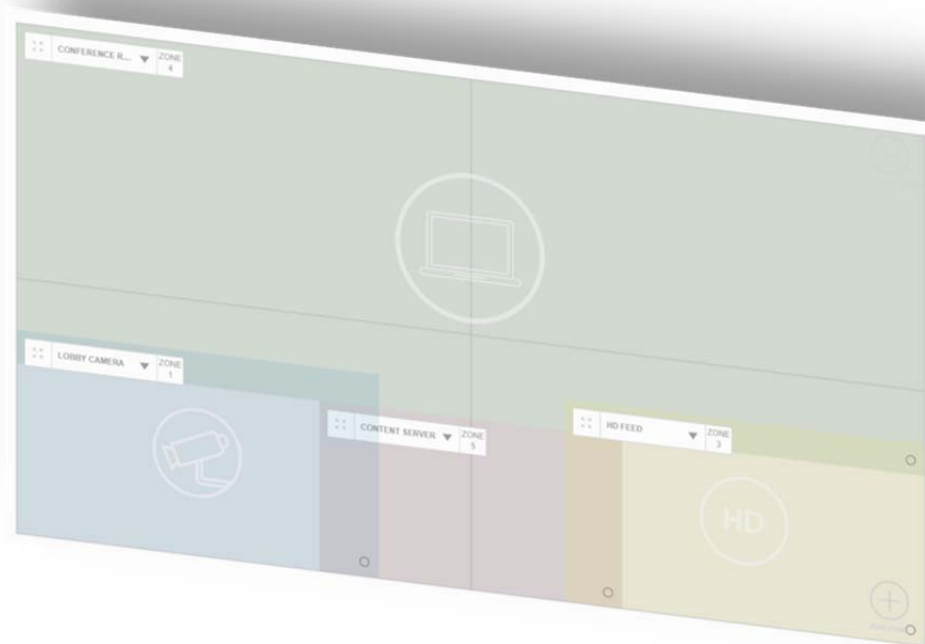


WallDirector-RPS and Video Controller



Trademark Credits

Clarity® Matrix® is a trademark of Planar Systems, Inc.

Planar® Big Picture™ is a trademark of Planar Systems, Inc.

Windows™ is a trademark of Microsoft Corp.

Apple® is a registered trademark of Apple Inc.

Google® is a registered trademark of Google LLC.

Mozilla® is a registered trademark of the Mozilla Foundation.

The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI Trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

All other names are trademarks or registered trademarks of their respective companies.

Disclaimer

The information contained in this document is subject to change without notice. Planar Systems, Inc. makes no warranty of any kind with regard to this material. While every precaution has been taken in the preparation of this manual, Planar shall not be liable for errors or omissions contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

Warranty and Service Plans

Planar warranty and service plans will help you maximize your investment by providing great support, display uptime, and performance optimization. From post-sale technical support to a full suite of depot services, our services are performed by trained Planar employees. When you purchase a Planar product, you get more than a display, you get the service and support you need to maximize your investment. To find the latest warranty and service information regarding your Planar product, please visit <http://www.planar.com/support/>

Manual Part Number: 020-1341-00K

Contents

Introduction	6
WallDirector UI	6
Establishing a LAN Connection (Windows)	7
On-Screen Display (OSD)	10
Video Controller Front Panel Display	11
WallDirector Web UI	12
General System Functions	14
User Icon	14
Admin	15
Settings	16
Pencil	17
Admin Tools	18
About	18
Saving a System Configuration	18
Firmware Updates	22
Factory Reset	27
System Reboot	27
Adding Users (available to “Admin” User only)	28
LDAP Settings (available to “Admin” User Only)	32
Security Settings (available to “Admin” User only)	34
Command Console	35
Settings	36
Network Setup	36
Certificates Management	38
Network Status	41
Date and Time	42
Diagnostics	43
Email Settings	44
Serial Settings	45
Alerts	46
SNMP Settings (available to “Admin” User only)	49
System Settings	51
Syslog (available to “Admin” User only)	53
Logs	54

Notes	55
Bottom Button Bar Features.....	56
Setup Tab.....	62
Video Wall.....	63
Video Controllers	89
Video Controller I/O	97
Sources	101
Zones	104
Power Supply Setup	109
Power Switches Setup	111
Sensor Hub Setup	113
Monitor Tab.....	115
Presets Tab.....	136
Scale Mode.....	141
Justify.....	141
Mobile Device Access.....	146
OSM.....	149
Remote	149
IR Command Protocol	150
Remote Operation.....	153
Browsing Menus.....	153
Changing Values	153
Menus	154
Main Menu	154
Big Picture Menu	155
Picture Setup Menu.....	156
Presets Menu.....	157
Advanced Settings Menu	158
Information Menu	185
Video Controller Front Panel.....	193
Main Menu.....	194
Power & Brightness Menu.....	195
On-Screen Menu	196
Information Menu	197
Advanced Settings Menu	202

Index..... 207

Introduction

The Planar Video Wall System includes a Web User Interface to get the optimum performance of the panels connected to the system. There are two additional user interfaces, the On Screen Display and the Video Controller Front Panel Display, that have similar functionality to the WallDirector™ Web UI and are useful during installation, depending on how the final system is installed. This manual provides a full description of each of these three interfaces and the functionality of the commands within each interface, with an emphasis on the WallDirector software.

WallDirector UI

The WallDirector software is a web browser-based user interface accessed through the WAN/LAN connection on the video wall system. To use the WallDirector software, you must configure the equipment accessing the web-based software to be on the same network as the WallDirector and use the IP address of the system master. Refer to the specific product's *Installation Guide* for how to configure a system master.

You can locate the IP address of the master in one of the following ways:

- Video controller front panel display
- On-Screen Display (OSD)
- RS232 command protocol (refer to the *RS232 Guide* for connection information and commands)

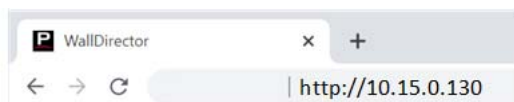
You can also use the OSD and RS232 command protocol to set up the network configuration prior to accessing the system with the WallDirector software.

After you have connected your equipment to the same network as the video wall, follow these steps to access the WallDirector software:

- 1 Open a supported Web browser:
 - Google Chrome™ v.62 or later
 - Microsoft Edge v.15 or later
 - Mozilla® Firefox® v.57 or later
 - Apple® Safari® v.11 or later

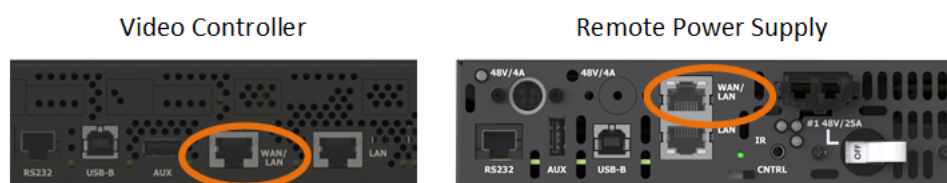
Note: Other browsers or versions may work; however, the performance of any other than listed above has not been validated by the factory.

- 2 Enter the IP address of the system master in the address bar and click the **Go** button. This loads a locally hosted system web page into the browser.



Establishing a LAN Connection (Windows)

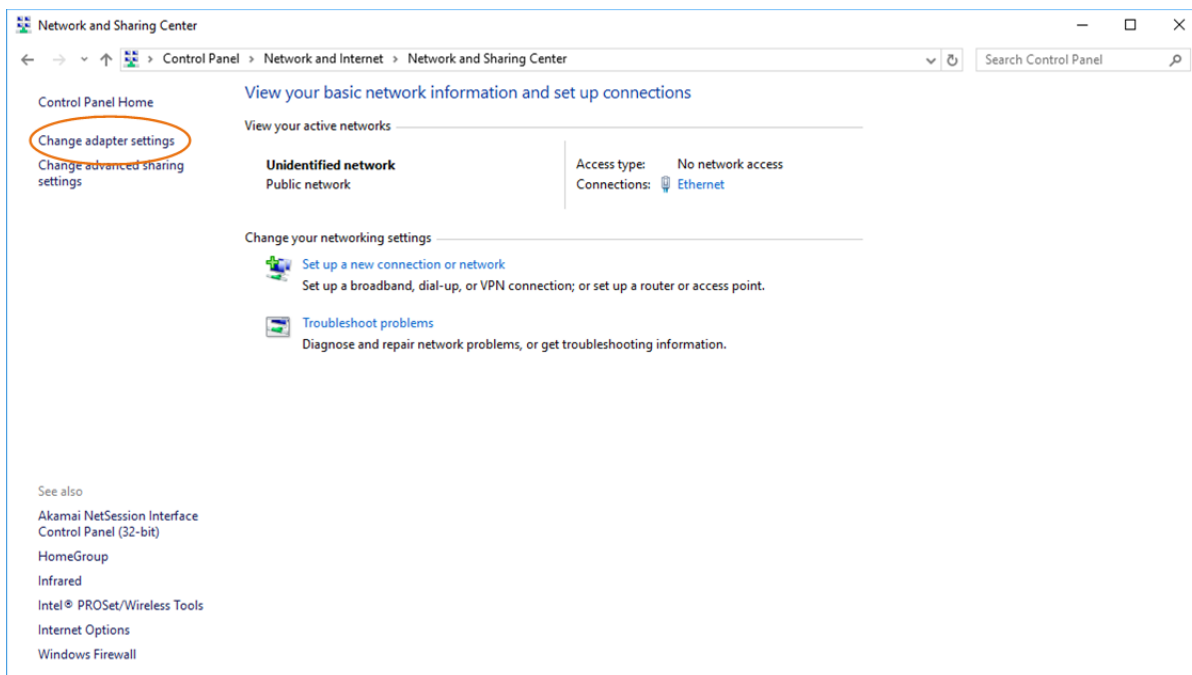
In the absence of a DHCP network, the WallDirector software may still be used with a local PC connected to the system network. To do this, a physical LAN connection between the PC and the system will need to be made by an Ethernet cable plugged into a component that has been set as the master.



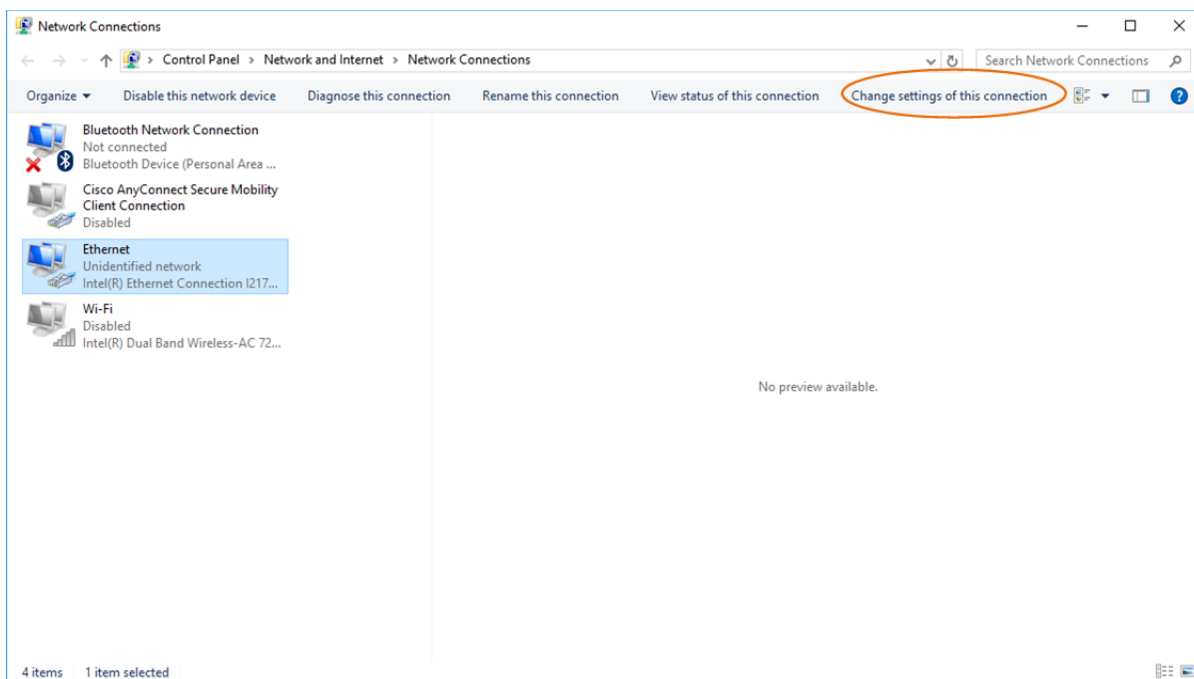
The default IP address for the master is 192.168.0.12. If a supported browser is unable to connect to this address, it may be necessary to configure the network parameters on the PC to make sure it is on the same network as the system. Follow the steps below for a Windows-based system to set up these parameters.

Note: This process works for systems where the default IP address has been changed; however, the data entered below will be specific to the changed IP address. Refer to the serial commands on how to obtain the network configuration data.

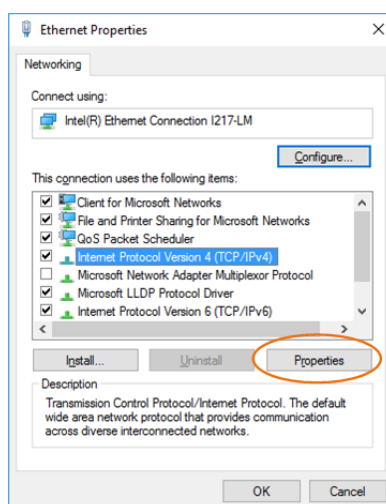
- 1 On the PC, open the Control Panel and browse to **Network and Internet > Network and Sharing Center** and choose **Change adapter settings**.



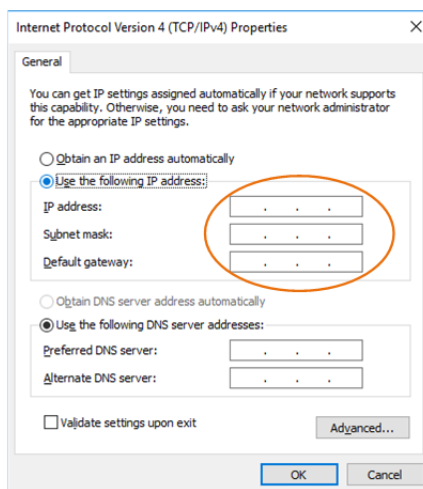
- 2 Select the adapter that is connected to the system master and click **Change settings of this connection**.



- 3 Select **Internet Protocol Version 4 (TCP/IPv4)** and click the **Properties** button.



- 4 In the dialog box that opens, select the **Use the following IP address** option and enter the following data:



IP address: 192.168.0.10
 Subnet mask: 255.255.255.0
 Default gateway: 192.168.0.1

Note: Any IP Address between 192.168.0.1 and 192.168.0.31 may be entered except for 192.168.0.12. Addresses beyond 192.168.0.31 may be used as default IP Addresses for other connected equipment.

- 5 Click **OK** and close the previous windows for the changes to take effect. Access to the system master will now be available via the default IP address.

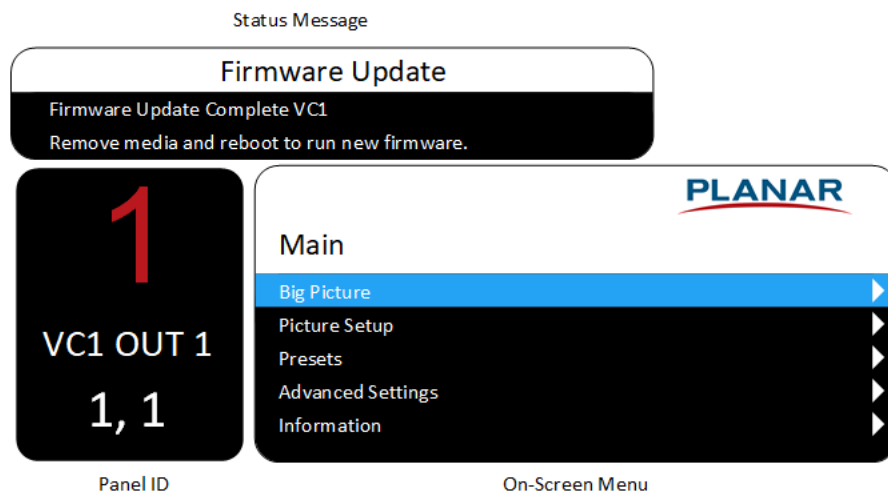
For details on using the WallDirector, see "WallDirector Web UI" on page 12.

On-Screen Display (OSD)

The OSD is accessed through an IR sensor connected to the video wall system with the remote control. The IR sensor can be connected to any piece of equipment within the system; however, for best functionality, connection to the system master is recommended. See the *Installation Guide* for IR sensor installation. The OSD is comprised of three distinct parts: the On-Screen Menu (OSM), Panel ID and Status Message. The OSM is capable of doing basic functions within the system, except there are significant limitations to image layout capabilities. Using the WallDirector software for layout is recommended.

For details on using the OSM, see "OSM" on page 149.

OSD



Video Controller Front Panel Display

The front panel display is on every video controller in the system. The front panel display is accessed through the front panel keypad next to the front panel display. Each is capable of accessing the system parameters found in the display for all components in the system. It is not necessary to use the front panel display on each component.

The front panel display includes a limited set of parameters that can be changed.

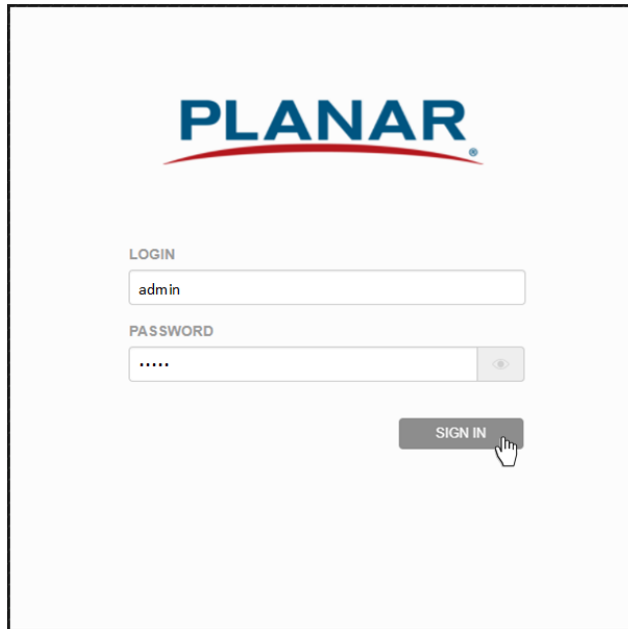
For details on using the front panel display, see "Video Controller Front Panel" on page 193.



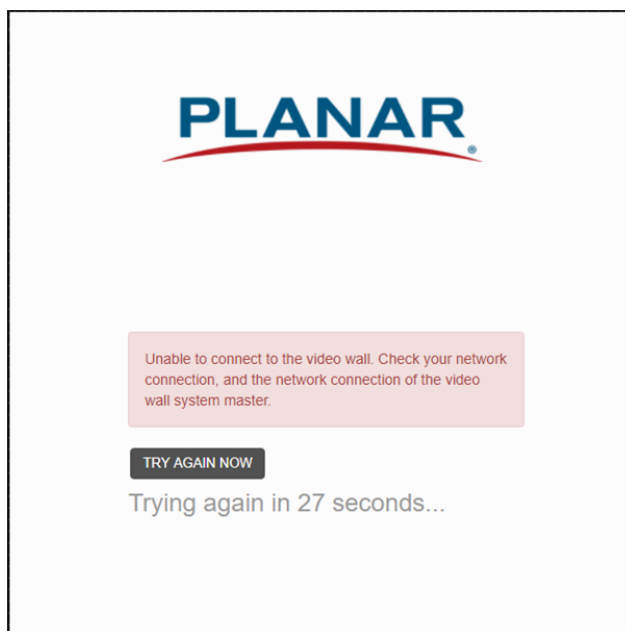
WallDirector Web UI

When a new session is started by opening a web browser window and directing it to the appropriate IP address, the system master will display the login page to access the features within the software.

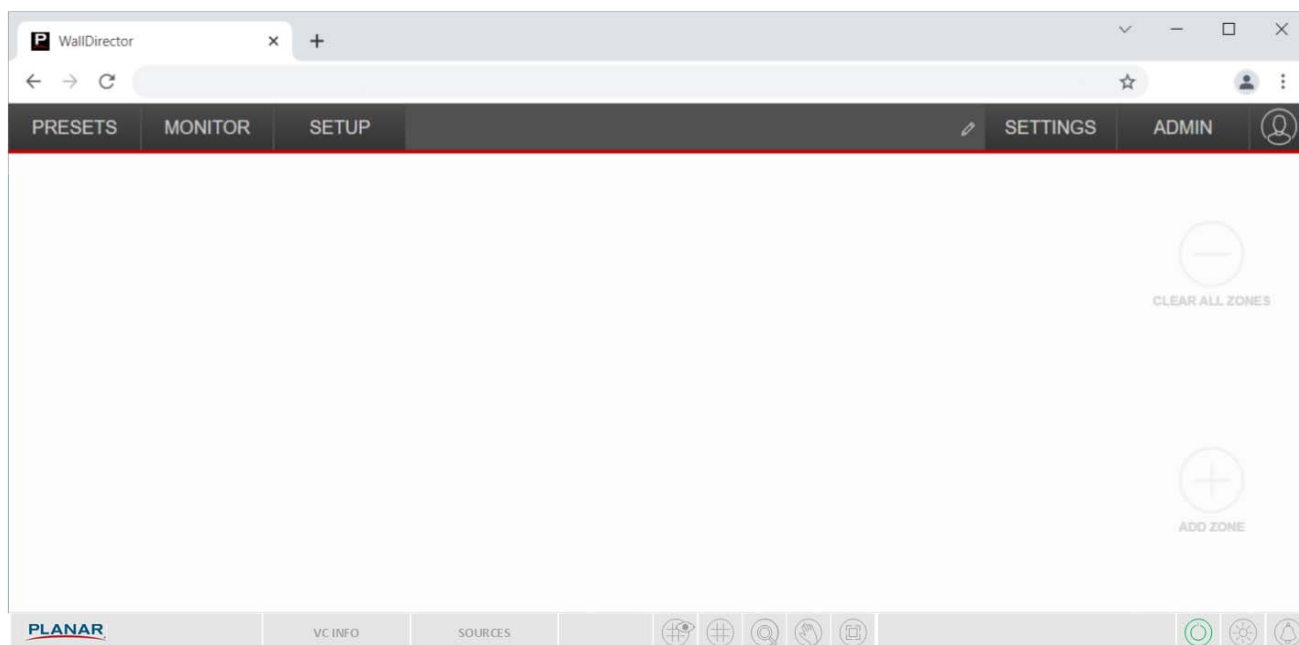
The default username is "admin" and the default password will be the serial number of the master component that was physically configured. This password may be changed after login (see "Adding Users (available to "Admin" User only)" on page 28) to a more convenient password, however, note a factory reset will revert the password back to the serial number of the master component. Additionally, if the master component is changed, this password will be the serial number of the new component chosen as the master component.

The image shows a screenshot of the PLANAR WallDirector Web UI login page. At the top center is the PLANAR logo, which consists of the word "PLANAR" in blue capital letters with a red swoosh underneath. Below the logo, the word "LOGIN" is displayed in small, light gray capital letters. Underneath "LOGIN" is a text input field containing the text "admin". Below this field, the word "PASSWORD" is displayed in small, light gray capital letters. Underneath "PASSWORD" is a password input field with five dots (.....) and a small eye icon to its right. At the bottom right of the login area is a gray button with the text "SIGN IN" in white capital letters. A mouse cursor is pointing at the "SIGN IN" button.

Note: If at any time the browser shows the following window, it means the system is no longer reachable at the IP address indicated. This may be due to a system reboot or other temporary disconnection. Click the refresh or reload page function of the web browser to reload the WallDirector software. If the system is ready and no other issues are present, the system should be recognized again by the browser. If this does not work, check the IP address and physical connections to the system.

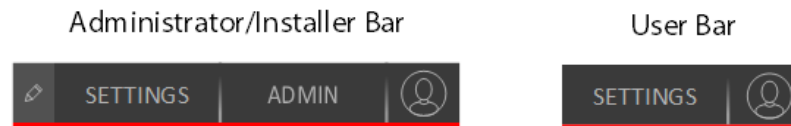


Once the web page loads into the browser, the software can be used to do a multitude of functions to set up the video wall and manage how the content is displayed. Additionally, access may be set and status information can be gathered from various menus, indicators and popup messages.



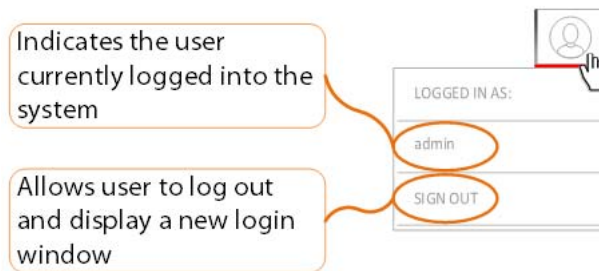
General System Functions

Starting on the right-upper corner of the window, there are four icons/text that can be selected for the purpose of general software setup items. Depending on the user login, this will look different depending on the level of access granted to different user logins. Menus beneath the main headings may look different as well.



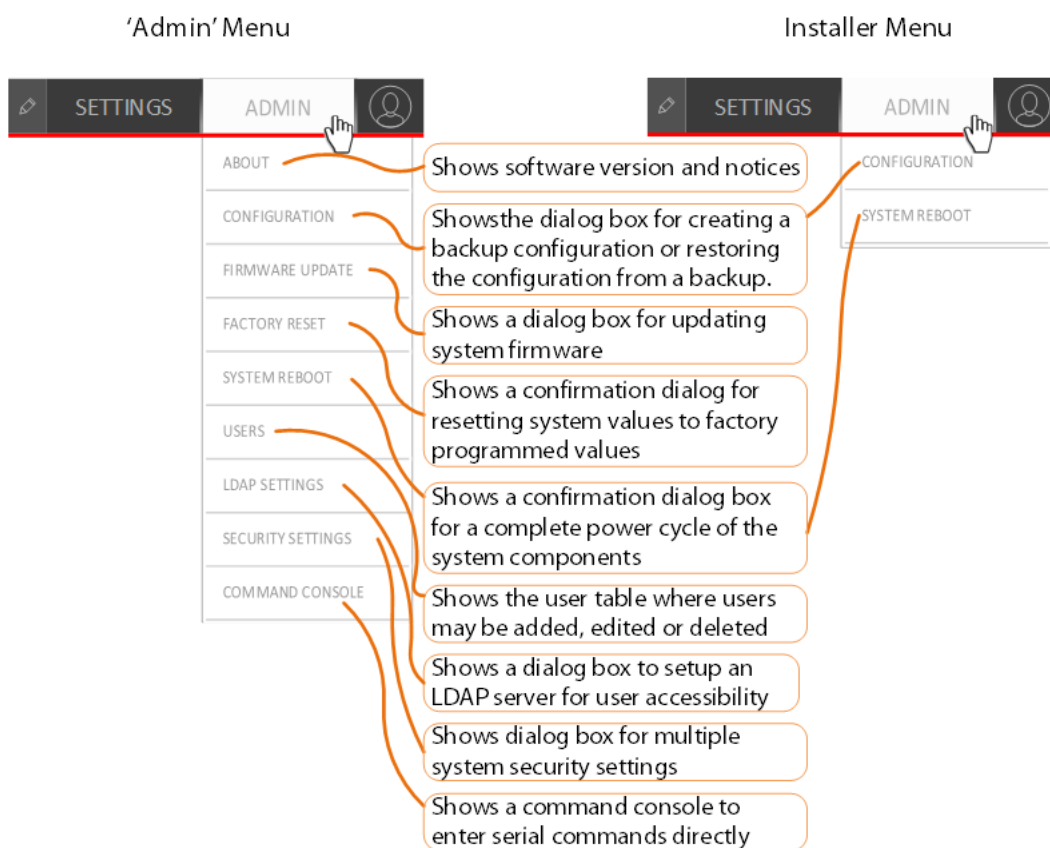
User Icon

This selection is the same no matter which user may be logged into the system.



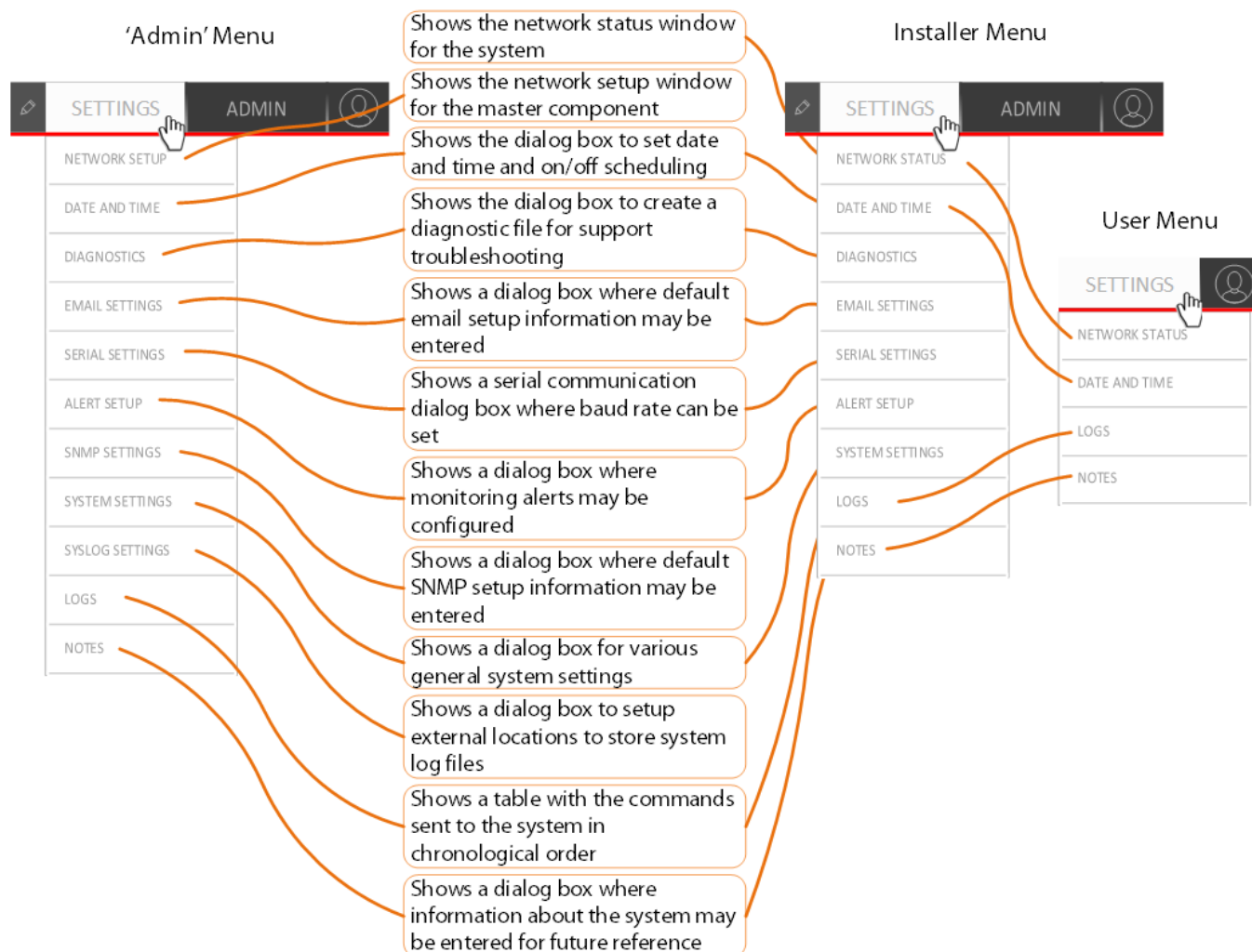
Admin

Only available for users with administrative or installer privileges, this allows for more technical setup and diagnostic selections. There are two designations for administrative users; the default “Admin” user has access to a full selection of items as noted below. Checking the Installer box when setting up a user does not allow access to the “Admin” User options, but pares down the operations to the items shown in the Installer Menu below.



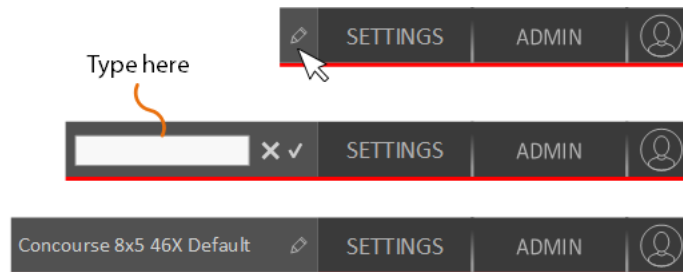
Settings

The **Settings** menu varies depending on if the logged in account has administration, installer or user rights.



Pencil

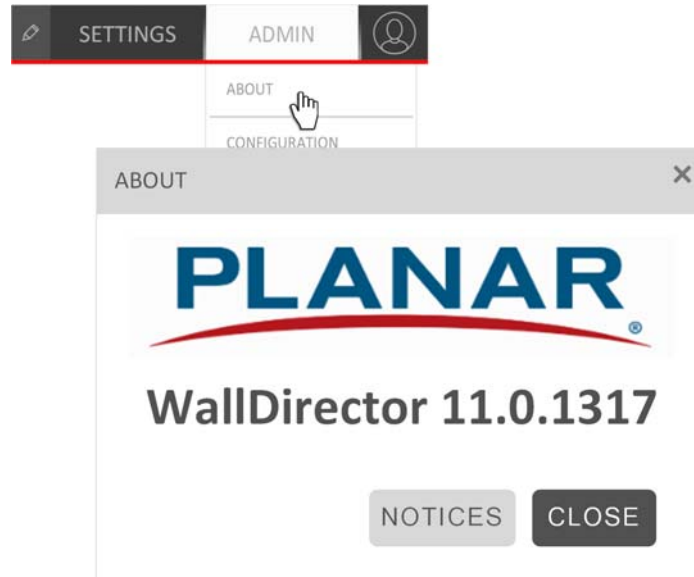
The pencil icon appears only for the Admin and installers and is for creating a unique name for the configuration. This allows for an easy way to know which video wall is being communicated with. The name also shows up in system summary and diagnostic files for easy recognition. The name is restricted to a maximum of 128 characters.



Admin Tools

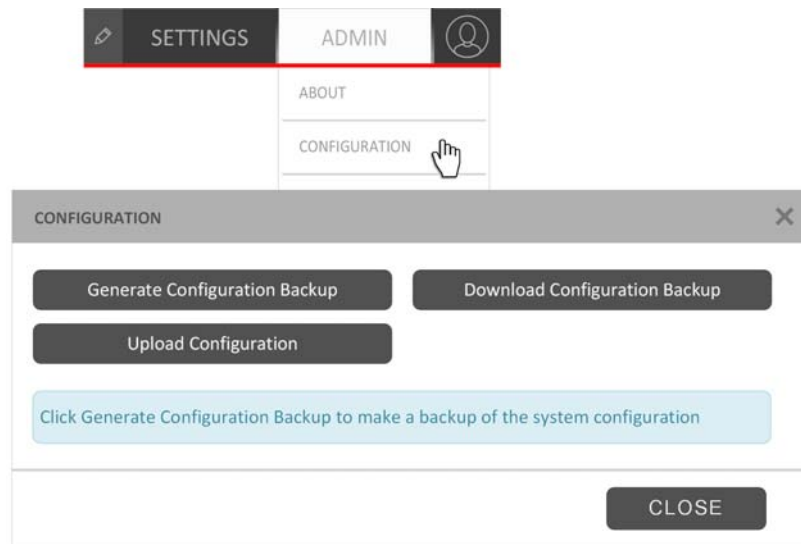
About

System Firmware level and Legal Notices may be found within this selection.

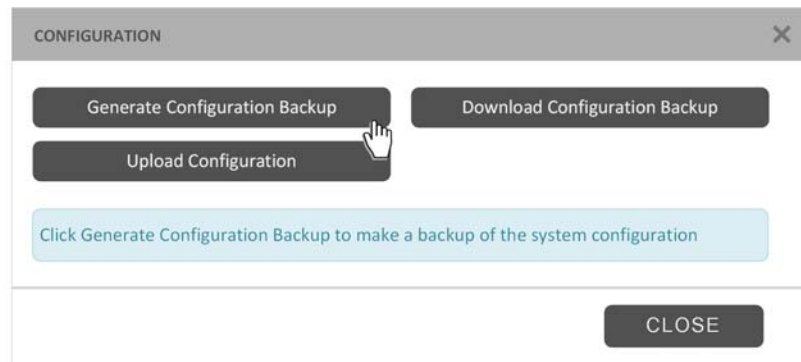


Saving a System Configuration

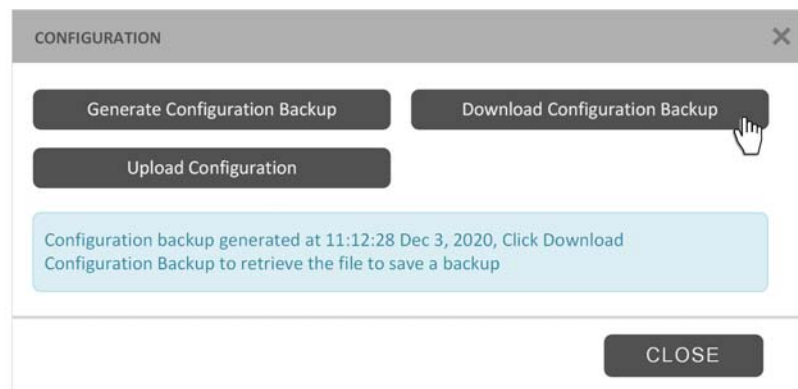
Saving a configuration will allow the setup data for the entire system to be backed up both locally on the system master and on a USB drive. The latter can be used to restore a system or can possibly be used as a basis for identical systems installed at a different location. Selecting **Configuration** will display a dialog box.



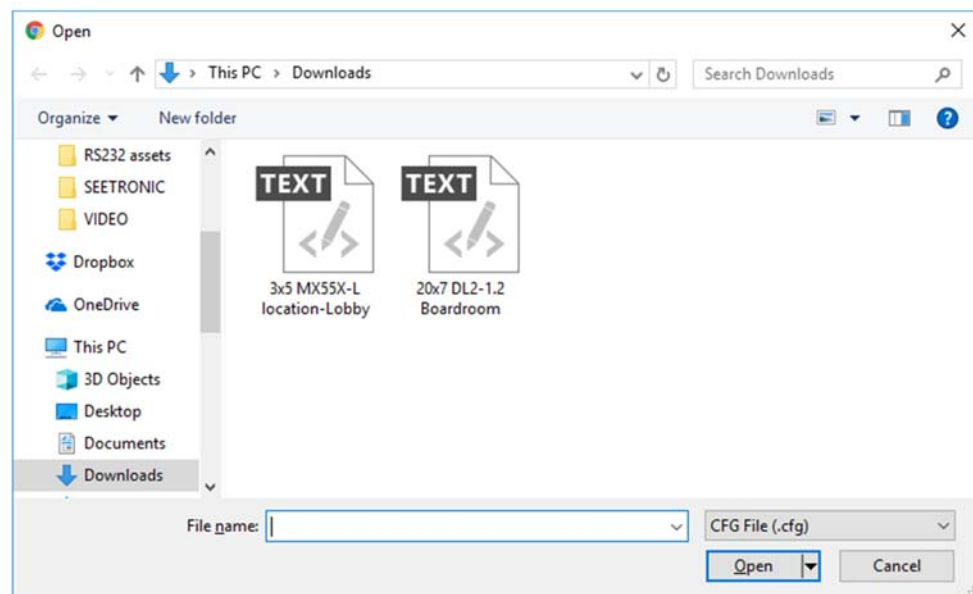
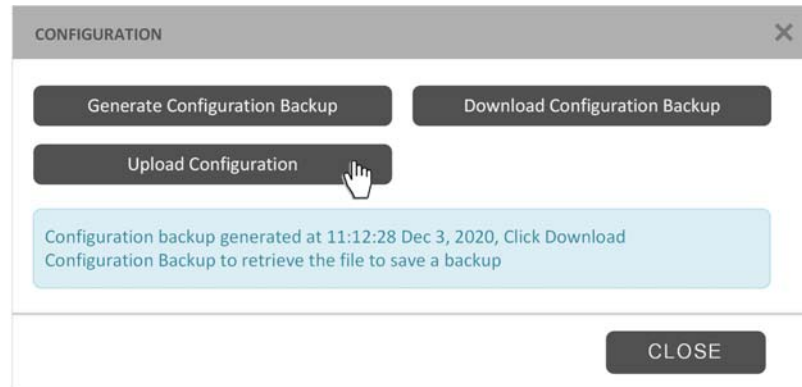
Clicking **Generate Configuration Backup** will save a copy of the current configuration. When a backup is generated, the information window on the dialog box confirms the time and date of the backup.



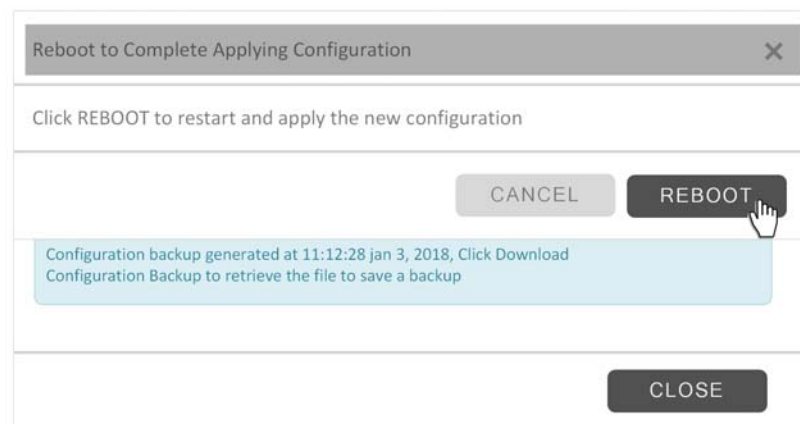
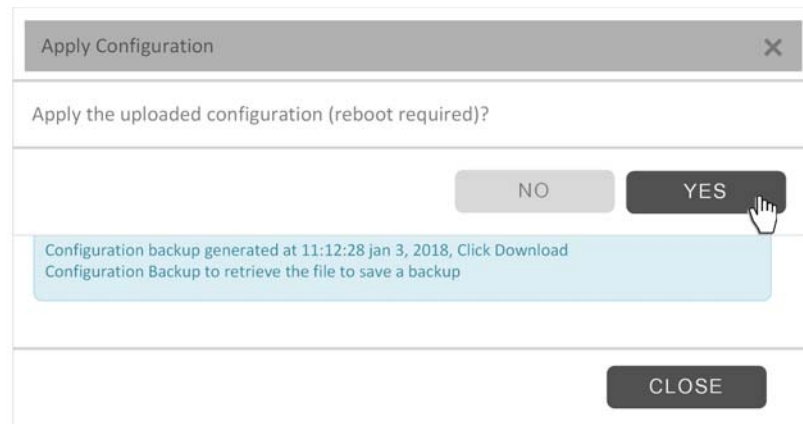
Clicking **Download Configuration Backup** will save the file to the Download folder on the connected computer. By default, downloaded configuration files are given a unique name that ends with *.cfg*. The file downloaded may be renamed to designate status and/or the date of the configuration for easy recognition later. Click **Close** when done.



Clicking **Upload Configuration** will open a file browser to select the configuration that is desired for upload to the system.



After you select the appropriate configuration file, a confirmation dialog will appear. Clicking **Yes** will open a second dialog box requesting that the system be rebooted. Clicking **No** in the Apply Configuration dialog box or **Cancel** in the Reboot dialog box will cancel the upload configuration selection.



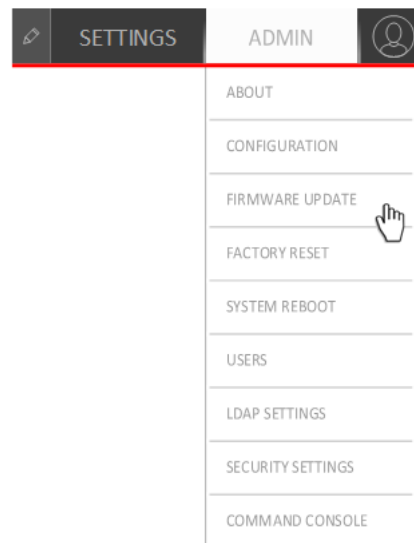
Firmware Updates

Note: It is recommended after connection of all equipment the firmware be updated to the latest revision. The latest firmware is located on the Planar Portal website (<http://partners.planar.com/>).

