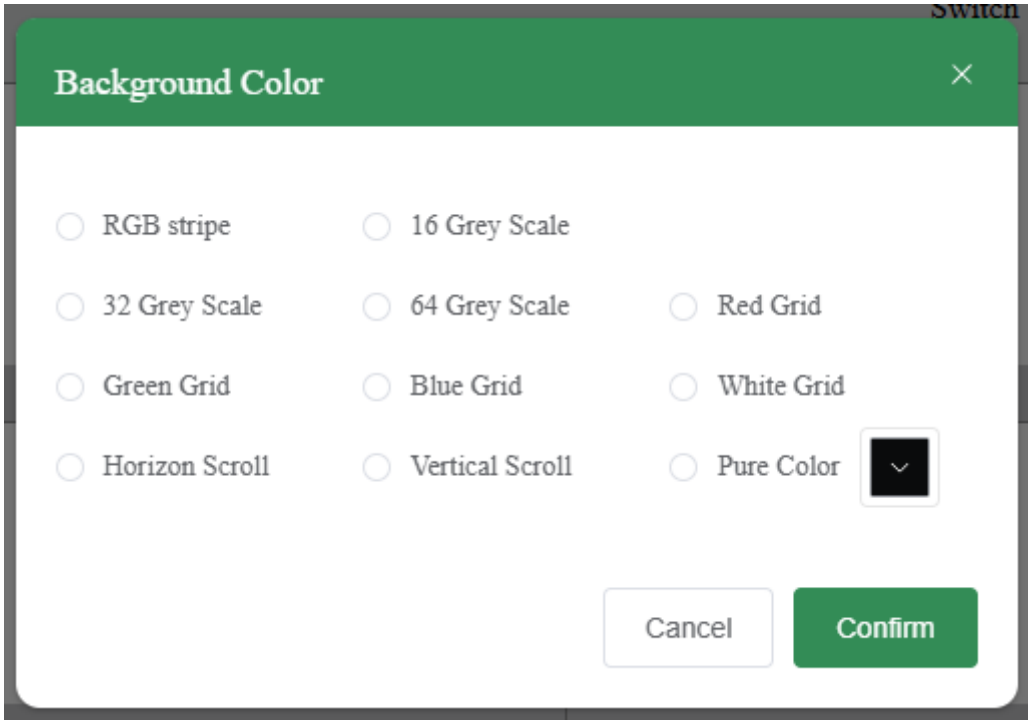
Right clicking the HDBaseT blade will bring up the following options below:



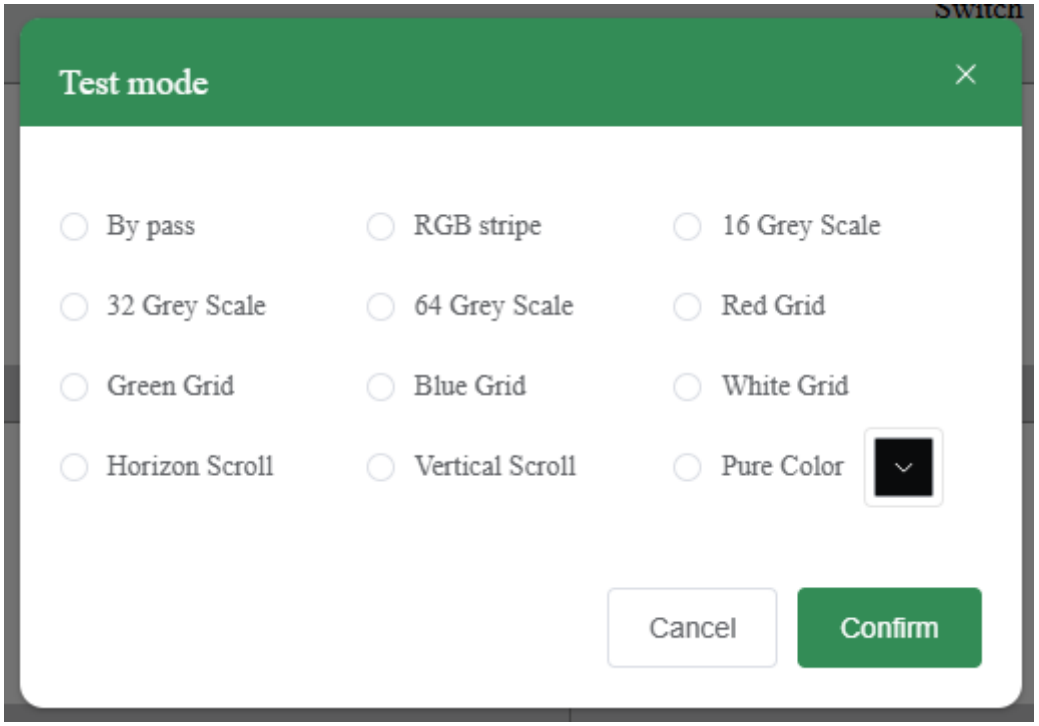


The description of each option is as follows:

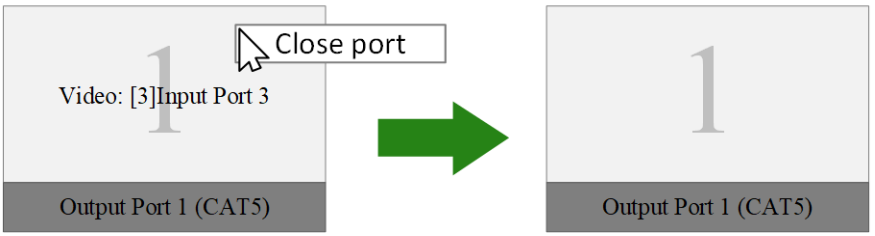
a) Background Colour – User defined test signal if port is 'closed'. The system allows the user to 'close' particular outputs, and will display a background image as chosen from the list below. This helps the user to easily identify outputs not in use.



b) Test mode – Allows the user to force the particular output to a test pattern, ideal for helping fault find installation cabling and calibration of the system and displays.