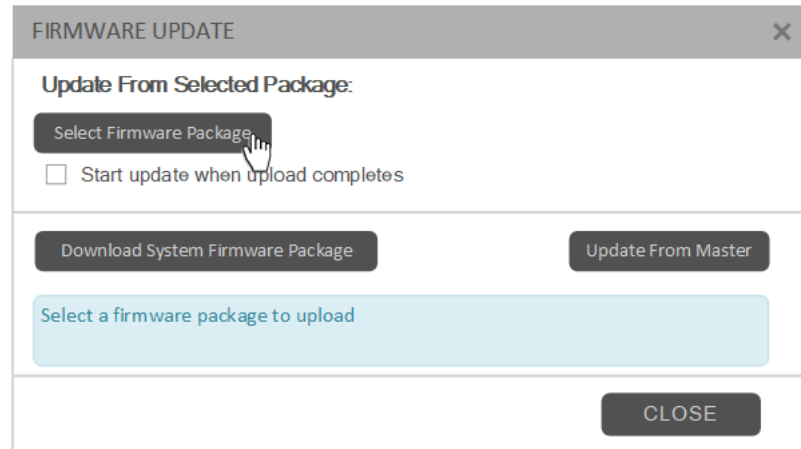
Component firmware may be updated through the settings menu. Selecting **Firmware Update** will open a dialog window for the process. Updating firmware through the WallDirector software will automatically update all equipment connected to the master. Any equipment that may not be connected may need to be updated at a later date.

Depending on the state of the equipment, there are two methods for updating the firmware from the Firmware Update menu.

- 1 Select **Firmware update** from the **Settings** drop-down menu, which will bring up a dialog box to select a firmware package.

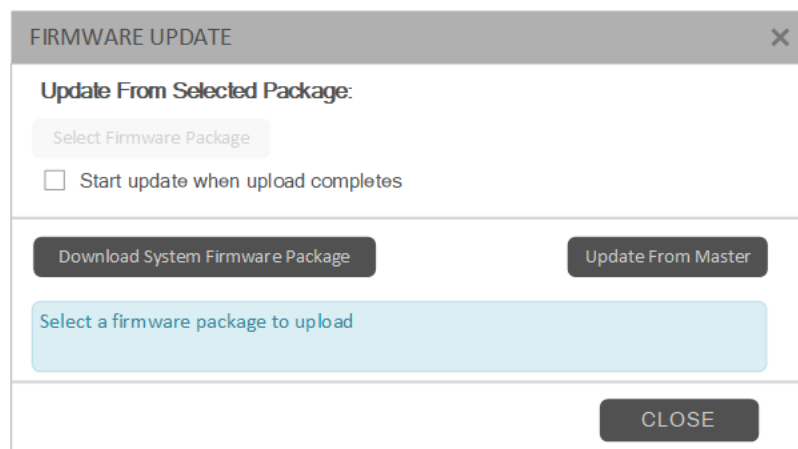
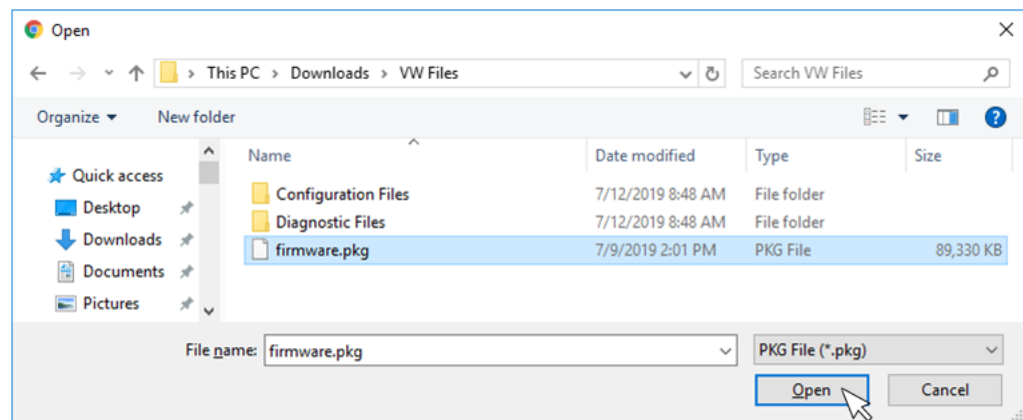


If the system needs to be completely updated, use the following method. If it is desired that all components of the system be on the same firmware version of the master component, then skip to step 4.

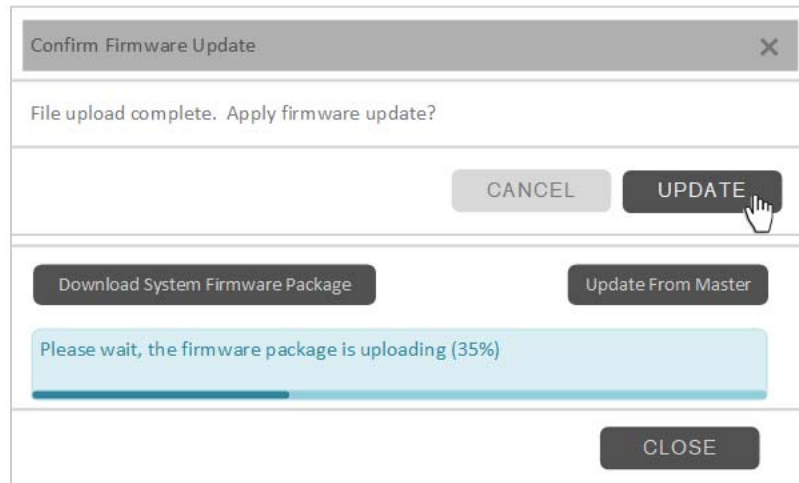


Note: Checking the **Start update when upload completes** box will automatically start the update process on all components. **Clicking Update** in step 3 will not be necessary.

- 2 A file browser will open when **Select Firmware Package** is clicked, allowing browsing to a connected file location. Once a file is selected, it will begin uploading to the equipment.



- 3 Once the file has uploaded, a confirmation box will appear to begin updating the firmware. Once updating starts, the dialog box may be closed



Confirm Firmware Update

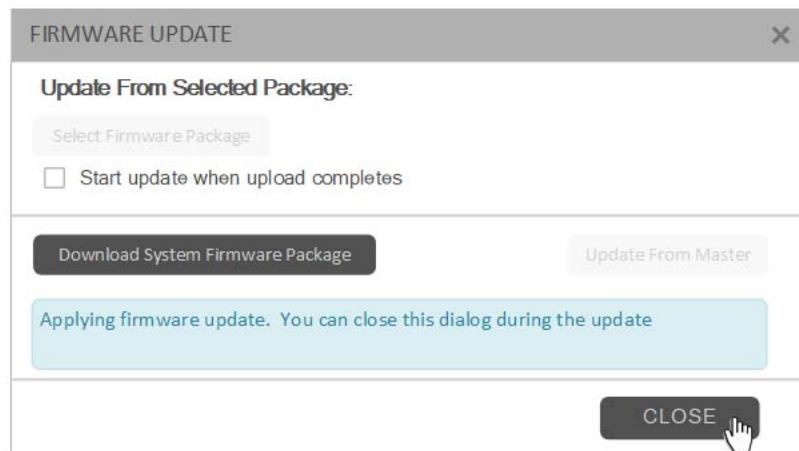
File upload complete. Apply firmware update?

CANCEL UPDATE

Download System Firmware Package Update From Master

Please wait, the firmware package is uploading (35%)

CLOSE



FIRMWARE UPDATE

Update From Selected Package:

Select Firmware Package

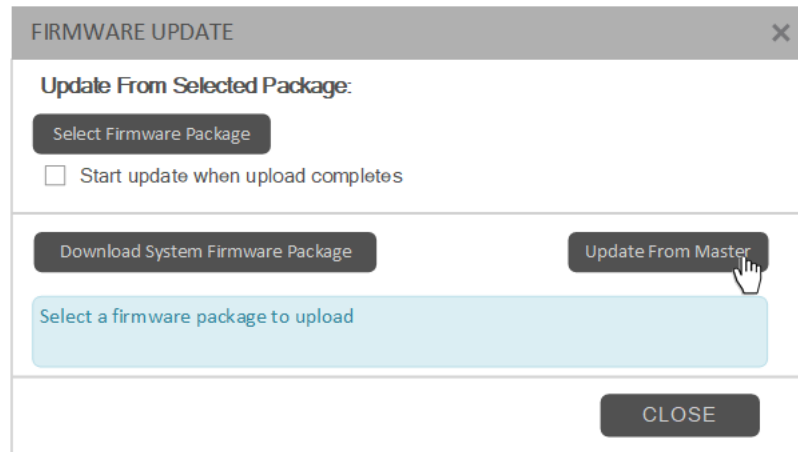
☐ Start update when upload completes

Download System Firmware Package Update From Master

Applying firmware update. You can close this dialog during the update

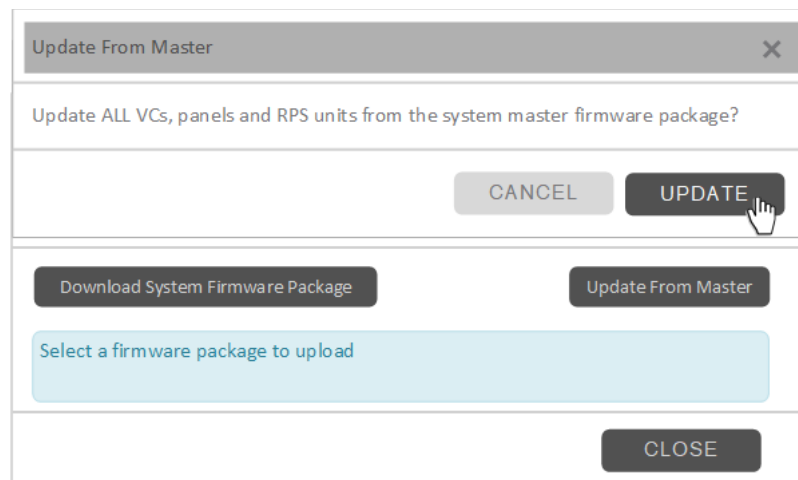
CLOSE

- 4 In some cases, such as a replacement component has been added and is not the same firmware version of the system, the following method may be of benefit.

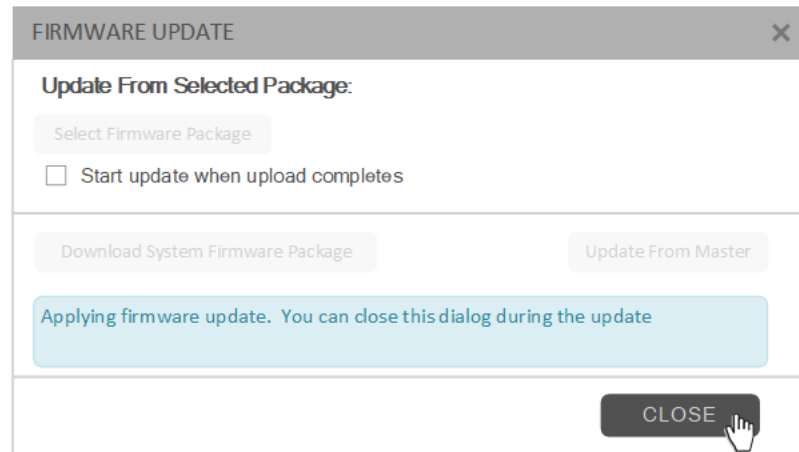


This will download the current version of the master component to all connected equipment and update to that version.

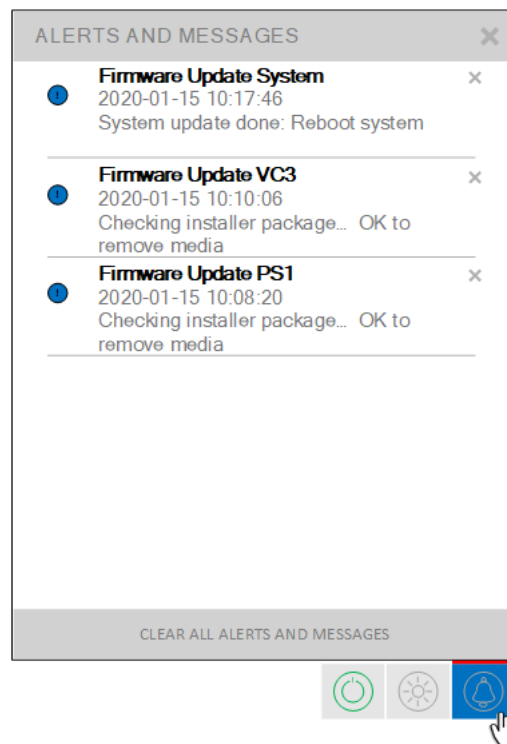
- 5 Verify that all equipment is to be updated. Selecting update will close all dialog boxes as the system processes the request.



- 6 During the firmware update, re-opening the dialog box will show the update selections grayed out until after the firmware update is complete.

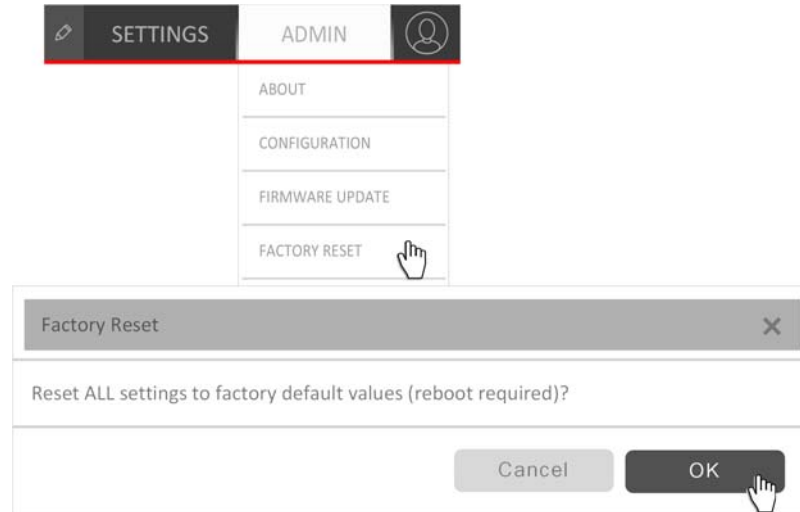


- 7 Status of the update will be noted in the System Alerts section (see "Bottom Button Bar Features" on page 56). Once it is indicated all firmware has been updated, a system reboot will be required for changes to take effect.



Factory Reset

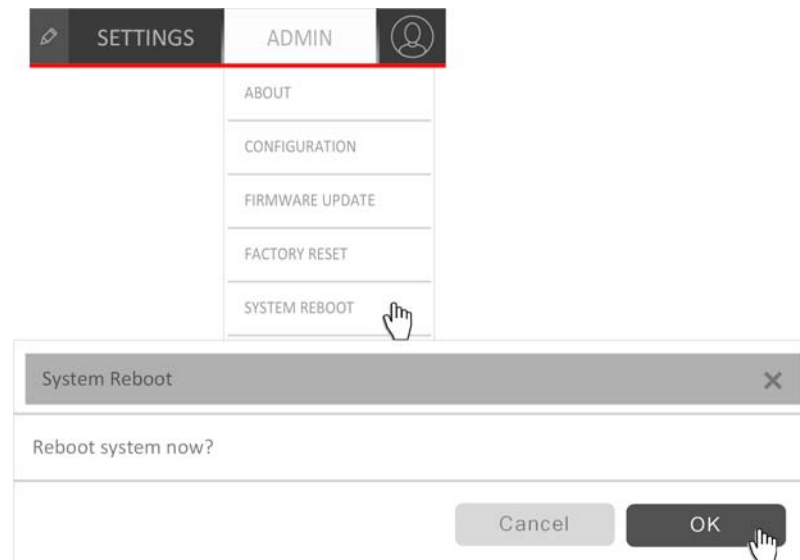
This selection will allow for removing all configuration data and reverting the system back to factory settings except for the panel color balance settings. This will be followed by a confirmation dialog box. A reboot will be required to take effect.



System Reboot

Selecting this menu item will perform an electronic reboot of the system.

During reboot the system will be unavailable. Try to reload the page after three minutes if it does not reload automatically.



Adding Users (available to “Admin” User only)

Add users by selecting **Admin** and then **Users**. The following table will appear showing the users that are currently set up in the system.

Note: admin is the default administrative user and it may not be deleted; however, the password may be changed from its default setting.

SETTINGSADMIN

USERS

Login	First Name
admin	

ABOUT

CONFIGURATION

FIRMWARE UPDATE

FACTORY RESET

SYSTEM REBOOT

USERS

LDAP SETTINGS

SECURITY SETTINGS

COMMAND CONSOLE

Name	LDAP	Installer
		✓

NEW USER

First<1>Last

CLOSE

Click **New User**, which will display a dialog box for entering the new user's relevant information. Only username and password with matching confirmation are required fields for this dialog box. However, it may be easier to add more information to distinguish between users. After entering the needed data, click **Apply** for the changes to take effect.

WallDirector supports LDAP for login permissions to the system. A checked box indicates that the user account was created through the LDAP system.

Note: Selecting the **Installer** check box will give that user rights to change the system as the default admin user EXCEPT for the security denoted items (see "Admin" on page 15).

The screenshot displays the 'USERS' management interface with a 'New User' dialog box open. The dialog box contains the following fields and controls:

- First Name:** Text input field containing 'Robin'.
- Last Name:** Text input field containing 'Michaels'.
- Login:** Text input field containing 'Rmich', followed by a green checkmark.
- Password:** Password input field containing '*****'.
- Confirm Password:** Password input field containing '*****', followed by a green checkmark.
- Installer:** A checkbox that is currently unchecked.
- Buttons:** 'Cancel' and 'Apply' buttons at the bottom right of the dialog. A hand cursor is pointing at the 'Apply' button.

In the background, the 'USERS' table is visible with columns 'Login' and 'First Name'. The first row shows 'admin' in the 'Login' column. At the bottom of the main window, there is a 'NEW USER' button with a hand cursor, a pagination control showing 'First < 1 > Last', and a 'CLOSE' button.

A check will indicate the user has configuration privileges

Click this icon to edit the associated user

Click this icon to delete the associated user

USERS

Login	First Name	Last Name	LDAP	Installer		
admin				✓		
Rmich	Robin	Michaels				

NEW USER

First < 1 > Last

CLOSE

Multiple users may be added to a system if needed.

Note: Blue characters or blue highlighted characters are valid selections for the browsing at the bottom of the window.

USERS						
Login	First Name	Last Name	LDAP	Installer		
admin				✓		
bmil	Bob	Miller		✓		
eegg	Sam	Fox				
president	Hardy	Taft	✓			
Raven	Edgar	Poe				
Rmich	Robin	Michaels				
wally	Will	George		✓		

NEW USER

First < 1 2 > Last

CLOSE

Click this to browse to the first page of users

Click this to browse to the previous page of users

Clicking these will browse to the selected page of users

Click this to browse to the next page of users

Click this to browse to the last page of users

LDAP Settings (available to "Admin" User Only)

WallDirector supports Lightweight Directory Access Protocol to both authorize and/or authenticate users in the system for ease of maintaining user permissions though a localized database. Checking the box will activate LDAP use within the software.

The screenshot displays the 'LDAP SETTINGS' dialog box. At the top, there's a navigation bar with 'SETTINGS', 'ADMIN', and a user icon. The 'ADMIN' menu is open, showing options like 'ABOUT', 'CONFIGURATION', 'FIRMWARE UPDATE', 'FACTORY RESET', 'SYSTEM REBOOT', 'USERS', 'LDAP SETTINGS' (which is highlighted with a mouse cursor), 'SECURITY SETTINGS', and 'COMMAND CONSOLE'. The 'LDAP SETTINGS' dialog itself has a title bar with a close button. It contains a checkbox for 'Enable LDAP Authentication'. Below this are two tabs: 'Main LDAP Server' and 'Backup LDAP Server'. The 'Main LDAP Server' tab is selected, showing input fields for 'Host', 'Port' (set to 389), 'Protocol Version' (set to 2), 'Timeout (sec)' (set to 30), 'Use SSL' (checked), 'Login Attribute' (set to mail), 'Base', 'Filter', and two search fields: 'Search for 'operator' profile' and 'Search for 'installer' profile'. A 'Manage CA certificate' button is located next to the 'Use SSL' checkbox. A red error message at the bottom of the dialog states 'LDAP Host name (or IP Address) is required'. A 'CLOSE' button is at the bottom right of the dialog.

Servers: A server must be configured for LDAP to function. The backup server is optional and will only be used if the primary server communication fails.

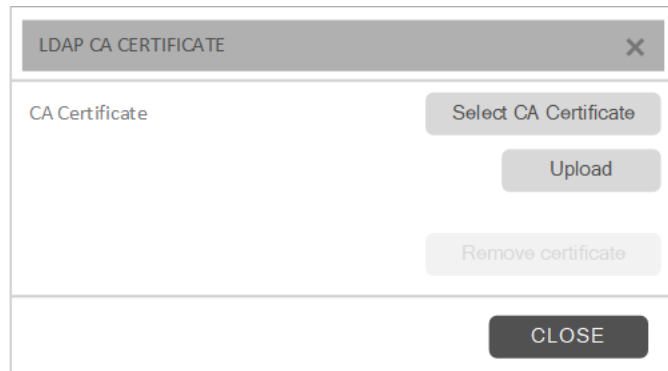
Host: IP address of the LDAP server.

Port: Port that LDAP services are active on the host server.

Protocol Version: Version 2 or version 3.

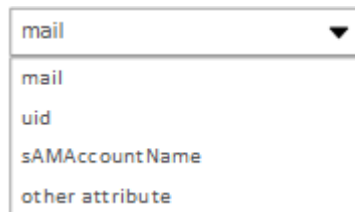
Use SSL: Check if server requires this encryption.

Manage CA certificate: For SSL connections that require a certificate, this is used to manage the certificate.



The dialog box is titled "LDAP CA CERTIFICATE" with a close button (X) in the top right corner. Inside the dialog, there is a text area labeled "CA Certificate". To the right of this text area are three buttons: "Select CA Certificate", "Upload", and "Remove certificate". The "Remove certificate" button is disabled. At the bottom right of the dialog is a "CLOSE" button.

For authorization, roles must be entered into the LDAP records based on groups/users. The Login Attribute provides predefined names commonly available.



A dropdown menu showing the "mail" attribute selected. The dropdown list contains the following options: "mail", "uid", "sAMAccountName", and "other attribute".

Other Attribute allows for custom attributes to be defined when authorizing a user.

Base: LDAP distinguished name of entry to begin searching the record.

Filter: LDAP attribute to search for the role/permissions.

Search for 'installer' profile: Value that determines if the user is to be an installer.

Security Settings (available to “Admin” User only)

Security settings determine system-wide measures to ensure how the system should be secured.

The screenshot shows the 'Security Settings' dialog box. It has a title bar with a close button. The main content is divided into sections: 'Login' with 'Session Timeout (minutes)' set to 60 and 'Auto Login' set to blank; 'Network' with 'Enable TCP/UDP Commands' checked; and 'Keypad and IR Remote' with 'Keypad Lock' and 'Lock IR Remote' unchecked, and 'IR Remote ID Code' set to 01785. A 'CLOSE' button is at the bottom right. To the right of the dialog is a sidebar with a list of settings: ABOUT, CONFIGURATION, FIRMWARE UPDATE, FACTORY RESET, SYSTEM REBOOT, USERS, LDAP SETTINGS, SECURITY SETTINGS (highlighted with a hand cursor), and COMMAND CONSOLE. At the top of the sidebar are tabs for 'SETTINGS' and 'ADMIN' with a user icon.

Session Timeout: The number of minutes of idle time before the user is automatically logged out of the WallDirector software.

Auto Login: Allows a user to be automatically logged in, bypassing the login/password requirement if multiple users are in the system. Leaving blank will require a username and password when logging in.

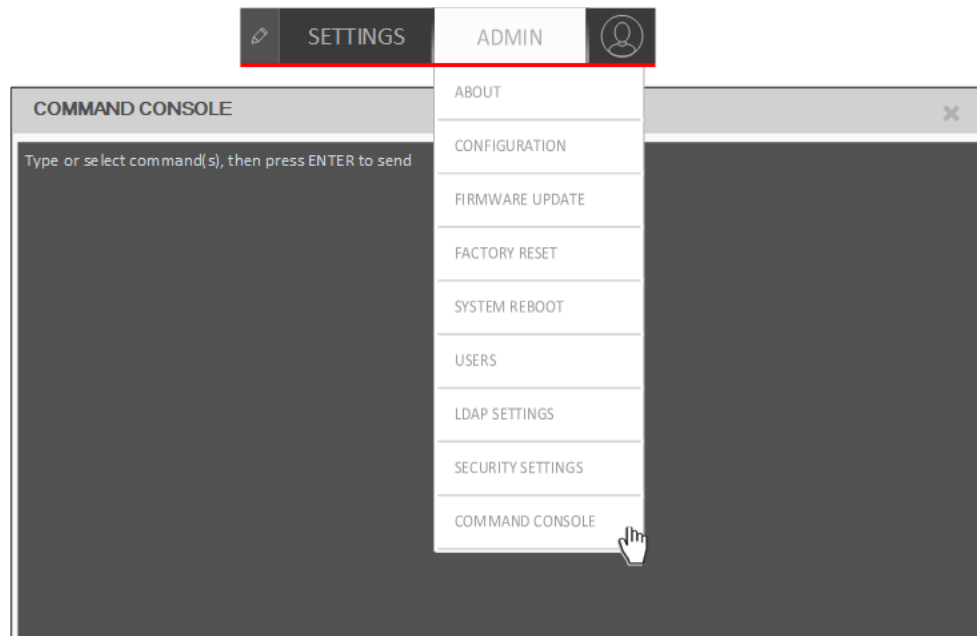
Enable TCP/UDP Commands: When selected, allows commands to be sent via port 57 via the stated protocols.

Keypad Lock: When selected, disables the keypad on the front of all video controllers.

Lock IR Remote: When selected, disables any commands from the remote. To unlock the remote commands, you must use the WallDirector or RS232 command protocol.

IR Remote ID Code: This is the currently set remote code for the remote. The Planar provided remote uses 01785 by default.

Command Console



The **Command Console** menu item opens a separate box that allows for direct access to the serial command line user interface. Any commands listed in the *RPS and Video Controller RS232 User Guide* are valid commands for this window, with the exception of some component-specific commands. This console provide a quick method for testing the system communications for commands that may be used in a larger programming environment.

Settings

Network Setup

WallDirector uses the IP network to control various products, so it is important to get the network setup correct for proper communication to happen between all devices. The **Network Setup** menu item allows the administrator to set the wide area network parameters of the master component. The default of the system is DHCP; however, it is possible to use the static IP address as shipped or assign a new one as needed. Changing and saving parameters in this menu may require connected control equipment re-configuration to re-connect.

When configuring a network setup, it is important to know the configuration of equipment to be installed and the type of IP address that will be used. By default, both a static, set at 192.168.0.12 from the factory, and DHCP are enabled. Consult the site network administrator for specific policies to be followed and if a new static address should be configured. Note that some installations have multiple devices on the IP network and each will require a specific IP address whether a static or DHCP address is used.

SETTINGSADMIN

NETWORK SETUPDATE AND TIME

NETWORK SETUP

System MasterVC 1MAC Address64:CF:D9:F5:21:EE

Hostnamevc-015d8b

☒ Enable Master Static IP

☒ Enable DHCP

MASTER Static IP

Active	YES
IP Address	192 . 168 . 0 . 12
Subnet	/24
Subnet Mask	255.255.255.0
Gateway	192 . 168 . 0 . 1

MASTER DHCP

Active	YES
IP Address	10.15.0.151
Subnet	/23
Subnet Mask	255.255.254.0
Gateway	10.15.0.1

MASTER DNS

DNS Server 1	192 . 168 . 0 . 13
DNS Server 2	192 . 168 . 0 . 14
DHCP DNS Servers	172.24.22.42 172.24.22.32 10.15.0.5

MANAGE HTTPS CERTIFICATE

CLOSE

System Master: The component in the system that is configured as the master.

MAC Address: The system master's unique hardware address.

Hostname: Default is set to VC-XXXXXX where XXXXX is the last 6 digits of the MAC Address. This may be changed to another string value as needed.

Enable Master Static IP: When selected, this enables communication with the system over the assigned static IP.

Enable DHCP: When selected, this check box enables you to connect to a WAN that assigns an IP address to a device. Once the system master has been assigned, the appropriate network information from a DHCP server making it accessible to equipment using the WallDirector software on the same network.

Note: If both **Enable Master Static IP** and **Enable DHCP** check boxes are checked, it is possible to gain access to the system controls using either network address. The system connected will need to be on one of the assigned networks, or one network will need to be able to reliably route to the other.

Active: Indicates whether the specified IP Address has been properly configured for system communication.

IP Address: The IP address of the system master component. All communication via the WAN port of the system master will use this number.

Subnet: The subnet in CIDR notation, which gives the number of bits in the network portion of the IP address.

Subnet Mask: The subnet mask as automatically defined by the subnet CIDR value.

Gateway: The network gateway.

DNS Server 1: Settable Domain Name Server #1.

DNS Server 2: Settable Domain Name Server #2.

DHCP DNS Servers: DHCP configured Domain Name Servers. This list of servers is a history of servers that have been assigned to the system by any DHCP server that may have been connected.

Manage HTTPS Certificate: Allows the use of secured communication between devices through the means of standard or custom generated certificates.

Certificates Management

Secure Server

Access to the VW control system (WallDirector) has been designed to take advantage of Secure Socket Layer (SSL) protocol for encrypted communication between the master component and remote devices. For this to work seamlessly, a trusted certificate will need to be uploaded to the system master. The system master defaults to a self-signed certificate; however, since this is not a "trusted" certificate, it results in a security risk warning from the browser being used to access the system. Most browsers allow a user to bypass this security risk; however, any iOS device browser requires a trusted certificate be used in order to function.

Consult the site network administrator for a proper certificate to use with the system if needed.

The use of trusted certificates requires a fixed IP Address for the system master and it is required to be the same IP Address used to generate the trusted certificate. This must be configured prior to uploading the certificate files. If a hostname is to be used to access the device, the DNS service to resolve the hostname to the IP Address must be entered within the Network Setup as well. Be sure that the DNS service is configured to resolve the hostname properly. See "Network Setup" on page 36 for network configuration before proceeding.

Uploading Certificates

The master component will maintain the public certificate and private key necessary to securely communicate between the system and other devices via the HTTPS protocol. Once these files have been created, follow the process below to enable the secure communication with the system.

- 1 Click **Manage HTTPS Certificate** in the **Network Setup** dialog box.

NETWORK SETUP

System Master VC 1 MAC Address 64:CF:D9:F5:21:EE
Hostname vc-015d3b

☒ Enable Master Static IP ☒ Enable DHCP

MASTER Static IP	
Active	YES
IP Address	192 . 168 . 0 . 12
Subnet	/24
Subnet Mask	255.255.255.0
Gateway	192 . 168 . 0 . 1

MASTER DHCP	
Active	YES
IP Address	10.15.0.151
Subnet	/23
Subnet Mask	255.255.254.0
Gateway	10.15.0.1

MASTER DNS	
DNS Server 1	192 . 168 . 0 . 13
DNS Server 2	192 . 168 . 0 . 14
DNS Servers	172.24.22.42 172.24.22.32

MANAGE HTTPS CERTIFICATE **CLOSE**

- 2 Click **Select Public Certificate** in the **HTTPS Certificate** dialog box.

FIRMWARE UPDATE

Both public certificate and private key files must be selected to upload the certificate

Public Certificate **Select Public Certificate**

Private Key **Select Private Key**

Upload

ISSUED TO	
Common Name (CN)	Web Server
DNS	

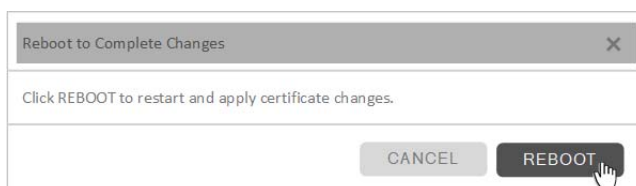
ISSUED BY	
Common Name (CN)	Web Server
Organization (O)	Company A
Organizational Unit	

VALIDITY PERIOD	
Issued On	Jul 12 16:22:48 2019 GMT
Expires On	Jul 9 16:22:48 2029 GMT

Remove certificate

CLOSE

- 3 Browse to and select the created or known certificate and click **Open**.
- 4 Click **Select Private Key** in the **HTTPS Certificate** dialog box.
- 5 Browse to and select the created or known key and click **Open**.
- 6 Click the **Upload** button in the **HTTPS Certificate** dialog box.
- 7 Choose **Reboot** when the confirmation dialog box opens.



- 8 Browse to the system and trust the certificate when prompted. Alternately, the key may be uploaded only to certain devices that may be used to communicate with the system.

Note: Remove Certificate will remove the uploaded certificate and key from the master component and revert back to the self-signed certificate. This will be followed by a confirmation dialog box and a reboot dialog box upon confirmation.

Network Status

The **Network Status** menu item under **Settings** in Installer and User mode shows a window with system information about the network connection as well as which component in the system is the master.

SETTINGS

NETWORK STATUS

NETWORK SETUP

System MasterVC 1MAC Address64:CF:D9:F5:21:EE

Hostnamevc-015d8b

☒ Enable Master Static IP☒ Enable DHCP

MASTER Static IP

Active	YES
IP Address	192.168.0.12
Subnet	/24
Subnet Mask	255.255.255.0
Gateway	192.168.0.1

MASTER DHCP

Active	YES
IP Address	10.15.0.151
Subnet	/23
Subnet Mask	255.255.254.0
Gateway	10.15.0.1

MASTER DNS

DNS Server 1	192.168.0.13
DNS Server 2	192.168.0.14
DHCP DNS Servers	172.24.22.42 172.24.22.32 10.15.0.5

CLOSE

Date and Time

Selecting **Date and Time** under **Settings** opens a dialog box allowing setup of a network time server or user input date and time. Additionally, basic daily on/off scheduling can be set within this dialog. Items are editable only by an administrator.

The screenshot shows the 'DATE AND TIME' dialog box. It has a title bar with a close button. The main content area includes a dropdown for 'Date and Time', a checkbox for 'Use Network Time' (checked), an 'NTP Server' field (containing 'hostname or IP' in red), a 'Time Zone' dropdown (set to '(UTC-8:00) Pacific Time (US & Ca)'), 'Date' and 'Time' input fields (set to 'Jul 12, 2019' and '09:08 AM' respectively), a 'Scheduled Power On / Off' dropdown, and a checkbox for 'Enable Scheduled Power' (checked). Below these are 'On' and 'Off' time slots for each day of the week. The 'On' slot for Monday is '08:30' and for Friday is '17:45'. The 'Off' slots are currently empty. A 'CLOSE' button is at the bottom right.

Note: Items will be grayed out if unavailable to the logged in user.

Use Network Time: A check in the box sets the default date and time to the configured NTP Server. If checked and no hostname/IP server is entered in the NTP Server box, it will be outlined in red.

NTP Server: Configured network time protocol server. Choose an NTP server that best suits the location.

Time Zone: A list of time zones to choose for the system locale. Use the proper time zone to be sure date and time are adhering to regional updates.

Date: The date as determined via the NTP server or by the user if network time is not used.

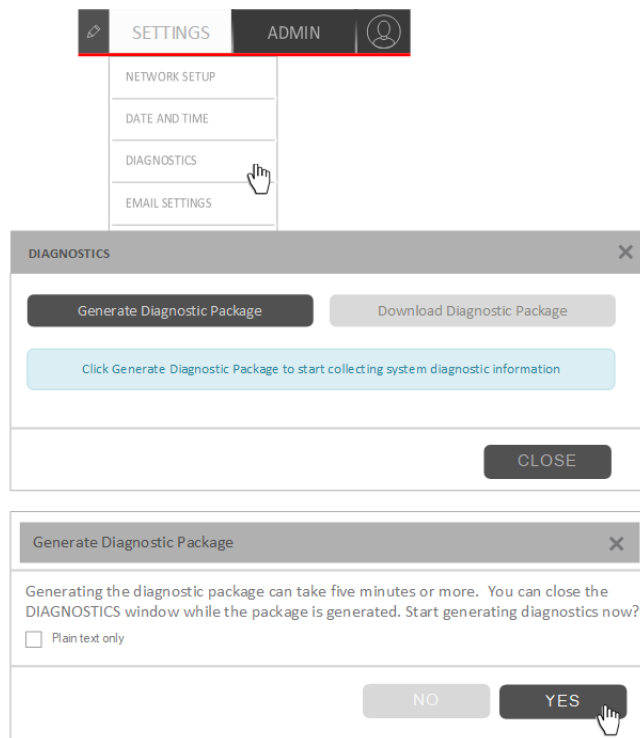
Time: The time as determined via the NTP server or by the user if network time is not used.

Enable Scheduled Power: Check to enable input of times for turning the system on and off based on the Standby Mode. (See "System Settings" on page 51.) Available to Administrator and Installer users.

Days: Provides a method to enter times for the system to turn on and/or off each day of the week. Entering time is in the 24hr format.

Diagnostics

Selecting **Diagnostics** under **Settings** will show a dialog box allowing the generation of a file to help troubleshoot complicated problems. When you click **Generate Diagnostic Package**, a confirmation box will appear to verify that this task is to be performed. Once the file is generated, clicking **Download Diagnostic Package** will save the file to the connected computer. This file can then be sent to the factory for analysis and troubleshooting of potential issues within the system. Click **Close** when done.



Note: Default diagnostic files are not human readable; however, checking plain text will generate a format that can be read without assistance.

Email Settings

Selecting **Email Settings** under **Settings** will open a dialog box where information about an email account may be entered for the purpose of pro-actively emailing system Alerts (see "Alerts" on page 46) to interested recipients. The site IT person should be consulted for information regarding the setup of the information below.

The screenshot shows a web interface with a 'SETTINGS' tab selected. Below it, a list of settings categories is shown: NETWORK SETUP, DATE AND TIME, DIAGNOSTICS, EMAIL SETTINGS (highlighted with a mouse cursor), and SERIAL SETTINGS. The 'EMAIL SETTINGS' dialog box is open, displaying the following fields:

- SMTP Server Name: mail.company.com
- SMTP Server Port: 465
- Security Mode: SSL (dropdown menu)
- Login: ping
- Password: (masked with dots)
- Sender: VWMon@company.com
- Global Recipients: Vwhelp@company.com,VWIT@company.com
- Global Note: HQ Boardroom 5x5 Status

At the bottom of the dialog are two buttons: 'TEST EMAIL' and 'CLOSE'.

SMTP Server Name: The address of the system that has the email account information and can handle email from the system to the recipients.

SMTP Server Port: The port on the server that handles the email traffic.

Security Mode: The email account authentication method used by the server.

Login: The login of the email account created for the system.

Password: The password associated with the email account created for the system.

Sender: The email address for the system account.

Global Recipients: Email account(s) where email will be sent for all enabled alerts. Multiple accounts may be separated by comma, semi-colon or spaces.

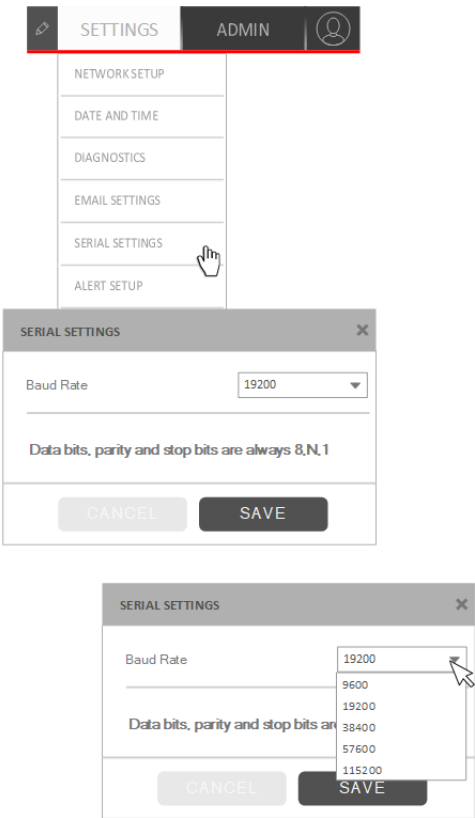
Note: Depending on setup this may be a significant amount of emails. This may also be input in the Alert Settings dialog box.

Global Note: The note appended to the body of the sent email text, for purposes of easily determining from which system an email may be originating or for ease of filtering emails. This may also be input in the Alert Settings dialog box.

Test Email: Provides a quick way to see if the parameters have been properly set. An email will be sent to the global recipient list for verification.

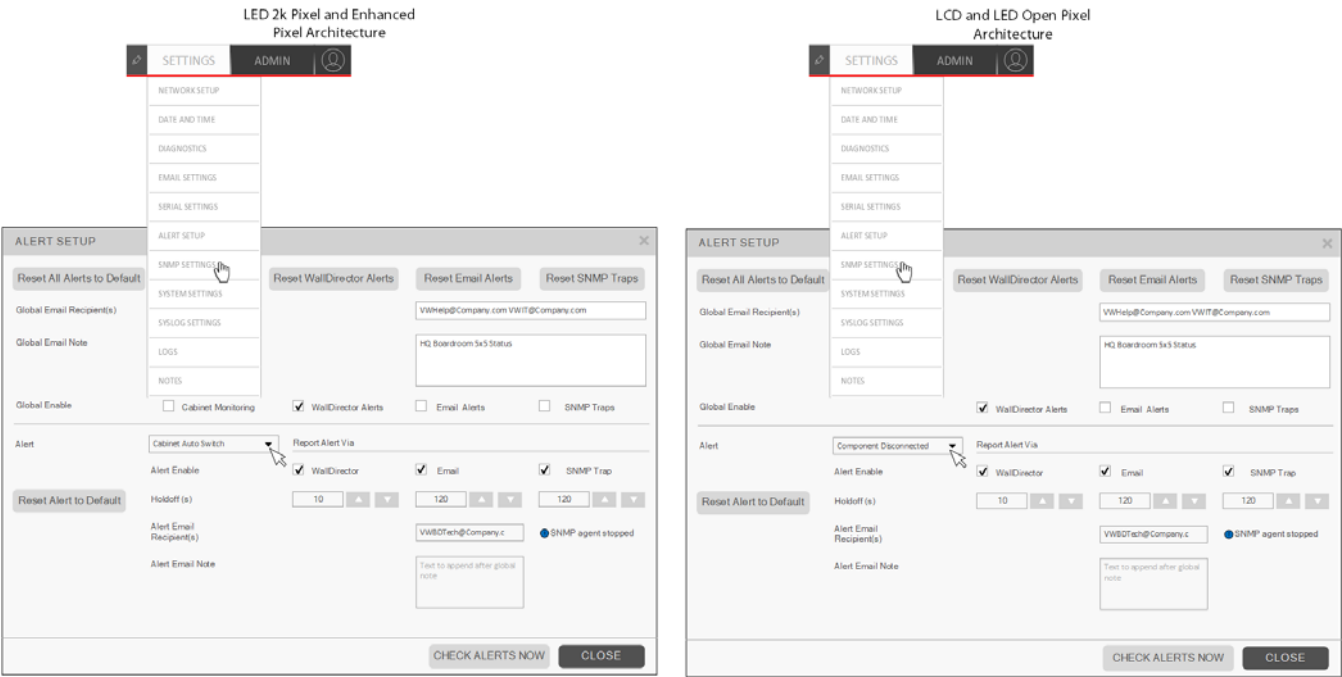
Serial Settings

Serial settings is a quick way to set the baud rate of the RS232 connection to the system and verify the system requirements for serial communication with the system. Click **Save** once the baud rate has been selected.



Alerts

LCD and LED have different alerts that may be configured as noted below.



Reset All Alerts to Default: Clicking this button will reset all Alert parameters and reporting methods back to factory default. This includes any email addresses that may have been configured in this window, but does not affect the information input in the Alert Setting or SNMP Settings dialog boxes. A confirmation window will open after selecting this button.



Reset WallDirector Alerts, Reset Email Alerts, Reset SNMP Traps: Clicking any of these buttons affects all the alert information setup for that particular section. A similar confirmation window as above will open after selecting this button.

Global Recipient(s): Email account(s) where email will be sent for all enabled alerts. Multiple accounts may be separated by comma, semi-colon or spaces.

Note: Depending on setup this may be a significant amount of emails. This may also be input in the Email Settings dialog box.

Global Note: The note appended to the body of the sent email text, for purposes of easily determining from which system an email may be originating or for ease of filtering emails. This may also be input in the Alert Settings dialog box.