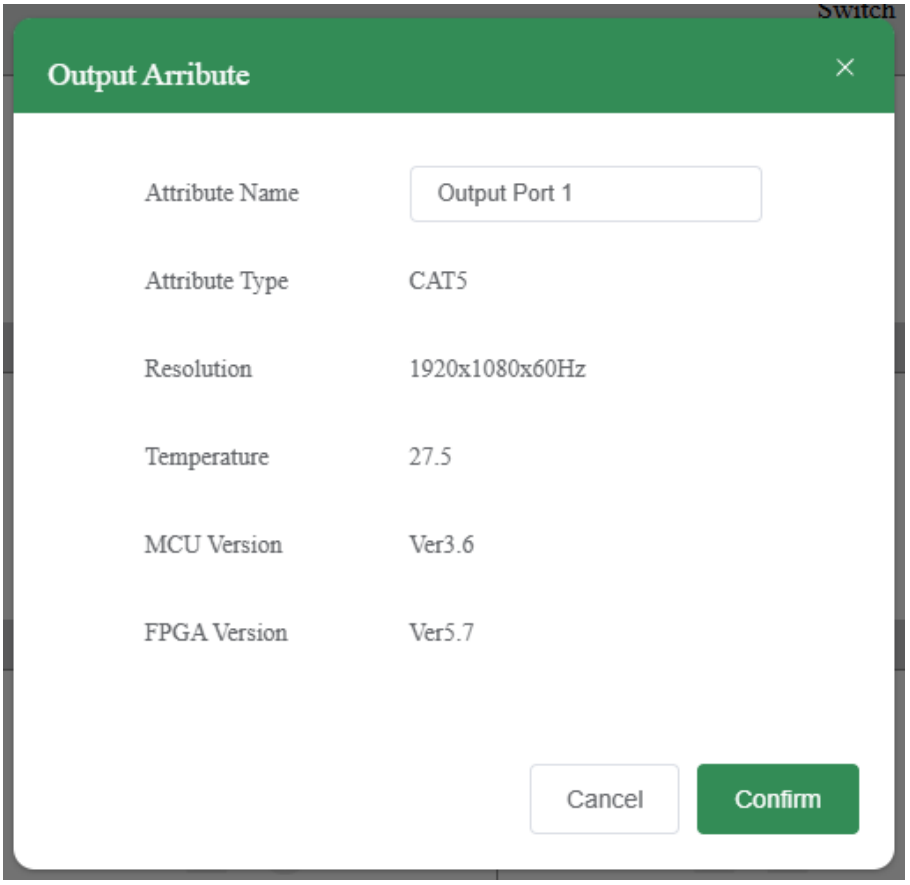


c) Close port – Choosing this option will disable the specific output that was clicked and display the chosen 'Background Colour' (default being black). Also when creating 'Plans' this option can be used to disable outputs which should not be changed when enabling the 'Plan' (see later chapter for more details)

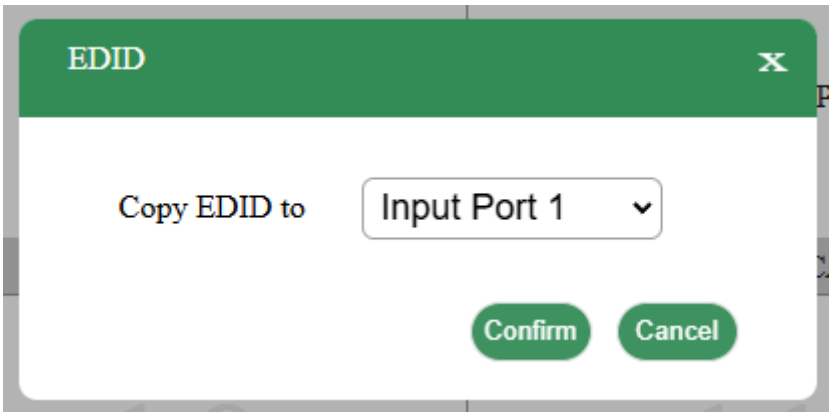


Once closed the output will show no input allocated to it, as seen above.

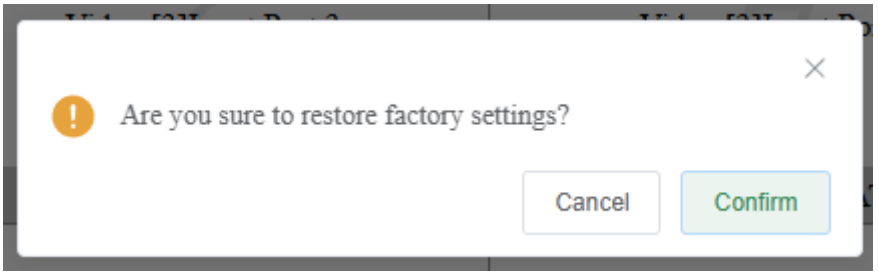
d) Attribute – Lists the relevant characteristics of the input card. Also allows the name of the output to be changed to help the user identify a particular destination display.



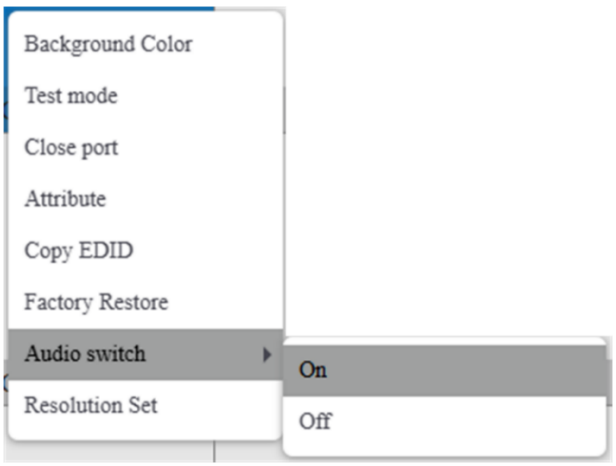
e) Copy EDID – Allows the EDID of the specific input to be changed. This feature enables the system to read the EDID from a particular output display and store in back into the EPROM for that particular input. This EDID information is then available for source devices like DVD players, PCs and video servers to read and set their own parameters accordingly. This facility is used when the default EDID is not compatible with the display screens connected to the matrix outputs.
EDID is copied from the current output to a particular input by selecting from the drop-down window and then clicking on the Confirm button.



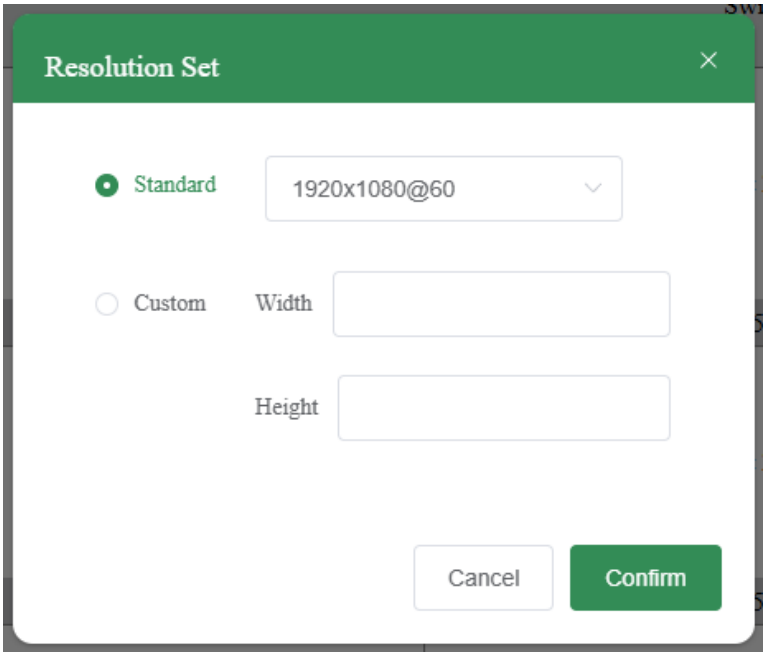
f) Factory Restore - Selecting this option resets all variables back to factory defaults for all outputs.



g) Audio switch – Allows the current output audio to be muted, there are 2 options:
   i. On – audio active
   ii. Off – audio muted



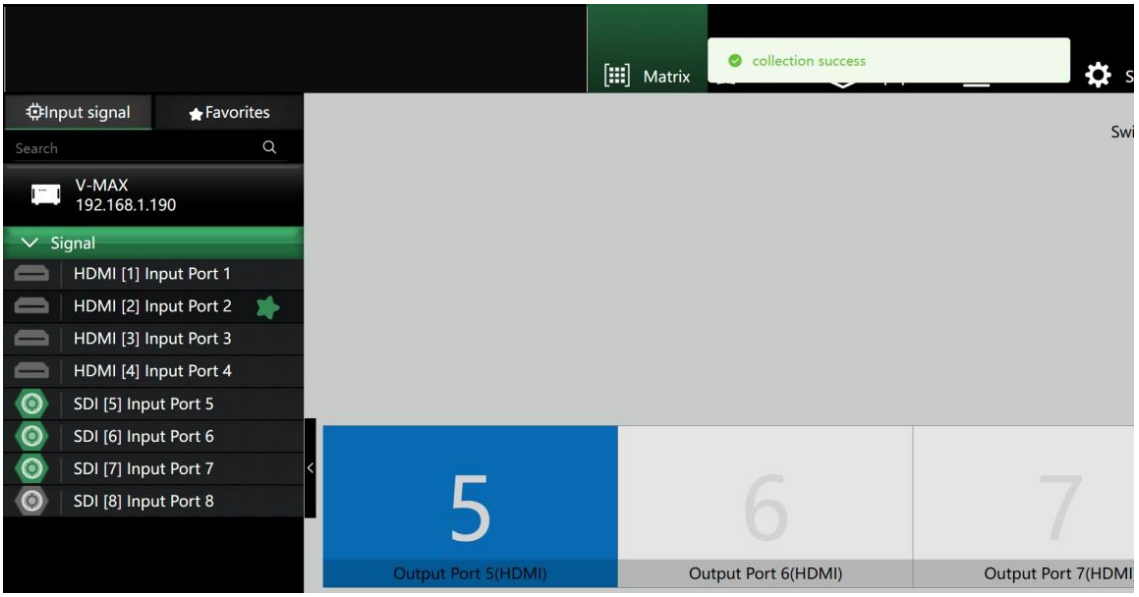
h) Resolution Set – Each output on the matrix has a video processor allowing the video to be scaled to match the native resolution of the connected display. Custom scaling can be accommodated by entering non-standard aspect ratios into the form.



iv) Favourites

Frequently selected input sources can be saved as Favorites. These sources can then be accessed easily through the Favorites tab.

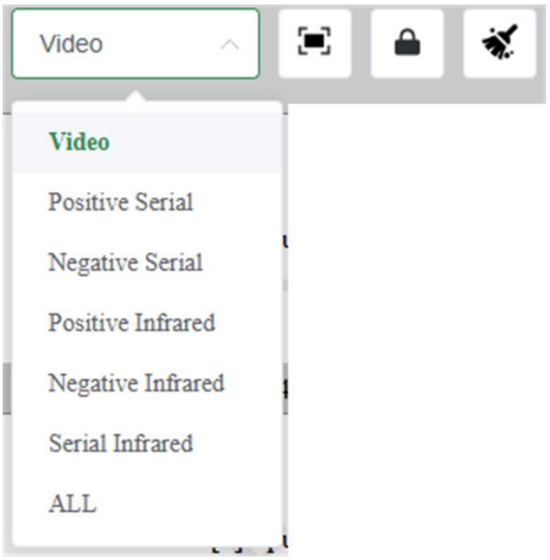
To make an input source a Favorite simply select the star icon next to the desired input. This can be seen below for Input Port 2. Click again to deselect favorite.



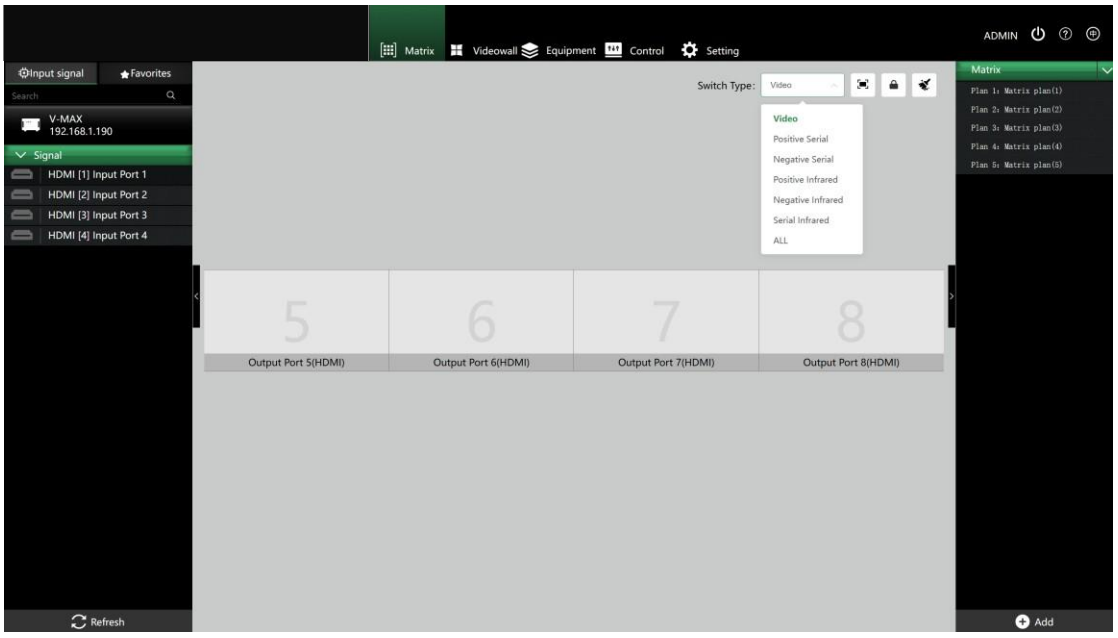
v) Controls

The LDX matrix system allows for multi-layer switching, including serial communication and infrared signals. Depending on the type of input and output cards these control signals are available to connect and switch in both positive and negative polarity.