Global Enable: Cabinet (LED Only), WallDirector Alerts, Email Alerts and SNMP Trap checkboxes control whether reporting will happen via the method indicated. These must be checked for information to be communicated as indicated.

Alert: This list has product specific monitor items that may be reported by the desired methods.

Alert	Product Available	Parameter
Cabinet Power Supply	Enhanced open pixel architecture	Threshold (°C), Holdoff (s)
Cabinet Auto Switch	LED – 2k pixel architecture	Holdoff (s)
Component Disconnected	All	Holdoff (s)
DLI Temperature	2k pixel architecture	Threshold (°C), Holdoff (s)
LCD Temperature	LCD Only	Threshold (°C), Holdoff (s)
LCD Under Voltage	LCD Only	Threshold (V), Holdoff (s)
Panel Signal Quality	LCD and LED 2k pixel architecture	Holdoff (s)
Receiver Temperature	Enhanced open pixel architecture	Threshold (°C), Holdoff (s)
RPS Breaker Open	Products configured with an RPS (Remote Power Supply)	Holdoff (s)
RPS Fuse Open	Products configured with an RPS (Remote Power Supply)	Holdoff (s)
RPS Module Count	Products configured with an RPS (Remote Power Supply)	Holdoff (s)
RPS Module Fans	Products configured with an RPS (Remote Power Supply)	Holdoff (s)
RPS Module Status	Products configured with an RPS (Remote Power Supply)	Holdoff (s)
RPS Temperature	Products configured with an RPS (Remote Power Supply)	Threshold (°C), Holdoff (s)
RPS110 or RPS220 AC In Under Voltage	Products configured with an RPS (Remote Power Supply)	Threshold (V), Holdoff (s)
Source Absent	All	Holdoff (s)
VC Fans	All	Holdoff (s)
VC Temperature	All	Threshold (°C), Holdoff (s)
VCI Temperature	2k pixel architecture	Threshold (°C), Holdoff (s)

Reset Alert to Default: Clicking this button affects the individual alert selected, returning it back to factory defaults.

Report Alert Via: This allows the reporting of individual alerts by the different methods to be configured as desired.

Alert Enable: Checking the box will enable alerts to be sent via the selected methods. This can be set for each individual alert.

Holdoff: The amount of time in seconds before an alert will be sent via the selected methods.

Threshold: The alert trigger for either a temperature in °C or a voltage in V that can be set by the user depending on conditions. Defaults are appropriate for most use cases.

Alert Email Recipient(s): Emails can be sent to accounts in addition to the global accounts on a per alert basis. Enter email account(s) information here. Multiple accounts may be separated by comma, semi-colon or spaces.

Alert Email Note: Additional system or filtering information may be entered here for the Alert Email Recipients.

SNMP Settings (available to "Admin" User only)

SNMP (Simple Network Management Protocol) is an automated application-layer protocol used to manage and monitor network enabled devices over Ethernet. The master component manages all traffic for the internal components and acts as the MIB (Management Information Base) for the system. The standard UDP port 161 is used for all queries/responses from the SNMP manager and the standard UDP port 162 is used for any 'Traps' or configured alerts. To utilize the SNMP function a SNMP manager must have access to the same WAN network that the equipment is connected to and the proper information included in the dialog box below.

The screenshot shows the 'SNMP SETTINGS' dialog box. On the left is a sidebar menu with options: NETWORK SETUP, DATE AND TIME, DIAGNOSTICS, EMAIL SETTINGS, SERIAL SETTINGS, ALERT SETUP, SNMP SETTINGS (highlighted with a hand icon), SYSTEM SETTINGS, SYSLOG SETTINGS, LOGS, and NOTES. The main content area of the dialog includes:

- Enable SNMP v3 Agent:** A checkbox that is currently unchecked.
- Traps:** A section containing 'Manager IP Address' (10.15.0.169) and 'Engine ID' (with a 'Download MIB File' button).
- Security Model:** Set to 'User Based (USM)'.
- User:** A section containing 'User Name' (SNMPCol), 'Authentication' (checked) with 'Protocol' (MD5) and 'Password' (masked), and 'Privacy' (checked) with 'Protocol' (DES) and 'Password' (masked).
- Status:** A red bar at the bottom indicating 'SNMP agent stopped'.
- Close:** A 'CLOSE' button at the bottom right.

Enable SNMP v3 Agent: Checking this box enables the system to communicate with the SNMP manager. Be sure to uncheck prior to adding or editing any information in the dialog box.

Manager IP Address: This is the IP address of the SNMP server that is managing the service.

Engine ID: This is the unique system identifier for recognition of the SNMP setup on the system. This is usually based on the MAC address of the master component. It is not allowed to have duplicate Engine IDs in the same SNMP service.

Download MIB File: The MIB file contains all the data pertinent to the system for the SNMP server to know the device it is communicating with as well as the information that will be shared. This file (DISPLAY-MIB-TRAPS.txt) will be saved on the PC during configuration and then can be uploaded to the appropriate SNMP server.

Note: RFC 3411 and RFC 2578 are required on the SNMP server for loading of the MIB file.

Security Model: The system uses User Based (USM).

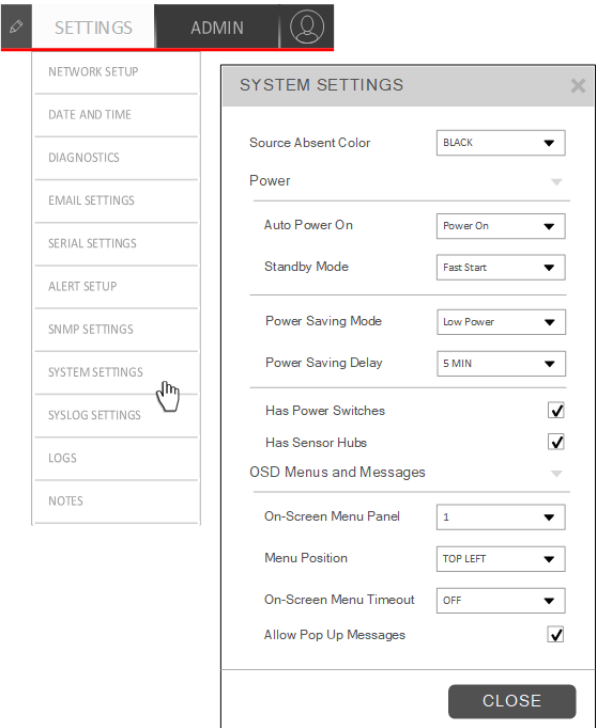
User Name: Enter the username as entered in the SNMP manager.

Authentication: (Optional) This is the security used for to ensure the identity of users. MD5 and SHA are the choices under protocol. Enter the password for the appropriate authentication settings.

Privacy: (Optional) This is the method used to encrypt data transfer to ensure confidentiality. DES and AES are the choices under protocol. Enter the password for the appropriate privacy settings.

System Settings

The system settings will display a menu where general system wide functions can be changed.



Source Absent Color: Sets any zone to display the selected color if a configured source for that zone is absent. Available colors are Black, Gray, Red, Green, Blue, Cyan, yellow, and Magenta.

Auto Power On: This value sets the behavior of the system when power is applied. The options are Power On, Disabled or Previous State. Power On automatically boots the entire system fully on. A Disabled setting requires user intervention through the various user interfaces to turn the system on. Previous State boots the system to the last known state prior to power being removed from the system.

Standby Mode: This value sets the behavior of the system when a user interface applied power command is used. The options are Fast Start or Low Power. Fast Start saves power by turning off the lights at the panels. Low Power saves power by turning off all power to the system except for the minimum required at each power supply. In systems with only Video Controllers, Low Power has the same behavior as Fast Start.

Power Saving Mode: Sets the system power mode when no active source is detected. Settings are Disabled, Fast Start or Low Power.

Power Saving Delay: Sets the amount of time the system will wait before enabling Power Saving Mode. Settings are 1, 5, 15, 30 and 60 minutes.

Note: This may be changed to any time amount through the RS232 protocol. See the *RPS and Video Controller RS232 User Guide*.

Has Power Switches: A check mark in the box will enable setup of an external power switch(es) configuration with the system. These switches can be used to control power to components that are powered by an external means other than the remote power supply system.

Has Sensor Hubs: (*Enhanced Open Pixel Architecture only*) A check mark in the box will allow the system to recognize Sensor Hubs that may be connected to the system. Sensors that connect to the sensor hubs may control brightness or report environmental conditions.

On-Screen Menu Panel: Sets the panel ID of the display where the OSD will be displayed on a video wall.

Menu Position: This sets the position on individual panels where the OSD should appear. Selections are Top Left, Top Right, Bottom Left, Bottom Right and Center. Center is the default.

On-Screen Menu Timeout: Sets the time in seconds from the last button press to when the menu will disappear from the screen due to inactivity. The settings are OFF, 30, 60, 120 and 240. The OFF setting enables the menu to always be on the screen until a user intervenes. The default is 60 seconds.

Allow Pop Up Messages: When checked, enables messages from the system to be seen on the screen. Messages usually indicate required reboots or software updating notifications.

Syslog (available to "Admin" User only)

Syslog is a standard for sending log messages from a monitored system to a server that can store and analyze logs from many devices. WallDirector provides up to two servers that can be configured for syslog storage/processing.

Enable Logging to Server X: Check box to make server active. Host, Port and Protocol must be defined prior to the checkbox being able to be checked.

Host: Syslog server name or IP address where data will be sent.

Port: Port server is expecting the data to be sent.

Protocol: Select TCP or UDP protocols.

Items that can be included in transfer to the syslog server are as follows:

System Log: Items visible in the SYSTEM LOG. System log messages are always sent when syslog servers are configured and enabled.

Telemetry: Telemetries that are sent to the WallDirector Cloud service, in syslog form.

Command Log: Items visible in the COMMAND LOG.

Alerts and Messages: Information visible in the WallDirector ALERTS AND MESSAGES list.

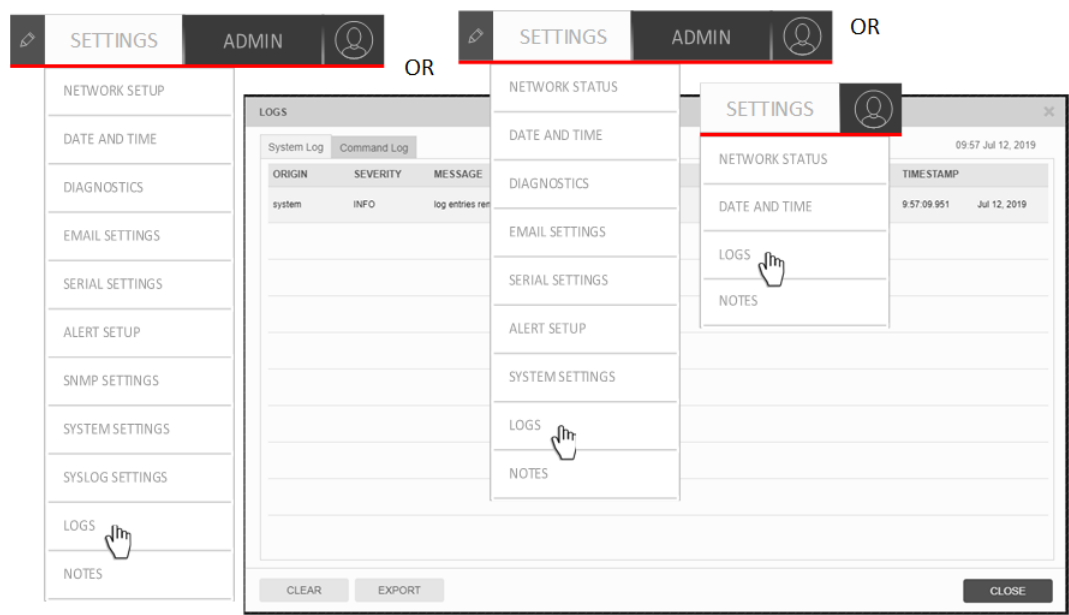
Note: If multiple categories are included, there may be duplicate records of data sent to the syslog under the labels systemlog, telemetry, commandlog, alert or message.

Logs

The Log window is comprised of two separate log tabs.

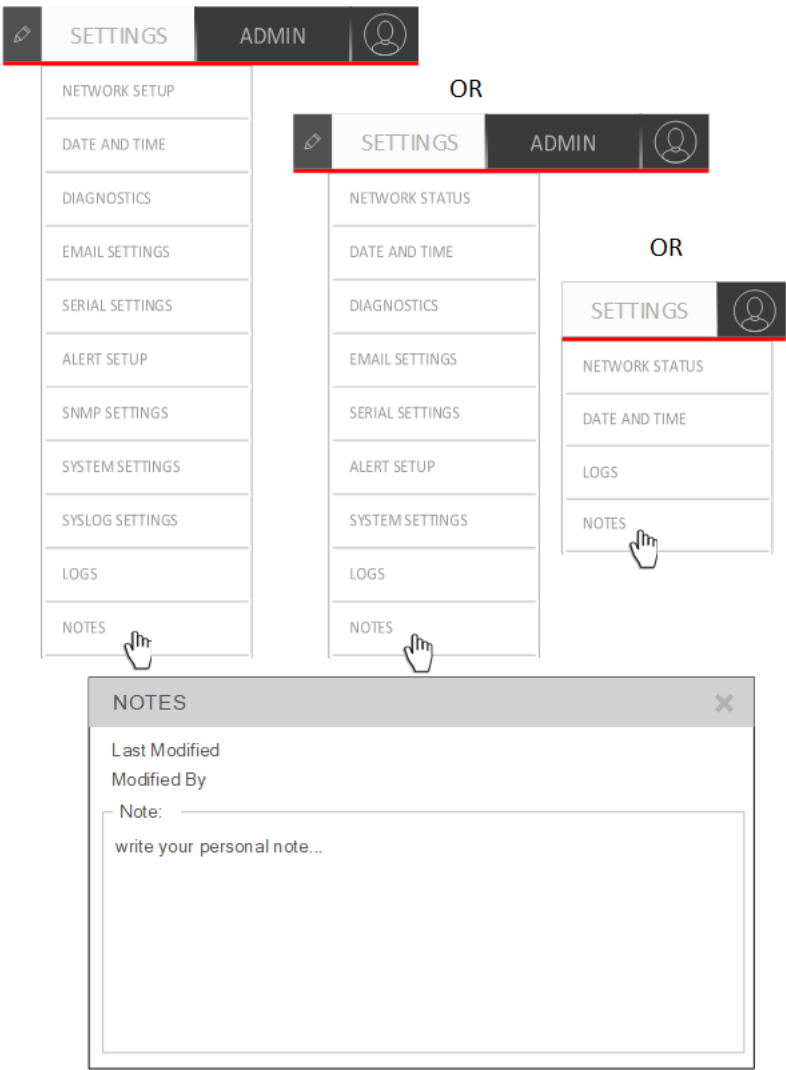
System Log: This log contains all system-related information in chronological order of occurrence. This includes all information in the Alerts section and regular status updates such as firmware updates, power on/off events and preset changes

Command Log: This log contains all external commands the system may receive through the serial or LAN ports. The command origin will depend on which component is connected to the external equipment that is providing the command.



Notes

The notes box provides a means of keeping records for settings or service that may have been performed that may be helpful to persons configuring the wall at a later date. There is an indication of the user who last altered the notes and a time stamp for reference.



Bottom Button Bar Features

There are a few quick access functions to help in setup of the video wall configuration within the software main interface. This section describes the bottom button bar features.



User Buttons

In the lower-right corner of the window are three user buttons available to all users.



Button	Description
	Turns power on or off based upon the standby power designation.
	Adjusts the brightness of the video wall by increments of 10 by sliding the circle up and down. Administrators and non-administrators may change this value.

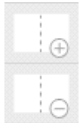
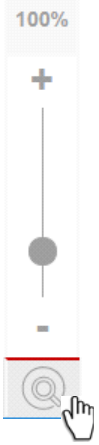
Button	Description
	Shows alerts and messages from all components connected.  A yellow icon means there are issues with the system configuration that will not inhibit basic performance.  A red icon means there are critical issues with the system that will affect performance.  A blue icon means there are informational only alerts based on the system state.

Workspace Buttons

The bottom bar has additional items that are used to manipulate the workspace area. These are primarily used when setting up zones but can also be used to zoom and pan the video wall area as well.



Button	Description
	Toggles the snap grid display on the video wall configuration. Changes the snap grid for the configuration. All snap grid divisions are created or removed by equally spacing the divisions based on the entire wall size.

Button		Description
		Quick snap grid selection converting each recognized panel edge into a grid division.
		Quick snap grid selection converting each recognized panel into having a center vertical and horizontal division.
		Quick snap grid selection displaying two horizontal by two vertical divisions.
		Quick snap grid selection displaying three horizontal by three vertical divisions.
		Increase or decrease the number of horizontal snap grid divisions by single increments.
		Increase or decrease the number of vertical snap grid divisions by single increments.
		Denotes how many horizontal/vertical snap grid divisions are displayed.
		Allows the adjustment of workspace zoom.
		Turns on the ability to pan the workspace. A crosshair icon () will appear in the workspace. This feature must be turned off in order to perform any other tasks within the workspace.

Button	Description
	Zooms the workspace to fit the display area. Note: Zoom to fit zooms only the physical panels. If a zone is not in the display area, use pan and zoom to find the zone or the position data in the zone tab under Setup.

The Sources button toggles the display of sources that have been set up within the system. This allows for easy reference and assigning of sources to various grid divisions or zones on the canvas.

SOURCES

↔

≡

✕

↖ ↗ ↘ ↙

Conference Room...

↖ ↗ ↘ ↙

Content Server

↖ ↗ ↘ ↙

HD Feed

↖ ↗ ↘ ↙

Lobby Camera

SOURCES

↕

≡

✕

↖ ↗ ↘ ↙

Conference Room...

↖ ↗ ↘ ↙

Content Server

↖ ↗ ↘ ↙

HD Feed

↖ ↗ ↘ ↙

Lobby Camera

SOURCES

↕

≡

✕

↖ ↗ ↘ ↙

Conference Room...

↖ ↗ ↘ ↙

Content Server

↖ ↗ ↘ ↙

HD Feed

↖ ↗ ↘ ↙

Lobby Camera

↖ ↗ ↘ ↙



↖ ↗ ↘ ↙



↖ ↗ ↘ ↙

HD

↖ ↗ ↘ ↙



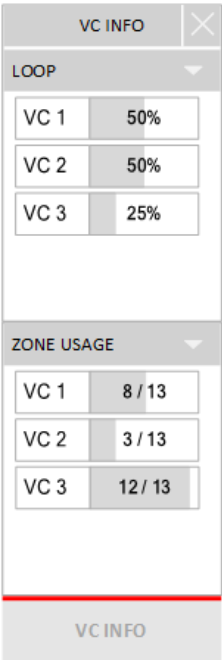
SOURCES

Toggles between showing the sources vertically or horizontally on the browser window

Minimizes Window

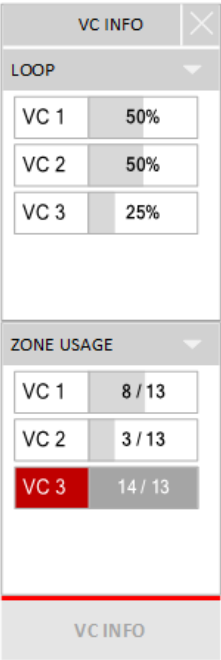
Toggles between the sources displaying assigned icons or just descriptions

The VC INFO button provides a quick view of the source looping capability and zone mapping capacity.



LOOP will detail the percentage of bandwidth currently being used by the noted VCs output. A more detailed view can be found in the "High Speed Link (Video Cotrollers configured with HSL only)" on page 92.

Zone Usage will detail the amount of zones that are currently being used by a VC. If any parameters were to exceed capacity, this provides an easy summary of where the issue may be.

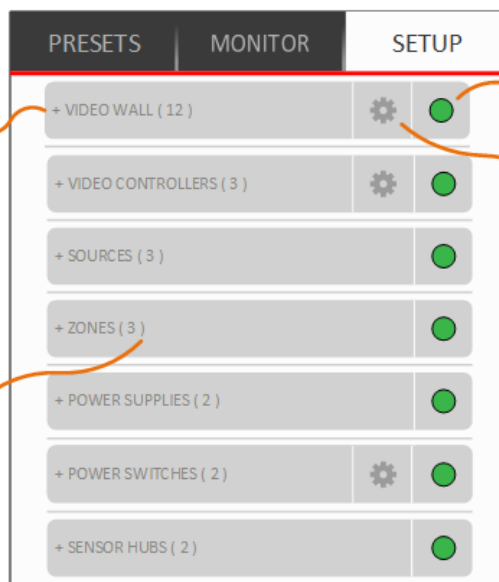


Setup Tab

The Setup tab is only visible by users with administrator privileges. On the **Setup** tab, administrators can change the layout settings of the video wall system, individual panels, power supplies, video controllers and sources. When hardware is connected to the system, it is automatically populated in the appropriate fields.

+ Symbol indicates there are additional items under this bar for viewing.
- Symbol indicates the menu may be collapsed. Click gray box to activate.

The number following each menu item indicates the number of items under the label.



Status of associated equipment.

Click to configure video wall settings. See "Video Wall Setup" on page 65.

	OK
	Warning
	Error
	Status Unavailable
	Power Switch Off

Holding the mouse arrow over the icons will provide quick information on the system. Additionally clicking the System Alerts icon will provide a summary of information.

Video Wall

Under **Video Wall**, you can do the following:

The image displays three screenshots of the Video Wall setup interface, each showing a different architecture. The interface is divided into three tabs: PRESETS, MONITOR, and SETUP. The SETUP tab is active in all three screenshots.

LCD

Click to configure panel settings. See "Panel Setup" on page 81.

LED - 2k Pixel Architecture

View the status of the video wall or panel.

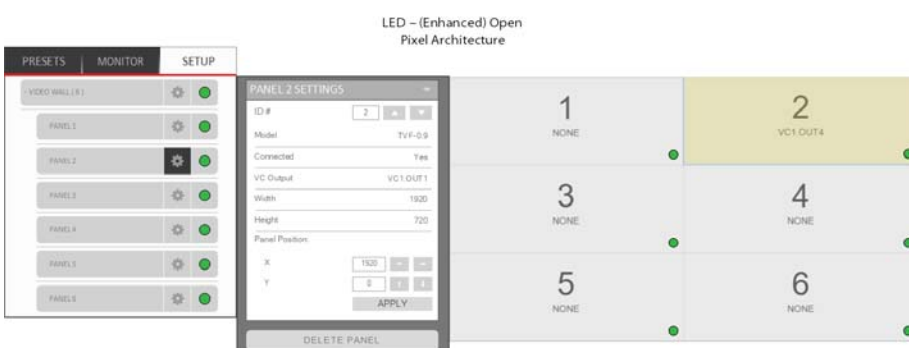
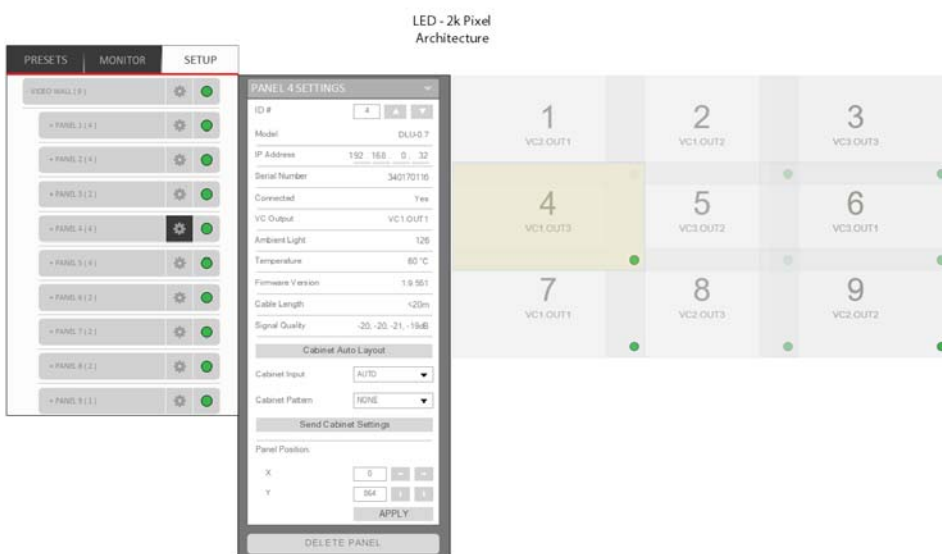
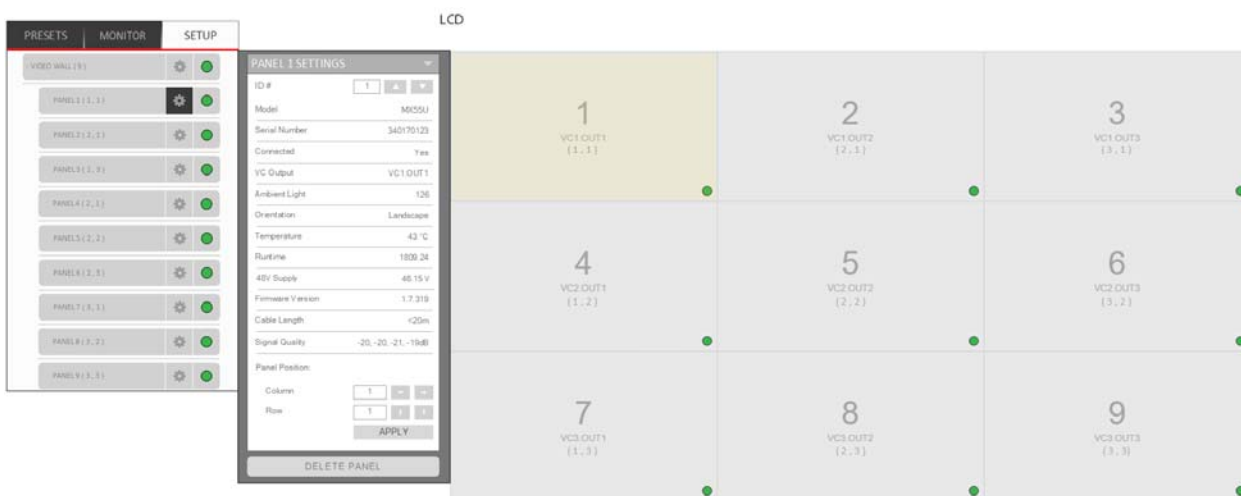
LED - (Enhanced) Open Pixel Architecture

The screenshots show the following configurations:

- LCD:** - VIDEO WALL (4) with four panels: PANEL 1 (1, 1), PANEL 2 (2, 1), PANEL 3 (1, 2), and PANEL 4 (2, 2).
- LED - 2k Pixel Architecture:** - VIDEO WALL (4) with four panels: + PANEL 1 (9), + PANEL 2 (9), + PANEL 3 (6), and + PANEL 4 (6).
- LED - (Enhanced) Open Pixel Architecture:** - VIDEO WALL (3) with three panels: PANEL 1, PANEL 2, and PANEL 3.

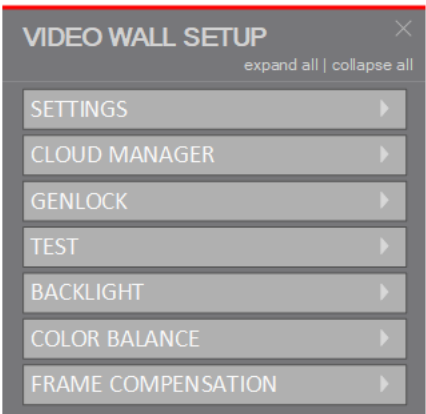
Each panel entry includes a gear icon for configuration and a green circle for status.

In the Setup tab environment with panels showing in the workspace area, clicking on a panel navigates to the panel settings menu of that panel. Whether the panel was selected this way or through the menu structure, this will be visibly noted by a color change of the display representation in the workspace area to better understand which panel is being edited.

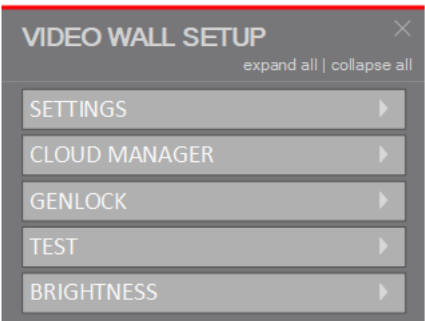


Video Wall Setup

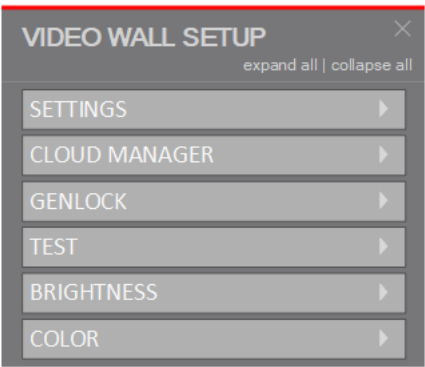
LCD



LED - 2k Pixel
Architecture



LED – (Enhanced) Open
Pixel Architecture



Settings

LCD

SETTINGS

Product

Matrix G3

Model

LX55M

Orientation

Landscape

Distance to PS (ft)

200

Columns

3

Rows

3

Layout Type

Manual

Auto Layout

Reset Layout

On-Screen Menu Panel

7

Show Menu

Hide Menu

Panel Sync

☒

System Master

PS1

System Firmware Version

8.0.1073

Panel Firmware Version

1.7.319

Video Wall Summary

LED - 2k Pixel Architecture

SETTINGS

Product

DLX

Model

DLX-1.2

Width (pixels)

3840

Height (pixels)

2160

APPLY

Layout Type

Manual

LED Wall Calculator

Reset Layout

On-Screen Menu Panel

5

Show Menu

Hide Menu

Color Temperature

8500K

Enable HDR

OFF

System Master

PS1

System Firmware Version

8.0.1073

Panel Firmware Version

1.7.319

Video Wall Summary

LED - Open Pixel Architecture

SETTINGS

Product

TVF

Model

TVF-1.2

Width (pixels)

3840

Height (pixels)

2160

APPLY

Layout Type

Default

LED Wall Calculator

Reset Layout

On-Screen Menu Panel

5

Show Menu

Hide Menu

Enable HDR

AUTO

System Master

VC1

System Firmware Version

8.0.1073

Video Wall Summary

LED – Enhanced Open Pixel Architecture

SETTINGS

Product

DirecLight Pro

Model

DLPro-1.2

Width (pixels)

3840

Height (pixels)

2160

APPLY

Cabinet Redundant Power

☐

Layout Type

Manual

LED Wall Calculator

Reset Layout

On-Screen Menu Panel

5

Show Menu

Hide Menu

Enable HDR

AUTO

System Master

VC1

System Firmware Version

12.0.1396

Video Wall Summary

Field	Description
Product	Describes the display equipment configured or detected by the system. Product may be chosen depending on detected equipment or set automatically.
Model	The panel model connected to the system. Available models depend on the Product detected or chosen.
Orientation	<i>(LCD products only)</i> The orientation of the panel that is connected to the system. The orientation is determined by a sensor attached to the panel. This can be manually changed here if necessary.
Distance to PS (ft)	Input value to help determine when too many panels may be connected together on a single power chain. A critical error icon will appear next to the PS if too many are determined to be attached.
Columns	<i>(LCD products only)</i> The number of columns in the array. In default mode, the value will be 1. In auto layout mode, the value is the number of columns in the physical array as self-detected by the panel position sensors. To manually change this value, enter a number or use the up and down arrow buttons. Click Apply after changing for new values to take affect.
Rows	<i>(LCD products only)</i> The number of rows in the array. In default mode, the value will be 1. In auto layout mode, the value is the number of rows in the physical array as self-detected by the panel position sensors. To manually change this value, enter a number or use the up and down arrow buttons. Click Apply after changing for new values to take affect.
Width (pixels)	<i>(LED products only)</i> The total number of horizontal pixels in the array. This is a summation of each cabinet's horizontal pixels. This can automatically be calculated by clicking the LED Wall Calculator and following the procedure for wall setup. Click Apply after changing here for new values to take affect.
Height (pixels)	<i>(LED products only)</i> The total number of horizontal pixels in the array. This is a summation of each cabinet's horizontal pixels. This can automatically be calculated by clicking the LED Wall Calculator and following the procedure for wall setup. Click Apply after changing here for new values to take affect.
Cabinet Redundant Power	<i>(Enhanced Open Pixel Architecture only)</i> Enables the system to recognize and monitor redundant power supplies if product is configured with redundant power supplies.

Field	Description
Layout Type	Indicates the layout mode as Default, Auto or Manual. Use manual mode if you have a faceted wall display or faulty or no panel position sensors. Manual mode acts like auto layout mode except it is required to set the panel positions manually in the software. Changing any panel position in the software will switch the layout to Manual mode from either Default or Auto.
Auto Layout	<i>(LCD products only)</i> Activates the auto layout feature, which tells the system that the wall has been installed and for the panels to self discover where they are positioned with respect to one another. Refer to the <i>Installation Guide</i> for more information. This will be followed by a confirmation dialog box. A successful Auto layout or Manual layout is essential for proper video wall behavior, and allows the system to place content within the video wall exactly where it is intended. Additionally, failure of a proper layout of the panels in the video wall will cause unexpected issues with content when the system or any portion of the system is restarted. When auto layout is successful, a message will appear at the bottom of this menu indicating "Auto Layout Complete."
LED Wall Calculator	<i>(LED products only)</i> Clicking this button opens a window allowing for easy configuration of the wall based on size and type of product chosen. The data from this window populates the settings window.
Reset Layout	Returns the wall to the default layout during setup prior to an auto or manual layout. This allows for the addition of more panels and components in an expected manner. Refer to the <i>Installation Guide</i> for more information. This will be followed by a confirmation dialog box.
On-Screen Menu Panel	Indicates which panel the On-Screen Menu is active on. To change this value, select a panel from the list.
Show Menu/Hide Menu	Clicking each button either shows or hides the OSD, which provides access to the panel ID and menus on the displays.
Panel Sync	<i>(1920x1080 resolution LCD products only)</i> Enables the inverted image scan on even rows of a video wall. This is meant to reduce tearing of the horizontal panning images.
Enable HDR	<i>(Select LED products only)</i> Sets whether the system will interpret and display HDR content from a source. Selections are OFF, HDR10 or AUTO. When OFF, any HDR sources are not recognized. When set to AUTO, any HDR10 source is displayed as HDR. An HDR10 setting forces the system into HDR mode, which interprets every source as HDR. When HDR is enabled, the brightness will increase to 100 for optimal performance.

Field	Description
Color Temperature	<i>(LED products only)</i> Sets the video wall cabinets' color temperature. Values are 3200K, 6500K, 8500K, 9300K and CUSTOM. 8500K is the default. CUSTOM is adjustable through the LED Control Software.
System Master	Details which component is the system master.
System Firmware Version	Indicates the system firmware version. An asterisk indicates there is a component(s) within the system that does not have the same software loaded as the master. A firmware update to this component(s) should be performed for proper system function.
Panel Firmware Version	Indicates the panel firmware version. An asterisk indicates there is a panel(s) within the system that does not have the same software loaded as the package expected by the system firmware version. A firmware update to the panel(s) should be performed for proper system function.
Video Wall Summary	Displays a popup window detailing equipment IDs, model numbers, serial numbers, panel position, panel connected port and firmware versions. Exporting to a .csv file is available within the window.

VIDEO WALL SUMMARY

Video Wall - Boardroom

Product	Model	Size	System Firmware Version	Panel Firmware Version
MATRIX G3	MX55M	3 x 3	8.0.1073	1.7.319*
System Master	Master Static IP	Master DHCP IP		
PS 1	192.168.0.12	10.15.0.86		

Panels (8)

ID	Model	Position	Serial Number	Firmware Version	IP Address	VC Output
Panel 1	MX55M	(1, 1)	109190148	1.7.319		VC1.OUT1
Panel 2	MX55M	(2, 1)	108190144	1.7.319		VC1.OUT2
Panel 4	MX55M	(1, 2)	109190141	1.7.319		VC1.OUT3
Panel 5	MX55M	(2, 2)	109190140	1.7.319		VC1.OUT4
Panel 6	MX55M	(3, 2)	108190141	1.7.319		VC1.OUT5
Panel 7	MX55M	(1, 3)	108190138	1.6.289		VC1.OUT6
Panel 8	MX55M	(2, 3)	108190143	1.7.319		VC1.OUT7
Panel 9	MX55M	(3, 3)	109190144	1.7.319		VC1.OUT9

Video Controllers (1)

ID	Model	Serial Number	Firmware Version	IP Address
VC 1	VC9H-BP+	073190016	8.0.1073	192.168.0.112

Power Supplies (1)

ID	Model	Serial Number	Firmware Version	IP Address
PS 1	RPS-110-3	012649534	8.0.1073	192.168.0.12

Power Switches (3)

ID	Name	Group	Tie to system power	IP Address	Connected	Power State
PSW 1	Source1	Left Wall	NO	192.168.0.248	Yes	ON
PSW 2	Source2	Left Wall	NO	192.168.0.249	Yes	ON
PSW 3	Source3	Left Wall	NO	192.168.0.250	Yes	ON

EXPORT

CLOSE

Note: Export will create a .csv file of the information contained on the screen.

LED Wall Calculator

LED WALL CALCULATOR

Product

DLX

Model

DLX-0.7

Cabinet Size:

Width

768 px

Height

432 px

Wall Layout:

Columns

5

▲

▼

Rows

5

▲

▼

Wall Size:

Width

3840 px

Height

2160 px

Panel Position:

X

0

▲

▼

Y

0

▲

▼

APPLY ALL CHANGES

CANCEL CHANGES

Note: Changes in this dialog box are not saved until the APPLY ALL CHANGES button is clicked. To revert back to the original, either click CANCEL CHANGES or exit this dialog box.

Field	Description
Model	Selects the LED product model to be used in the video wall. Available models depend on the Product detected or chosen.
Cabinet Size	Indicates the total cabinet horizontal and vertical pixels of the LED model chosen.
Wall Layout	Settable number of columns and rows of cabinets in the video wall. Change by entering a number in the field or by the up and down arrows.
Wall Size	Total video wall horizontal and vertical pixels calculated by the cabinet size multiplied by the wall layout.
Panel Position	Indicates the panel in the video wall that will have its position configured. This may be selected by clicking on a panel in the workspace or choosing from the drop-down box. X is the horizontal position in pixels and Y is the vertical position in pixels. The origin is the upper left corner and is referred to as the 0, 0 position. Values may be changed by either entering data in the boxes or using the left, right, up or down arrows.

Cloud Manager

The screenshot shows a 'CLOUD MANAGER' panel with the following elements:

- Enable Cloud Manager:** A checkbox that is currently unchecked.
- Cloud ID:** A text field containing a unique identifier, with a 'Copy' button to its right.
- Last Connection:** A text field showing the date and time of the last connection.
- Claim This Device:** A button to initiate the device claiming process.
- Send All Telemetries:** A button to upload all supported monitor items to the cloud monitoring account.

Field	Description
Enable Cloud Manager	Sets whether cloud management of monitoring data will be enabled.
Cloud Management Agent	Indicates if cloud management is operating or stopped.
Cloud ID	The unique ID of the equipment used to link with the cloud manager software. Click Copy to use when claiming the device.
Last Connection	Indicates the last time the system was connected to the cloud manager.
Claim This Device	Opens a web page to the cloud manager. This is where equipment can be linked to a cloud monitoring account.
Send All Telemetries	Uploads all supported monitor items to the cloud monitoring account.

Genlock

GENLOCK

Panel Vertical Refresh

60 Hz

Disable Genlock

☐

Auto Genlock

☒

All VC Outputs Locked

YES

VC

1

Sync Reference

INTERNAL

Sync Reference Present

YES

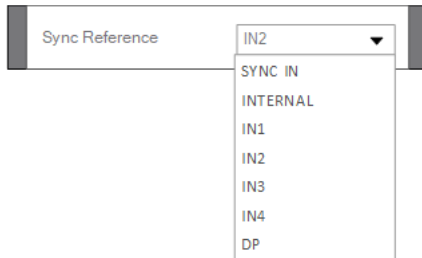
Sync Reference Present

60.00 Hz

VC Output Locked

YES

Field	Description
Panel Vertical Refresh	Sets the default refresh rate of the connected panels. Values are 50Hz or 60Hz. The VCs will automatically reboot when this is changed.
Disable Genlock	Toggles genlock as enabled or disabled, normally enabled.
Auto Genlock	Checking this box sets VC 1 to use "INTERNAL" for its reference and all other VCs to Sync In. This is the system default. If another source is to be used as the Sync Reference, then a complete manual setup for each VC must be done.
All VC Outputs Locked	Indicates if there are any VCs that are not locked to a reference. Value is either YES or NO.
VC	This selects the VC to set up or view the details of the Sync Reference parameters.

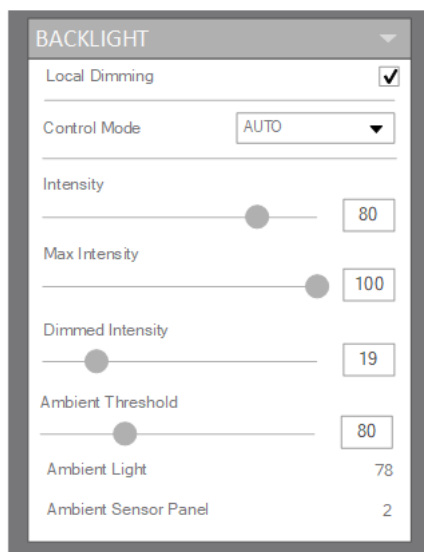
Field	Description
Sync Reference	This is the input that will be used to sync all of the selected VC outputs. Available for selection only when Auto Genlock is disabled.  IN2: Chooses the HDBNC Sync In as the reference signal. SYNC IN: Chooses the VC-internally generated clock as the reference signal. INTERNAL: Chooses the VC-internally generated clock as the reference signal. IN1: Chooses Input 1 as the reference signal. IN2: Chooses Input 2 as the reference signal. IN3: Chooses Input 3 as the reference signal. IN4: Chooses Input 4 as the reference signal. DP: Chooses the DisplayPort Loop In as the reference signal. Note: For Video Controllers with High Speed Links, DP will not be an option.
Sync Reference Present	This indicates if the sync is present on the selected VC. A value of NO can mean a sync cable is not installed or there is no valid signal.
Sync Reference Frequency	This is the frequency of the sync reference.
VC Output Locked	Indicates if the output on the VC is locked to a reference. Value is either YES or NO.

Test

Field	Description
Panel	Select which panel to display the test pattern or a source on. "All" displays the test pattern on every panel connected to the system. The pattern will remain in place as you navigate further in the menus or exit the menu. Predefined zones will not be seen on the panels until the "None" pattern or Clear All is selected.
Test Pattern	Displays a predefined test pattern on the selected panel. The available test patterns are: None Black White Red Green Blue Gray Red Scale Green Scale Blue Scale Gray Scale Logo Grid Contrast Color Bars
Sources	Displays a source that has been set up or detected on the selected panel.
One to One Sources	Deletes existing zones and replaces with a zone for each panel in the video wall. Active input sources that share the same numeric value as the output are automatically assigned to the zones for that output. Outputs without a corresponding active input do not have sources assigned and are blank.
Clear All	Clears any test pattern or source assignment so that zones may be displayed.