Clicking on the drop-down arrow adjacent to the Switch Type window brings up the below table:

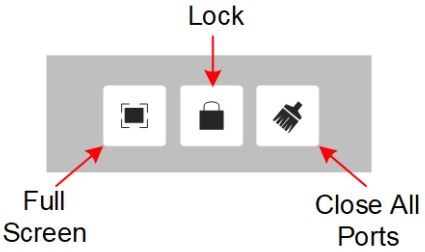


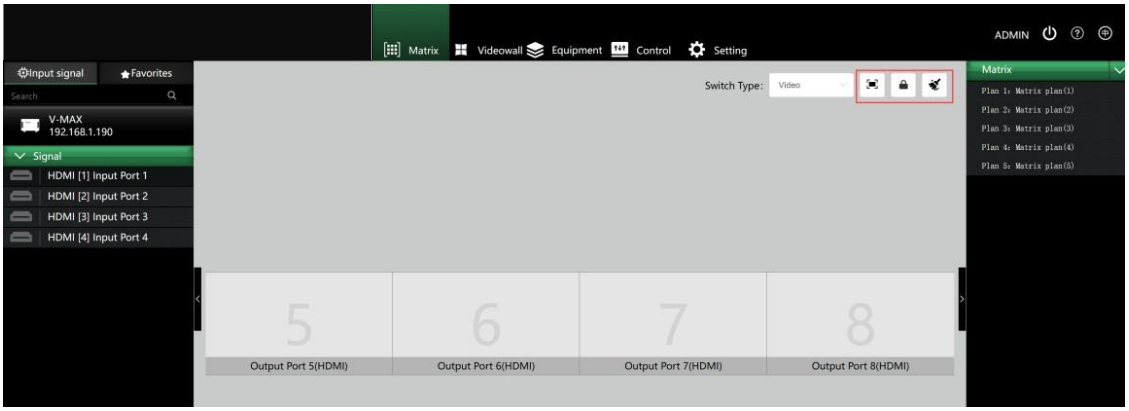
Select the desired option followed by new crosspoint selection for specific signal switching. The signal status of each output will be show in the output block.



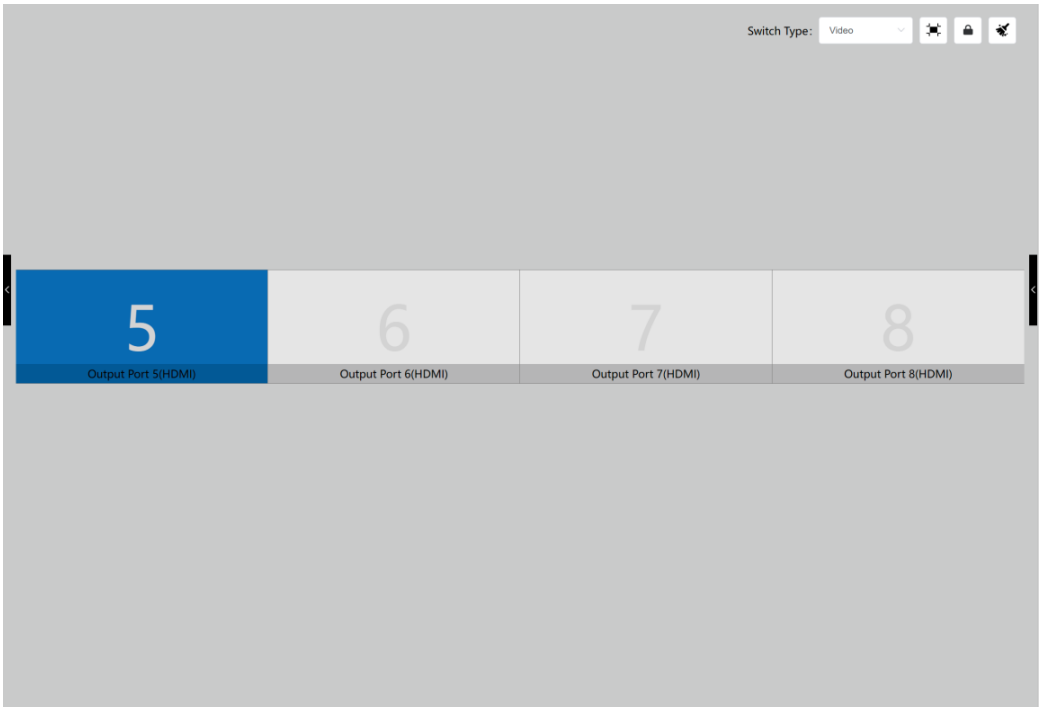
Adjacent to the Switch Type table are 3 other icons presenting the functions of:

a) Full Screen
b) Lock
c) Close All Ports

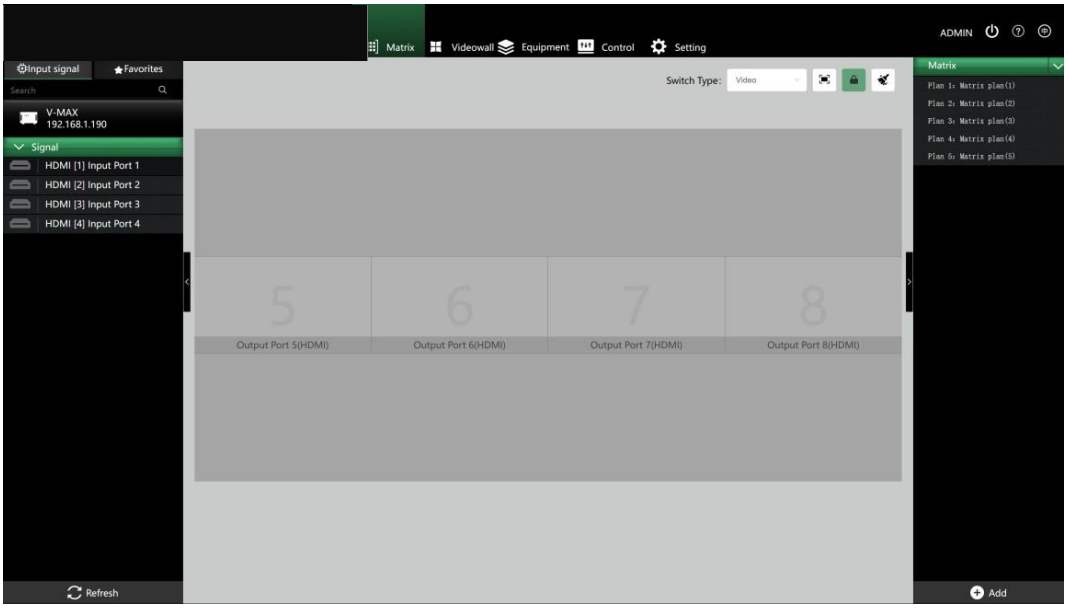




a) Full Screen – Selecting Full Screen expands the main central output status display to all edges of the window, hiding all the other functions of the web browser. This presentation simplifies what the user can see and can be used for monitoring the matrix status. An example can be seen below:



b) Lock – Choosing Lock will protect all the outputs from accidental crosspoint selection. Once enabled, each output is displayed in grey to show the lock status and will be unavailable for change until unlocked.



c) Close All Ports – Closing all ports removes all the input images from the outputs. A useful feature when creating Plans or when you need to initialise the matrix crosspoint configuration.

vi) Plan (preset) creation

Introduction

For many applications it is helpful to save specific predefined crosspoint configurations of the matrix, and then to recall them when required. In the LDX matrix web browser, we call these 'Plans' and the following description explains how to create, save, edit and recall them.

Description

Plans can be used to save pre-defined crosspoint setting of the entire matrix. There can be a number of Plans, each one with a unique configuration of inputs and outputs. These Plans are saved within the web browser and can be re-called as and when required.

To start the process of Plan creation click on the Matrix tab and a typical screen display of the web browser will be seen, as below. The screen shot below shows a left-hand column with all the inputs and signal types available for selection. The main central block displays all the outputs on the matrix together with their current input status. Whilst the right- hand column shows any Plans that have been created.

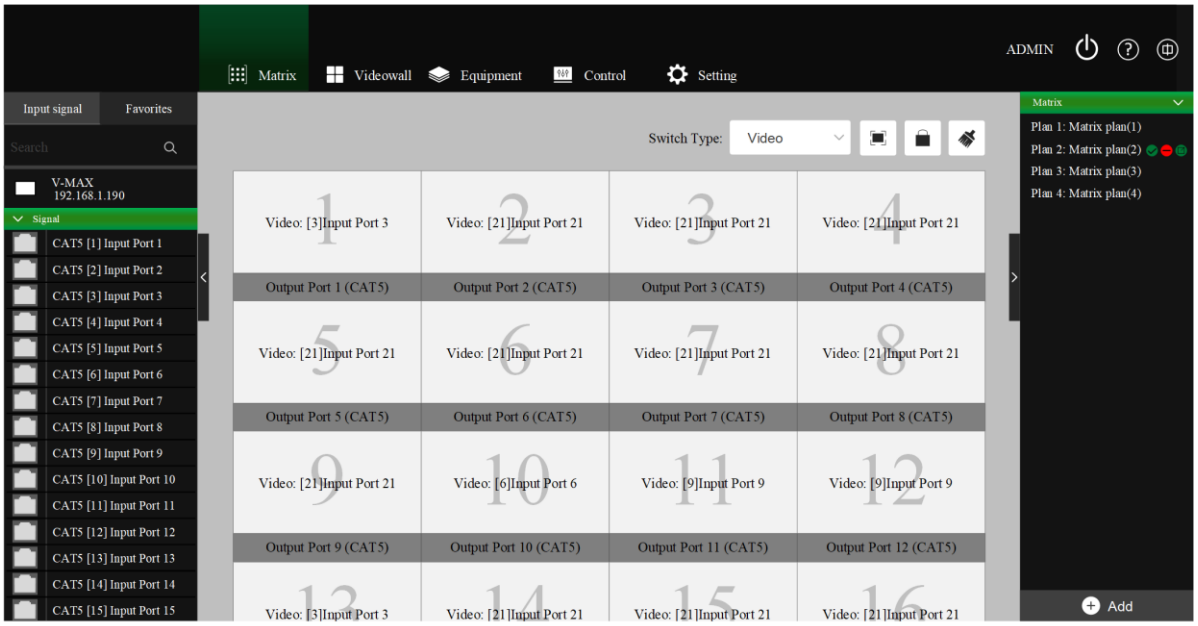
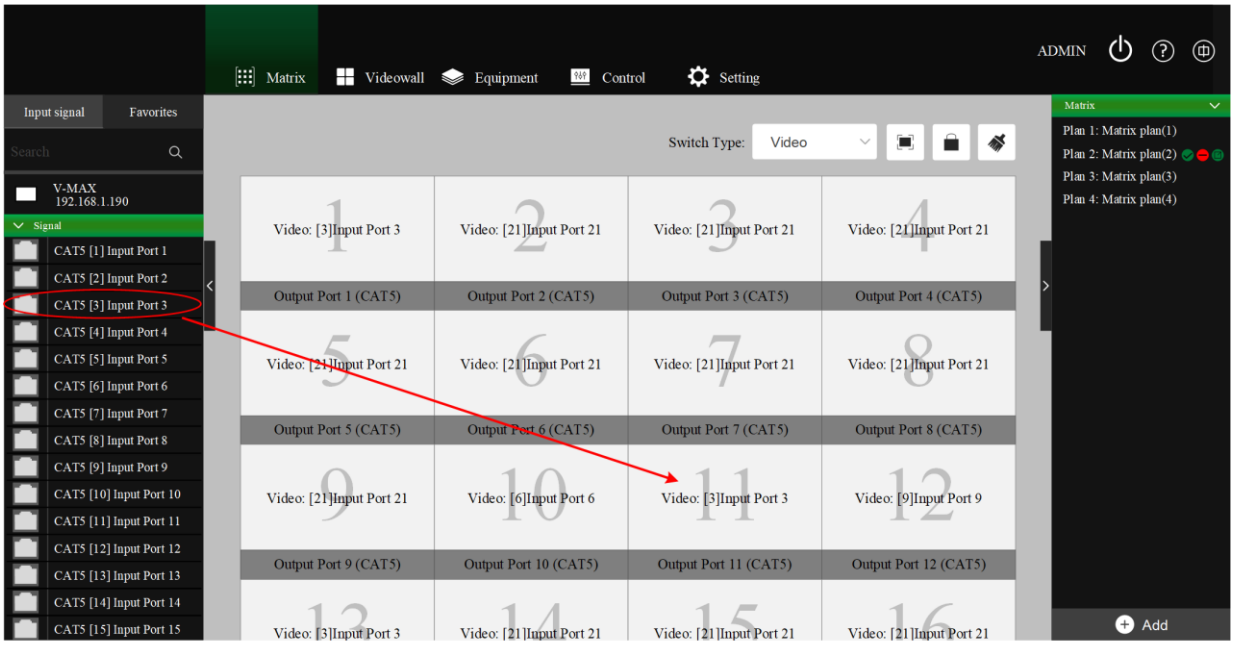


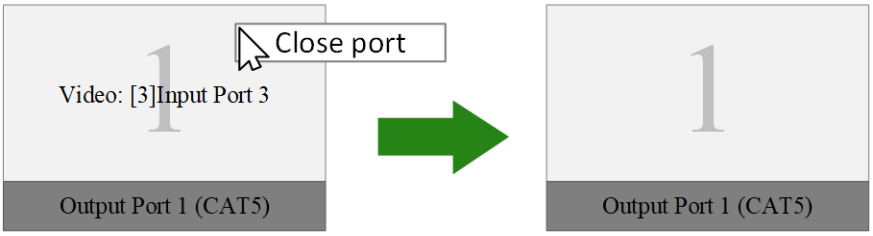
Figure (i) – Main Matrix screen window

Plan creation

Plans can be created very simply and easily through the web browser interface.
First, the inputs and outputs of the matrix need to be set as required for your application. This means selecting all the crosspoints you want to save and disabling all the outputs you don't want to save.
Selecting inputs to specific outputs is achieved by dragging and dropping the required input in the left-hand column to the output in the main central display.
As can be seen in the diagram below, input 3 is clicked and then dragged over to output 11 and then released, overriding the previous setting, and enabling the selection.