Backlight/Brightness

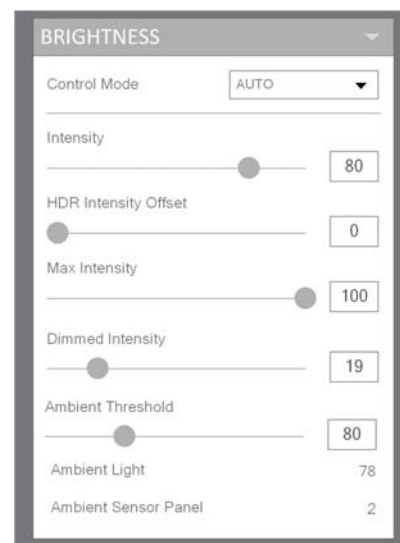
LCD



The LCD Backlight settings interface includes the following controls:

- BACKLIGHT** (Section Header)
- Local Dimming**: Enabled (checkbox checked)
- Control Mode**: Set to **AUTO** (dropdown menu)
- Intensity**: Slider set to 80
- Max Intensity**: Slider set to 100
- Dimmed Intensity**: Slider set to 19
- Ambient Threshold**: Slider set to 80
- Ambient Light**: 78
- Ambient Sensor Panel**: 2

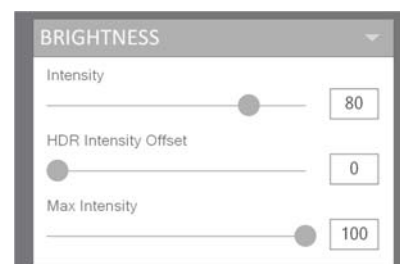
LED - 2k Pixel Architecture and Enhanced Open Pixel Architecture



The LED - 2k Pixel Architecture and Enhanced Open Pixel Architecture Brightness settings interface includes the following controls:

- BRIGHTNESS** (Section Header)
- Control Mode**: Set to **AUTO** (dropdown menu)
- Intensity**: Slider set to 80
- HDR Intensity Offset**: Slider set to 0
- Max Intensity**: Slider set to 100
- Dimmed Intensity**: Slider set to 19
- Ambient Threshold**: Slider set to 80
- Ambient Light**: 78
- Ambient Sensor Panel**: 2

LED - Open Pixel Architecture

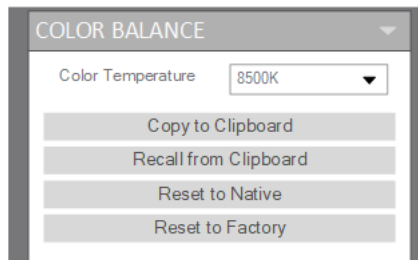


The LED - Open Pixel Architecture Brightness settings interface includes the following controls:

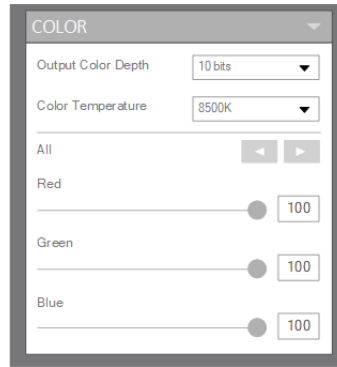
- BRIGHTNESS** (Section Header)
- Intensity**: Slider set to 80
- HDR Intensity Offset**: Slider set to 0
- Max Intensity**: Slider set to 100

Field	Description
Local Dimming	(55M/X2,X3 LCD products only) Enables system to reduce backlight usage and improve contrast when dark content is displayed. Improves black uniformity.
Control Mode	(LCD, LED 2k and Enhanced Open Pixel Architectures only) Select Manual or Auto. With manual, you can set a value for the brightness of the video wall. Use Auto in conjunction with the Ambient Light Sensor option. See the <i>Installation Guide</i> for setup and use of the ambient light sensor.
Intensity	The backlight intensity value for all panels within the video wall. The higher the number, the brighter the display and the more power the video wall uses. To change the value, enter a number or move the slider. Note: The slider changes the number by increments of 10, but a number may manually be entered between 0-100.

Field	Description
HDR Intensity Offset	<i>(HDR enabled systems only)</i> Sets the offset to increase the brightness intensity from the set intensity when the system switches to an HDR-recognized source. This does not go beyond the set Max Intensity. Note: The slider changes the number by increments of 10, but a number may manually be entered between 0-100.
Max Intensity	Sets a wall intensity value that the intensity setting cannot exceed. The intensity setting is scaled from this setting. To change the value, enter a number or move the slider. Note: The slider changes the number by increments of 10, but a number may manually be entered between 0-100.
Dimmed Intensity	<i>(LCD, LED 2k and Enhanced Open Pixel Architectures only)</i> Available to change when in Auto mode. The higher the number, the brighter the display and the more power the video wall uses. To change the value, enter a number or move the slider. Note: The slider changes the number by increments of 10, but a number may manually be entered between 0-100.
Ambient Threshold	<i>(LCD, LED 2k and Enhanced Open Pixel Architectures only)</i> Available to change when in Auto mode. The higher the number, the brighter the display and the more power the video wall uses. To change the value, enter a number or move the slider. The range is 0 to 255 for LCD and LED 2k pixel architectures and 0-65500 for Enhanced Open Pixel Architecture.
Ambient Light	<i>(LCD, LED 2k and Enhanced Open Pixel Architectures only)</i> Hidden unless Auto mode is selected. The reading from the first detected ambient light sensor. The higher the number, the brighter the light that is detected.
Ambient Sensor Panel	<i>(LCD, LED 2k and Enhanced Open Pixel Architectures only)</i> Hidden unless Auto mode is selected. Indicates the panel ID that has the first detected ambient light sensor connected.

Color Balance *(LCD products only)*

Field	Description
Color Temperature	Enables you to choose preset color temperatures on all panels. The values are 3200K, 5500K, 6500K, 8500K, Custom and Native.
Copy to Clipboard	Click to copy all current color balance values as a short term backup value that can be restored until the next system reboot. This will be followed by a confirmation dialog box.
Recall from Clipboard	Click to update all color balance values to the panel with the values that were copied to the clipboard. This will be followed by a confirmation dialog box.
Reset to Native	Click to return the color balance values on all panels to the pre-programmed calibrated data from the factory. This will be followed by a confirmation dialog box.
Reset to Factory	Click to return the color balance values on all panels to the factory calibrated values for each panel. This will be followed by a confirmation dialog box.

Color (LED 2k (Enhanced) Open Pixel Architecture only)

Field	Description
Output Color Depth	Sets the output bit depth of the video controller. Default is 10 bit.
Output Color Depth	Sets the bit depth of the output ports. Higher bit depth will require more outputs on the system due to the increased data required.
Color Temperature	Sets the video wall cabinets' color temperature. Values vary based on product and CUSTOM. 6500K is the default.
All	Adjusts the global color temperature. Changing this will change the Color Temperature to CUSTOM.
Red, Green and Blue	Individually adjust the color of the three primary colors. Changing this will change the Color Temperature to CUSTOM.

Frame Compensation *(LCD products only)*

FRAME COMPENSATION

Enable Compensation ☒

Frame Height ▲ ▼

Frame Width ▲ ▼

Field	Description
Enable Compensation	When selected, activates frame compensation.
Frame Height	The amount of vertical scale applied to the image to hide portions of an image that would be otherwise behind the image break. This is a global setting for all panels within the video wall. The higher the value, the more an image is scaled. To change the value, enter a number or use the up and down arrow buttons. Note: If a panel is in portrait orientation, this value is actually the Frame Width.
Frame Width	The amount of horizontal scale applied to the image to hide portions of an image that would be otherwise behind the image break. This is a global setting for all panels within the video wall. The higher the value, the more an image is scaled. To change the value, enter a number or use the up and down arrow buttons. Note: If a panel is in portrait orientation, this value is actually the Frame Height.

Panel Setup

LCD - FHD

PANEL SETUP

expand all | collapse all

PANEL 1 SETTINGS

PANEL 1 COLOR BALANCE

DELETE PANEL

PANEL 1 SETTINGS

ID #

1

▲

▼

Model

MX55M

Serial Number

109190148

Connected

Yes

VC Output

VC1.OUT1

Ambient Light

126

Orientation

Landscape

Temperature

43 °C

Runtime

1809.24

48V Supply

46.15 V

Firmware Version

1.7.319

Cable Length

<20m

Signal Quality

-20, -20, -21, -19dB

Panel Position:

Column

1

←

→

Row

1

↑

↓

APPLY

DELETE PANEL

LCD – 4k

PANEL SETUP

expand all | collapse all

PANEL 1 SETTINGS

PANEL 1 PRIMARY

PANEL 1 SECONDARY

PANEL 1 COLOR BALANCE

DELETE PANEL

PANEL 1 SETTINGS

ID #

1

▲

▼

Model

MX65U-4K

Serial Number

109200148

Connected

Yes

Ambient Light

126

Orientation

Landscape

Temperature

43 °C

Runtime

1809.24

48V Supply

46.15 V

Firmware Version

1.7.319

Panel Position:

Column

1

←

→

Row

1

↑

↓

APPLY

PANEL 1 PRIMARY

Connected

Yes

VC Output

VC2.OUT3

Cable Length

30m

Signal Quality

-21, -21, -21, -21dB

PANEL 1 SECONDARY

Connected

Yes

VC Output

VC2.OUT4

Cable Length

30m

Signal Quality

-20, -21, -20, -21dB

DELETE PANEL

LED

PANEL SETUP

expand all | collapse all

PANEL 1 SETTINGS

DELETE PANEL

LED - 2k Pixel Architecture

PANEL 4 SETTINGS

ID #4

ModelDLU-0.7

IP Address192 . 168 . 0 . 32

Serial Number340170116

ConnectedYes

VC OutputVC1.OUT1

Ambient Light126

Temperature60 °C

Firmware Version1.9.551

Cable Length<20m

Signal Quality-20, -20, -21, -19dB

Cabinet Auto Layout

Cabinet InputAUTO

Cabinet PatternNONE

Send Cabinet Settings

Panel Position:

X0

Y864

APPLY

DELETE PANEL

LED – (Enhanced) Open Pixel Architecture

PANEL 4 SETTINGS

ID #4

ModelTVF-1.2

ConnectedYes

VC OutputVC1.OUT1

Width1920

Height810

Panel Position:

X0

Y864

APPLY

DELETE PANEL

Settings

Field	Description
ID #	The ID of the panel to be associated with the OSD. This value may be changed to any number. To change the value, enter a number or use the up and down arrow buttons.
Model	The type of panel.
IP Address	Assigned IP address of the Panel (Input Chassis) for use when commands are sent to the video wall component. Must be unique for each panel.
Serial Number	The factory serial number of the equipment.
Connected	Yes indicates that the panel is connected and communication is active. No indicates there is a communication error between the master and the panel. For 4k panels, both primary and secondary need to indicate "Yes" under their respective "Connected" labels for this label to be Yes.
VC Output	Indicates which VC ID and physical output connector the selected panel is connected to.
Ambient Light	Indicates if an ambient light sensor is connected to the panel.
Orientation	<i>(LCD products only)</i> The panel sensor orientation reading.
Temperature	<i>(LCD and DirectLight Ultra products only)</i> The panel temperature value.
Runtime	<i>(LCD products only)</i> The amount of time in minutes:seconds the backlight has been operating.
48V Supply	<i>(LCD products only)</i> The 48V DC supply value.
Firmware Version	<i>(LCD and LED 2k pixel architecture only)</i> The loaded version of the firmware on the panel/DLI.
Connected - Primary/Secondary	<i>(3840x2160 LCD products only)</i> Yes indicates that the primary and/or secondary channel for the panel is connected and communication is active. No indicates there is a communication error on the indicated port(s).
VC Output - Primary/Secondary	<i>(3840x2160 LCD products only)</i> Indicates the VC output port the primary and/or secondary panel is connected to.
Cable Length	<i>(LCD and LED 2k pixel architecture only)</i> Rough approximation of the actual cable length connected between the VC and the panel.
Signal Quality	<i>(LCD and LED 2k pixel architecture only)</i> Diagnostic tool to determine if there may be cable issues causing display anomalies. Values less than -12dB may cause image display issues. Also, differences greater than 4dB between any of the four values may cause image display issues.

Field	Description
Cabinet Auto Layout	<i>(DLX products only)</i> Sends a cabinet chain 'Detect' command to automatically recognize connected cabinets, automatically 'Assigns' each cabinet an address based on the standard data/communication wiring scheme and 'Sets' the 0, 0 pixel position for the related panel based on the detected cabinet and assigned positions.
Cabinet Input	<i>(LED 2k pixel architecture products only)</i> Sets the cabinet input to be used for a panel. Values are AUTO, HDMI 1 and HDMI 2.
Cabinet Pattern	<i>(LED 2k pixel architecture products only)</i> Sets the cabinets connected to the specified DLI to a cabinet-generated test pattern: None, Red, Green, Blue, Black and White. "None" allows source from VC to be displayed.
Send Cabinet Settings	<i>(LED 2k pixel architecture products only)</i> Sends a standard setup command to the cabinets connected to the specified DLI. These commands are Brightness=20%, Cabinet Input=Auto, Vertical Refresh Frequency=60Hz, Cabinet Pattern=None and Color Temperature=8500K.
Panel Position	For LCD, the column and row position of the panel in the array. For LED, this is the X (horizontal) and Y (vertical) pixel position of the panel in the array. Panel origin is the upper-left corner of the video wall, incrementing to the right and down. To manually change the value, enter a number or use the arrow buttons. This will actively change in the canvas area as the arrows are selected.
Apply	Click to apply changes to the panel position.

Color Balance (LCD Products Only)

PANEL 1 COLOR BALANCE

White Balance

White Test Pattern ☐

Color Temperature **8500K**

All

Red 100

Green 100

Blue 100

Gray Balance

Gray Test Pattern ☐

All

Red 2.20

Green 2.20

Blue 2.20

Backlight Adjustment

0

Clipboard

Copy to Clipboard

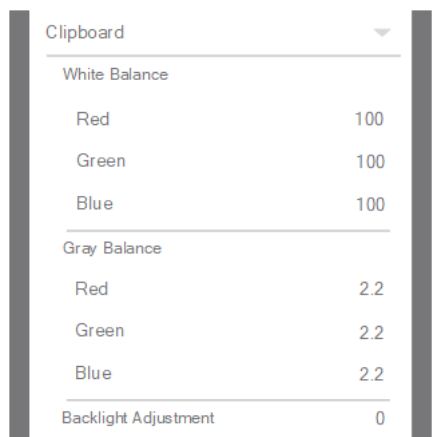
Recall from Clipboard

Reset to Native

Reset to Factory

Field	Description
White Test Pattern	When selected, displays a white image across all panels connected to the system. For best results, use this option when color balancing panels. Selecting this check box clears the Gray Test Pattern check box.
Color Temperature	Enables you to select preset color temperatures from 3200K, 5500K, 6500K, 8500K, CUSTOM and NATIVE. This value is initially set to CUSTOM from the factory, as it has been pre-calibrated to a known value to match other panels from the factory. Changing the color temperature values changes this value to CUSTOM if the changes start from one of the presets.

Field	Description
All	Moves the Red, Green and Blue color points simultaneously for the selected panel. Once one of the Red, Green or Blue color points is maximized to 100 or minimized to 0, none of the values will change further.
Red	Changes the red color point for the selected panel. The higher the value, the more red a panel will appear. To change the value, enter a number or move the slider.
Green	Changes the green color point for the selected panel. The higher the value, the more green a panel will appear. To change the value, enter a number or move the slider.
Blue	Changes the blue color point for the selected panel. The higher the value, the more blue a panel will appear. To change the value, enter a number or move the slider.
Gray Test Pattern	When selected, displays a gray image across all panels connected to the system. For best results, use this option after the white color balancing is done. Selecting this check box clears the White Test Pattern check box.
All	Moves the Red, Green and Blue gammas simultaneously for the selected panel. Once one of the Red, Green or Blue gammas is maximized to 100 or minimized to 0, none of the values will change further.
Red	Changes the red gamma for the selected panel. The lower the value, the more red a panel will appear. To change the value, enter a number, use the up/down arrow keys or move the slider. Range is 1.80 to 2.60.
Green	Changes the green gamma for the selected panel. The lower the value, the more green a panel will appear. To change the value, enter a number, use the up/down arrow keys or move the slider. Range is 1.80 to 2.60.
Blue	Changes the blue gamma for the selected panel. The lower the value, the more blue a panel will appear. To change the value, enter a number, use the up/down arrow keys or move the slider. Range is 1.80 to 2.60.
Backlight Adjustment	Adjusts the backlight intensity for the selected panel, enabling panels to match brightness so color balancing can be done properly. To change the value, enter a number or move the slider. If the brightness does not change when moving in either direction, it means that the panel has hit the range limit.

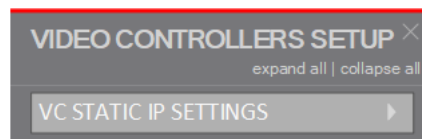
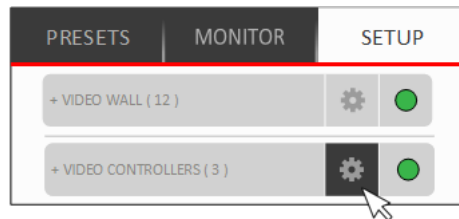
Field	Description
Clipboard	Expanding shows the current values saved to the clipboard for use when recall from clipboard is used.  The screenshot shows a menu titled 'Clipboard' with a dropdown arrow. It lists three sections: 'White Balance', 'Gray Balance', and 'Backlight Adjustment'. Each section has three rows for 'Red', 'Green', and 'Blue' values. The 'White Balance' section shows values of 100 for Red, Green, and Blue. The 'Gray Balance' section shows values of 2.2 for Red, Green, and Blue. The 'Backlight Adjustment' section shows a value of 0.
Copy to Clipboard	Click to copy current panel color balance values as a short term backup value that can be restored until the next system reboot. This will be followed by a confirmation dialog box. These values are stored in the same location as the video wall color balance clipboard location.
Recall from Clipboard	Click to update the current panel color balance values in this menu with the values that were copied to the clipboard. This will be followed by a confirmation dialog box.
Reset to Factory	Click to return the current panel color balance factory calibrated values. This will be followed by a confirmation dialog box.
Reset to Native	Click to return the current panel color balance values to the native setting. This is the same as selecting NATIVE from the Color Temperature list. Native values are all at 100. This will be followed by a confirmation dialog box.

Video Controllers

The screenshot shows the 'SETUP' tab in the WallDirector interface. It lists various system components with expand/collapse icons (plus/minus) and status indicators (green circles). Annotations with orange arrows point to specific elements:

- Expands details on VC equipment:** Points to the expand icon (plus sign) next to '+ VIDEO CONTROLLERS (3)'.
- Status of Video Controllers in the system:** Points to the green status circle next to '+ VIDEO CONTROLLERS (3)'.
- Click to configure global controller settings. See "Video Controller", next.** Points to the gear icon next to '+ VIDEO CONTROLLERS (3)'.
- Click to configure controller settings. See "Video Controller Setup" on page 90.** Points to the gear icon next to '+ VC 1'.
- Click to display the VC output areas in the workspace:** Points to the eye icon next to '+ VC 1'.

Component	Expand/Collapse	Configure (Gear)	Status (Green Circle)
+ VIDEO WALL (12)	+	⚙️	●
- VIDEO CONTROLLERS (3)	-	⚙️	●
+ VC 1	+	⚙️	●
+ VC 2	+	⚙️	●
+ VC 3	+	⚙️	●
+ SOURCES (3)	+		●
+ ZONES (2)	+		●
+ POWER SUPPLIES (2)	+		●
+ POWER SWITCHES (2)	+	⚙️	●
+ SENSOR HUBS (2)	+		●



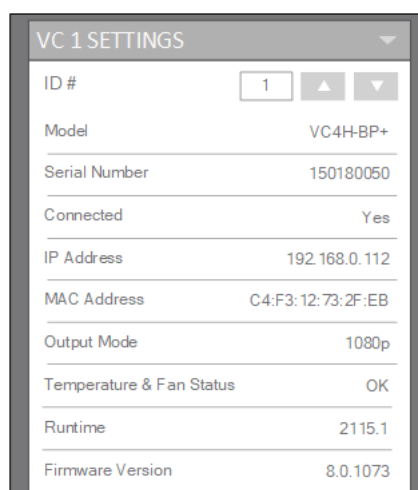
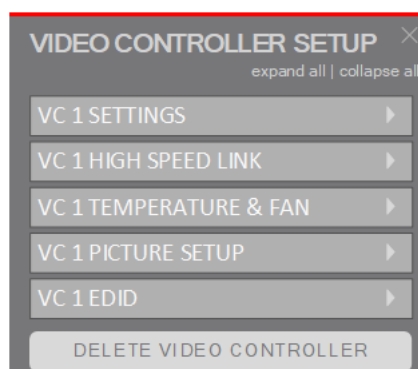
The 'VC STATIC IP SETTINGS' form is displayed. It contains the following fields and values:

- VC Start IP Address: 192 . 168 . 0 . 112
- Subnet: /24
- Subnet Mask: 255.255.255.0

An 'APPLY' button is located at the bottom right of the form.

Field	Description
VC Static IP Address	<i>(LED products only)</i> Sets the IP address for the first VC in a system, typically the master for the network, for communication to other equipment that is on the same network. Subsequent VCs are assigned an IP in numeric order from this IP address. For external control of additional equipment, this must be on the same network as the master.
Subnet	<i>(LED products only)</i> The subnet in CIDR notation for the VC Static IP Address network. It is the number of bits in the network portion of the IP address.
Subnet Mask	<i>(LED products only)</i> The subnet mask as automatically defined by the subnet CIDR value.

Video Controller Setup



Settings

Field	Description
ID #	The ID of the video controller associated with the component. This value may be changed to any number. To change the value, enter a number or use the up or down arrow buttons.
Model	The type of video controller.
Serial Number	The factory serial number of the equipment.
Connected	Yes indicates that the VC is connected and communication is active. No indicates there is a communication error between the master and the VC.
IP Address	Static IP address to communicate directly to the VC.
MAC Address	The physical equipment's unique hardware address.
Output Mode	Indicates if the VC output is set to 1080p or 4K resolution.
Temperature & Fan Status	Indicates if either a fan has failed or the temperature is greater than the limit. The possible status is OK or Fault.
Runtime	The amount of time in minutes:seconds the video controller has been operating.
Firmware Version	The loaded version of the firmware on the video controller.

High Speed Link (Video Cotrollers configured with HSL only)

VC 1 HIGH SPEED LINK

Link 1:

Loop In Connected Yes

Loop Out Connected Yes

Link 2:

Loop In Connected Yes

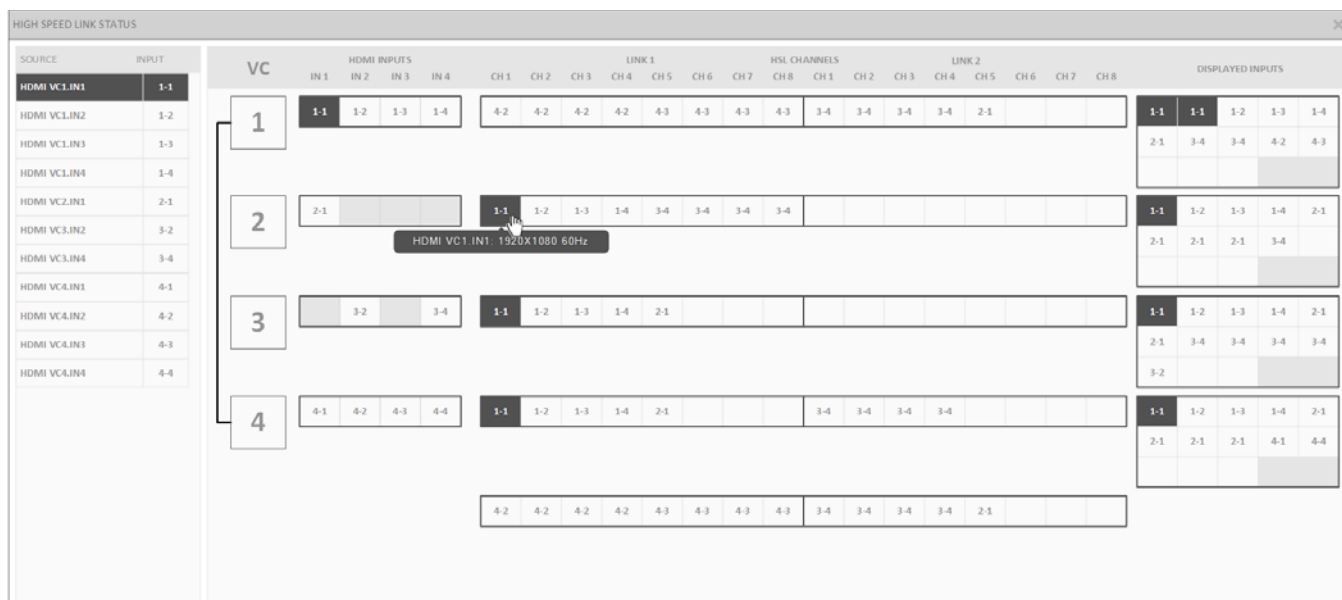
Loop Out Connected Yes

Loop Out Capacity Used 50%

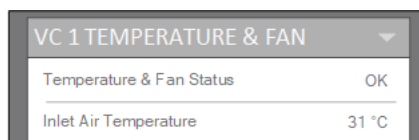
Loop Status OK

High Speed Link Status

Field	Description
Link 1:/Link 2:	Specifies the physical connection of the signal loop cable. Link 1 Loop is furthest to the right when looking at VC from the back.
Loop In Connected	Indicates if the cable is connected properly to the Loop In connection.
Loop Out Connected	Indicates if the cable is connected properly to the Loop Out connection.
Loop Out Capacity Used	Indicates in percent the amount of capacity used based on the number of Link Loop Out cables connected. Each cable is capable of carrying 2 UHD sources or 1 UHD and 4 FHD sources or 8 FHD sources.
Loop Status	Indicates that the system request for sources to display on any VC does not exceed the maximum bandwidth of the connected loop cables.
High Speed Link Status	Clicking this button activates a window with a visual representation of the sources being routed through the system.



Temperature & Fan



Field	Description
Temperature Status	Indicates the status is OK, Warning or Fault for the VC.
Inlet Air Temperature	Indicates the approximate inlet air temperature of the VC.

Picture Setup

The screenshot displays the 'VC 1 PICTURE SETUP' window. At the top, 'Current Input' is set to 'VC1.IN1'. Below this is a 'Reset to Default' button. The settings are as follows:

Setting	Value
Brightness	45
Contrast	50
Color Space	AUTO
Red Gain	100
Green Gain	100
Blue Gain	100
Red Offset	50
Green Offset	50
Blue Offset	50

At the bottom, the 'Signal' status is 'Not Present'.

Field	Description
Current Input	The source that will be modified.
Reset to Default	Clicking this button returns all picture settings to factory defaults.
Brightness	Adjusts the brightness of the selected input. The higher the number, the brighter the image.
Contrast	Adjusts the contrast of the selected input. The higher the number, the whiter the contrast.
Color Space	Selects the desired color space for the input. AUTO uses the color space from the input. Other choices are REC601, REC709, RGB and RGB VIDEO.
Red Gain	Adjusts the red color for the selected input. The higher the number, the more red for the input.
Green Gain	Adjusts the green color for the selected input. The higher the number, the more green for the input.
Blue Gain	Adjusts the blue color for the selected input. The higher the number, the more blue for the input.
Red Offset	Adjusts the red offset for the selected input. The higher the number, the more red for the input.

Field	Description
Green Offset	Adjusts the green offset for the selected input. The higher the number, the more green for the input.
Blue Offset	Adjusts the blue offset for the selected input. The higher the number, the more blue for the input.
Signal	Denotes if a valid source is connected to the current input.
DisplayPort Type	Enables the choice between DisplayPort 1.1 and 1.2 as the source connected. Changing may require a re-insertion of the source cable to the input. Note: For Video Controllers with High Speed Links this will not be an option.

EDID

VC 1 EDID

Input: VC1.IN1

Program EDID

EDID Type: 4K60

Horizontal Active: 3840

Vertical Active: 2160

Vertical Refresh Rate: 60

Enable HDR10: ☒

Fully Specified: ☐

Pixel Clock (MHz): 594.00

Horizontal Blanking: 560

Horizontal Front Porch: 176

Horizontal Sync Width: 88

Vertical Blanking: 90

Vertical Front Porch: 8

Vertical Sync Width: 10

Revert to Factory

Field	Description
Input	The current source input that information is displayed for, and can be edited if desired. To change the value, use the up or down arrow keys or enter the number desired in the box.
Program EDID	If changes are made to the information of a source, press ENTER while this line is highlighted for the changes to take effect.
EDID Type	There are three quick select types of pre-defined EDIDs for sources to use: 4K/60, 4K/30 and 1080P. The default setting is 4K/60. Selecting each will change the Horizontal Active, Vertical Active and Vertical Refresh Rate Below.

Field	Description
Horizontal Active	The horizontal resolution that the input will represent to the source. The maximum for this value is 4095 as long as the Pixel Clock remains under 600MHz. To change the value, use the up or down arrow keys or enter the number desired in the box.
Vertical Active	The vertical resolution that the input will represent to the source. The maximum for this value is 4095 as long as the Pixel Clock remains under 600MHz. To change the value, use the up or down arrow keys or enter the number desired in the box.
Vertical Refresh Rate	The refresh rate that the input will represent to the source. The default is 60, but can be tuned to any standard and non-standard refresh rate as long as the Pixel Clock remains under 600MHz. To change the value, use the up or down arrow keys or enter the number desired in the box.
Enable HDR10	<i>(Products capable of HDR and enabled in Video Wall Setup only)</i> Enables the source to pass HDR10 data to the system for processing. Program EDID must be selected after select/de-select for changes to take place. Default is enabled.
Fully Specified	When selected, enables the editing for the parameters below. These parameters are meant for users who fully understand the image setup parameters.
Pixel Clock	The frequency of the pixel clock. The maximum setting is 600MHz. To change the value, use the up or down arrow keys or enter the number desired in the box.
Horizontal Blanking	To change the value, use the up or down arrow keys or enter the number desired in the box.
Horizontal Front Porch	To change the value, use the up or down arrow keys or enter the number desired in the box.
Horizontal Sync Width	To change the value, use the up or down arrow keys or enter the number desired in the box.
Vertical Blanking	To change the value, use the up or down arrow keys or enter the number desired in the box.
Vertical Front Porch	To change the value, use the up or down arrow keys or enter the number desired in the box.
Vertical Sync Width	To change the value, use the up or down arrow keys or enter the number desired in the box.
Revert to Factory	Press the ENTER button while highlighted to return the factory settings for the EDID Type selected above. This will be followed by a confirmation dialog box.

Video Controller I/O

2K Pixel Architecture and Open Pixel Architecture

- VIDEO CONTROLLERS { 3 }



- VC 1 { 8 }




- VC 1 INPUTS - HDMI

VC1.IN1

VC1.IN2

VC1.IN3

VC1.IN4

- VC 1 INPUTS - DP

VC1.DP

- VC 1 - OUTPUTS

VC1.OUT1 1

VC1.OUT2 2

VC1.OUT3 3

VC1.OUT4 4

VC1.OUT5 6

VC1.OUT6 NONE

VC1.OUT7 5

VC1.OUT8 7

VC1.OUT9 8

+ VC 2 { 8 }




Enhanced Open Architecture Cabinets

- VIDEO CONTROLLERS { 3 }



- VC 1 { 7 }




- VC 1 INPUTS - HDMI

VC1.IN1

VC1.IN2

VC1.IN3

VC1.IN4

- VC 1 INPUTS - HSL

VC1.HSL

- VC 1 - OUTPUTS

VC1.OUT1 1

VC1.OUT2 2

VC1.OUT3 3

VC1.OUT4 4

VC1.OUT5 6

VC1.OUT6 NONE

VC1.OUT7 5

VC1.OUT8 7

+ VC 1 - PORT 1



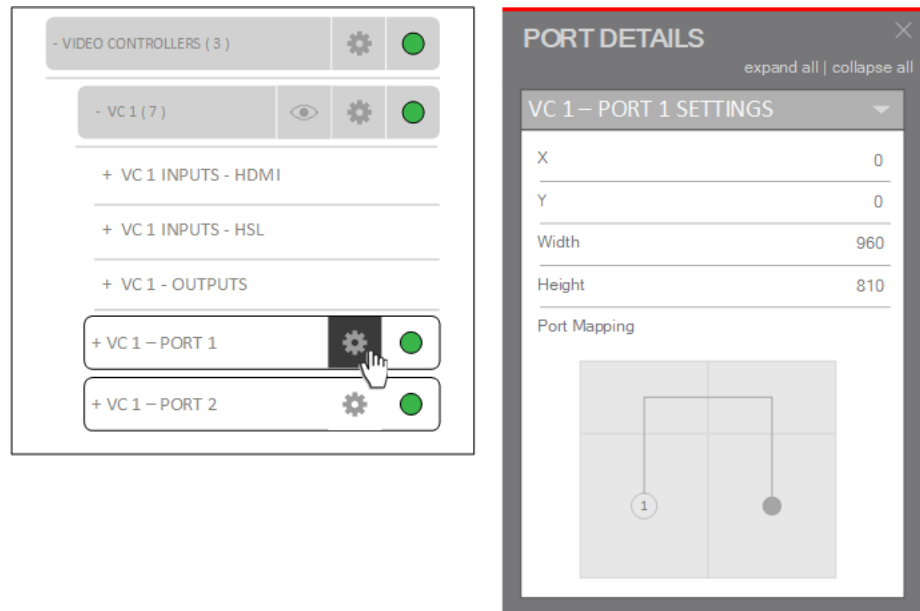
+ VC 1 - PORT 2



+ VC 2 { 8 }

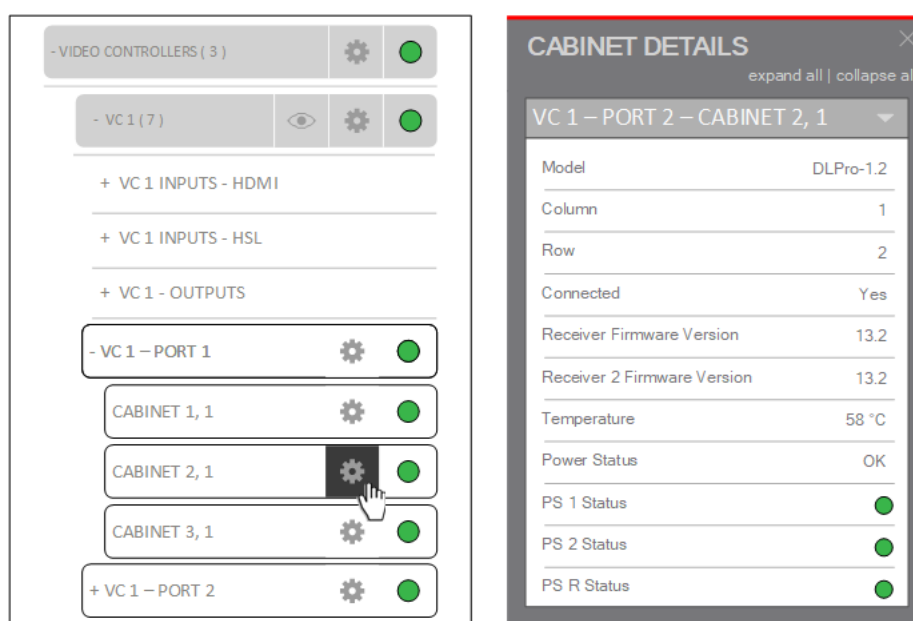



Field	Description
VC#.IN#	Can configure the named sources for the inputs. No two sources may be selected for one input.
VC#.DP	Can assign a source other than the default loop to the DiplayPort input.
VC#.HSL	Indicates the system has High Speed Link. Sources cannot be manually applied.
VC#.OUT#	Indicates the panel ID number an output is connected to.
VC# - PORT#	<i>(Enhanced Open Pixel Architectures only)</i> Provide specific information about the configuration and status of connected equipment.



Enhanced Open Architecture Cabinets

Field	Description
X or Y	Provides the X and Y pixel position of the section within the image area of the video controller of the equipment connected to the selected port.
Width	Provides the pixel width of the equipment on the selected port.
Height	Provides the pixel height of the equipment on the selected port.
Port Mapping	Provides a graphical representation of the equipment on the selected port and the signal map.



Enhanced Open Architecture Cabinets

Field	Description
Model	The product model connected to the system. Available models depend on the product detected or chosen.
Column	The column the equipment physically occupies in the port array.
Row	The row the equipment physically occupies in the port array.
Connected	Yes indicates that the equipment is connected and communication is active. No indicates there is a communication error between the VC and the equipment.
Receiver Firmware Version	The receiver firmware version of the cabinet electronics. Cabinet Monitoring must be enabled for a value to show.
Receiver 2 Firmware Version	For equipment with two receivers, the receiver firmware version of the electronics of the second electronics in the signal chain. Cabinet Monitoring must be enabled for a value to show.
Temperature	The equipment temperature value. Cabinet Monitoring must be enabled for a value to show.
Power Status	Summary indication if the power supplies are functioning properly. Cabinet Monitoring must be enabled for a value to show.
PS1 Status	Indicates the status of the equipment power supply. Cabinet Monitoring must be enabled for a value to show.

Field	Description
PS2 Status	Indicates the status of the second power supply in the equipment if equipped. Cabinet Monitoring must be enabled for a value to show.
PSR Status	Indicates the status of a third power supply in the equipment if equipped. Cabinet Monitoring must be enabled for a value to show.

Sources

Click to add a source to the system

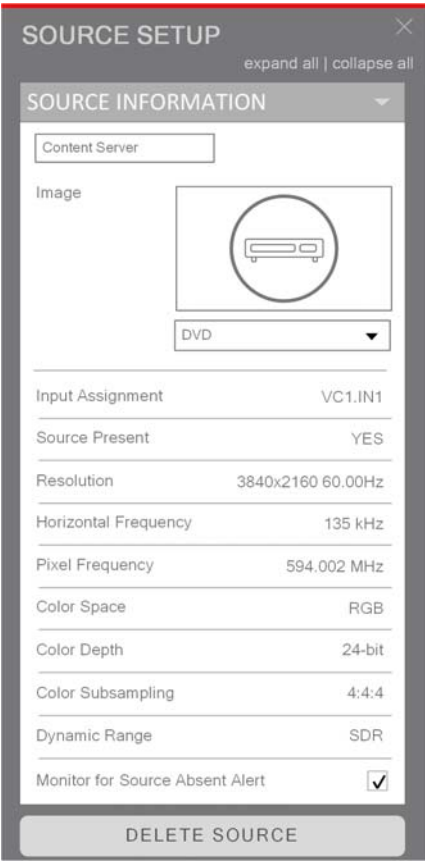
Click to configure sources. See "Source Setup" on page 102.

Status of Sources in the system

Category	Count	Status
+ VIDEO WALL	(4)	Green Circle
+ VIDEO CONTROLLERS	(3)	Green Circle
- SOURCES	(4)	Green Circle
Expanded SOURCES (4):		
Conf Room Comp	1	Green Circle
Content Server	1	Green Circle
HD Feed	1	Green Circle
Lobby Camera	1	Green Circle
+ ZONES (1)		
+ POWER SUPPLIES (1)		
+ POWER SWITCHES (2)		
+ SENSOR HUBS (2)		

Note: Adding a source is a manual way to add sources that have not yet been connected to an input. The source can later be assigned in an input in the configure sources menu.

Source Setup



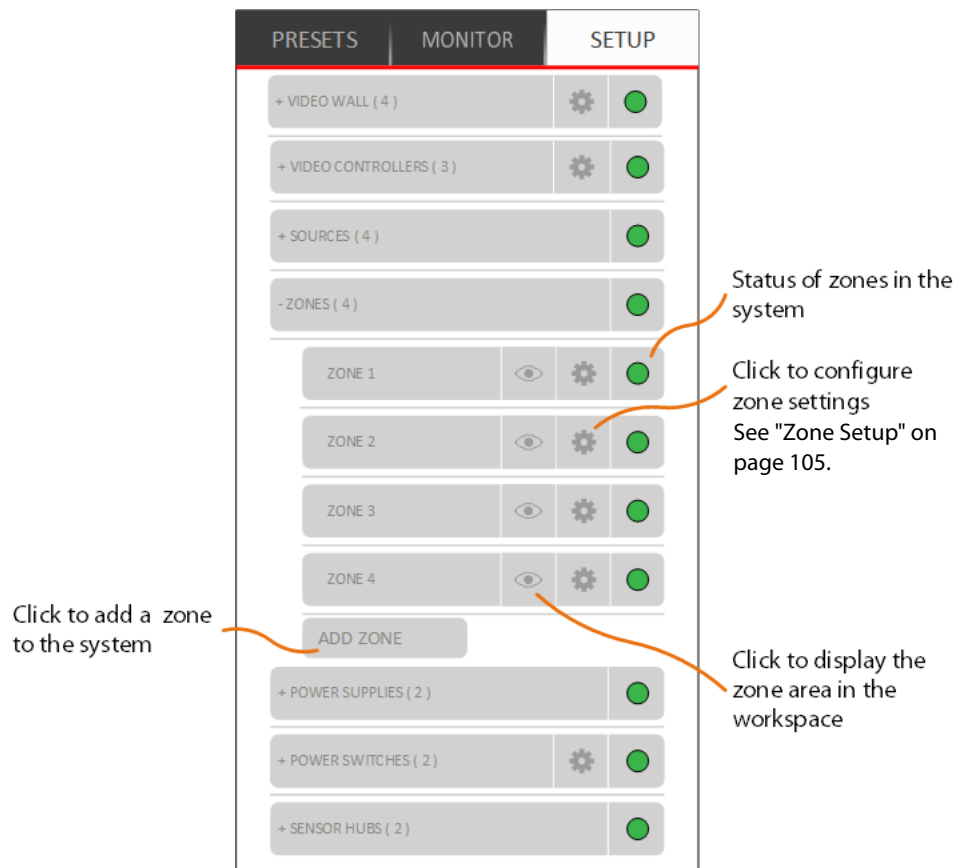
Field	Description
Source Name	The active input on the active video controller for which the status information will be displayed. The system automatically assigns a source name as the auto detected video controller and input. The value may be changed to a more descriptive value based upon the source plugged in. There is a 128 character limit.
Image	A predefined image is associated with the drop-down menu for easy recognition of the source on the canvas. There is an option to use custom images as well.
Input Assignment	The video controller and input assigned to this source.
Source Present	Indicates if a source is detected.
Resolution	The recognized resolution and refresh rate of the selected input.
Horizontal Frequency	The horizontal scan rate of the selected input.
Pixel Frequency	The pixel clock frequency of the selected input.
Color Space	The color space setting of the selected input.
Color Depth	The color depth in bits for the selected input.

Field	Description
Color Subsampling	The subsampling of the selected input in X:X:X format. For example, 4:4:4 or 4:2:0.
Dynamic Range	Indicates the source input as being either SDR or HDR.
Monitor for Source Absent	A check indicates this source will be part of the Alerts if sources are configured to be monitored.
Delete Source	Removes the source configuration from the video wall.

Zones

Zones are the means for assigning, sizing and positioning sources on a video wall array. A zone can have only a single source assigned, but a single video controller can have up to 9 displayable zones contained within its output area. Any number beyond 9 will make some zones go black due to bandwidth limitations. See the "Design Guide" section in the *Installation Guide* for information on video wall layout for multi-zone environments. Zones may be created in two ways:

- In the Setup tab as shown below:



- Or by clicking the icon below in the workspace area.



The latter method will navigate to the Preset tab for zone creation. See "Presets Tab" on page 136.

There are two locations within WallDirector where zone information may be edited. Using the former method will display a dialog box as shown below to input information about the zone.

Zone Setup

ZONE SETUP

expand all | collapse all

ZONE SETTINGS

ZONE SOURCE CAPTURE

DUPLICATE ZONE

DELETE ZONE

ZONE SETTINGS

ID#

1

Zone Position:

X

0

Y

0

Width

1920

Height

1080

APPLY

Source

Comp

Scale Mode

FILL

Justify

CENTER

Bring to Front

Zone Settings

Field	Description
ID #	The ID of the zone associated with the area on the video wall. This value may be changed to any number. To change the value, enter a number or use the up or down arrow buttons.
Zone Position X	Adjusts the horizontal position of the zone in landscape, or adjusts the vertical position of the zone in portrait. This value may be changed to any number. To change the value, enter a number or use the up or down arrow buttons.
Zone Position Y	Adjusts the vertical position of the zone in landscape, or adjusts the horizontal position of the zone in portrait. This value may be changed to any number. To change the value, enter a number or use the up or down arrow buttons.
Width	Adjusts the pixel width of the zone in landscape, or adjusts the height of the zone in portrait. This value may be changed to any number. To change the value, enter a number or use the up or down arrow buttons.

Field	Description
Height	Adjusts the pixel height of the zone in landscape, or adjusts the width of the zone in portrait. This value may be changed to any number. To change the value, enter a number or use the up or down arrow buttons.
Source	Assigns a predefined source to be displayed within the zone. Select drop-down arrow to see all sources setup on the system.
Scale Mode	Determines how the source will display within the zone. See "Scale Mode" on page 141.
Justify	Determines where within the zone a source will display. See "Justify" on page 141.
Bring to Front	For overlapping zones, moves the selected zone to display over any others.
Duplicate Zone	Creates a new zone based on the active zone. Offsets the new zone in the canvas.
Delete Zone	Removes the zone from the active workspace.

Zone Source Capture

The screenshot shows a dialog box titled "ZONE SOURCE CAPTURE". It has two input fields at the top: "Expected Source Width" with the value 3840 and "Expected Source Height" with the value 2160. Below these are radio buttons for "Source Capture": "Percent" is selected, and "Pixel" is unselected. At the bottom, there are four input fields for coordinates: "X" (0.0000), "Y" (0.0000), "Width" (100.0000), and "Height" (100.0000). Each input field has up and down arrow buttons next to it.

Field	Description
Expected Source Width	Width of source resolution. This will automatically populate based on the recognized source assigned to the zone. In the absence of sources this may still be used as a setup box for the source capture.
Expected Source Height	Height of source resolution. This will automatically populate based on the recognized source assigned to the zone. In the absence of sources this may still be used as a setup box for the source capture.
Percent/Pixel	Toggles the boxes below between percent or pixel manipulation of the Expected Source Width or Expected Zone Height.

Field	Description
X	Changes the horizontal offset of the source image to be displayed with respect to the zone x position origin.
Y	Changes the vertical offset of the source image to be displayed with respect to the zone y position origin.
Width	Changes the width selection of the source image to be displayed with in the zone.
Height	Changes the height selection of the source image to be displayed with in the zone.

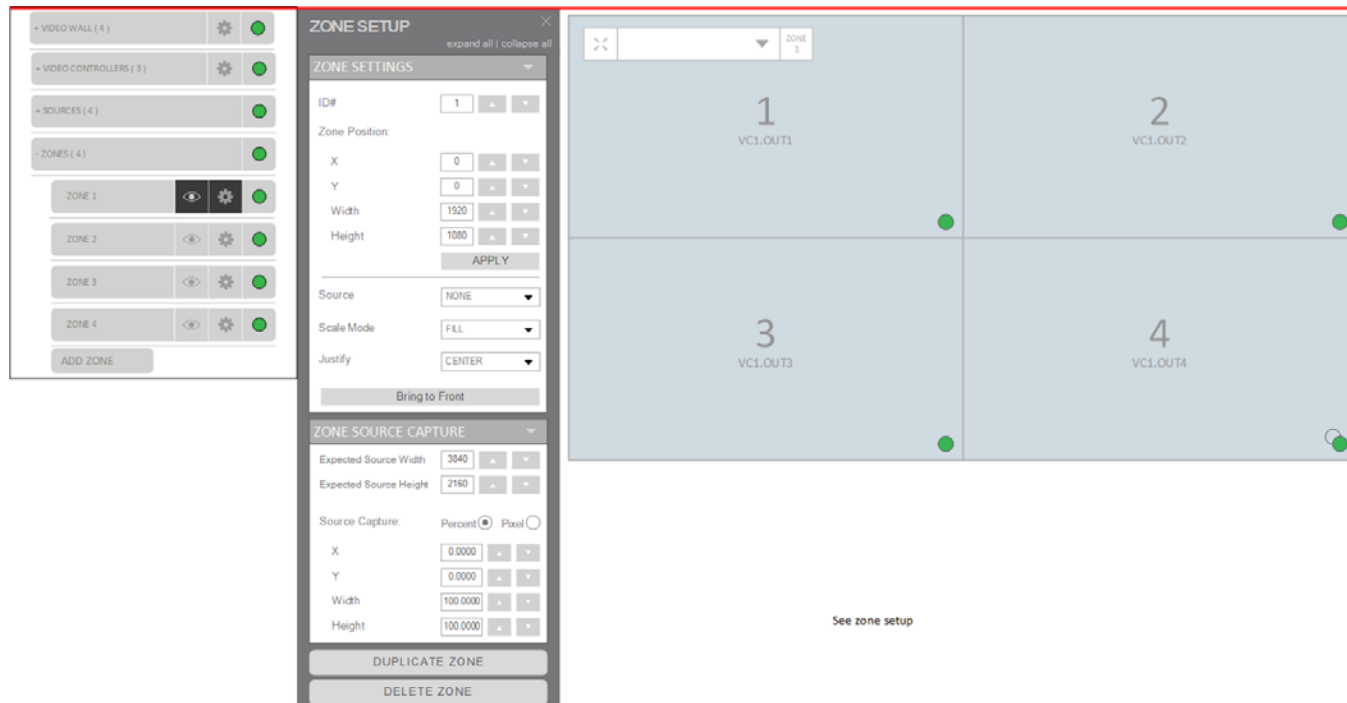
For the second location on editing zones, see "Presets Tab" on page 136.

Note: The zone menu here is an easy way to navigate to zones that may be positioned off the active area of the workspace or hidden beneath other zones in the

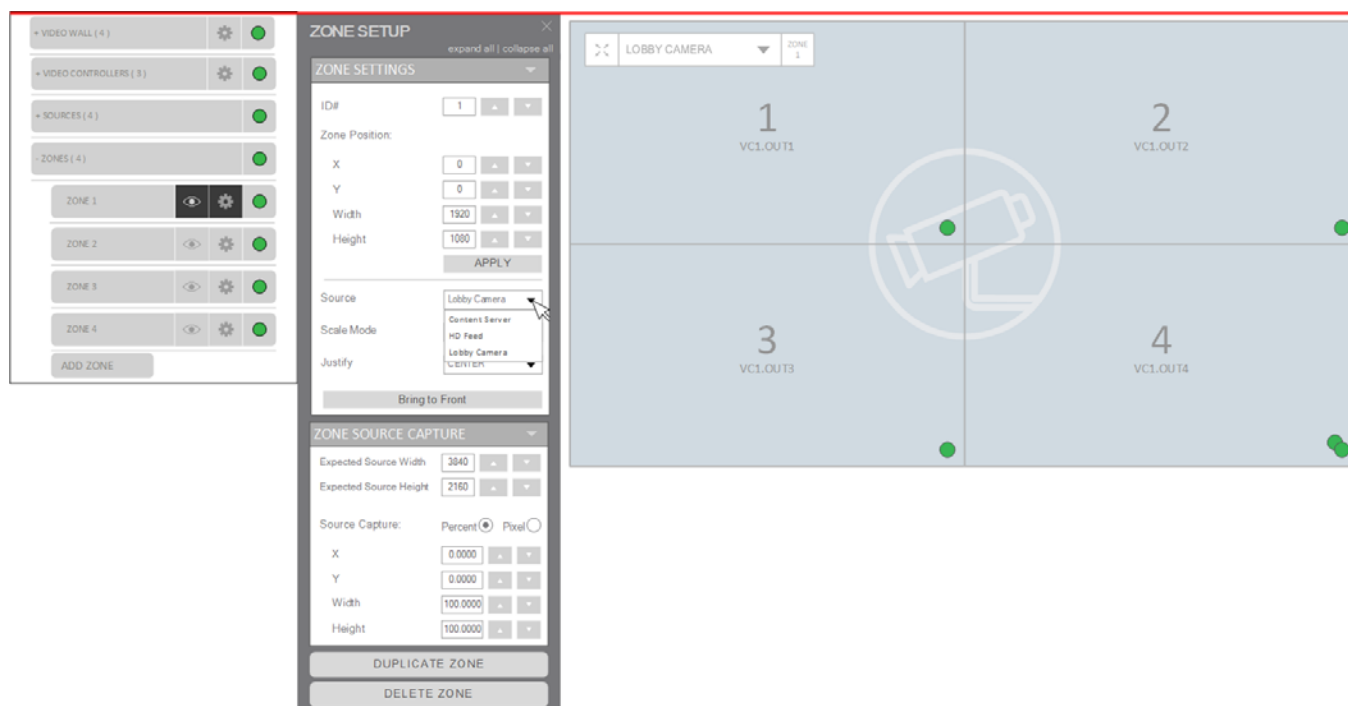
layout. Clicking the  will show the zone's physical representation on the

workspace. If a zone is not seen, use the zoom  and/or pan  features to locate or change the position values to fit the display area.

Adding the first zone will automatically apply Big Picture to the setup display area as shown below.



From here the size position and source may be changed for the zone.



Additional zones may be added and set up from here.

To save the layout, see "Presets Tab" on page 136.

Power Supply Setup

PRESETS

MONITOR

SETUP

+ VIDEO WALL (4)

⚙️

●

+ VIDEO CONTROLLERS (3)

⚙️

●

+ SOURCES (1)

●

+ ZONES (1)

●

- POWER SUPPLIES (1)

●

+ PS 1

⚙️

●

+ POWER SWITCHES (2)

⚙️

●

+ SENSOR HUBS (2)

●

Status of Power Supplies in the system

Click to configure power supply settings. See "Power Supply Setup", next.

Power Supply Setup

POWER SUPPLY SETUP

expand all | collapse all

PS 1 INFORMATION

ID #

1

▲ ▼

Model

RPS110-1

Serial Number

12341234

Connected

Yes

PS Module 1 Status

OK

PS Module 2 Status

PS Module 3 Status

PS Module R Status

Not Present

Standby Power Status

Good

Temperature

34 °C

Exhaust Temperature

38 °C

Runtime

1615.10

Firmware Version

13.0.1516

DELETE POWER SUPPLY

Field	Description
ID #	The ID of the power supply associated with the component. This value may be changed to any number. To change the value, enter a number or use the up and down arrow buttons.
Model	The type of power supply.
Serial Number	The factory serial number of the equipment.
Connected	Yes indicates that the power supply is connected and communication is active. No indicates there is a communication error between the master and the power supply.
PS Module 1 Status	The status of the power supply module in position 1. The possible statuses are OK, Fault or Not Present.
PS Module 2 Status	The status of the power supply module in position 2. The possible statuses are OK, Fault, blank or Not Present.
PS Module 3 Status	The status of the power supply module in position 3. The possible statuses are OK, Fault, blank or Not Present.
PS Module R Status	The status of the power supply module in position 4. The possible statuses are OK, Fault or Not Present.
Standby Power Status	<i>(RPSa models only)</i> The status of the internal standby supplies within the power supply.
Temperature	The control electronics temperature value.
Exhaust Temperature	The power electronics temperature value.
Runtime	The amount of time in minutes:seconds the power supply has been operating.
Firmware Version	The loaded version of the firmware on the power supply.
Delete Power Supply	Removes the power supply configuration from the video wall.

Power Switches Setup



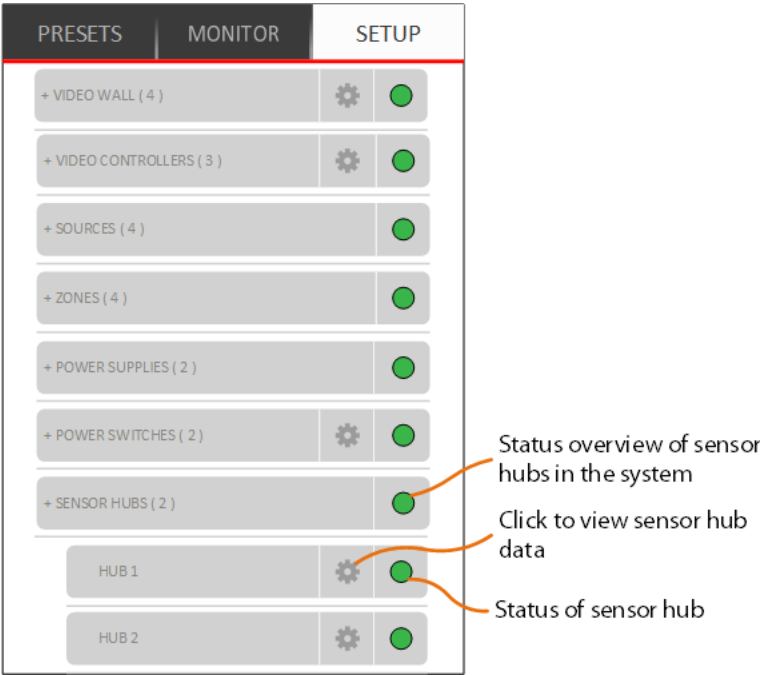
Power Switch Global Settings

Field	Description
Tie ALL to system power	Selecting YES will allow the system to automatically control all the power switches based on the Standby Power Mode or Power Saving Mode chosen in the System Settings dialog box.
Connection Password	This is the password assigned to the power switches connected during power switch setup. Note all power switches must have the same password and that password entered here for system control.
Control Switch Group	Selection of group will depend on groups assigned to individual power switches during setup. Choosing here will set the active devices controlled by selecting the ON/OFF buttons.
ON/OFF	Buttons to manually control the power state of a switch.

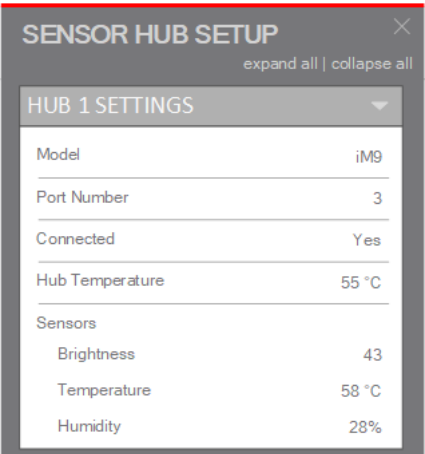
Power Switch Settings

Field	Description
ID #	The ID of the power switch associated with the physical piece of equipment. This value may be changed to any integer up to 999. To change the value, enter a number or use the up or down arrow buttons.
Name	Allows for a custom name to easily determine to which device(s) the power switch may be connected.
Group	Allows for assignment of a group name where two or more switches may be controlled by a single command. Group names assigned to individual switches must be identical. Once a group name is entered, it will appear for selection when typing an identical name.
Tie to system power	Selecting YES will allow the system to automatically control the power switch based on the Standby Power Mode or Power Saving Mode chosen in the System Settings dialog box.
IP Address	The IP Address assigned to the power switch during switch setup. This must be on the same LAN network as the master for system control. Needed for communication between the system and the power switch.
Connected	Denotes if the system master is connected to the power switch for control.
Power State	Status as to if the power switch output is On or Off.
ON/OFF	Buttons to manually control the power state of a switch.

Sensor Hub Setup



Sensor Hub Settings



Field	Description
Model	The product model connected to the system. Available models depend on the product detected or chosen.
Port Number	The video controller port to which the sensor hub is connected.

Field	Description
Connected	Yes indicates that the power supply is connected and communication is active. No indicates there is a communication error between the master and the power supply.
Hub Temperature	The equipment temperature value.
Sensors	Recognized connected sensors will be shown in this section with the associated values.

Monitor Tab

The **Monitor** tab allows non-administrator users to check the health of individual components within the system. Configuration items may not be changed here, but these items can help in troubleshooting system issues.

PRESETS	MONITOR	SETUP
+ VIDEO WALL (12)		
+ VIDEO CONTROLLERS (3)		
+ SOURCES (3)		
+ ZONES (2)		
+ POWER SUPPLIES (3)		
+ POWER SWITCHES (2)		
+ SENSOR HUBS (2)		

Video Wall Details

- VIDEO WALL (12)

LCD

LED - 2k Pixel
Architecture

LED - Open Pixel
Architecture

LED – Enhanced Open
Pixel Architecture

VIDEO WALL DETAILS

expand all | collapse all

INFORMATION

Product

Matrix G3

Model

LX55M

Orientation

Landscape

Columns

3

Rows

3

Layout Type

Manual

On-Screen Menu Panel

5

Panel Sync

YES

System Master

PS 1

System Firmware Version

8.0.1022

Panel Firmware Version

1.7.319

Video Wall Summary

CLOUD MANAGER

Cloud Manger Enabled

YES

Copy

Cloud ID

CgCQdIO7aFSnBHpvB0R0khAd

Last Connection

2024-May-23 12:50:45

GENLOCK

Panel Vertical Refresh

60 Hz

Auto Genlock Enabled

YES

All VC Outputs Locked

NO

VC

1

Sync Reference

IN1

Sync Reference Present

YES

Sync Reference Frequency

60.00 Hz

VC Output Locked

YES

BACKLIGHT

Local Dimming

YES

Control Mode

Auto

Intensity

80

Max Intensity

100

Dimmed Intensity

20

Ambient Threshold

100

Ambient Light

126

Ambient Sensor Panel

1

FRAME COMPENSATION

Enabled

YES

Frame Height

2

Frame Width

2

VIDEO WALL DETAILS

expand all | collapse all

INFORMATION

Product

DLX

Model

DLX-1.2

Width

3840

Height

2160

Layout Type

Manual

On-Screen Menu Panel

1

Enable HDR

YES

Color Temperature

8500K

System Master

VC 1

System Firmware Version

8.0.1022

Panel Firmware Version

1.7.319

Video Wall Summary

CLOUD MANAGER

Cloud Manger Enabled

YES

Copy

Cloud ID

CgCQdIO7aFSnBHpvB0R0khAd

Last Connection

2024-May-23 12:50:45

GENLOCK

Panel Vertical Refresh

60 Hz

Auto Genlock Enabled

YES

All VC Outputs Locked

NO

VC

1

Sync Reference

IN1

Sync Reference Present

YES

Sync Reference Frequency

60.00 Hz

VC Output Locked

YES

BRIGHTNESS

Control Mode

Auto

Intensity

80

HDR Intensity Offset

0

Max Intensity

100

Dimmed Intensity

20

Ambient Threshold

100

Ambient Light

126

Ambient Sensor Panel

1

VIDEO WALL DETAILS

expand all | collapse all

INFORMATION

Product

TV F

Model

TV F-1.2

Width

3840

Height

2160

Layout Type

Manual

On-Screen Menu Panel

1

Enable HDR

AUTO

Color Temperature

8500K

System Master

VC 1

System Firmware Version

8.0.1073

Video Wall Summary

CLOUD MANAGER

Cloud Manger Enabled

YES

Copy

Cloud ID

CgCQdIO7aFSnBHpvB0R0khAd

Last Connection

2024-May-23 12:50:45

GENLOCK

Panel Vertical Refresh

60 Hz

Auto Genlock Enabled

YES

All VC Outputs Locked

NO

VC

1

Sync Reference

IN1

Sync Reference Present

YES

Sync Reference Frequency

60.00 Hz

VC Output Locked

YES

BRIGHTNESS

Intensity

80

HDR Intensity Offset

0

Max Intensity

100

VIDEO WALL DETAILS

expand all | collapse all

INFORMATION

Product

DirectLight Pro

Model

DLPro-1.2

Width

3840

Height

2160

Layout Type

Default

On-Screen Menu Panel

1

Enable HDR

AUTO

System Master

VC 1

System Firmware Version

8.0.1073

Video Wall Summary

CLOUD MANAGER

Cloud Manger Enabled

YES

Copy

Cloud ID

CgCQdIO7aFSnBHpvB0R0khAd

Last Connection

2024-May-23 12:50:45

GENLOCK

Panel Vertical Refresh

60 Hz

Auto Genlock Enabled

YES

All VC Outputs Locked

NO

VC

1

Sync Reference

IN1

Sync Reference Present

YES

Sync Reference Frequency

60.00 Hz

VC Output Locked

YES

BRIGHTNESS

Intensity

80

HDR Intensity Offset

0

Max Intensity

100

COLOR

Output Color Depth

10 bits

Color Temperature

8500K

Red

100

Green

100

Blue

100

Field	Description
Product	Describes the display equipment configured or detected by the system.
Model	The panel model connected to the system.
Orientation	<i>(LCD products only)</i> The orientation of the panel as recognized by the sensor or manually set by the administrator.
Columns	<i>(LCD products only)</i> The number of columns in the video wall array as recognized by the position sensors or set by the administrator.
Rows	<i>(LCD products only)</i> The number of rows in the video wall array as recognized by the position sensors or set by the administrator.
Width (pixels)	<i>(LED products only)</i> The total number of horizontal pixels in the array. This is a summation of each cabinet's horizontal pixels.
Height (pixels)	<i>(LED products only)</i> The total number of horizontal pixels in the array. This is a summation of each cabinet's horizontal pixels.
Layout Type	Denotes whether the panel position sensors were used to configure the rows and columns or if this was set by the administrator. The possible statuses are Default, Auto or Manual.
On-Screen Menu	Denotes panel ID number the On-Screen Menu will be displayed for use with the remote control.
Panel Sync	<i>(1920x1080 resolution LCD products only)</i> This indicates if the inverted image scan on even rows is enabled. Values are YES or No.
Enable HDR	<i>(Select LED products only)</i> Denotes if HDR signal will be processed by the system. Options are OFF, HDR10 and AUTO.
Color Temperature	<i>(LED products only)</i> Denotes video wall cabinets' color temperature. Values are 3200K, 6500K, 8500K, 9300K and CUSTOM.
System Master	Denotes which component is the system master.
System Firmware Version	Indicates the system firmware version. An asterisk indicates there is a component(s) within the system that does not have the same software loaded as the master. A firmware update to this component(s) should be performed for proper system function.
Panel Firmware Version	Indicates the panel firmware version. An asterisk indicates there is a panel(s) within the system that does not have the same software loaded as the package expected by the system firmware version. A firmware update to the panel(s) should be performed for proper system function.
Video Wall Summary	Displays a popup window detailing equipment IDs, model numbers, serial numbers, panel position, panel connected port and firmware versions. Exporting to a .csv file is available within the window.

Field	Description
Panel Vertical Refresh	Indicates the vertical refresh setting for the panel. Values are 50Hz and 60Hz.
Auto Genlock Enabled	Indicates if the reference signal was automatically or manually selected.
All VC Outputs Locked	Indicates if all connected VCs have sync locked outputs. Values are YES and NO.
VC	Sets the number of the VC that data is shown for in the remaining portion of the Genlock section.
Sync Reference	Indicates the VC sync reference. Values are SYNC IN, INTERNAL, IN 1, IN 2, IN 3, IN 4, and DP.
Sync Reference Present	Indicates if a sync reference is present on the selected VC. Values are YES and NO.
Sync Reference Frequency	Indicates the value of the sync reference in Hz.
VC Output Locked	Indicates if the output on the selected VC is locked to the sync reference. Values are YES and NO.
Control Mode	<i>(LCD and LED 2k pixel architecture only)</i> Denotes the method used for controlling panel brightness. The possible statuses are Manual or Auto.
Intensity	Denotes the global brightness setting. This value is a percentage of Max Intensity.
HDR Intensity Offset	<i>(HDR enabled systems only)</i> Denotes the offset intensity from the normal intensity when the system switches to an HDR-recognized source.
Max Intensity	Denotes the percentage reduction from the absolute maximum brightness the system is set to.
Dimmed Intensity	<i>(LCD and LED 2k pixel architecture only)</i> Denotes the brightness setting when the Ambient Threshold is reached as set by the administrator.
Ambient Threshold	<i>(LCD and LED 2k pixel architecture only)</i> Denotes the administrator set value for when the Dimmed Intensity value is used for the brightness of the video wall.
Ambient Light	<i>(LCD and LED 2k pixel architecture only)</i> The light intensity reading from the Ambient Light sensor.
Ambient Sensor Panel	<i>(LCD and LED 2k pixel architecture only)</i> The panel ID of which the Ambient Light sensor is connected.
Enabled	<i>(LCD products only)</i> Denotes whether or not Frame Compensation is on or off. The possible statuses are Yes or No.
Frame Height	<i>(LCD products only)</i> Value set by the administrator for the vertical Frame Compensation.

Field	Description
Frame Width	<i>(LCD products only)</i> Value set by the administrator for the horizontal Frame Compensation.
Output Color Depth	<i>(Enhanced Open Pixel Architecture only)</i> System output color depth setting
Red	<i>(Enhanced Open Pixel Architecture only)</i> Gain setting for Red
Green	<i>(Enhanced Open Pixel Architecture only)</i> Gain setting for Green
Blue	<i>(Enhanced Open Pixel Architecture only)</i> Gain setting for Blue

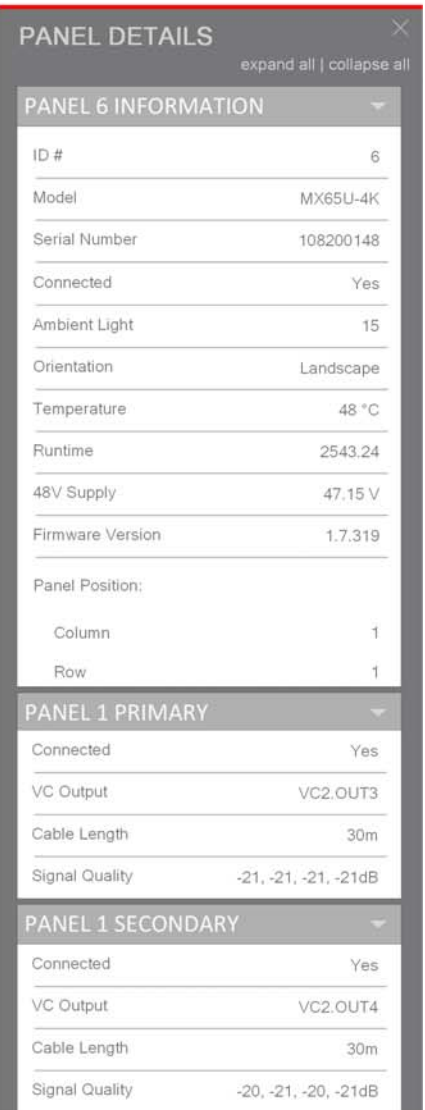
Panel Details

LCD

FHD



4k



The LCD monitor status is shown at the top, with a list of panels. A hand icon points to the settings gear for Panel 6 (2, 3).

Panel 6 Information (FHD):

ID #	6
Model	MX55M
Serial Number	109190148
Connected	Yes
VC Output	VC1.OUT1
Ambient Light	126
Orientation	Landscape
Temperature	43 °C
Runtime	1809.24
48V Supply	46.15 V
Firmware Version	1.7.319
Cable Length	<20m
Signal Quality	-20, -20, -21, -19dB
Panel Position:	
Column	3
Row	2

Panel 6 Information (4k):

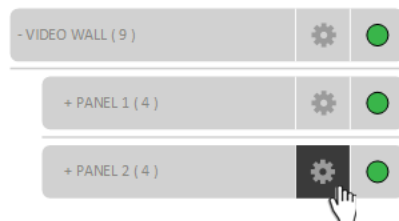
ID #	6
Model	MX65U-4K
Serial Number	108200148
Connected	Yes
Ambient Light	15
Orientation	Landscape
Temperature	48 °C
Runtime	2543.24
48V Supply	47.15 V
Firmware Version	1.7.319
Panel Position:	
Column	1
Row	1

Panel 1 Primary (4k):

Connected	Yes
VC Output	VC2.OUT3
Cable Length	30m
Signal Quality	-21, -21, -21, -21dB

Panel 1 Secondary (4k):

Connected	Yes
VC Output	VC2.OUT4
Cable Length	30m
Signal Quality	-20, -21, -20, -21dB

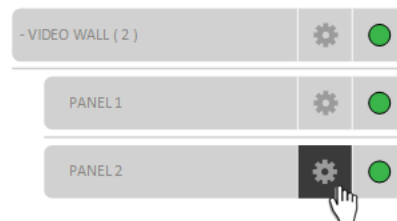
LED - 2k Pixel
Architecture

PANEL DETAILS

expand all | collapse all

PANEL 2 INFORMATION

ID #	2
Model	DLU-0.7
IP Address	10.15.0.124
Serial Number	340170116
Connected	Yes
VC Output	VC1.OUT1
Ambient Light	6
Temperature	50 °C
Firmware Version	1.7.319
Cable Length	<20m
Signal Quality	-20, -20, -21, -19dB
Cabinet Input	AUTO
Panel Position:	
X	1536
Y	0

LED – (Enhanced) Open
Pixel Architecture

PANEL DETAILS

expand all | collapse all

PANEL 2 INFORMATION

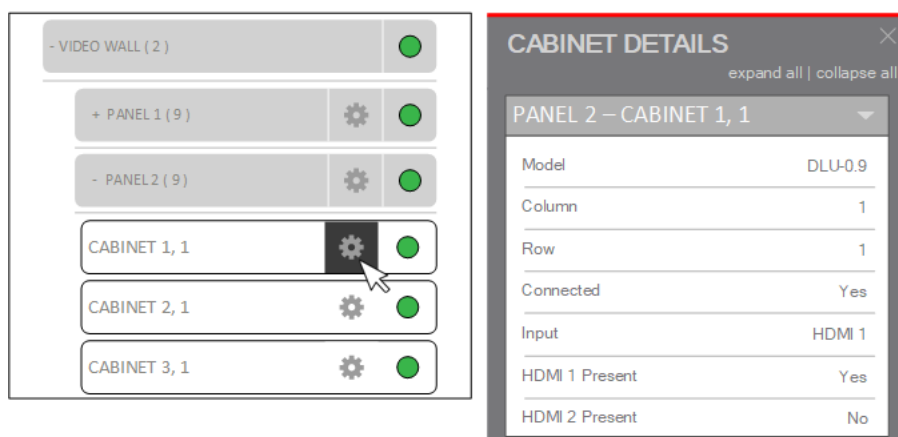
ID #	2
Model	TVF-1.2
Connected	Yes
VC Output	VC1.OUT1
Width	1920
Height	810
Panel Position:	
X	960
Y	0

Field	Description
ID #	The panel number for which this information menu pertains.
Model	The product type.
Serial Number	The factory assigned serial number for the panel.
IP Address	<i>(DirectLight Ultra Only)</i> Static IP address for communication to cabinet.
Connected	Yes indicates that the panel is connected and communication is active. No indicates there is a communication error between the master and the panel.
VC Output	<i>(1920x1080 LCD and LED products only)</i> Indicates the VC output port the panel is connected to.

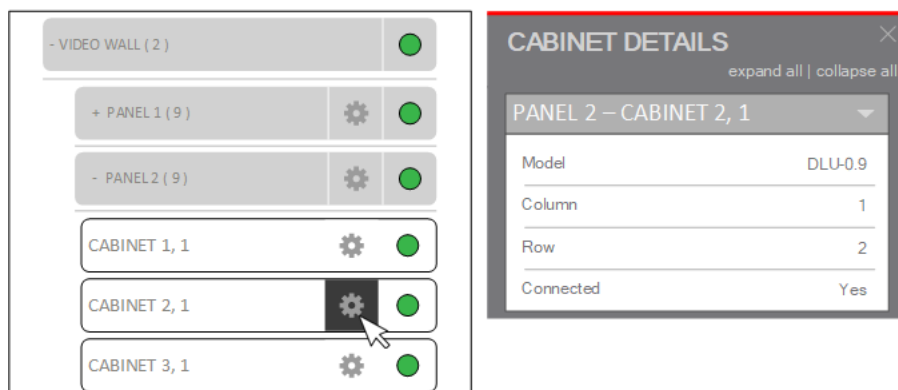
Field	Description
Ambient Light	<i>(LCD and LED 2k pixel architecture only)</i> Denotes whether an Ambient Light sensor is connected to the panel.
Orientation	<i>(LCD products only)</i> Denotes the orientation sensor reading for the panel.
Temperature	<i>(LCD products only)</i> Denotes the current temperature of the electronics on the back of the panel.
Runtime	<i>(LCD products only)</i> The amount of time in minutes:seconds the backlight has been operating.
48V Supply	<i>(LCD products only)</i> Denotes the actual voltage being supplied to the electronics of the panel.
Firmware Version	<i>(LCD and LED 2k pixel architecture only)</i> Current loaded version of the firmware on the panel/DLI electronics.
Connected - Primary/Secondary	<i>(3840x2160 LCD products only)</i> Yes indicates that the primary and/or secondary channel for the panel is connected and communication is active. No indicates there is a communication error on the indicated port(s).
VC Output - Primary/Secondary	<i>(3840x2160 LCD products only)</i> Indicates the VC output port the primary and/or secondary panel is connected to.
Cable Length	<i>(LCD and LED 2k pixel architecture only)</i> Rough approximation of the cable length from the VC to the panel.
Signal Quality	<i>(LCD and LED 2k pixel architecture only)</i> Diagnostic tool to determine if there may be cable issues causing display anomalies. Values less than -12dB may cause image display issues. Also, differences greater than 4dB between any of the four values may cause image display issues.
Cabinet Input	<i>(LED 2k pixel architecture only)</i> Denotes the current input setting for the first cabinet in the video chain is using. Values are AUTO, HDMI 1 and HDMI 2.
Column	<i>(LCD products only)</i> Denotes the horizontal position of the panel in the video wall array.
Row	<i>(LCD products only)</i> Denotes the vertical position of the panel in the video wall array.
X	<i>(LED products only)</i> Denotes the horizontal pixel position of the upper left corner of the selected panel with respect to the left side of the video wall.
Y	<i>(LED products only)</i> Denotes the vertical pixel position of the upper left corner of the selected panel with respect to the top of the video wall.

Cabinet Details (LED – 2k Pixel Architecture Only)

2k Pixel Architecture



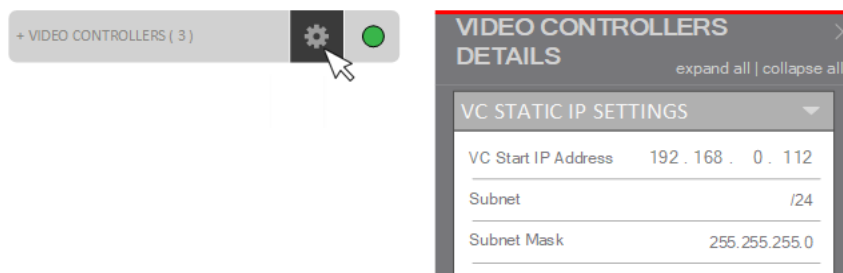
2k Pixel Architecture Distribution and Core Cabinets



Note: Cabinet Monitoring must be enabled in the Alerts dialog box for accurate data to be present.

Field	Description
Model	Cabinet model attached to system.
Column	Horizontal position of the cabinet within the panel area with 1 being the leftmost row of the panel area.
Row	Vertical position of the cabinet within the panel area with 1 being the upper row of the panel area.
Connected	Yes indicates that the cabinet is connected and communication is active. No indicates there is a communication error between the master and the cabinet.
Input	Indicates which of the video inputs is actively receiving and transmitting signal within the cabinet and the loop out.
HDMI 1 Present	Indicates if a valid signal is recognized on HDMI input 1.
HDMI 2 Present	Indicates if a valid signal is recognized on HDMI Input 2.

Video Controller Details



Field	Description
VC Static IP Address	<i>(LED products only)</i> Sets the IP address for the first VC in a system, typically master for the network, for communication to other equipment that is on the same network. Subsequent VCs are assigned an IP in numeric order from this IP address. For external control of additional equipment, this must be on the same network as the master.
Subnet	<i>(LED products only)</i> The subnet in CIDR notation for the VC Static IP Address network. It is the number of bits in the network portion of the IP address.
Subnet Mask	<i>(LED products only)</i> The subnet mask as automatically defined by the subnet CIDR value.

- VIDEO CONTROLLERS (1) [Settings] [Status]

- VC 1 (8) [View] [Settings] [Status]

- VC1 INPUTS - HDMI

VC1.IN1	NONE
VC1.IN2	Conference Room C...
VC1.IN3	HD Feed
VC1.IN4	Lobby Camera

- VC1 INPUTS - DP

VC1.DP	VC2.LOOP_OUT
--------	--------------

- VC1 - OUTPUTS

VC1.OUT1	1
VC1.OUT2	2
VC1.OUT3	3
VC1.OUT4	4
VC1.OUT5	6
VC1.OUT6	NONE
VC1.OUT7	5
VC1.OUT8	7
VC1.OUT9	8

VIDEO CONTROLLER DETAILS [X] expand all | collapse all

VC 1 INFORMATION

ID #	1
Model	VC9H-BP+
Serial Number	073190016
Connected	Yes
IP Address	192.168.0.112
MAC Address	C4:F3:12:73:2F:EB
Output Mode	1080p
Temperature & Fan Status	OK
Runtime	3876:40
Firmware Version	7.0.745

VC 1 HIGH SPEED LINK

Link 1:

Loop In Connected	Yes
Loop Out Connected	Yes

Link 2:

Loop In Connected	Yes
Loop Out Connected	Yes
Loop Out Capacity Used	50 %
Loop Status	OK

High Speed Link Status

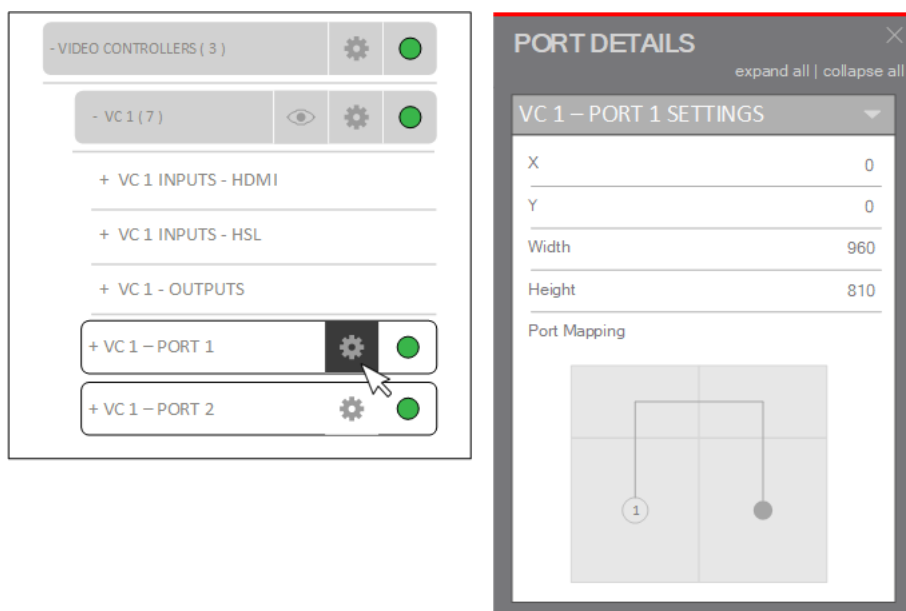
VC 1 TEMPERATURE & FAN

Temperature Status	OK
Inlet Air Temperature	29 °C

Field	Description
ID #	The video controller number for which this information menu pertains.
Model	The video controller type
Serial Number	The factory assigned serial number for the video controller.
Connected	Yes indicates that the VC is connected and communication is active. No indicates there is a communication error between the master and the VC.
IP Address	Static IP address to communicate directly to the VC.
MAC Address	The physical equipment's unique hardware address.
Output Mode	Indicates if the VC output is set to 1080p or 4K resolution.

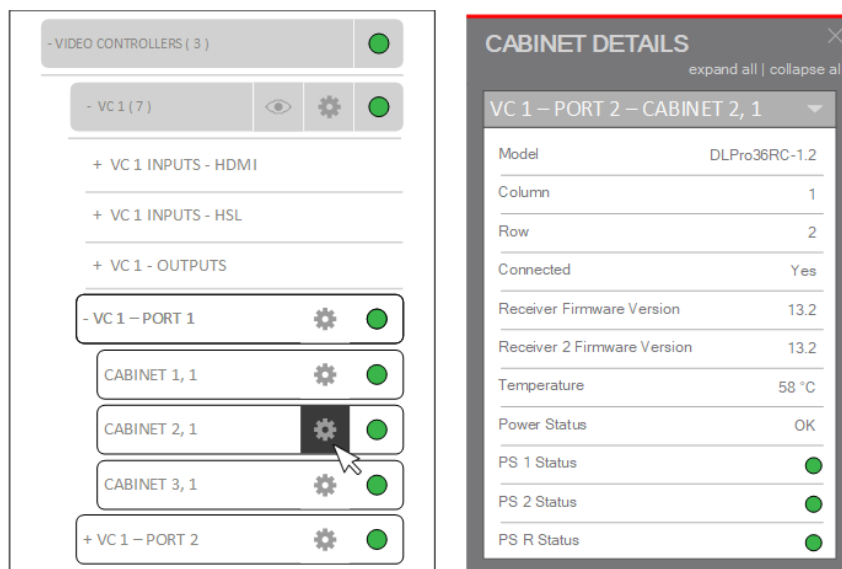
Field	Description
Temperature & Fan Status	Indicates if either a fan has failed or the temperature is greater than the limit. The possible statuses are OK or Fault.
Runtime	The amount of time in minutes:seconds the video controller has been operating.
Firmware Version	Current loaded version of the firmware on the video controller.
Link# Loop In Connected	Denotes if the cable is connected properly to the Loop In connection on the VC.
Link# Loop Out Connected	Denotes if the cable is connected properly to the Loop Out connection on the VC.
Loop Out Capacity Used	Denotes the percent amount of capacity used based on the number of Link Loop Out cables properly connected. Each cable is capable of carrying 2 UHD or 1 UHD plus 4 FHD or 8 FHD sources.
Loop Status	Denotes if the capacity of the loop connection is exceeded.
High Speed Link Status	Opens window with graphical representation of the source routing in the system (see page 93 for an example).
Temperature Status	Indicates the status is OK, Warning or Fault for the VC.
Inlet Air Temperature	Indicates the approximate inlet air temperature of the VC.

Port Details (Enhanced Open Pixel Architecture only)



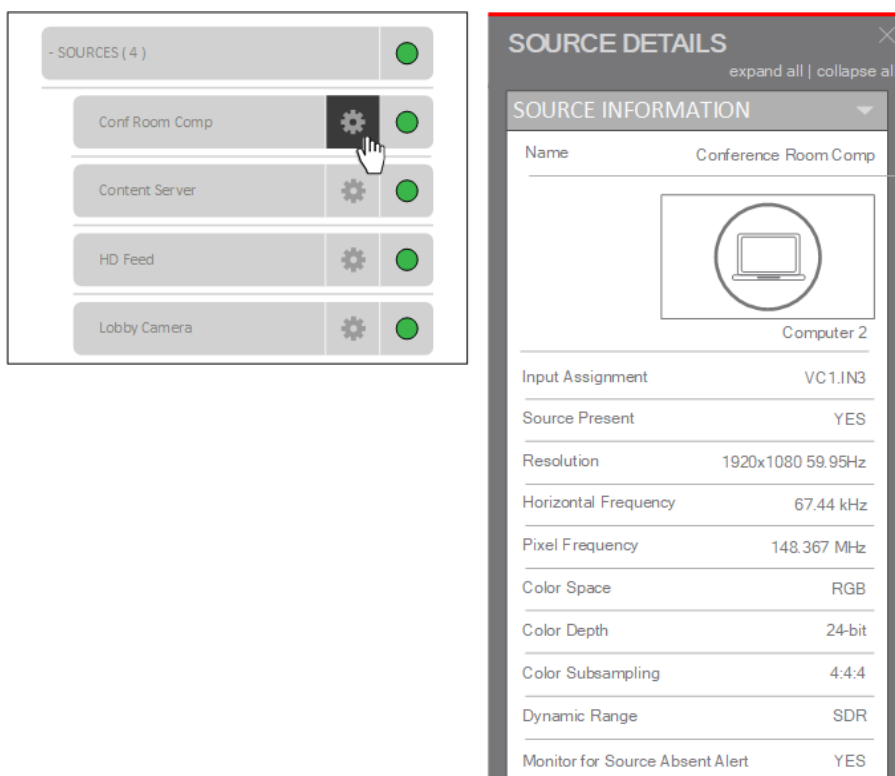
Field	Description
X or Y	Provides the X and Y pixel position of the section within the image area of the video controller of the equipment connected to the selected port.
Width	Provides the pixel width of the equipment on the selected port.
Height	Provides the pixel height of the equipment on the selected port.
Port Mapping	Provides a graphical representation of the equipment on the selected port and the signal map.