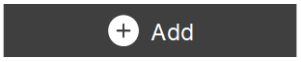
All the necessary outputs should be set to their inputs however, if the Plan need not change an existing crosspoint then you need to disable the output port before saving the Plan. This can be achieved by right clicking the mouse cursor on the output block and clicking 'close port'.



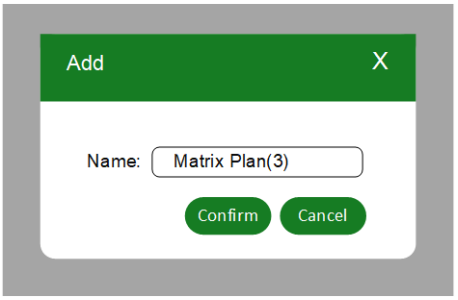
Once closed the output will show no input allocated to it, as seen above.

Saving Plans

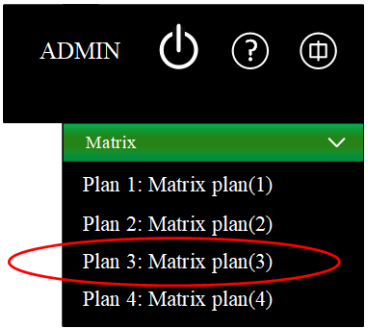
Once the matrix has been configured as you want, a Plan can be saved. To achieve this, click on the Add button on the bottom right-hand column.



This action will bring up a new window asking for a name of the Plan.

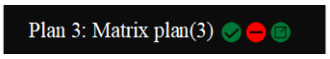


Edit the name if required and then press the confirm button and the new Plan will be created and displayed on the right-hand column, as seen below:



Recalling Plans

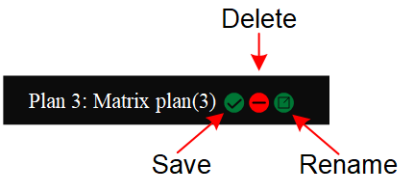
Once the Plan has been created it can be recalled simply by clicking on the appropriate name in the Plan column. This action will immediately re-instate all the crosspoints saved in the Plan and you will see the status of the outputs change on the main central display.



Once clicked, the enabled Plan will then show a group of 3 icons to the left of the name giving the user some options.

Editing, re-Saving and Deleting Plans

The 3 icons to the left of the Plan name allow various functions to be performed on the Plan of Save, Delete and Edit.



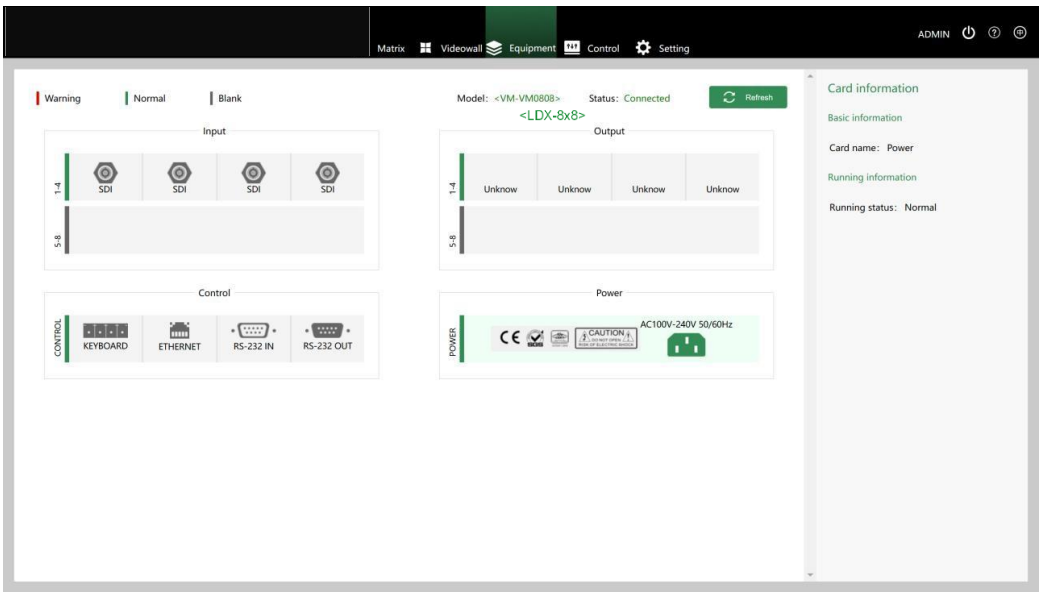
If the Plan name needs to be changed then first press the 'Rename' icon and then make the changes. If you want to alter to the crosspoint configuration, then make the changes by dragging and dropping the required inputs to outputs. Then once you are happy with the changes press the 'Save' icon.
If the Plan is not needed and you don't want it in the list, then simply press the 'Delete' icon and the Plan will be removed from the list.