Cabinet Details (Enhanced Open Pixel Architecture Only)



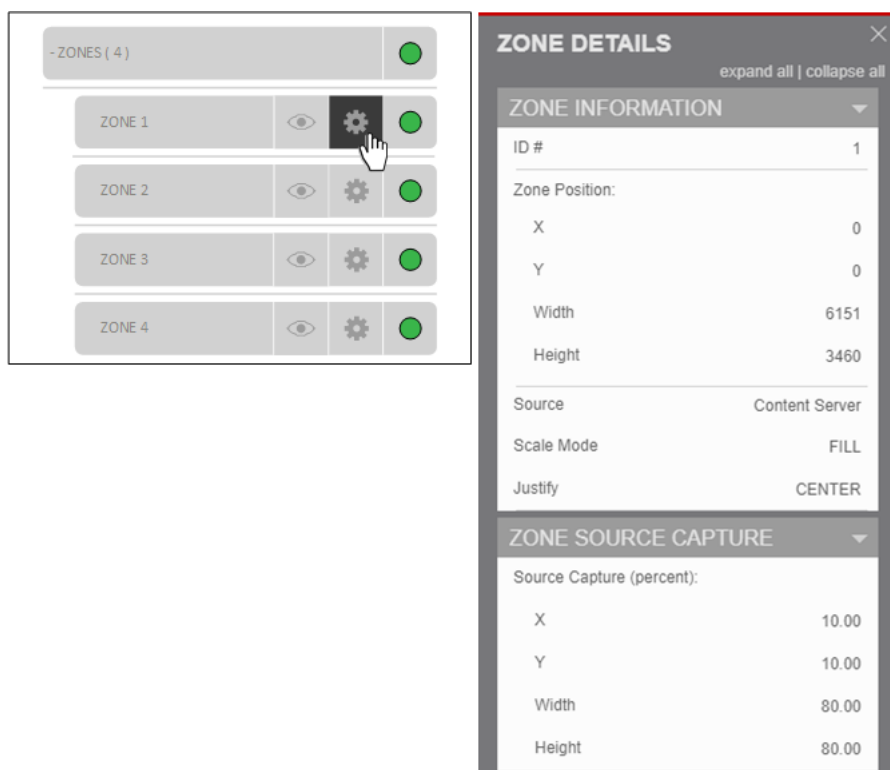
Field	Description
Model	The product model connected to the system. Available models depend on the product detected or chosen.
Column	The column the equipment physically occupies in the port array.
Row	The row the equipment physically occupies in the port array connected. Yes indicates that the equipment is connected and communication is active. No indicates there is a communication error between the VC and the equipment.
Receiver Firmware Version	The receiver firmware version of the electronics. Cabinet Monitoring must be enabled for a value to show.
Receiver 2 Firmware Version	For equipment with two receivers, the receiver firmware version of the electronics of the second electronics in the signal chain. Cabinet Monitoring must be enabled for a value to show.
Temperature	The equipment temperature value. Cabinet Monitoring must be enabled for a value to show.
Power Status	Summary indication if the power supplies are functioning properly. Cabinet Monitoring must be enabled for a value to show.
PS1 Status	Indicates the status of the equipment power supply. Cabinet Monitoring must be enabled for a value to show.
PS2 Status	Indicates the status of the second power supply in the equipment if equipped. Cabinet Monitoring must be enabled for a value to show.
PS3 Status	Indicates the status of a third power supply in the equipment if equipped. Cabinet Monitoring must be enabled for a value to show.

Source Details



Field	Description
Name	Default or administrator set name for the source.
Image	Assigned or blank icon denoting source zone on canvas.
Input Assignment	Physical connection point of the source to a video controller.
Source Present	Denotes if the source is recognized by the system as being valid. The possible statuses are Yes or No.
Resolution	The recognized resolution and refresh rate of the source.
Horizontal Frequency	The horizontal scan rate of the selected source.
Pixel Frequency	The pixel clock frequency of the source.
Color Space	The color space of the source.
Color Depth	The color depth in bits of the source.
Dynamic Range	Indicates the source input as being either SDR or HDR.
Color Subsampling	The subsampling of the source.
Monitor for Source Absent Alert	Indicates whether the selected source is monitored by the Alert system.

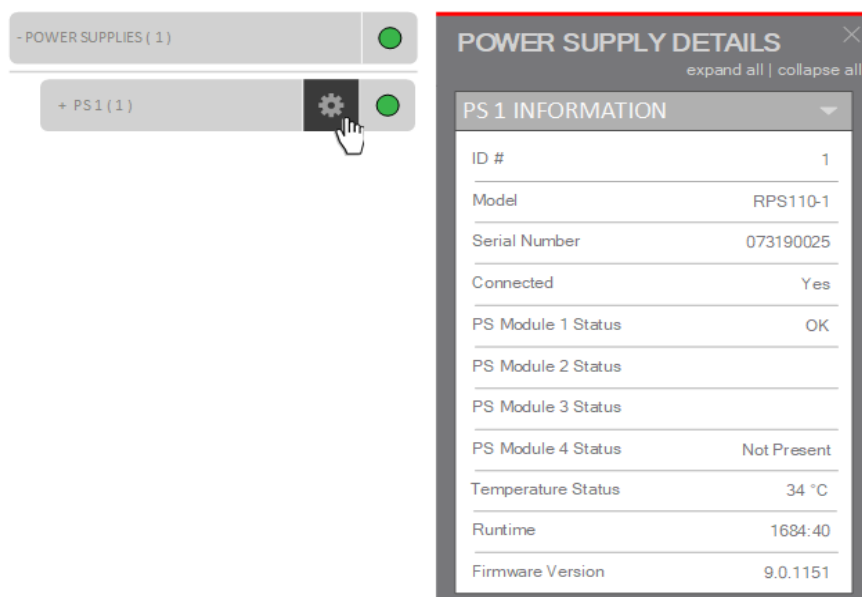
Zone Details



Field	Description
ID #	The ID of the zone associated with the area on the video wall.
Zone Position X	The horizontal position of the zone in landscape, or the vertical position of the zone in portrait.
Zone Position Y	The vertical position of the zone in landscape, or the horizontal position of the zone in portrait.
Width	The pixel width of the zone in landscape, or the height of the zone in portrait.
Height	The pixel height of the zone in landscape, or the width of the zone in portrait.
Source	Shows the name of the source assigned to the zone.
Scale Mode	Shows the source aspect ratio used to fill a zone.
Justify	Shows the bias position of the source to use within the zone.
Position	Denotes where in overlapping zones the zone is positioned.
X	The percentage horizontal offset of the source image displayed with respect to the zone x position origin.
Y	The percentage vertical offset of the source image displayed with respect to the zone y position origin.

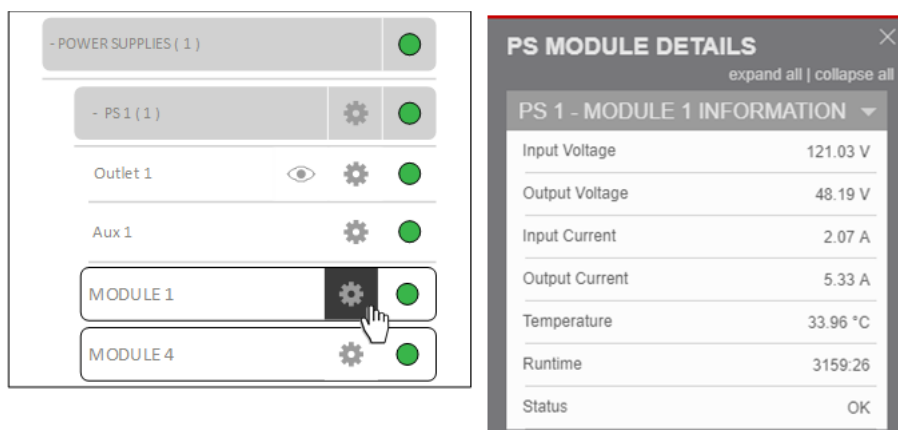
Field	Description
Width	The percentage width of the source image displayed with in the zone.
Height	The percentage height of the source image displayed with in the zone.

Power Supply Details



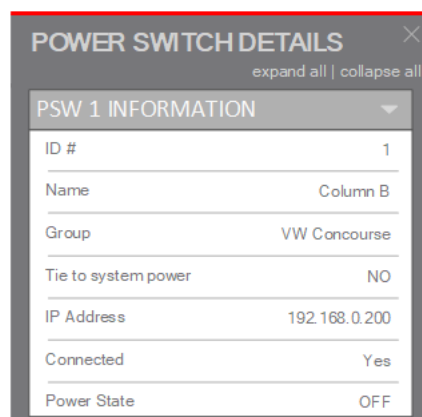
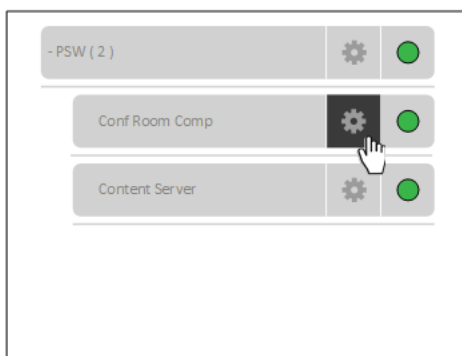
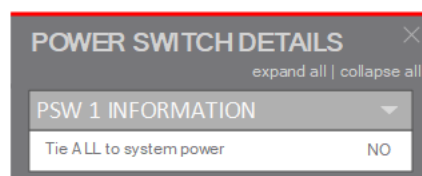
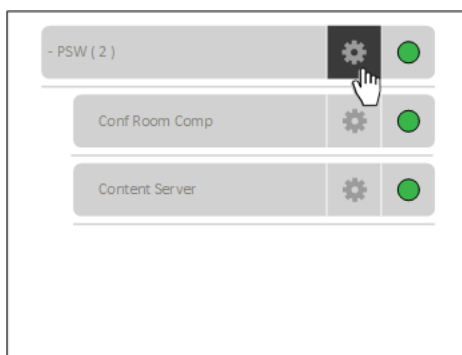
Field	Description
ID #	The power supply number for which this information menu pertains.
Model	The power supply type
Serial Number	The factory assigned serial number for the power supply.
Connected	Yes indicates that the power supply is connected and communication is active. No indicates there is a communication error between the master and the power supply.
PS Module 1 Status	The status of the power supply module in position 1. The possible statuses are OK, Fault or Not Present.
PS Module 2 Status	The status of the power supply module in position 2. The possible statuses are OK, Fault, Blank or Not Present.
PS Module 3 Status	The status of the power supply module in position 3. The possible statuses are OK, Fault, Blank or Not Present.
PS Module 4 Status	The status of the power supply module in position 4. The possible statuses are OK, Fault or Not Present.
Temperature	Denotes the current temperature of the electronics in the power supply.
Runtime	The amount of time in minutes:seconds the power supply has been operating.
Firmware Version	Current loaded version of the firmware on the power supply.

Module Details



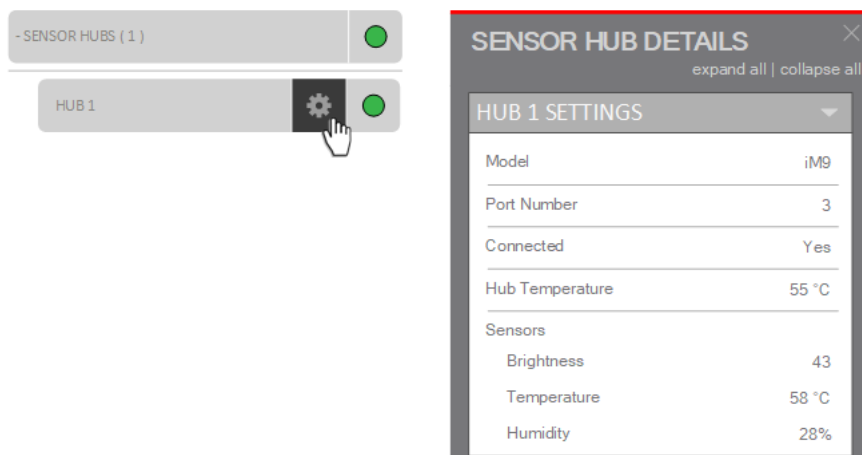
Field	Description
Input Voltage	The AC input voltage detected by the module.
Output Voltage	The DC output voltage of the module.
Input Current	The AC input current detected by the module.
Output Current	The DC output current of the module.
Temperature	The temperature of the module control circuit.
Runtime	The amount of time in minutes:seconds the power supply module has been operating.
Status	The status of the module. Possible values are OK, Warning and Fault.

Power Switch Details



Field	Description
Tie ALL to system power	Indicates if all power switches in the system will operate based on the power mode set within the system.
ID#	The power supply switch assigned number for which this information menu pertains.
Name	Assigned name to the power supply switch.
Group	Assigned group for the power supply switch.
Tie to system power	Indicates if the power switch will operate based on the power mode set within the system.
IP Address	Indicates the IP address of the power switch.
Connected	Indicates if communication is active to the power switch.
Power State	Indicates if the power switch is ON or OFF.

Sensor Hub Details



Field	Description
Model	The product model connected to the system. Available models depend on the product detected or chosen.
Port Number	The video controller port to which the sensor hub is connected.
Connected	Yes indicates that the power supply is connected and communication is active. No indicates there is a communication error between the master and the power supply.
Hub Temperature	The equipment temperature value.
Sensors	Recognized connected sensors will be shown in this section with the associated values.

Presets Tab

On the **Presets** tab, administrators can manage zones on the video wall, and save the layout as a preset. Non-administrative users may switch between predefined presets if multiple are available. See the “Design Guide” section in the *Installation Guide* for considerations for laying out the wall.



It is important to note that Presets save only the zone information as shown in the active workspace and not any other system settings. The information saved includes:

- Layout of zones
- Assigned source
- Source scaling
- Source justification
- Source overscan
- Zone size
- Zone position
- Zone layer

Nothing in a preset is saved until the save button is pressed.

As described earlier, zones may be created in the Setup tab; however, there is more freedom to adjust zones in the Presets tab. Instead of a panel being selected for editing in the workspace as in the Setup tab, the zones are selectable and able to be manipulated with the cursor. The active zone for manipulation is denoted by a red rectangle and round circles at the points where the zone can be resized with a click and drag. Additionally, the grid buttons described earlier (see "Workspace Buttons" on page 57) may be used to snap zones to a location.

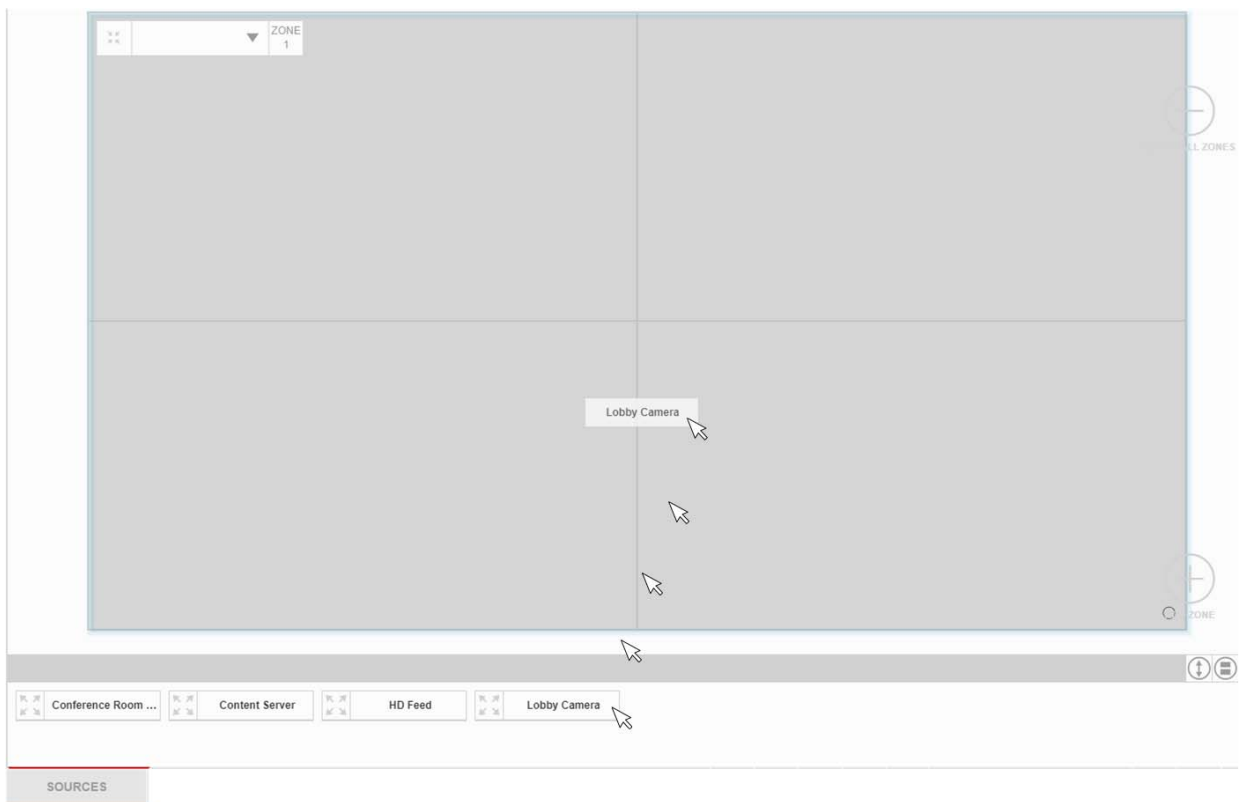
There are two ways to add zones to the workspace from the Preset tab. The first way to add a zone is to press the icon in the workspace area below:



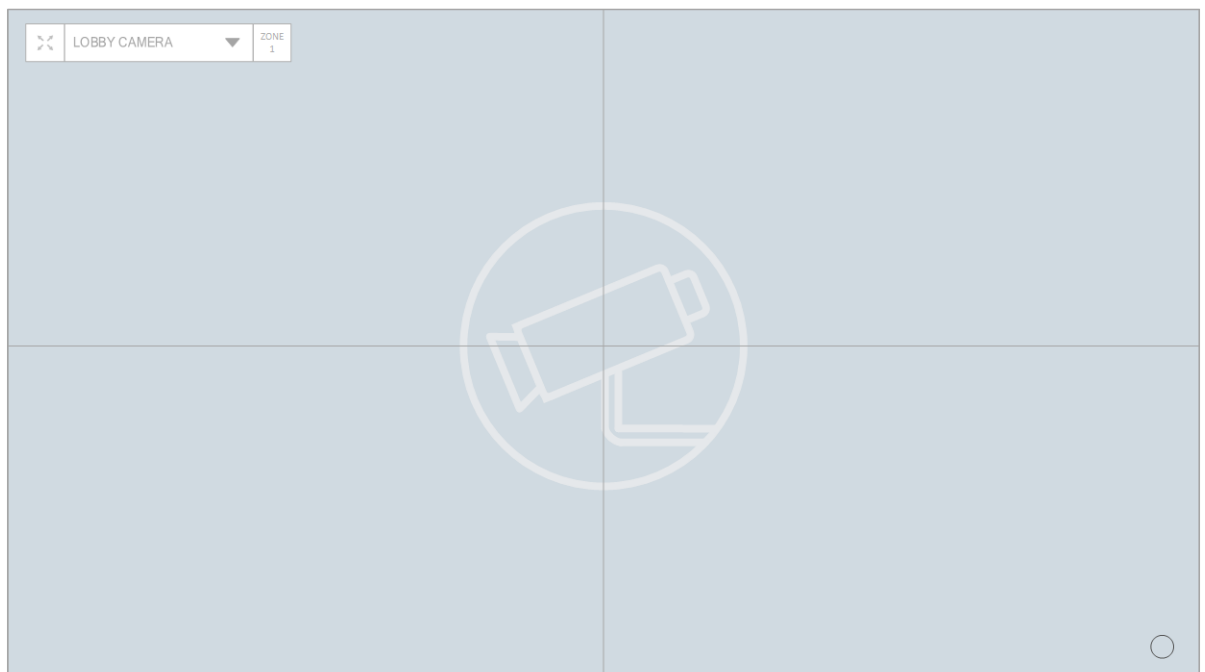
Note: Clicking the other icon in the workspace area removes all zones created in the active preset.



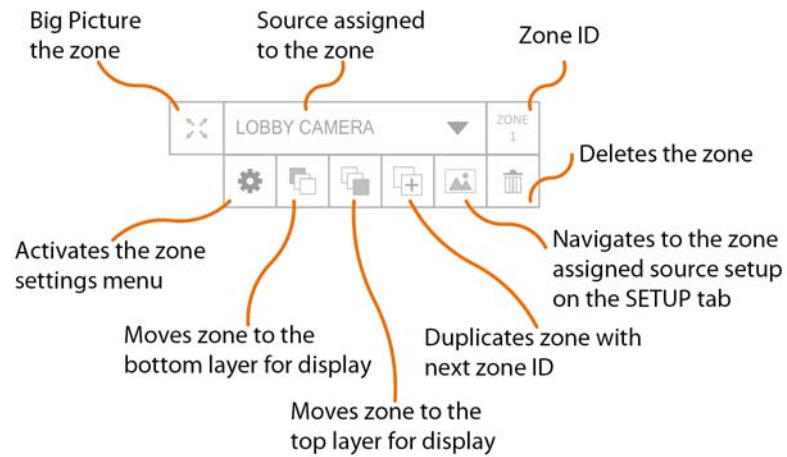
The second way to add a zone is by showing the sources by clicking **SOURCES** and dragging a source into the workspace area.



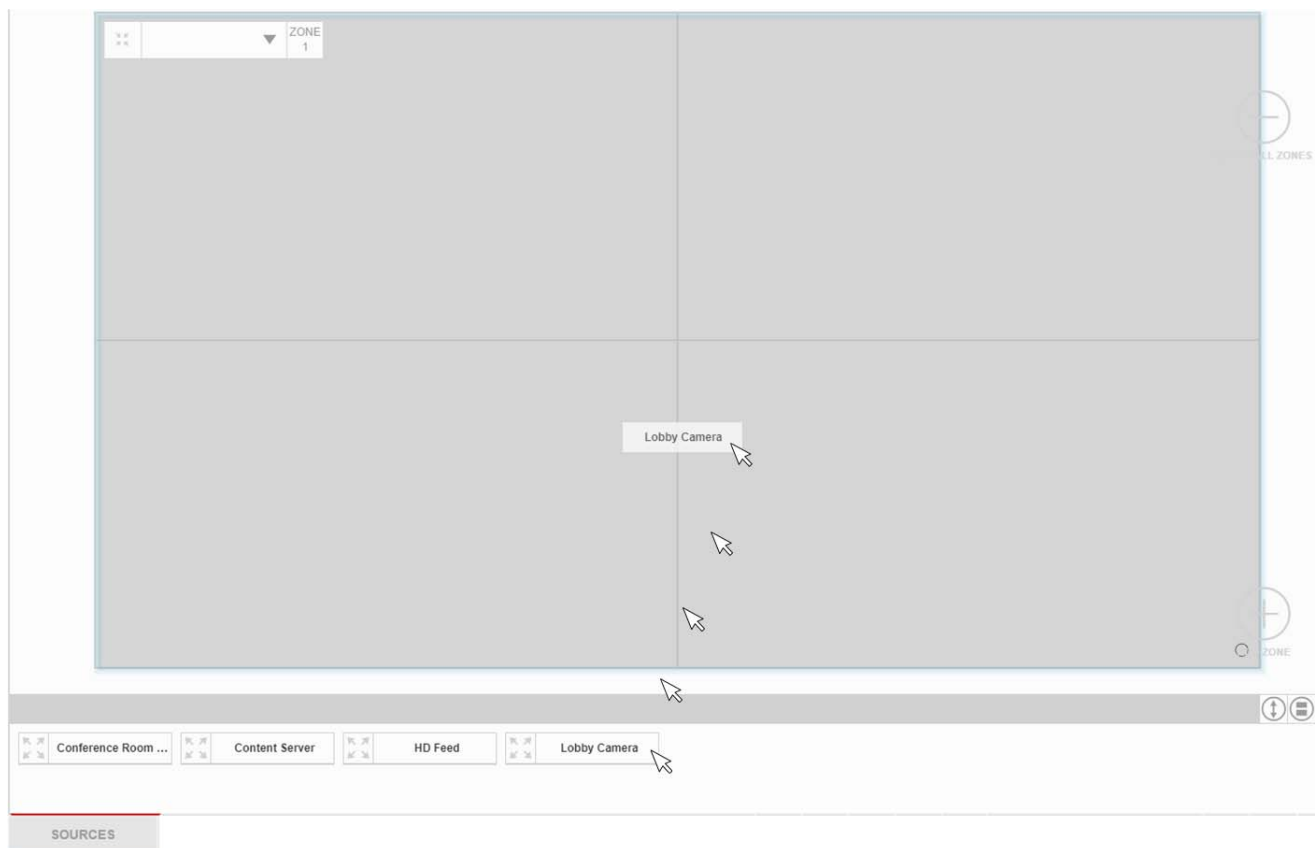
Adding the first zone automatically applies Big Picture to the setup display area as shown below.



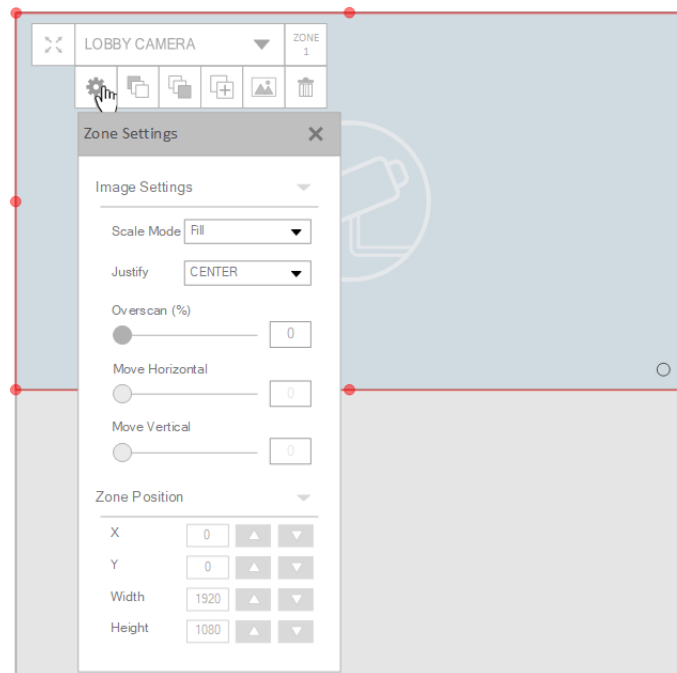
When a zone is created, a zone bar appears with various functions.



Note: Source may be assigned within the zone bar drop-down menu or by dragging a source from the source bar onto the zone area.



Within the zone settings menu, the size and position may be entered manually. The menu also includes other functions to get the most out of the display.



Field	Description
Scale Mode	Allows for the selection of how the source should be scaled within the zone area. Scale Mode Fill Fill Crop 16x9 4X3 NATIVE AUTO See "Scale Mode" on page 141.
Justify	Allows for the selection of how the source should be referenced within the zone area. Justify CENTER CENTER LEFT RIGHT TOP BOTTOM TOP-LEFT TOP-RIGHT BOTTOM-LEFT BOTTOM-RIGHT See "Justify" on page 141.

Field	Description
Overscan	This is a percentage of how much the source should be scaled in excess of the native resolution. Change this value by clicking the circle and dragging to the desired value. The range is 0-50%.
Move Horizontal	Active only when overscan is enabled, this feature allows the overscanned image to move left or right up to the edge of the native image. Change this value by clicking the circle and dragging to the desired value. The range is 0– <i>Overscan setting</i> .
Move Vertical	Active only when overscan is enabled, this feature allows the overscanned image to move up or down up to the edge of the native image. Change by clicking the circle and dragging to the desired value. The range is 0– <i>Overscan setting</i> .
Zone Position X	Adjusts the horizontal position of the zone in landscape and the vertical position in portrait. This value may be changed to any number. To change the value, enter a number or use the up or down arrow buttons.
Zone Position Y	Adjusts the vertical position of the zone in landscape and the horizontal position in portrait. This value may be changed to any number. To change the value, enter a number or use the up or down arrow buttons.
Width	Adjusts the pixel width of the zone. This value may be changed to any positive non-zero number. To change the value, enter a number or use the up or down arrow buttons.
Height	Adjusts the pixel height of the zone. This value may be changed to any positive non-zero number. To change the value, enter a number or use the up or down arrow buttons.

Scale Mode

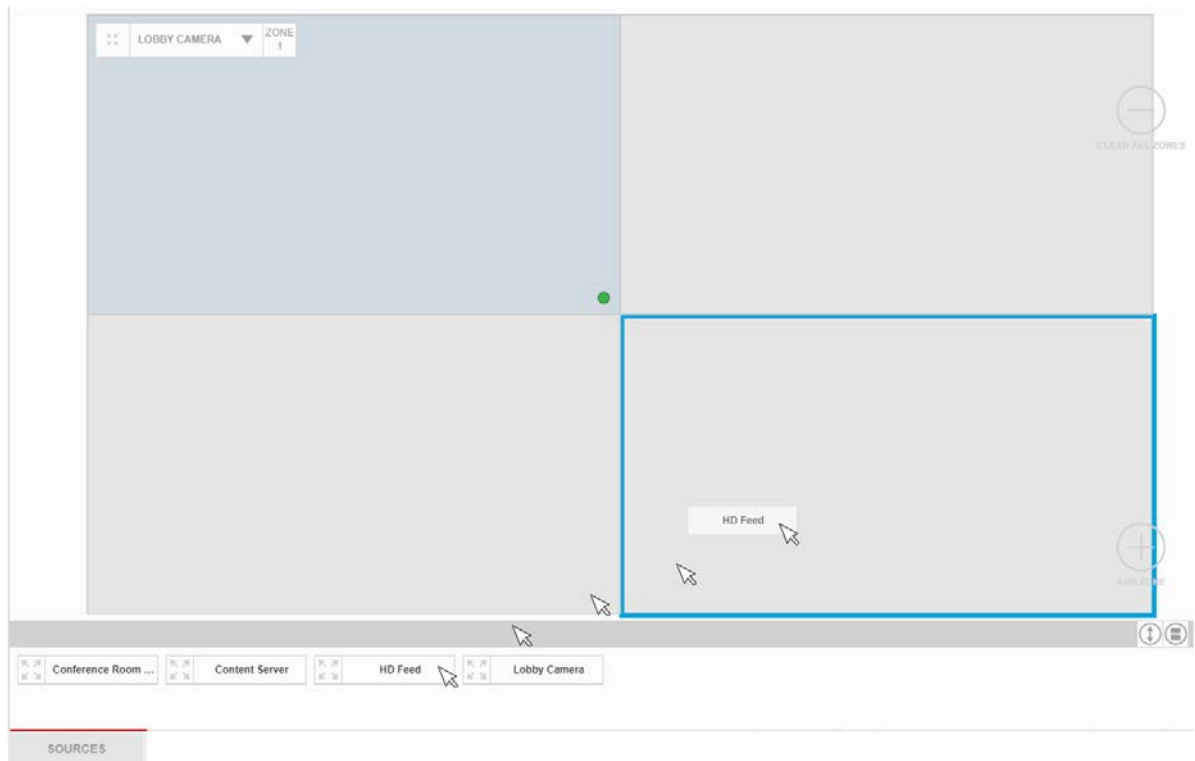
Field	Description
Fill	Stretches or shrinks the image to fit both top to bottom and left to right of the zone size. The result is a zone showing all source content with no black bars but possible significant image distortion.
Crop	Stretches the image resolution equally in both width and height until both horizontal and vertical rows of pixels have equaled or exceeded a zone resolution. The result is a source aspect ratio correct image with no black bars but a possible oversized image in either horizontal or vertical direction.
16x9	Stretches or shrinks the image in the horizontal and/or vertical to the closest edge of a zone to create a 16x9 aspect ratio. The result is a 16x9 image with possible vertical or horizontal black bars.
4x3	Stretches or shrinks the image in the horizontal and/or vertical to the closest edge of a zone to create a 4x3 aspect ratio. The result is a 4x3 image with possible vertical or horizontal black bars.
Native	No scaling of the image occurs. The result is a zone with source resolution unchanged, but depending on the difference of the zone and image resolutions, the image may be oversized or contain black bars.
Auto	Stretches or shrinks the image in the horizontal and/or vertical to the closest edge of a zone while maintaining the input resolution. The result is a source equal aspect ratio image with possible vertical or horizontal black bars.

Justify

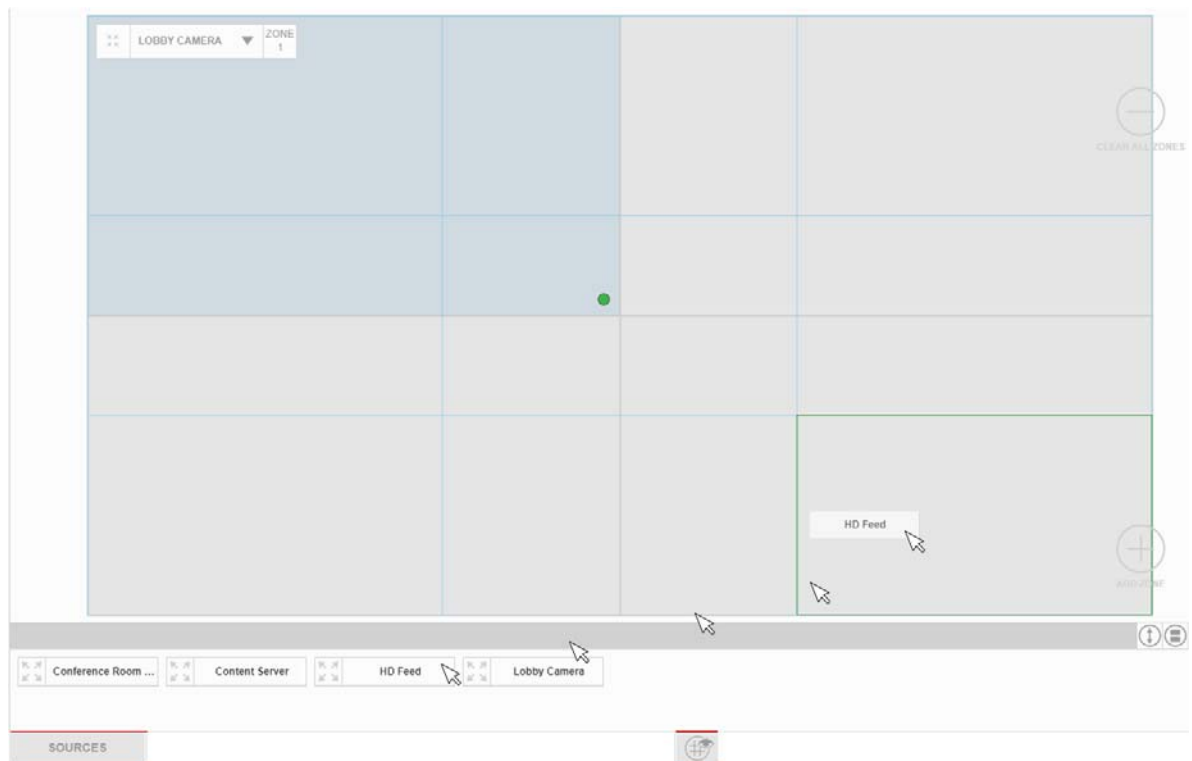
Field	Description
Center	The image is placed in the zone based on the center vertical pixel being centered between the top/bottom of the zone and the center horizontal pixel being centered between the left/right of the zone.
Left	The image is placed in the zone based on the center vertical pixel being centered between the top/bottom of the zone and the left most line of pixels on the left most edge of the zone.
Right	The image is placed in the zone based on the center vertical pixel being centered between the top/bottom of the zone and the right most line of pixels on the right most edge of the zone.

Field	Description
Top	The image is placed in the zone based on the center horizontal pixel being centered between the left/right of the zone and the top most line of pixels on the top most edge of the zone.
Bottom	The image is placed in the zone based on the center horizontal pixel being centered between the left/right of the zone and the bottom most line of pixels on the bottom most edge of the zone.
Top-Left	The image is placed in the zone based on the top most line of pixels on the top most edge of the zone and the left most line of pixels on the left most edge of the zone.
Top-Right	The image is placed in the zone based on the top most line of pixels on the top most edge of the zone and the right most line of pixels on the right most edge of the zone.
Bottom-Left	The image is placed in the zone based on the bottom most line of pixels on the bottom most edge of the zone and the left most line of pixels on the left most edge of the zone.
Bottom-Right	The image is placed in the zone based on the bottom most line of pixels on the bottom most edge of the zone and the right most line of pixels on the right most edge of the zone.

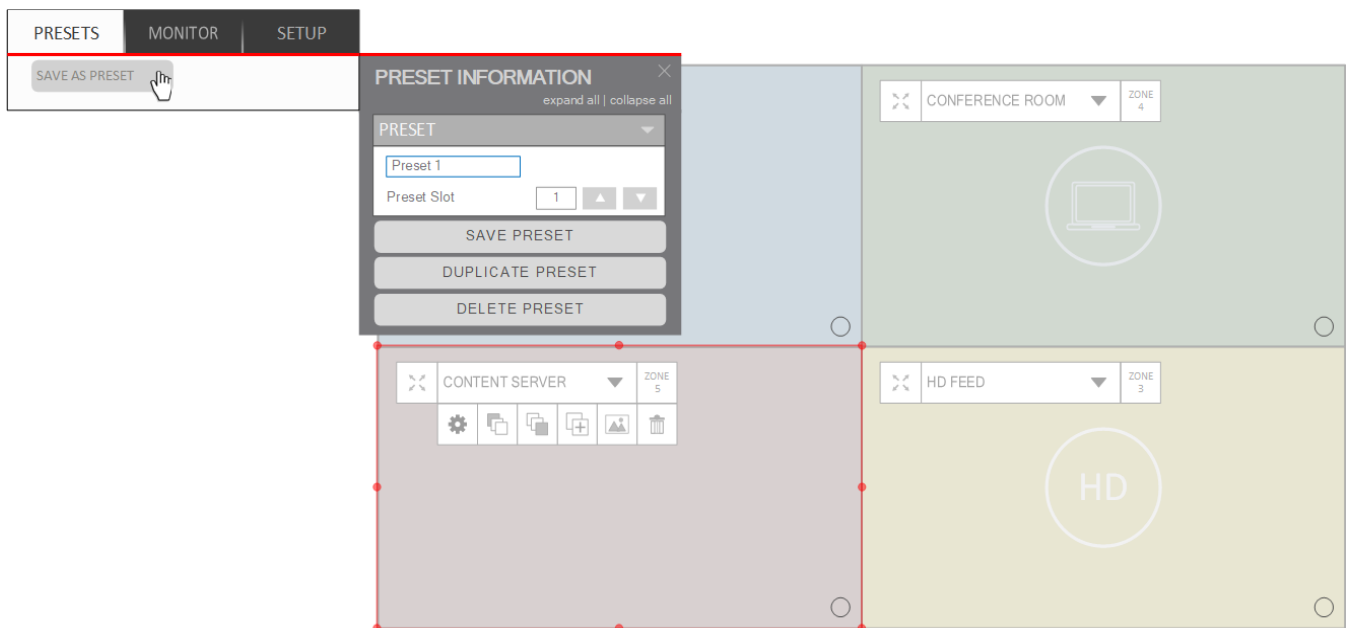
Once one zone is configured, additional zones may be added. For convenience, dragging a source to the wall will snap to the panel desired.



Or, if the grid is enabled, the source will snap and size to the section desired.

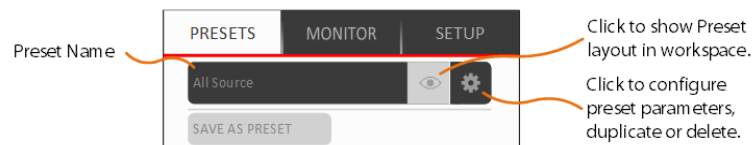


Once all the desired zones for the preset are created, the information may be saved under a preset number.



Field	Description
Preset Name	Allows a user name for the preset. Limited to maximum 28 visible characters in menu (128 characters available). Changing a preset name only does not require a Save Preset; the change will be automatic.
Preset Slot	Allows the user to identify the slot location the preset should be saved under. Slot locations are limited from 1-255. This may be changed by entering a number or using the arrow keys. Different presets will not be allowed to be saved under the same slot and will revert to the original slot if there is a conflict. Note: Presets are listed in slot order in the Presets Tab.
Save Preset	Saves the current layout to the slot location and makes the new preset active.
Duplicate Preset	Duplicates and initiates a dialog box to copy and save the active layout to an unused slot location that is next in numerical order.  The dialog box allows for the renaming of the layout. Note: Any changes made to the active layout are not saved in the duplicate layout. Use Save as Preset instead. Duplicating the preset does not make the duplicate active; navigation to the new preset is necessary.
Delete Preset	Deletes the selected preset from the configuration. The following confirmation dialog box will appear. 

Once a preset has been created, the Preset will be added as an item to the menu.

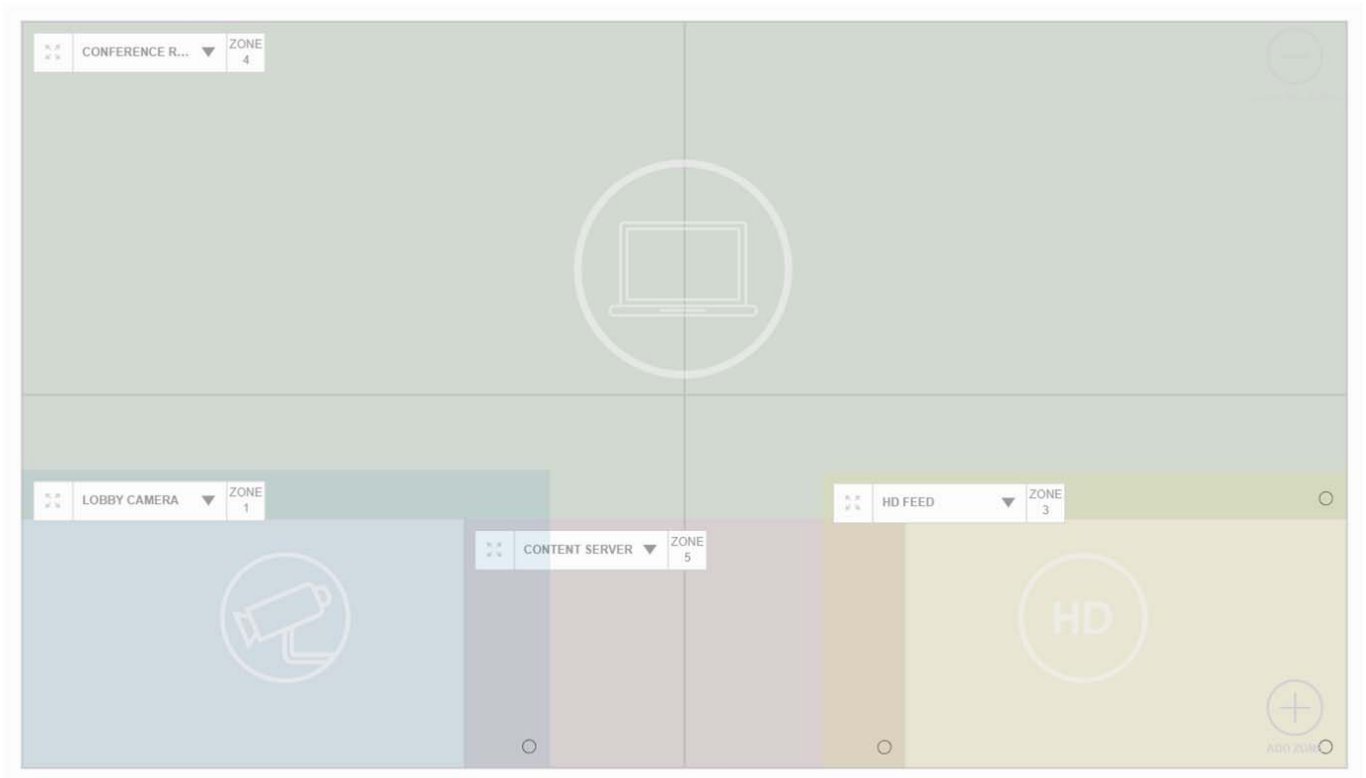


Note: A dark colored preset line indicates that the preset is currently being displayed on the screen.

A few more notes about presets and zones:

- As stated, additional presets may be created by duplication or by adding and deleting zones from the current preset and saving it as a new preset.
- Zone numbers between presets may or may not match as they are identified separately under each preset.

Overlapping zones in a preset are acceptable. Use the **Bring to Front** and/or **Send to Back** buttons for proper display order. For example, the image below shows zones 1 and 3 being displayed in the overlap areas instead of zones 4 and 5.

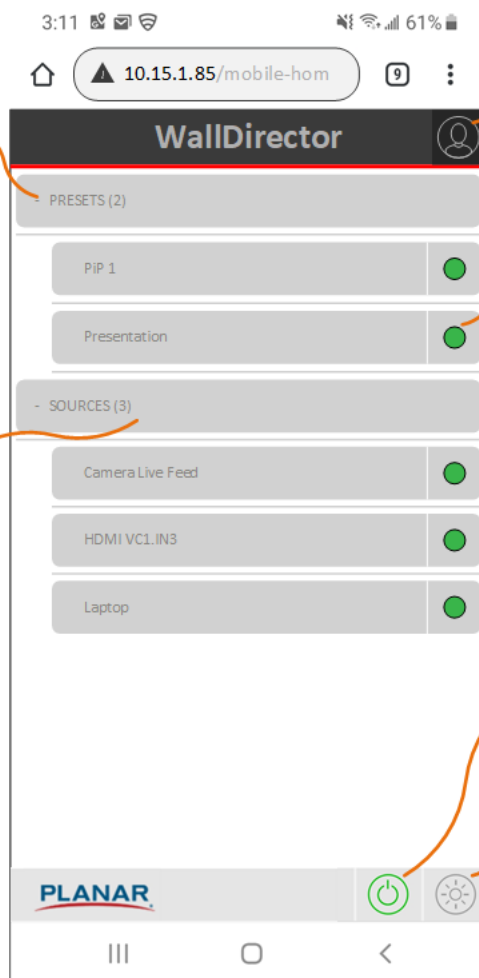


Mobile Device Access

Access to the video wall's basic functions is available through any mobile device on the same network as the system.

+ Symbol indicates there are additional items under this bar for viewing.
 - Symbol indicates the menu may be collapsed.
 Click gray box to activate.

The number following each menu item indicates the number of items under the label.



User Login/Logout

Status of the preset or source

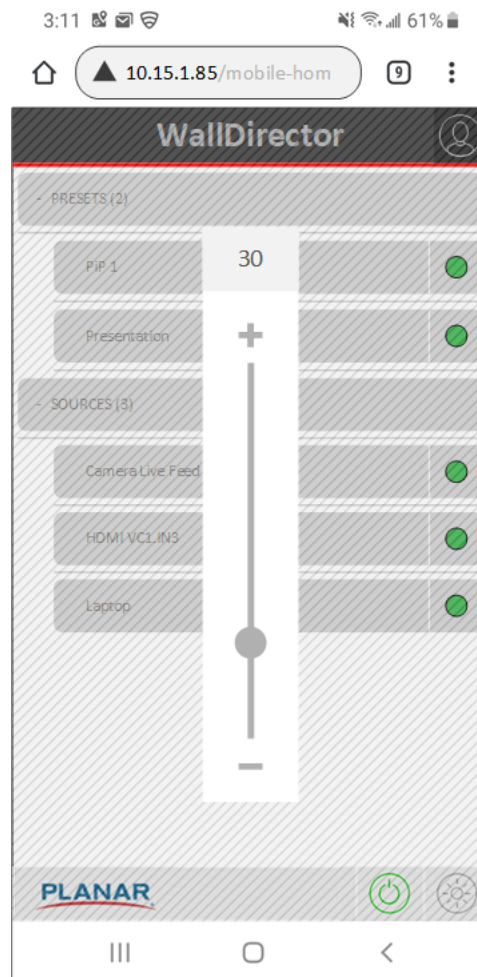
Click to open a dialog to turn the video wall on or off

Click to open a dialog to set the brightness of the video wall

When selecting the power button, a window will appear requesting which function is desired. Click ON or OFF will place the system in the Standby Mode for the system. Selecting either ON or OFF or clicking anywhere off the window will remove the window from the screen.

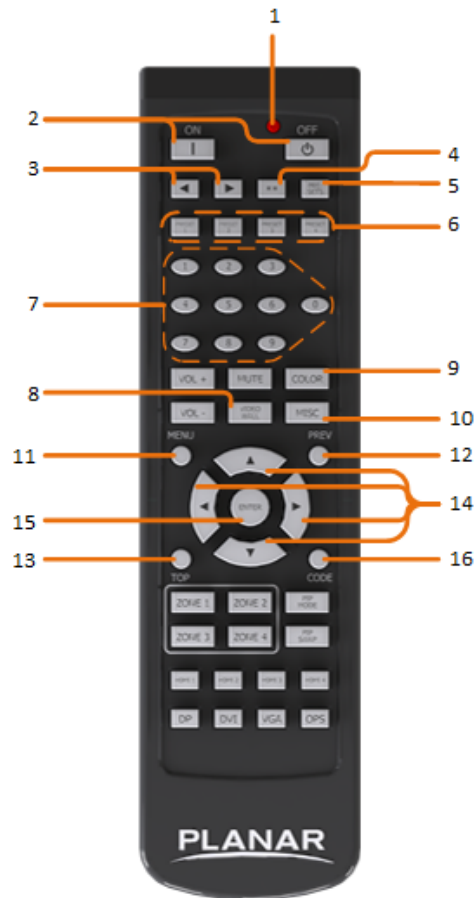


When selecting the brightness button, a window with a slider to increase or decrease the brightness. The slider will adjust the brightness in increments of 10. Clicking anywhere off the slider will remove this window.



OSM

Remote



Number	Symbol	Description
1	LED	Indicates button has been pressed; feedback for remote code programming
2	ON/OFF	Turns the system on or off. Equipment affected depends on Power Mode setup.
3	◀ ▶	Color Balance Menu only; Moves control between previous and next display
4	**	Color Balance Menu only; Selects All displays for control (LCD only)
5	PRE-SETS	Shortcut to Presets Menu
6	PRESET1-4	Shortcut to display Presets 1 thru 4
7	0-9	Keypad for numeric entry
8	VIDEO WALL	Shortcut to Big Picture Menu
9	COLOR	Shortcut to Color Balance Menu (LCD only)
10	MISC	Shortcut to Brightness Menu
11	MENU	Shortcut to display the OSD
12	PREV	Navigates to previous level of menu
13	TOP	Moves OSD highlight bar to top of current menu
14	◀ ▶ ▲ ▼	Navigation arrows for menus
15	ENTER	Selects the highlighted item in the menu
16	CODE	Used when programming a custom remote code

IR Command Protocol

Planar Video Wall Systems accept commands in the form of IR signals that conform to the NEC protocol. Each Planar Video Wall System remote control has an NEC control code associated with it. These codes can be used to program a third-party “universal” remote control to work with Planar Video Wall Systems. These third-party products usually come with a computer software application for this purpose. For more information, consult the documentation provided with the remote control.

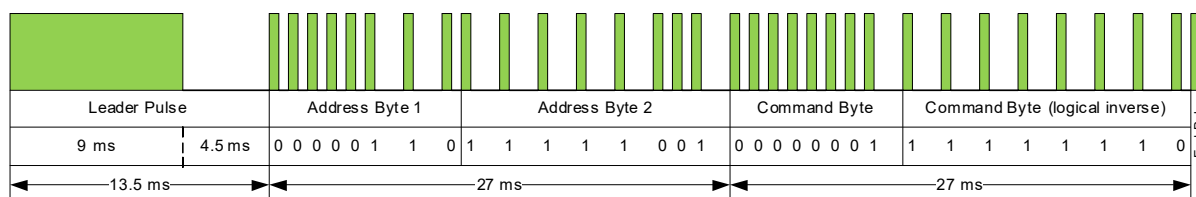
The IR control codes have the following characteristics:

- Each code consists of the following:
 - A leader pulse (a modulated pulse of 9 ms followed by a non-modulated pulse of 4.5 ms)
 - 16 address bits. The default address is 1785 (0x06F9, binary 00000110 11111001)
 - 16 data bits: eight (8) bits for the command followed by the logical inverse of the command
 - An end pulse (a modulated pulse of 0.56 ms, similar to the modulated pulse in the ‘0’ and ‘1’ bits). The end of the modulated pulse constitutes the end of the data transmission.
- The carrier frequency is 38 kHz, with the modulated pulses having a 33% duty cycle.
- Commands are sent at a maximum rate of 9 Hz.

For example, below is the NEC control code for the ON button of the Planar Video Wall System remote control (assuming the default address is used).

Hex	06	F9	01	FE
Binary	00000110	11111001	00000001	11111110
Function	Address Byte 1	Address Byte 2	Command	Command (Logical Inverse)

The following example shows the pulse train for this command.

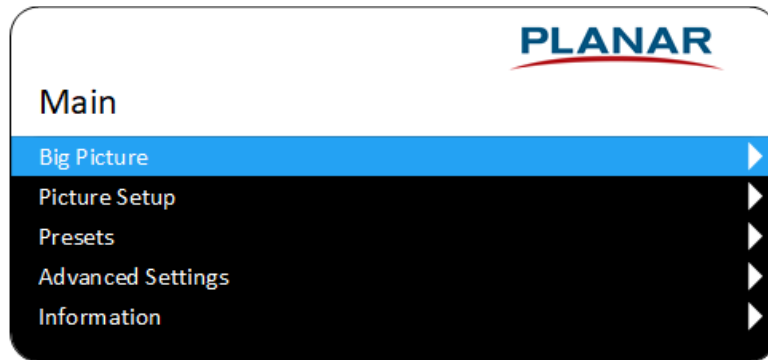


Remote Control Button Name	Address	Data	NEC Data From Remote (Hex Code)	Description
ON	1785	1	0x06F901FE	Power on
OFF	1785	9	0x06F909F6	Power off
◀	1785	2	0x06F902FD	In Color Balance menu, cycles left through panel ID
▶	1785	3	0x06F903FC	In Color Balance menu, cycles right through panel ID
**	1785	6	0x06F906F9	In Color Balance menu, selects ALL panels
PRESETS	1785	4	0x06F904FB	Opens the Presets menu
PRESET 1	1785	5	0x06F905FA	Applies Preset 1
PRESET 2	1785	7	0x06F907F8	Applies Preset 2
PRESET 3	1785	8	0x06F908F7	Applies Preset 3
PRESET 4	1785	10	0x06F90AF5	Applies Preset 4
1	1785	12	0x06F90CF3	Number button 1
2	1785	13	0x06F90DF2	Number button 2
3	1785	14	0x06F90EF1	Number button 3
4	1785	15	0x06F90FF0	Number button 4
5	1785	16	0x06F910EF	Number button 5
6	1785	17	0x06F911EE	Number button 6
7	1785	20	0x06F914EB	Number button 7
8	1785	25	0x06F919E6	Number button 8
9	1785	27	0x06F91BE4	Number button 9
0	1785	18	0x06F912ED	Number button 0
VOL +	1785	28	0x06F91CE3	Not used
VOL -	1785	33	0x06F921DE	Not used
MUTE	1785	32	0x06F920DF	Not used
COLOR	1785	19	0x06F913EC	Opens the Color Balance menu
VIDEO WALL	1785	34	0x06F922DD	Opens the Big Picture menu
MISC	1785	11	0x06F90BF4	Opens the Backlight or Brightness menu
MENU	1785	21	0x06F915EA	Opens the Main menu
PREV	1785	22	0x06F916E9	Returns to the previous menu
ENTER	1785	23	0x06F917E8	Selects the current menu item
UP	1785	26	0x06F91AE5	Navigate up
LEFT	1785	29	0x06F91DE2	Navigate left

Remote Control Button Name	Address	Data	NEC Data From Remote (Hex Code)	Description
RIGHT	1785	31	0x06F91FE0	Navigate right
DOWN	1785	24	0x06F918E7	Navigate down
TOP	1785	30	0x06F91EE1	Selects the top line in the current menu
ZONE 1	1785	35	0x06F923DC	Not used
ZONE 2	1785	36	0x06F924DB	Not used
ZONE 3	1785	38	0x06F926D9	Not used
ZONE 4	1785	39	0x06F927D8	Not used
PIP MODE	1785	37	0x06F925DA	Not used
PIP SWAP	1785	40	0x06F928D7	Not used
HDMI 1	1785	41	0x06F929D6	Not used
HDMI 2	1785	42	0x06F92AD5	Not used
HDMI 3	1785	43	0x06F92BD4	Not used
HDMI 4	1785	44	0x06F92CD3	Not used
DP	1785	45	0x06F92DD2	Not used
DVI	1785	46	0x06F92ED1	Not used
VGA	1785	47	0x06F92FD0	Not used
OPS	1785	48	0x06F930CF	Not used

Remote Operation

The OSD menu is activated by pointing the remote at a video wall active IR sensor and pressing MENU on the remote. Once pressed, each panel should show its assigned panel ID and one of the panels will have the OSD menu. The first menu shown will be like the one below.



The active command/setting in a menu will be the orange highlighted line. Some lines will not highlight when browsing the menus. These are either information/status lines or lines that require a check box to be clicked to enable.

Browsing Menus

- To browse the menus, use the remote up and down arrow keys.
- Menus are self scrolling, meaning once the bottom is reached, pressing the down arrow will move the highlight back to the top of the menu.
- If there is an arrow that points to the right on the menu line, it indicates there is another menu under this line with more items that can be viewed. Once the highlight line is on one of these lines, use either the ENTER or right arrow to navigate to the next menu.
- To navigate back to the previous menu, press the PREV button on the remote.
- To remove the menu from the panels, press the EXIT button.

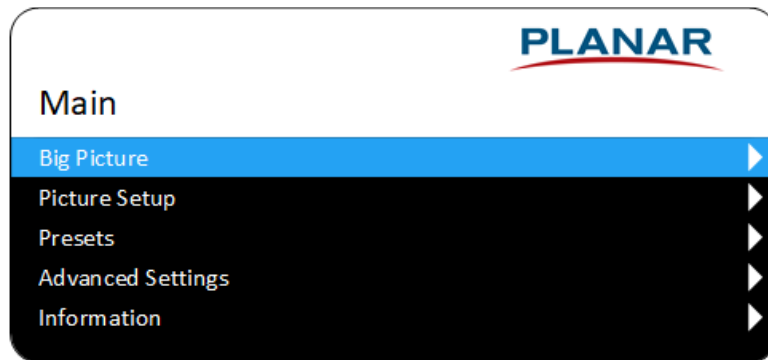
Changing Values

All lines that can be highlighted have values that can be changed via the left and right arrows. Additionally, lines that have editable numbers may be changed via the numeric keypad of the remote. To do this, do the following:

- 1 Press ENTER while on the line.
- 2 If necessary, delete the existing data by using the left arrow on the keypad.
- 3 Enter the desired numbers and press ENTER again to save the values.

Menus

Main Menu



Menu	Description
Big Picture	Navigates to the Big Picture menu. See "Big Picture Menu" on page 155.
Picture Setup	Navigates to the Picture Setup menu. See "Picture Setup Menu" on page 156.
Presets	Navigates to the Presets menu. See "Presets Menu" on page 157.
Advanced Settings	Navigates to the Advanced Settings menu. See "Advanced Settings Menu" on page 158.
Information	Navigates to the Information menu. See "Information Menu" on page 185.

Big Picture Menu

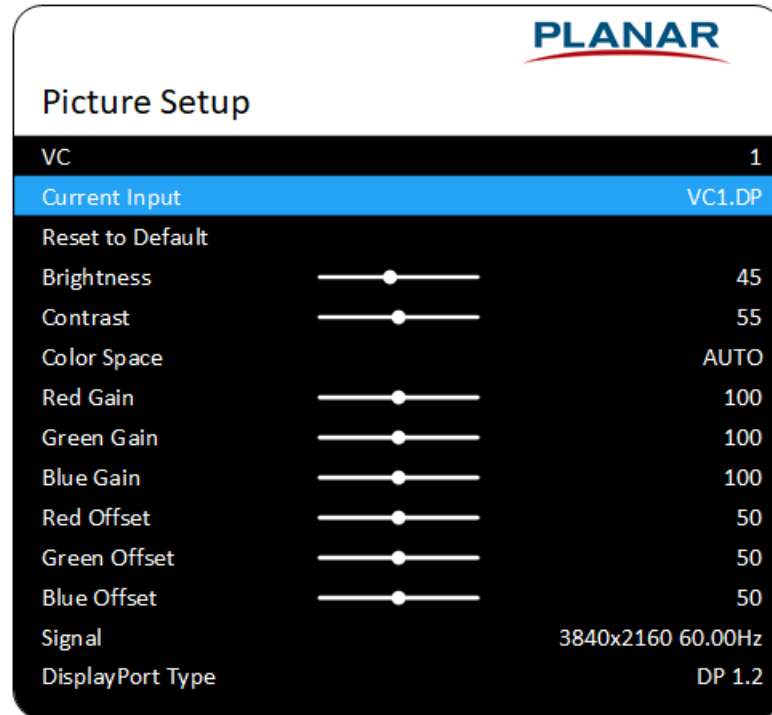
This menu enables you to easily spread a single source over the entire video wall or display the inputs to each panel.



Menu	Description
VC	The active video controller that contains the source to be scaled across the video wall. Can be changed to any video controller number in the system.
Input	The input of the active controller that will be used for the source across the video wall. Can be changed to any input within the video controller.
One to One	Deletes existing zones and replaces with a zone for each panel in the video wall. Active input sources that share the same numeric value as the output are automatically assigned to the zones for that output. Outputs without a corresponding active input do not have sources assigned and are blank.
Signal	Displays the resolution and refresh rate of the source selected for the input, if present. If nothing is detected, displays "Not Present."

Picture Setup Menu

Use this menu to modify the input source.



Field	Description
VC	The active video controller that the source is connected to. Can be changed to any video controller number in the system.
Current Input	The source that will be modified. Note: For Video Controllers with High Speed Links, VC#.DP will not be an option.
Reset to Default	Resets the current input to the factory default settings. This will be followed by a confirmation dialog box.
Brightness	Adjusts the brightness of the selected input. The higher the number, the brighter the image. Range is 1-100.
Contrast	Adjusts the contrast of the selected input. The higher the number, the whiter the contrast. Range is 1-100.
Color Space	Selects the desired color space for the input. AUTO uses the color space from the input. Other choices are REC601, REC709, RGB and RGB VIDEO.
Red Gain	Adjusts the red color for the selected input. The higher the number, the more red for the input. Range is 0-200.
Green Gain	Adjusts the green color for the selected input. The higher the number, the more green for the input. Range is 0-200.

Field	Description
Blue Gain	Adjusts the blue color for the selected input. The higher the number, the more blue for the input. Range is 0-200.
Red Offset	Adjusts the red offset for the selected input. The higher the number, the more red for the input. Range is 1-100.
Green Offset	Adjusts the green offset for the selected input. The higher the number, the more green for the input. Range is 1-100.
Blue Offset	Adjusts the blue offset for the selected input. The higher the number, the more blue for the input. Range is 1-100.
Signal	Denotes if a valid source is connected to the current input.
DisplayPort Type	Enables the choice between DisplayPort 1.1 and 1.2 as the source connected. Changing may require a re-insertion of the source cable to the input. Note: For Video Controllers with High Speed Links, this will not be an option.

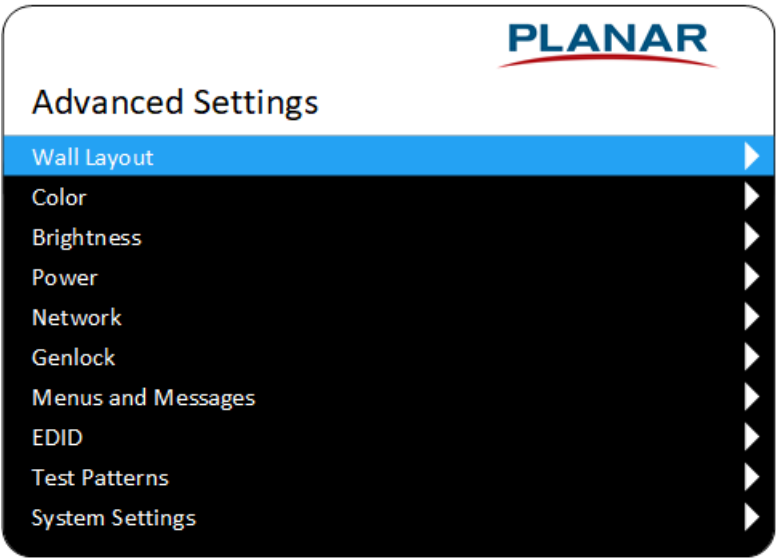
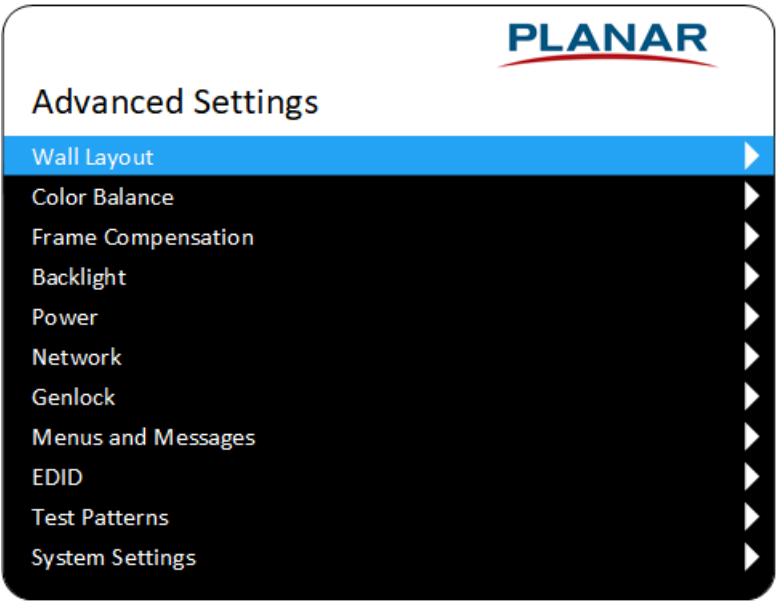
Presets Menu

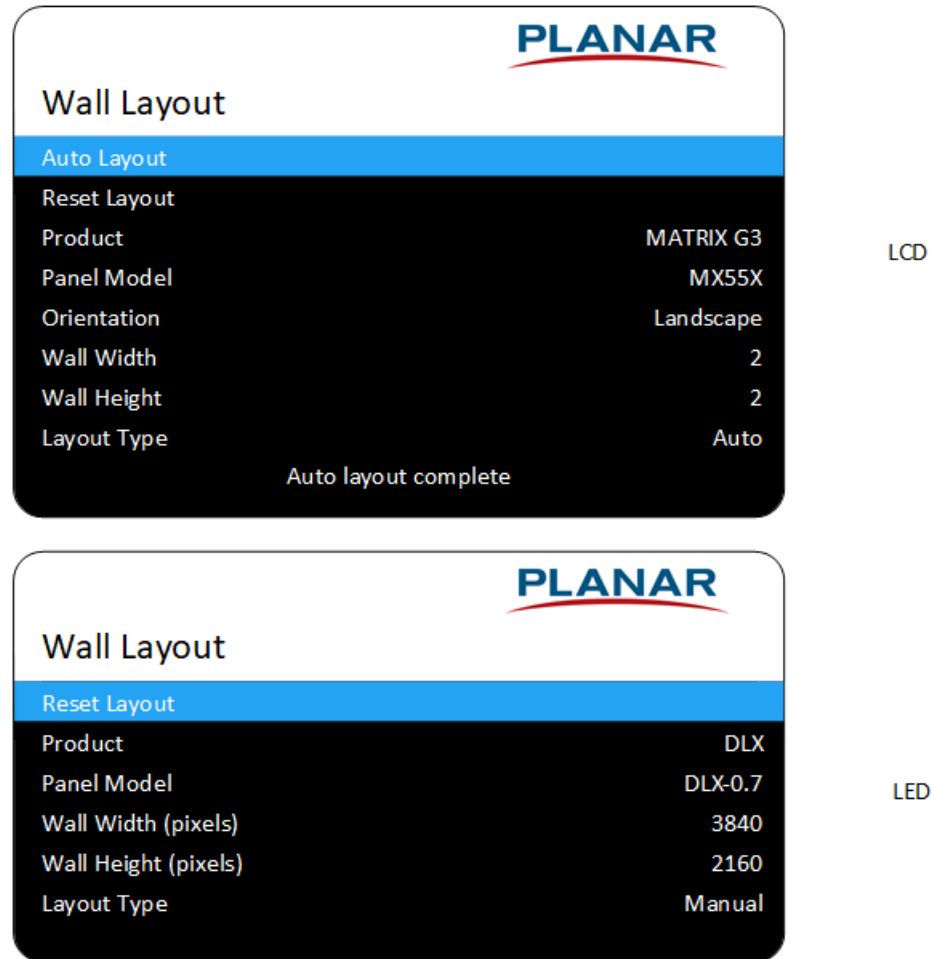


Field	Description
Preset Slot	Selects the preset slot number to recall, save or delete.
Name	The number or name of the preset. A name can be defined for a preset from the WallDirector software.
Recall	Activates the selected preset.
Save	Saves the selected preset. This will be followed by a confirmation dialog box.
Delete	Deletes the selected preset. This will be followed by a confirmation dialog box.

Advanced Settings Menu

Wall Layout Menu

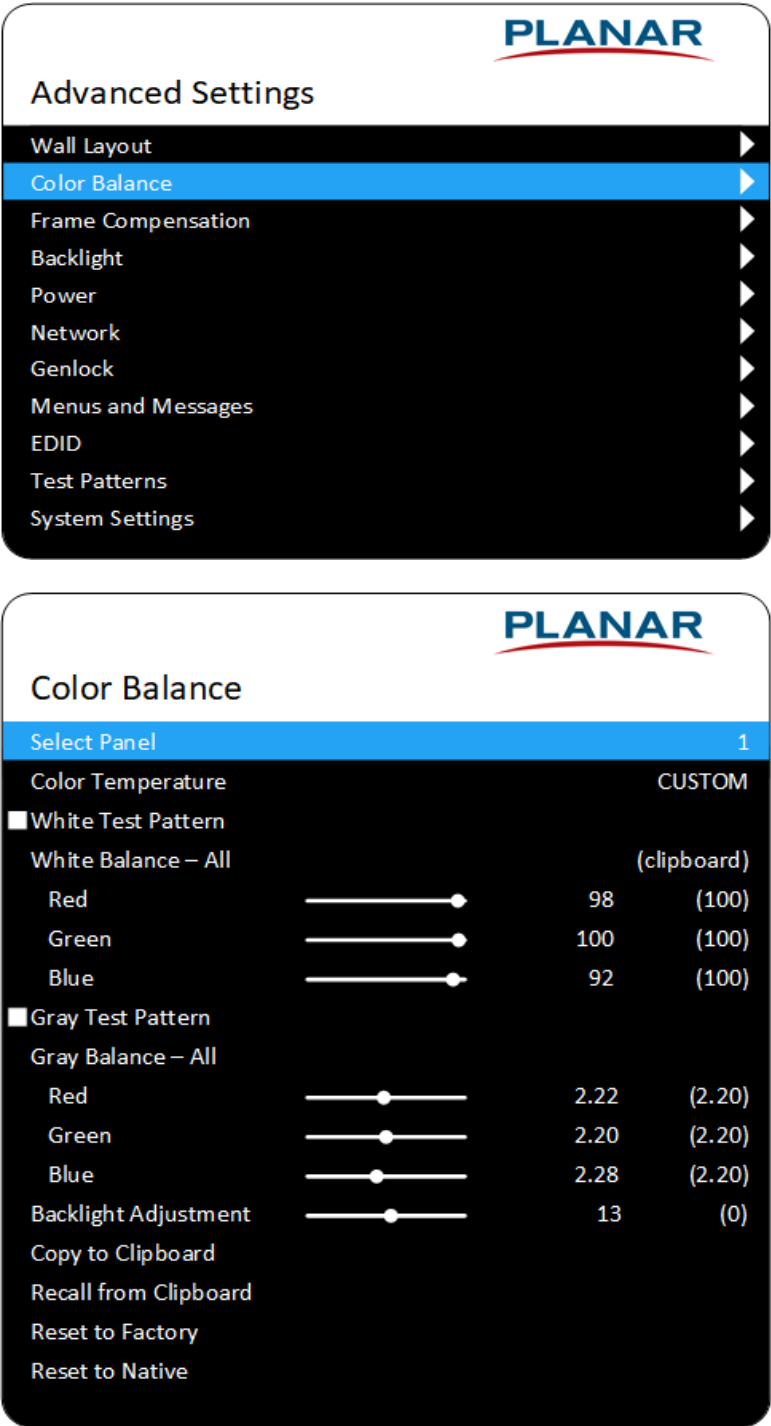




Field	Description
Auto Layout	(LCD products only) Activates the auto layout feature, which tells the system that the wall has been installed and for the panels to self discover where they are positioned with respect to one another. Refer to the <i>Installation Guide</i> for more information. This will be followed by a confirmation dialog box. Auto layout is essential for proper video wall behavior, and allows the system to place content within the video wall exactly where it is intended. Additionally, failure to auto layout a video wall will cause unexpected issues with content if components lose power indiscriminately. When auto layout is successful, a message will appear at the bottom of this menu indicating "Auto Layout Complete."
Reset Layout	Returns the wall to the default layout during setup prior to an auto or manual layout. This allows for the addition of more panels and components in an expected manner. Refer to the <i>Installation Guide</i> for more information. This will be followed by a confirmation dialog box.

Field	Description
Product	Type of product that has been configured or detected by the system.
Panel Model	The panel model connected to the system.
Orientation	<i>(LCD products only)</i> The orientation of the panel that is connected to the system. The orientation is determined by a sensor attached to the panel but can be changed in the WallDirector software.
Wall Width	<i>(LCD products only)</i> The number of columns in the array. In auto layout mode, the value is the number of columns in the physical array as self-detected by the panels. To manually change this value, use the WallDirector software.
Wall Height	<i>(LCD products only)</i> The number of rows in the array. In auto layout mode, the value is the number of rows in the physical array as self-detected by the panels. To manually change this value, use the WallDirector software.
Wall Width (pixels)	<i>(LED products only)</i> The total number of horizontal pixels in the array. This is a summation of each cabinet's horizontal pixels. This can automatically be calculated by clicking the LED Wall Calculator and following the procedure for wall setup. Click Apply after changing here for new values to take affect.
Wall Height (pixels)	<i>(LED products only)</i> The total number of horizontal pixels in the array. This is a summation of each cabinet's horizontal pixels. This can automatically be calculated by clicking the LED Wall Calculator and following the procedure for wall setup. Click Apply after changing here for new values to take affect.
Layout Type	Indicates the layout mode as Default, Auto or Manual. You can activate manual mode in WallDirector if you have a faceted wall panel, faulty sensor or the physical product has no sensors. Manual mode acts like auto layout mode except the user must set the panel positions manually in the software. Changing any panel position in the software will switch the layout to Manual mode from either Default or Auto.

Color Balance Menu (LCD Products Only)

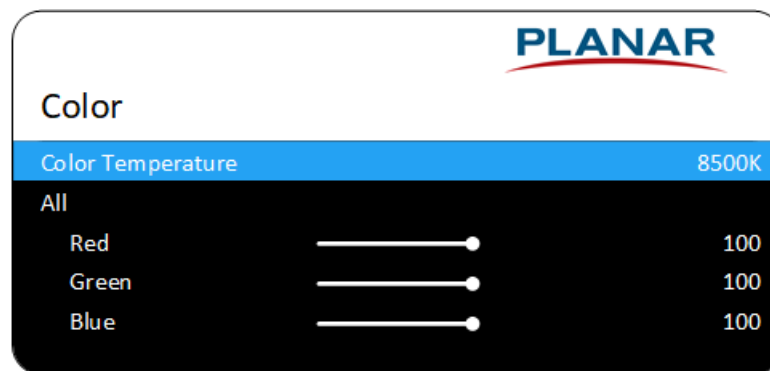
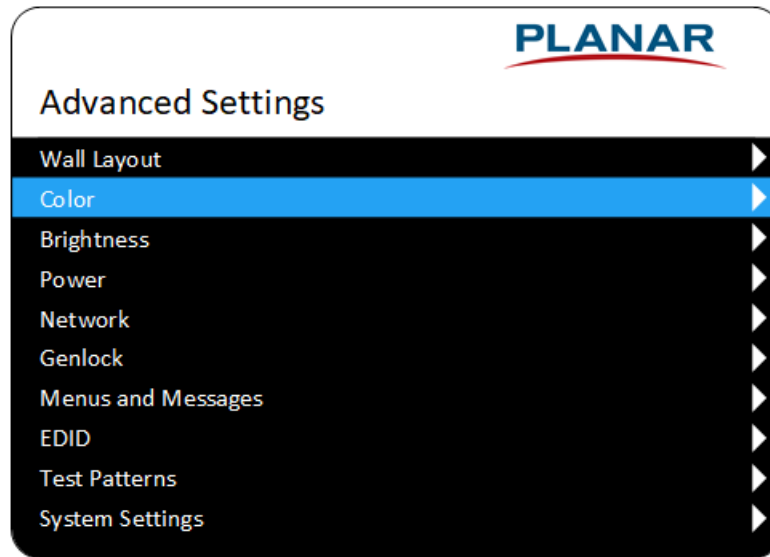


Note: Changes within this menu are instantaneous. Changing any parameter should result in a visible change to all or part of the video wall.

Field	Description
Select Panel	Enables you to change the panel being addressed by the commands within this menu. To change the value, use the left or right arrow keys or the numeric keypad. Additionally, pressing the ** button on the remote changes the value to ALL, which enables you to change the Color Temperature on all panels. To navigate away from ALL, use the left or right arrows and the previous panel number will return.
Color Temperature	Enables you to select preset color temperatures from 3200K, 5500K, 6500K, 8500K and Native. This value is initially set to CUSTOM from the factory, as it has been pre-calibrated to a known value to match other panels from the factory. Changing the color temperature values below changes this value to CUSTOM if the changes start from one of the presets.
White Test Pattern	When selected, displays a white image across all panels connected to the system. For best results, use this option when color balancing panels. Selecting this check box clears the Gray Test Pattern check box.
All	Moves the Red, Green and Blue color points simultaneously for the selected panel. Once one of the Red, Green or Blue color points is maximized to 100 or minimized to zero, none of the values will change further.
Red	Changes the red color point for the selected panel. The higher the value, the more red a panel will appear. To change the value, use the left or right arrow keys or the numeric keypad.
Green	Changes the green color point for the selected panel. The higher the value, the more green a panel will appear. To change the value, use the left or right arrow keys or the numeric keypad.
Blue	Changes the blue color point for the selected panel. The higher the value, the more blue a panel will appear. To change the value, use the left or right arrow keys or the numeric keypad.
Gray Test Pattern	When selected, displays a gray image across all panels connected to the system. For best results, use this option after the white color balancing is done. Selecting this check box clears the White Test Pattern check box.
All	Moves the Red, Green and Blue gammas simultaneously for the selected panel. Once one of the Red, Green or Blue gammas is maximized to 100 or minimized to 0, none of the values will change further.
Red	Changes the red gamma for the selected panel. The lower the value, the more red a panel will appear. To change the value, use the left or right arrow keys or the numeric keypad. Range is 1.80 to 2.60.

Field	Description
Green	Changes the green gamma for the selected panel. The lower the value, the more green a panel will appear. To change the value, use the left or right arrow keys or the numeric keypad. Range is 1.80 to 2.60.
Blue	Changes the blue gamma for the selected panel. The lower the value, the more blue a panel will appear. To change the value, use the left or right arrow keys or the numeric keypad. Range is 1.80 to 2.60.
Backlight Adjustment	Adjusts the backlight intensity for the selected panel, enabling panels to match brightness so color balancing can be done properly. To change the value, use the left or right arrow keys or the numeric keypad. If the brightness does not change when moving in either direction, it means that the panel has hit the range limit.
Copy to Clipboard	Press ENTER to copy all numeric values in this menu for use on other panels.
Recall from Clipboard	Press ENTER to update the numeric values in this menu with the values that were copied to the clipboard.
Reset to Factory	Press ENTER to return the numeric values to the pre-programmed calibrated data from the factory. This will be followed by a confirmation dialog box.
Reset to Native	Press ENTER to return the numeric values to the Native programmed numbers. This is the same as selecting NATIVE from the Color Temperature list. Native values are all at 100. This will be followed by a confirmation dialog box.

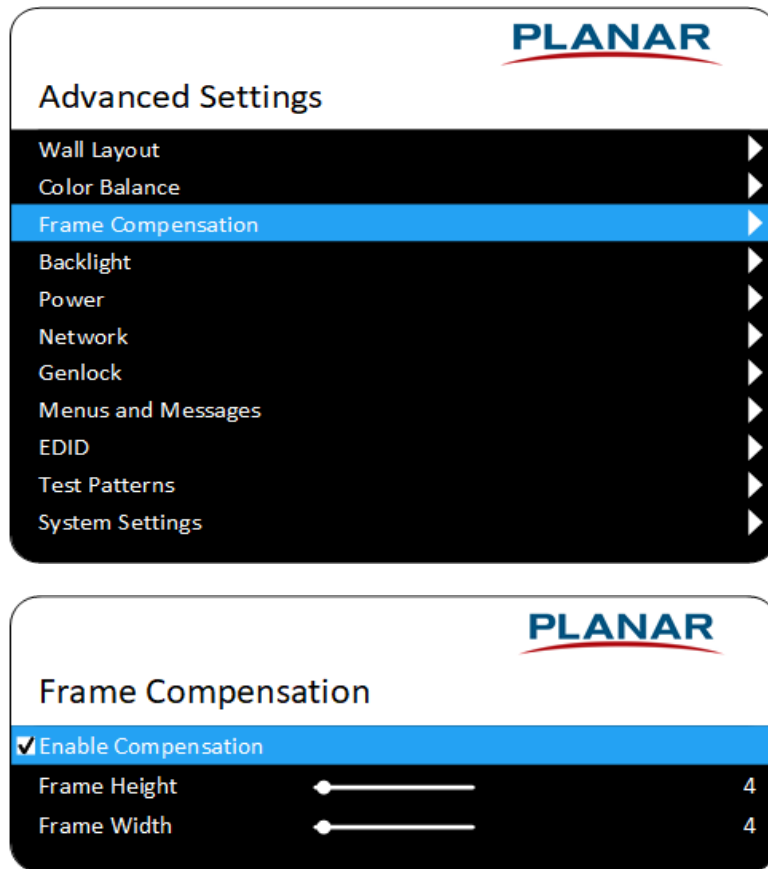
Color Menu (Open Pixel Architecture Only)



Note: Changes within this menu are instantaneous. Changing any parameter should result in a visible change to all or part of the video wall.

Field	Description
Color Temperature	Sets the video wall cabinets' color temperature. Values are 3200K, 6500K, 8500K, 9300K and CUSTOM. 6500K is the default.
All	Adjusts the global color temperature. Changing this will change the Color Temperature to CUSTOM.
Red, Green and Blue	Individually adjust the color of the three primary colors. Changing this will change the Color Temperature to CUSTOM.

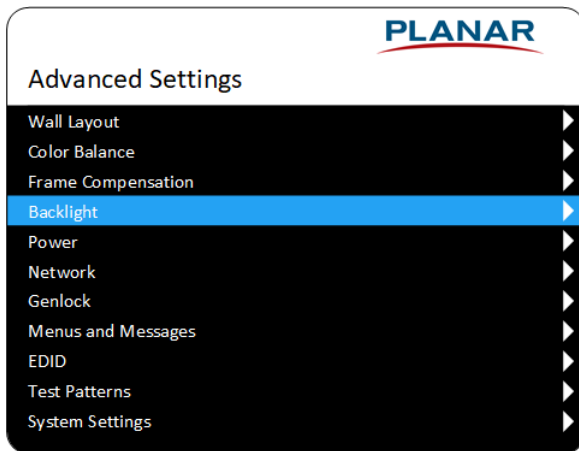
Frame Compensation Menu (LCD Products Only)



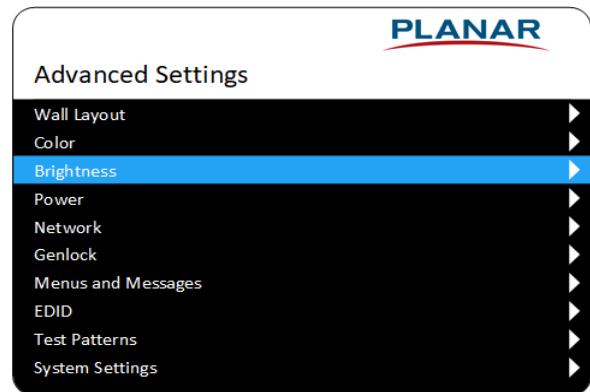
Field	Description
Enable Compensation	When selected, activates frame compensation.
Frame Height	The amount of vertical overscan to hide portions of an image that would be otherwise behind the image break. This is a global setting for all panels within the video wall. The higher the value, the more an image is overscanned. To change the value, use the left or right arrow keys or the numeric keypad. Note: If a panel is in portrait orientation, this value is actually the Frame Width.
Frame Width	The amount of horizontal overscan to hide portions of an image that would be otherwise behind the image break. This is a global setting for all panels within the video wall. The higher the value, the more an image is overscanned. To change the value, use the left or right arrow keys or the numeric keypad. Note: If a panel is in portrait orientation, this value is actually the Frame Height.

Backlight/Brightness Menu

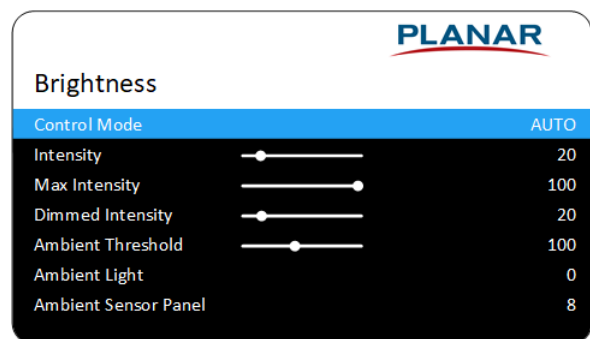
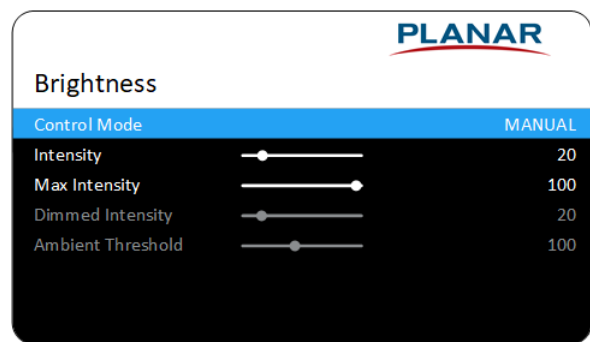
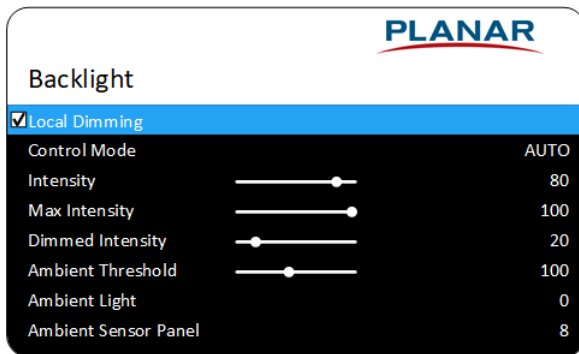
LCD



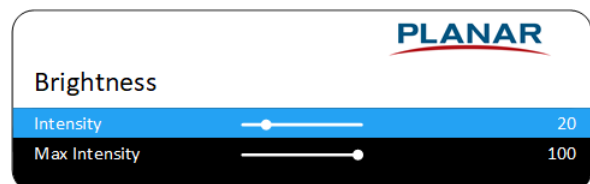
LED



LED - 2k Pixel Architecture

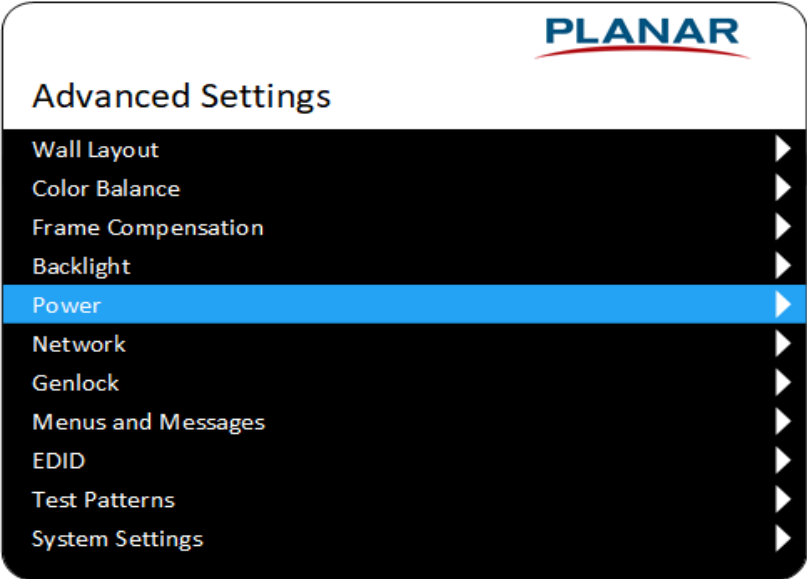


LED - Open Pixel Architecture

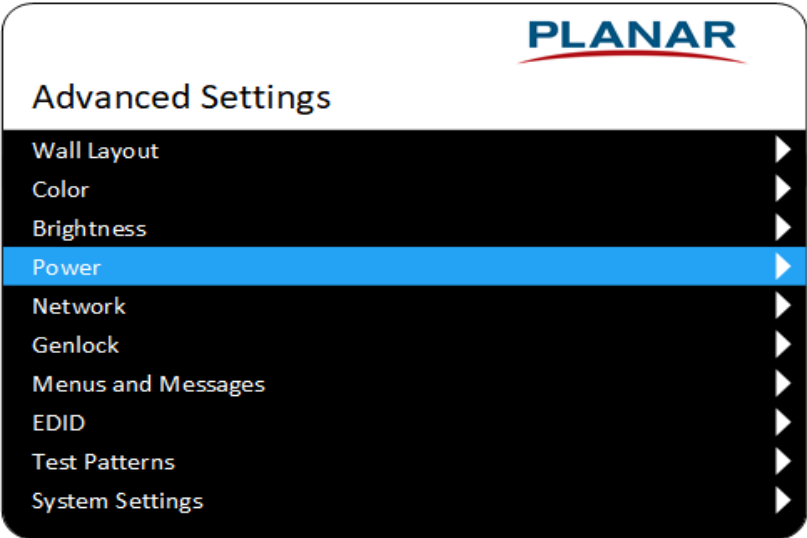


Field	Description
Local Dimming	<i>(55M/X2 LCD products only)</i> Enables system to reduce backlight usage when dark content is displayed. Improves black uniformity.
Control Mode	<i>(LCD and LED 2k pixel architecture only)</i> Select Manual or Auto. With manual, you can set a value for the brightness of the video wall. Use Auto in conjunction with the Ambient Light Sensor option. See the <i>Installation Guide</i> for setup and use of the ambient light sensor.
Intensity	The backlight intensity value for all panels within the video wall. The higher the number, the brighter the display and the more power the video wall uses. To change the value, use the left or right arrow keys or the numeric keypad. Note: The left or right arrow changes the number by increments of 10, but you can manually enter any number between 0-100.
Max Intensity	Sets a wall intensity value that the intensity setting cannot exceed. The intensity setting is scaled from this setting. To change the value, enter a number or move the slider. Note: The slider changes the number by increments of 10, but a number may manually be entered between 0-100.
Dimmed Intensity	<i>(LCD and LED 2k pixel architecture only)</i> Available to change when in Auto mode. The higher the number, the brighter the display and the more power the video wall uses. To change the value, use the left or right arrow keys or the numeric keypad. Note: The left or right arrow changes the number by increments of 10, but you can manually enter any number between 0-100.
Ambient Threshold	<i>(LCD and LED 2k pixel architecture only)</i> Available to change when in Auto mode. The higher the number, the brighter the display and the more power the video wall uses. To change the value, use the left or right arrow keys or the numeric keypad. The range is 0 to 255.
Ambient Light	<i>(LCD and LED 2k pixel architecture only)</i> Hidden unless in Auto mode. The reading from the first detected ambient light sensor. The higher the number, the brighter the light that is detected.
Ambient Sensor Panel	<i>(LCD and LED 2k pixel architecture only)</i> Hidden unless in Auto mode. Indicates the panel ID that has the first detected ambient light sensor connected.