Chapter 3 – Tab Option – Videowall

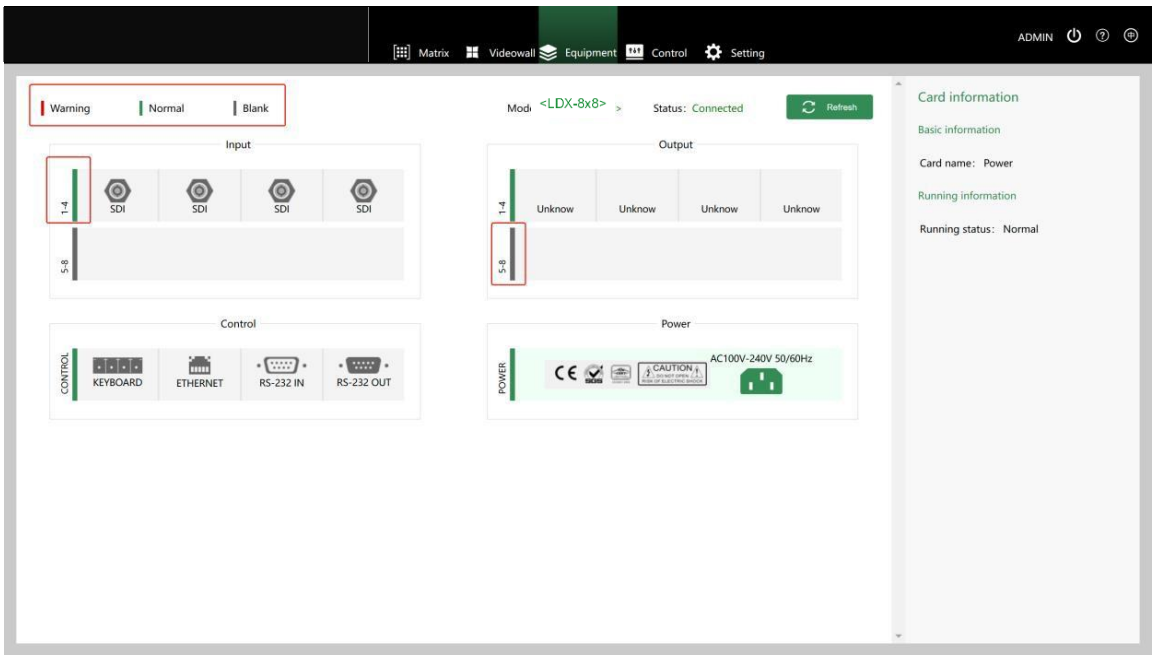
This section is not included in this version of the manual.

Chapter 4 – Tab Option – Equipment

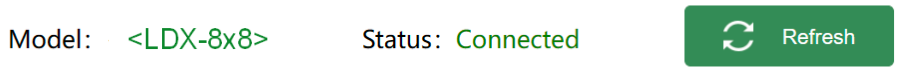
Selecting the equipment tab brings up a diagram of the rear panel showing the card configuration of the matrix. All the optional input and output cards are shown with their signal types.



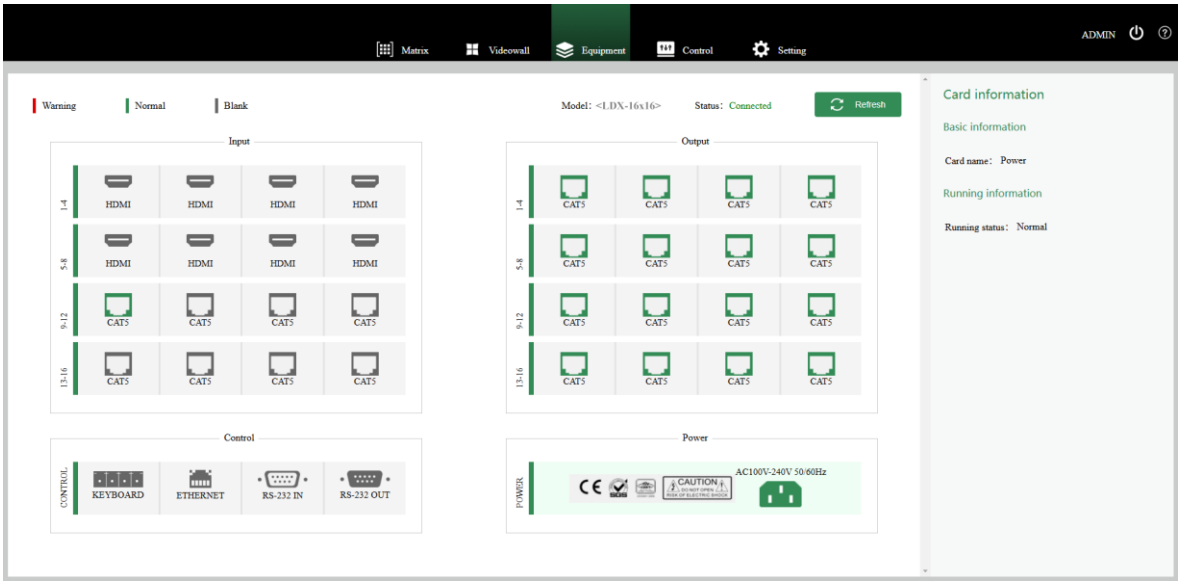
Correct working of each card is indicated by a colour bar to the left of the slot. Red for warming, green for normal and grey for a blank slot, as can be seen below.



The model number and status is shown at the top right-hand side and can be refreshed if new cards are added by 'hot plugging

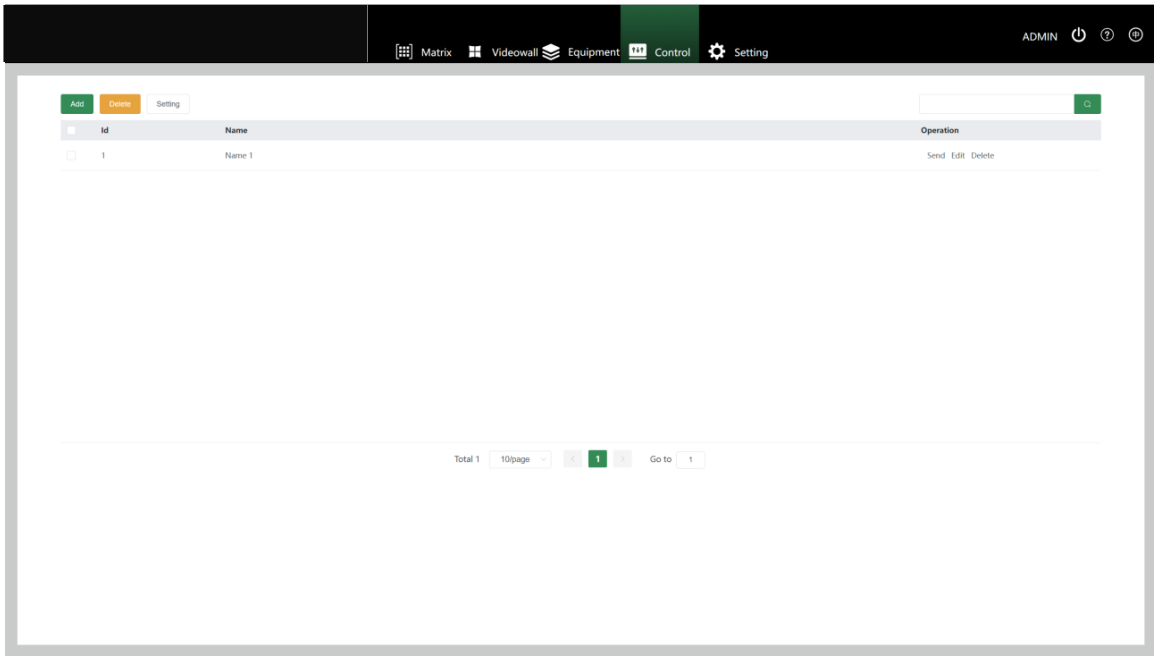


Each card can be individually selected, and the status shown on the right-hand column as shown below:



Chapter 5 – Tab Option – Control

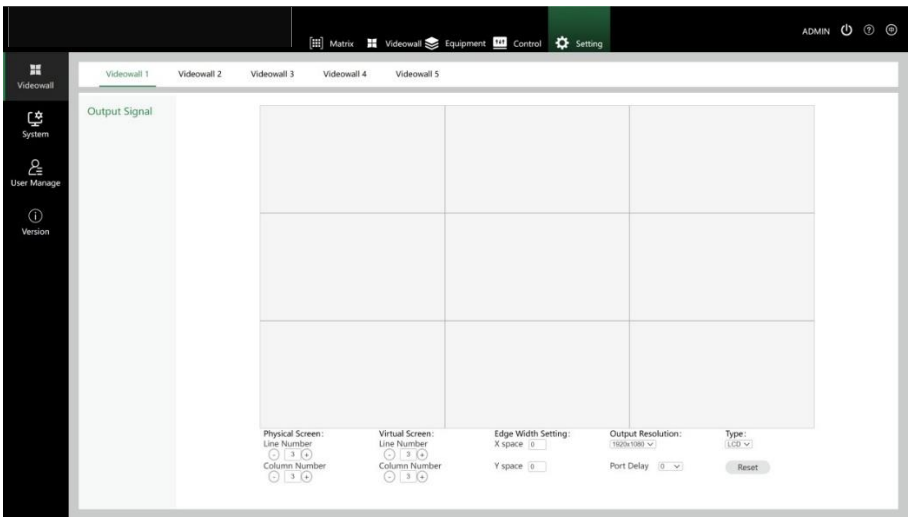
The control section allows control strings to be stored for later use. Serial command in either ASCII or HEX format can be saved and edited for controlling third party equipment. Please see the separate Control Commands User Guide for further information.



Chapter 6 – Tab Option – Settings

The above diagram shows the areas of user interaction and their functions including:

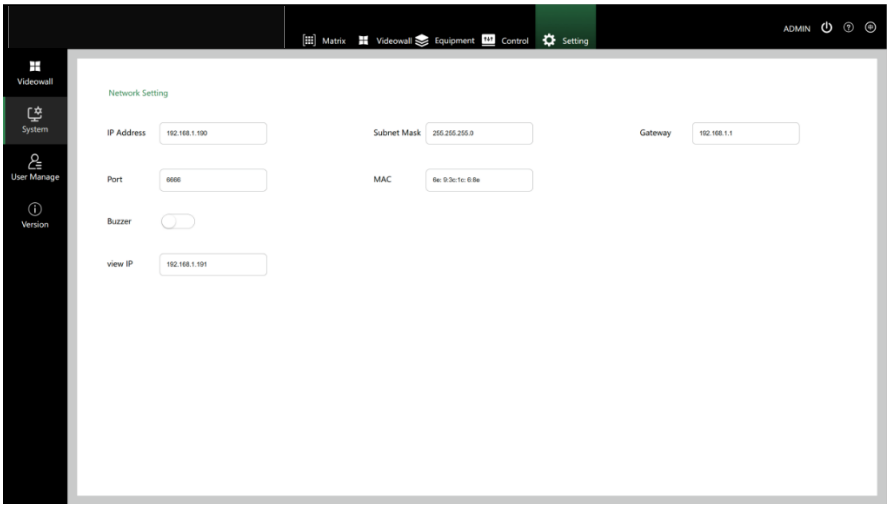
i. Videowall
ii. System
iii. User management
iv. Software version



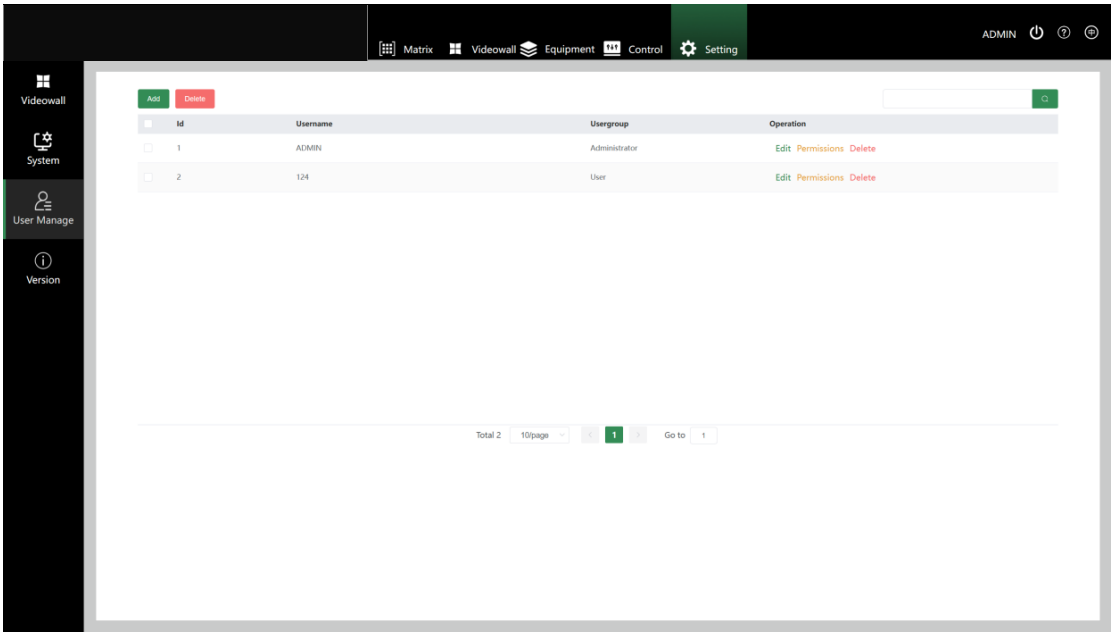
<u>i. Videowall</u> – Up to 5 different configurations can be stored for later use in the main Videowall tab control. Features include the number of displays required and their position also, specifying the display resolution and bezel adjustment to portray the best image.

<u>ii. System</u> – the system tab shows the current network settings including:

a) IP Address
b) Subnet Mask
c) Gateway
d) Port Number
e) MAC Address



iii. User Management – Additional users can be added to allow limited control of the web browser. You can set new username and password by clicking the Add button, and then click Save to save your action. Note: An administrator can edit all user passwords, and users with management permission can edit their own passwords. You can remove a user by clicking Delete after selecting the specific user.



Permissions – functions specific to that particular user can be enabled or disabled depending on authority. Please note that only an administrator is entitled to assign permissions, the permissions table is shown in the following figure.