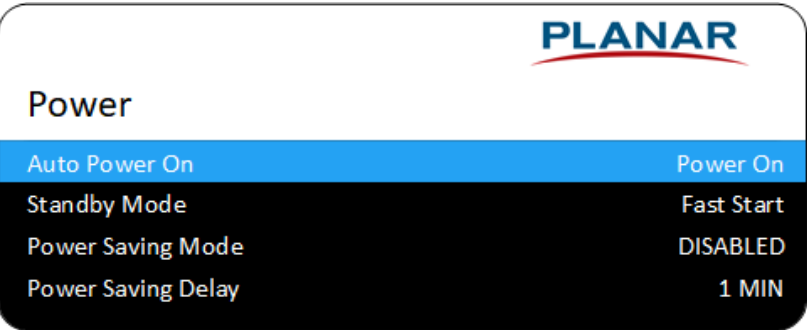
Power Menu



LCD



LED



Field	Description
Auto Power On	This value sets the behavior of the system when power is applied. The options are Power On, Disabled or Previous State. Power On automatically boots the entire system fully on. A Disabled setting requires user intervention through the various user interfaces to turn the system on. Previous State boots the system to the last known state prior to power being removed from the system.
Standby Mode	This value sets the behavior of the system when a user interface applied power command is used. The options are Fast Start or Low Power. Fast Start saves power by turning off the lights at the panels. Low Power saves power by turning off all power to the system except for the minimum required at each power supply.
Power Saving Mode	Sets the system power mode when no active source is detected. Settings are Disabled, Fast Start or Low Power
Power Saving Delay	Sets the amount of time the system will wait before enabling Power Saving Mode. Settings are 1, 5, 15, 30 and 60 minutes.

Network Menu

PLANAR

Advanced Settings

Wall Layout

Color Balance

Frame Compensation

Backlight

Power

Network

Genlock

Menus and Messages

EDID

Test Patterns

System Settings

PLANAR

Advanced Settings

Wall Layout

Color

Brightness

Power

Network

Genlock

Menus and Messages

EDID

Test Patterns

System Settings

PLANAR

Network

System MasterPS1

MAC AddressF4:5E:AB:38:C9:58

MASTER static IP192.168.0.12

MASTER DHCP10.15.0.117

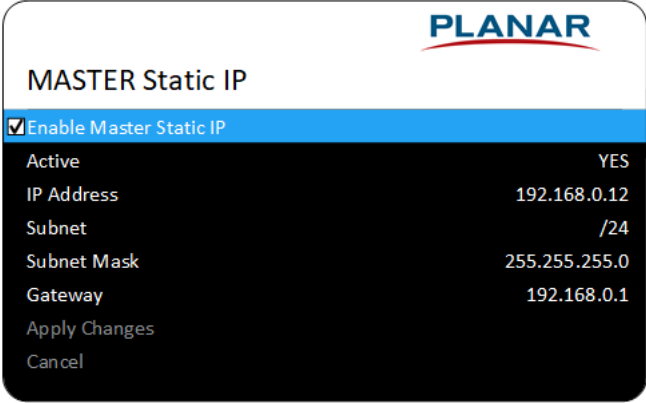
MASTER DNS

LCD

LED

Field	Description
System Master	The component in the system that is the master.
MAC Address	The physical master component's unique hardware address.
MASTER Static IP	Indicates assigned Static IP and navigates to the MASTER Static IP setup window.
MASTER DHCP	Indicates assigned DHCP IP and navigates to the MASTER DHCP setup window.
MASTER DNS	Navigates to the MASTER DNS setup window.

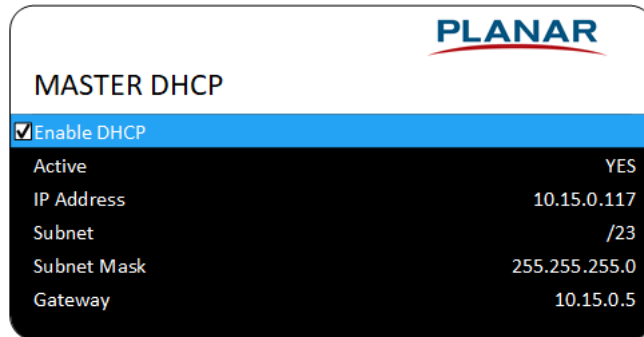
Master Static IP



Field	Description
Enable Master Static IP	Check mark indicates that Ethernet-enabled systems on the same network as the static IP may connect and control the system and its components.
Active	Indicates if the Master Static IP is enabled.
IP Address	The static IP address of the system master component. To change this value, press ENTER and use the numeric keypad. The left and right arrow keys allow for traversing between numbers to ones to be changed. Press ENTER to keep changes.
Subnet	The subnet in CIDR notation, which gives the number of bits in the network portion of the IP address. To change this value, press ENTER and use the numeric keypad. Press ENTER to keep changes.
Subnet Mask	The subnet mask as automatically defined by the subnet CIDR value.
Gateway	The network gateway. To change this value, press ENTER and use the numeric keypad. The left and right arrow keys allow for traversing between numbers to ones to be changed. Press ENTER to keep changes.

Field	Description
Apply Changes	Selecting will save all changes made within this menu to the system master.
Cancel	Selecting will revert all data in this menu back to values prior to any changes made.

Master DHCP



PLANAR

MASTER DHCP

☒ Enable DHCP

Active YES

IP Address 10.15.0.117

Subnet /23

Subnet Mask 255.255.255.0

Gateway 10.15.0.5

Field	Description
Enable DHCP	Check mark indicates that a system master IP will be assigned by a connected DHCP server. Ethernet-enabled systems on the same network as the dynamically assigned IP may connect and control the system and its components.
Active	Indicates if the Master DHCP IP is enabled.
IP Address	The dynamic IP address of the system master component as assigned by the DHCP server.
Subnet	The subnet in CIDR notation, which gives the number of bits in the network portion of the IP address.
Subnet Mask	The subnet mask as automatically defined by the subnet CIDR value.
Gateway	The network gateway.

Master DNS



PLANAR

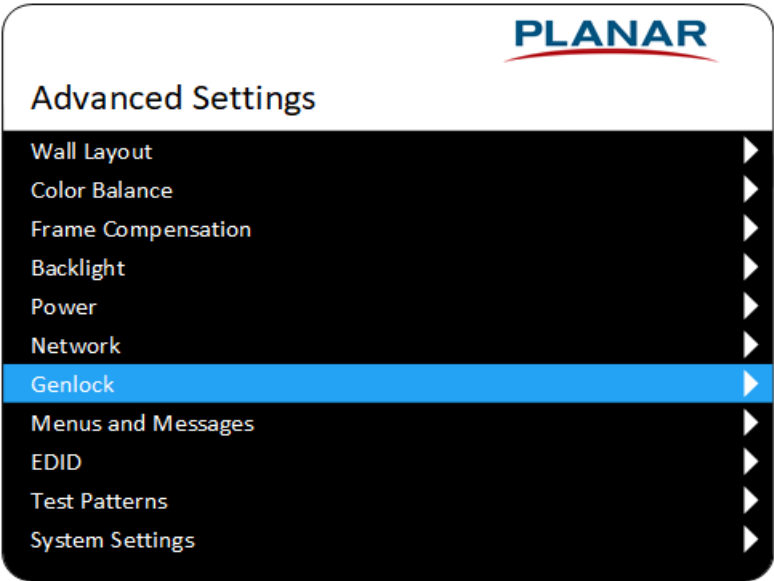
MASTER DNS

DNS Server 1 0.0.0.0

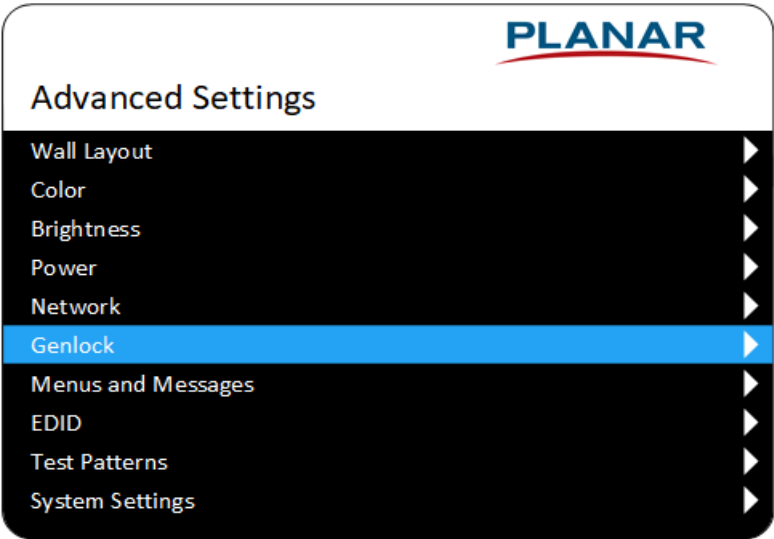
DNS Server 2 0.0.0.0

Field	Description
DNS Server 1	Domain Name Server #1. To change this value, press ENTER and use the numeric keypad. Press ENTER to save changes.
DNS Server 2	Domain Name Server #2. To change this value, press ENTER and use the numeric keypad. Press ENTER to save changes.

Genlock Menu



LCD



LED

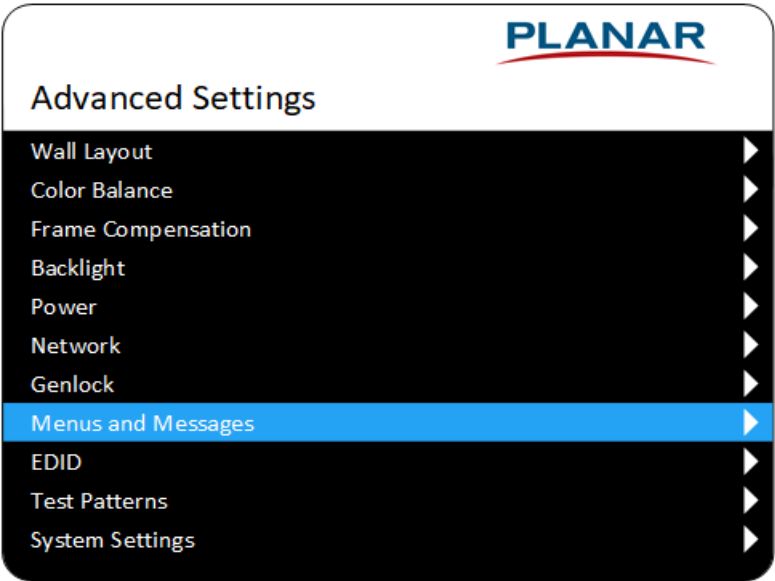


Genlock

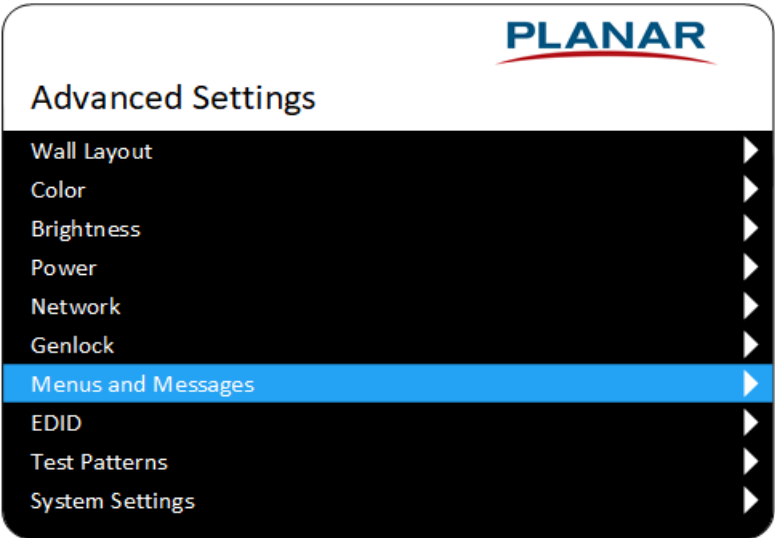
Panel Vertical Refresh	60Hz
☐ Disable Genlock	
☒ Auto Genlock	
All VC Outputs Locked	NO
VC	1
Sync Reference	SYNC IN
Sync Reference Present	YES
Sync Reference Frequency	59.97Hz
VC Output Locked	YES

Field	Description
Panel Vertical Refresh	Sets the default refresh rate of the connected panels. Values are 50Hz or 60Hz. The VCs will automatically reboot when this is changed.
Disable Genlock	Toggles genlock as enabled or disabled, normally enabled.
Auto Genlock	Checking this box sets all VC outputs to sync to a single source determined by the system.
All VC Outputs Locked	Indicates if there are any VCs that are not locked to a reference. Value is either YES or NO.
VC	This is the VC of the sync reference.
Sync Reference	This is the input that will be used to sync all outputs. SYNC IN: Chooses the HDBNC Sync In as the reference signal. INTERNAL: Chooses a VC internally generated clock as the reference signal. IN1: Chooses Input 1 as the reference signal. IN2: Chooses Input 2 as the reference signal. IN3: Chooses Input 3 as the reference signal. IN4: Chooses Input 4 as the reference signal. DP: Chooses the DisplayPort Loop In as the reference signal. Note: For Video Controllers with High Speed Links, DP will not be an option.
Sync Reference Present	This indicates if the sync is present on the selected VC.
Sync Reference Frequency	This is the frequency of the sync reference.
VC Output Locked	Indicates if the output on the VC is locked to a reference. Value is either YES or NO.

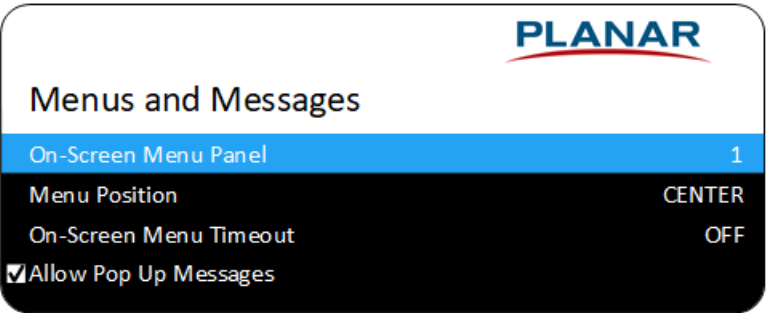
Menu and Messages Menu



LCD

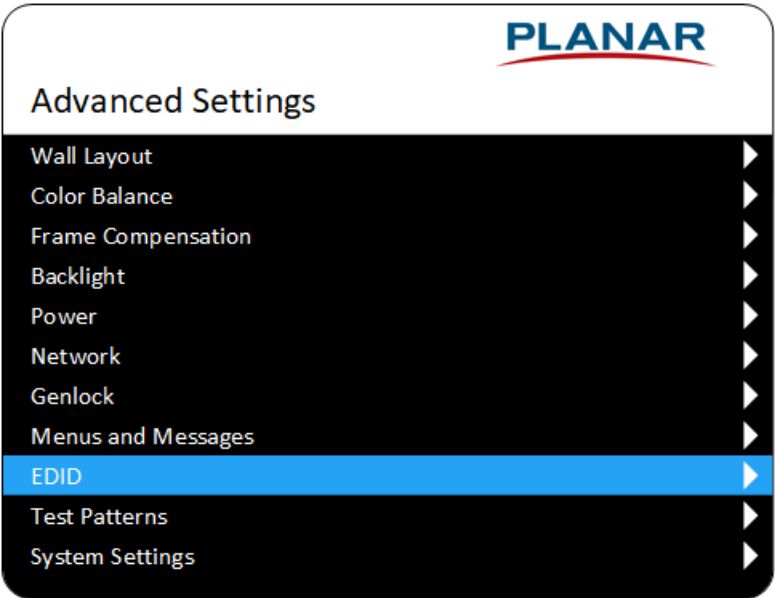


LED

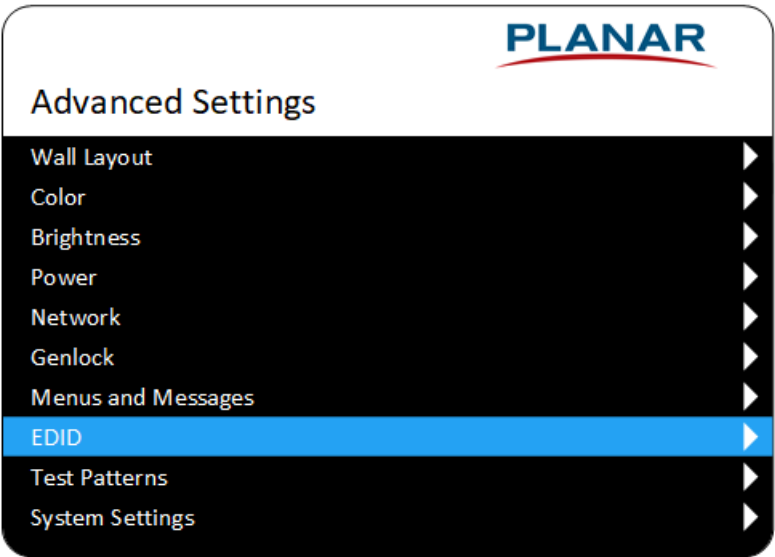


Field	Description
On-Screen Menu Panel	Indicates which panel the OSD is active on. To change this value, use the left or right arrow keys or the numeric keypad.
Menu Position	This sets the position on individual panels where the OSD should appear. Selections are Top Left, Top Right, Bottom Left, Bottom Right and Center. Center is the default.
On-Screen Menu Timeout	Sets the time in seconds from the last button press to when the menu will disappear from the screen due to inactivity. The settings are OFF, 30, 60, 120 and 240. The OFF setting enables the menu to always be on the screen until a user intervenes.
Allow Pop Up Messages	When checked, enables messages from the system to be seen on the screen. Messages usually indicate required reboots or software updating notifications.

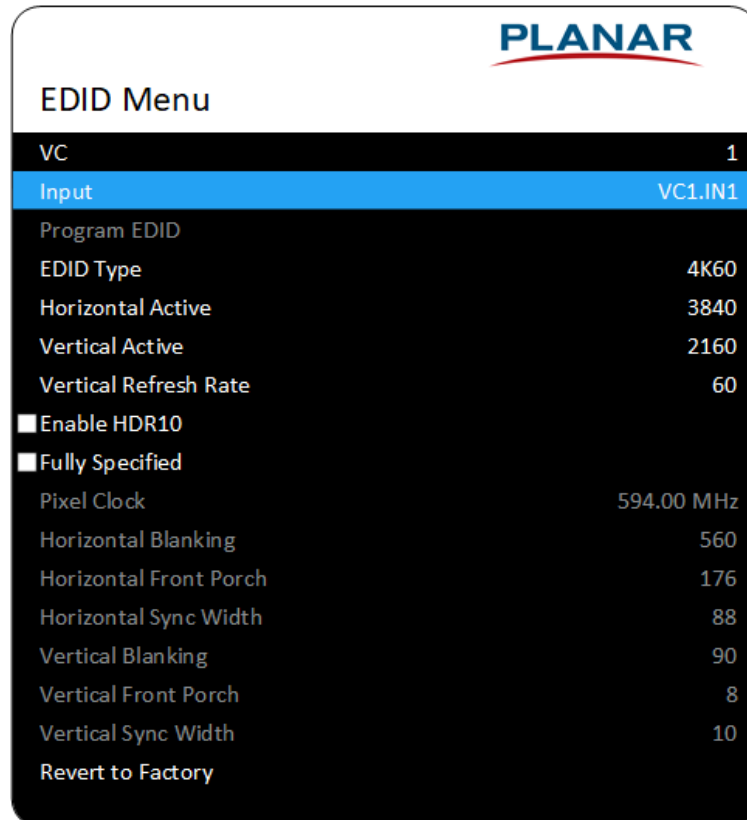
EDID Menu



LCD



LED



EDID is the standard protocol for connected equipment to communicate its capability to an image source. The equipment default values may not always be optimum for the desired application, so these values can be changed to get the best performance from the system and a multitude of possible sources. EDIDs for the inputs are determined using the CVT formula when not using the Fully Specified option.

Note: The DisplayPort input 4K/60 EDID uses the CVT reduced blanking for its calculation. If an HDMI® to DisplayPort adapter is employed to connect to an HDMI source, the source may not be able to use these parameters. Use the Fully Specified option to correct.

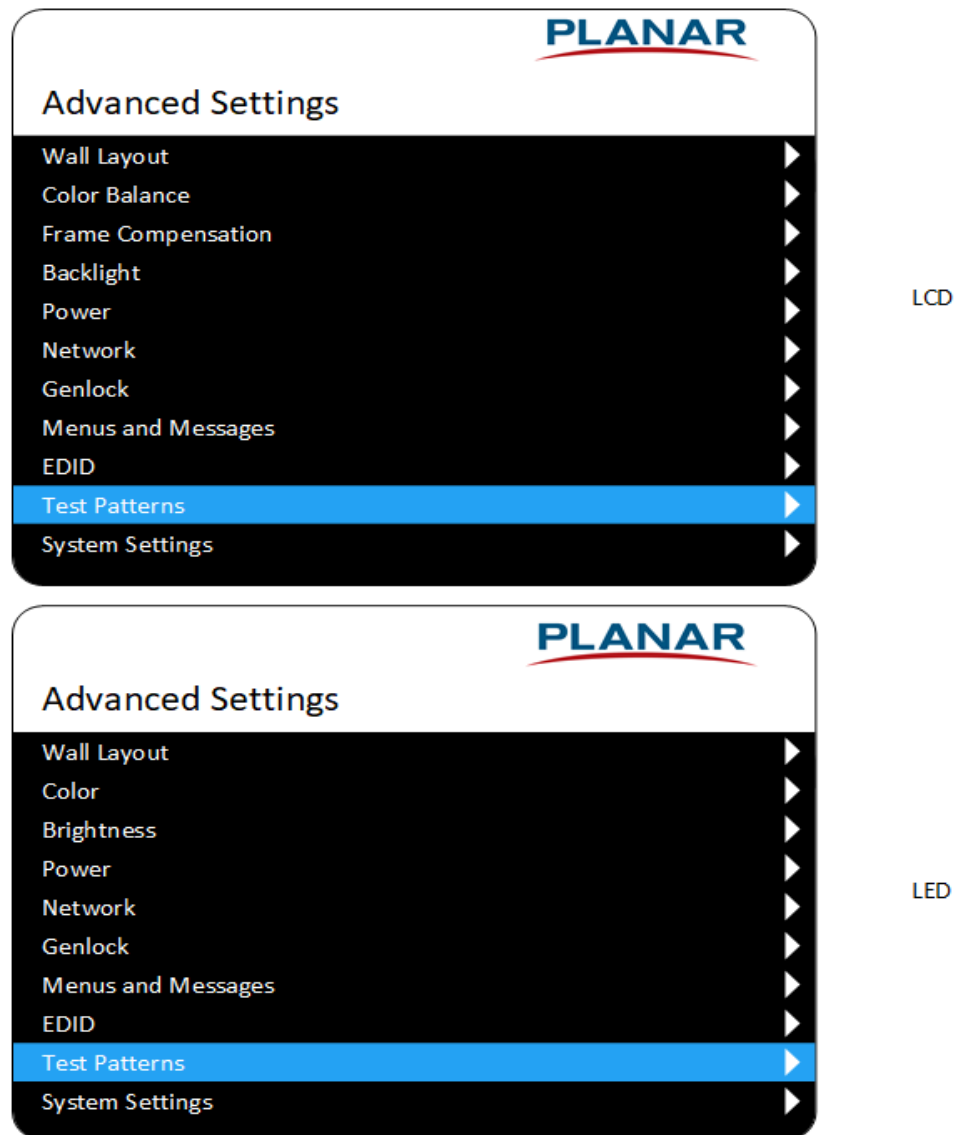
Field	Description
VC	Indicates to which video controller the source to be edited is attached.
Input	The current source input that information is displayed for, and can be edited if desired. To change this value, use the left or right arrow keys or the numeric keypad.
Program EDID	If changes are made to the information of a source, press ENTER while this line is highlighted for the changes to take effect.
EDID Type	There are three quick select types of pre-defined EDIDs for sources to use: 4K/60, 4K/30 and 1080P. The default setting is 4K/60. Selecting each will change the Horizontal Active, Vertical Active and Vertical Refresh Rate Below.

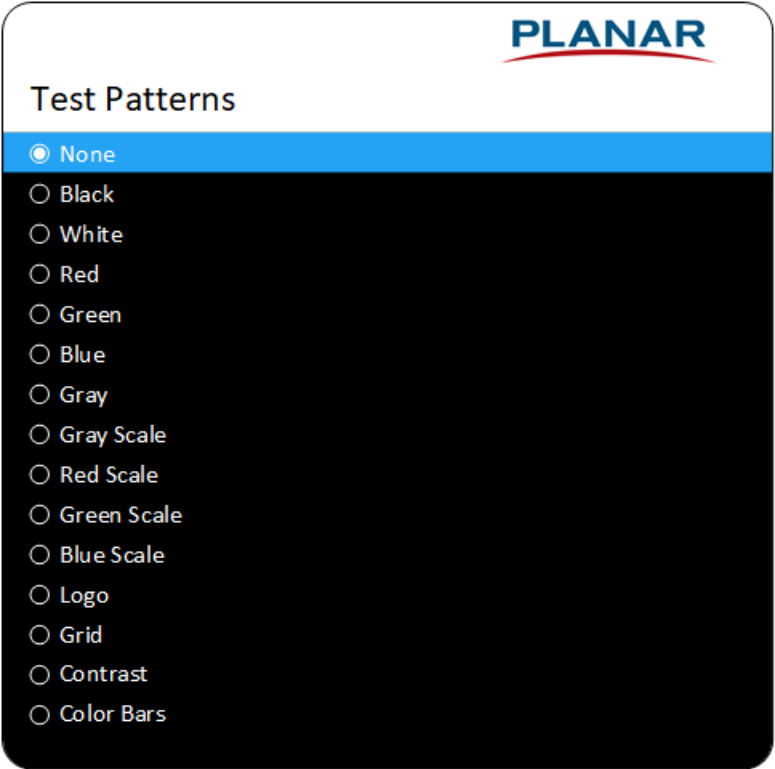
Field	Description
Horizontal Active	The horizontal resolution that the input will represent to the source. The maximum for this value is 4095 as long as the Pixel Clock remains under 600MHz. To change the value, use the left or right arrow keys or the numeric keypad process.
Vertical Active	The vertical resolution that the input will represent to the source. The maximum for this value is 4095 as long as the Pixel Clock remains under 600MHz. To change the value, use the left or right arrow keys or the numeric keypad.
Vertical Refresh Rate	The refresh rate that the input will represent to the source. The default is 60, but can be tuned to any standard and non-standard refresh rate as long as the Pixel Clock remains under 600MHz. To change the value, use the left or right arrow keys or the numeric keypad.
Enable HDR10	<i>(Products capable of HDR and enabled in Video Wall Setup only)</i> Enables the selected source to pass HDR10 data to the system for processing. Program EDID must be selected after select/de-select for changes to take place. Default is enabled. When HDR is enabled, the brightness will increase to 100 for optimal performance.
Fully Specified	When selected, enables the editing for the parameters below. These parameters are meant for users who fully understand the image setup parameters.
Pixel Clock	The frequency of the pixel clock. The maximum setting is 600MHz. To change the value, use the left or right arrow keys or the numeric keypad.
Horizontal Blanking	To change the value, use the left or right arrow keys or the numeric keypad.
Horizontal Front Porch	To change the value, use the left or right arrow keys or the numeric keypad.
Horizontal Sync Width	To change the value, use the left or right arrow keys or the numeric keypad.
Vertical Blanking	To change the value, use the left or right arrow keys or the numeric keypad.
Vertical Front Porch	To change the value, use the left or right arrow keys or the numeric keypad.
Vertical Sync Width	To change the value, use the left or right arrow keys or the numeric keypad.
Revert to Factory	Press the ENTER button while highlighted to return the factory settings for the EDID Type selected above. This will be followed by a confirmation dialog box.

Test Pattern Menu

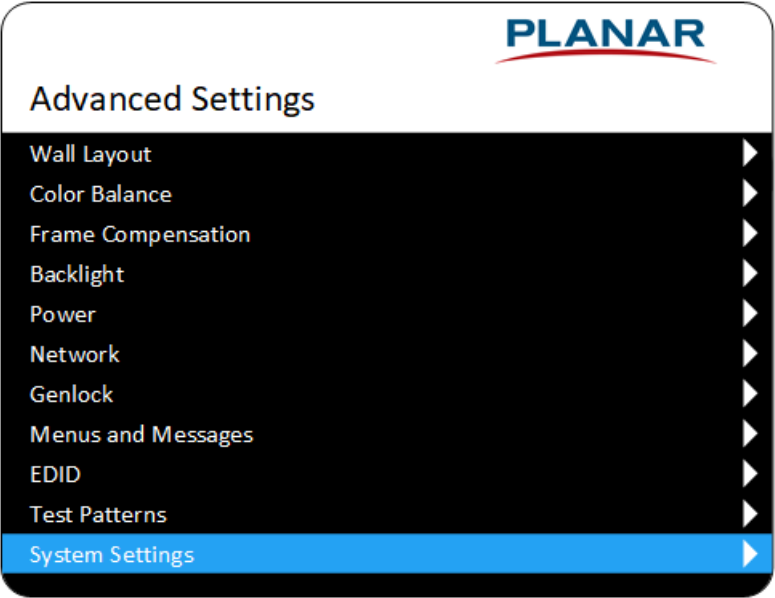
The Test Pattern menu enables you to select one test pattern to be displayed on every panel connected to the system. Pressing ENTER on the highlighted pattern will enable that pattern. The pattern will remain in place as you navigate further in the menus or exit the menu. Sources will not be seen on the panels until the “None” pattern is selected.

The available test patterns are shown below.

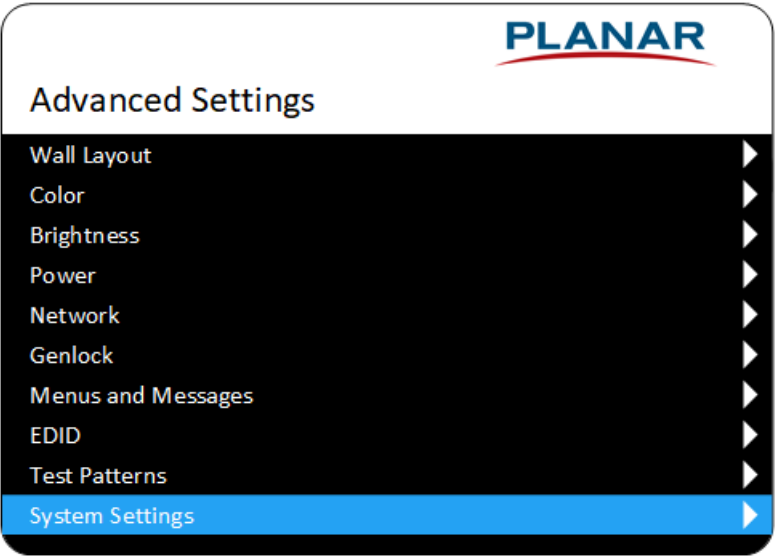




System Settings Menu



LCD



LED



System Settings

Source Absent Color	BLACK
☐ Keypad Lock	
Lock IR Remote	
Panel Vertical Refresh	60Hz
☒ Panel Sync	
Factory Reset	
System Reboot	
Firmware Update	

LCD



System Settings

Source Absent Color	BLACK
Color Temperature	8500K
Enable HDR	OFF
☐ Keypad Lock	
Lock IR Remote	
Panel Vertical Refresh	60Hz
Factory Reset	
System Reboot	
Firmware Update	

LED – 2k Pixel
Architecture



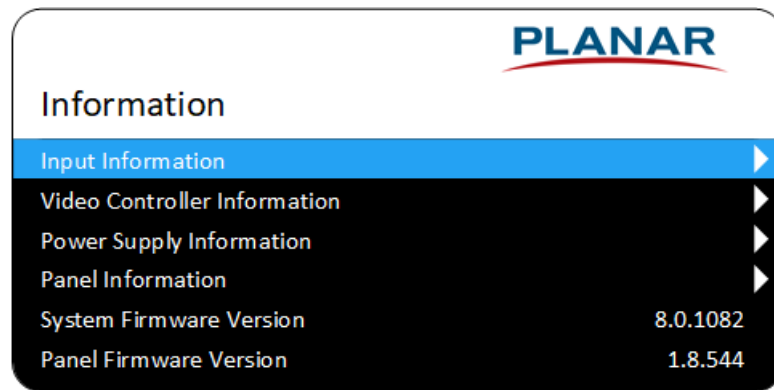
System Settings

Source Absent Color	BLACK
Color Temperature	8500K
Enable HDR	OFF
☐ Keypad Lock	
Lock IR Remote	
Panel Vertical Refresh	60Hz
Factory Reset	
System Reboot	
Firmware Update	

LED – Open Pixel
Architecture

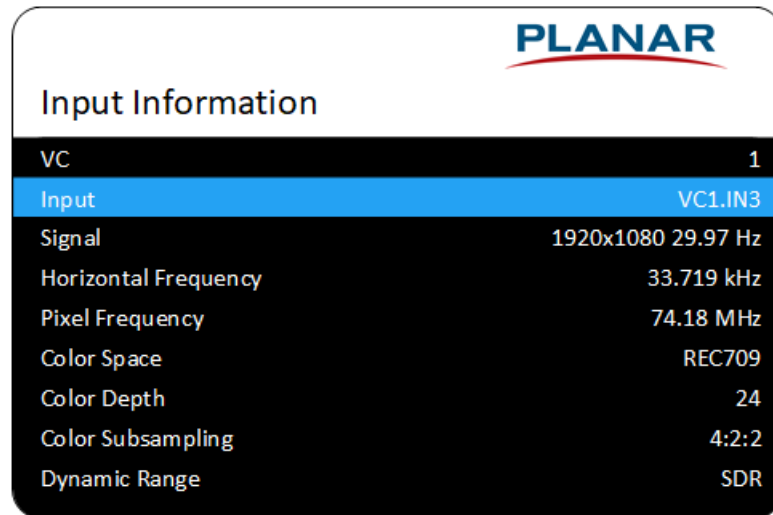
Field	Description
Source Absent Color	Sets any zone output color if a configured source is absent. Available colors are Black, Gray, Red, Green, Blue, Cyan, Yellow, and Magenta.
Color Temperature	<i>(LED products only)</i> Sets the video wall cabinets' color temperature. Values are 3200K, 6500K, 8500K, 9300K and CUSTOM. 8500K is the default. CUSTOM is adjustable through the LED Control Software.
Enable HDR	<i>(Select LED products only)</i> Sets whether the system will interpret and display HDR content from a source. Selections are OFF, HDR10 or AUTO.
Keypad Lock	When selected, disables the keypad on the front of all video controllers from working.
Lock IR Remote	Press ENTER to disable any commands from the remote from working. This will be followed by a confirmation dialog box. To unlock the remote commands, you must use the WallDirector or RS232 command protocol.
Panel Vertical Refresh	Sets the default refresh rate of the connected panels. Values are 50Hz or 60Hz. The VCs will automatically reboot when this is changed.
Panel Sync	<i>(1920x1080 resolution LCD products only)</i> Enables the inverted image scan on even rows of a video wall. This is meant to reduce tearing of the horizontal panning images.
Factory Reset	Press Enter to reset the system back to factory settings except for panel color balance settings. Resetting color balance may be done in the color balance menu. This will be followed by a confirmation dialog box. A reboot of the system is required.
System Reboot	Press Enter to perform a power cycle to the equipment. This will be followed by a confirmation dialog box.
Firmware Update	Press ENTER e multiple times if only one USB is used and multiple pieces of equipment need updating. This will be followed by a confirmation dialog box. A reboot is required after firmware updating; however, it is best to update all components before rebooting the system.

Information Menu



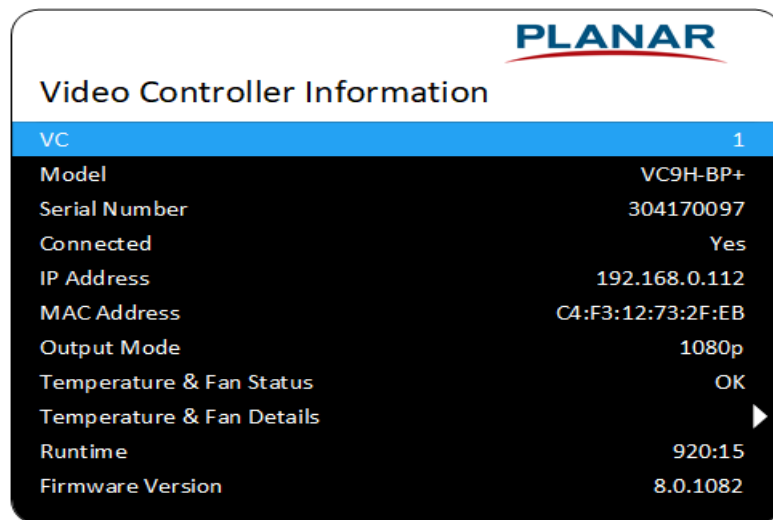
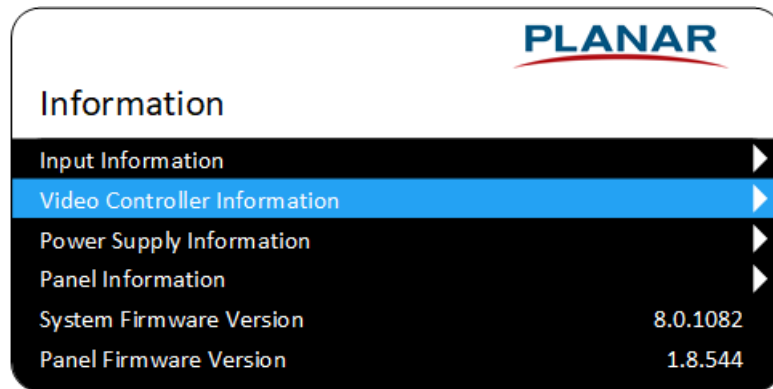
Field	Description
Input Information	Menu item to find information about system sources.
Video Controller Information	Menu item to find information about video controller status.
Power Supply Information	Menu item to find information about power supply status.
Panel Information	Menu item to find information about video wall displays.
System Firmware Version	Indicates the system firmware version. An asterisk indicates there is a component(s) within the system that does not have the same software loaded as the master. A firmware update to this component(s) should be performed for proper system function.
Panel Firmware Version	<i>(LCD and LED 2k pixel architecture only)</i> Indicates the panel firmware version. An asterisk indicates there is a panel(s) within the system that does not have the same software loaded as the package expected by the system firmware version. A firmware update to the panel(s) should be performed for proper system function.

Input Information Menu



Field	Description
VC	The active video controller for which the status information will be displayed. Can be changed to any video controller in the system. To change this value, use the left or right arrow key or the numeric keypad.
Input	The active input on the active video controller for which the status information will be displayed. To change this value, use the left or right arrow key or the numeric keypad.
Signal	The recognized resolution and refresh rate of the selected input.
Horizontal Frequency	The horizontal scan rate of the selected input.
Pixel Frequency	The pixel clock frequency of the selected input.
Color Space	The color space setting of the selected input.
Color Depth	The color depth in bits for the selected input.
Color Subsampling	The subsampling of the selected input in X:X:X format. For example, 4:4:4 or 4:2:0.
Dynamic Range	Indicates the source input as being either SDR or HDR.

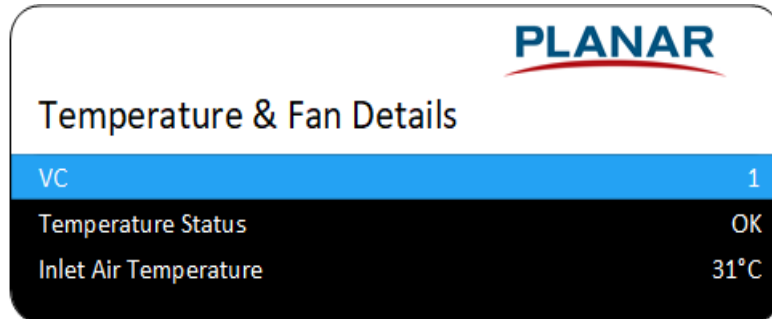
Video Controller Information Menu



Field	Description
VC	The active video controller for which the status information is displayed. You can change this value to any video controller in the system. To change the value, use the left or right arrow keys or the numeric keypad.
Model	The type of video controller.
Serial Number	The factory serial number of the equipment.
Connected	Yes indicates that the VC is connected and communication is active. No indicates there is a communication error between the master and the VC.
IP Address	Static IP address to communicate directly to the VC.
MAC Address	The physical equipment's unique hardware address.
Output Mode	Indicates if the VC output is set to 1080p or 4K resolution.
Temperature & Fan Status	Indicates if either a fan has failed or the temperature is greater than the limit. The possible status is OK or Fault.

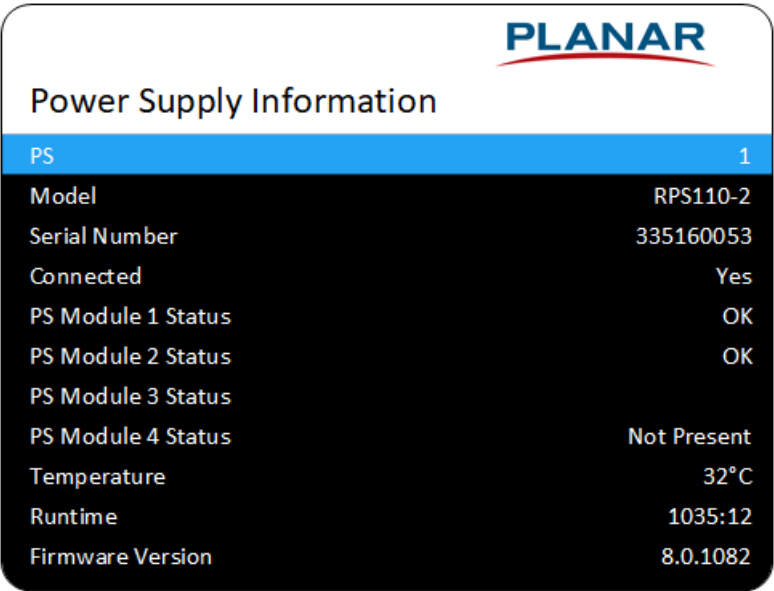
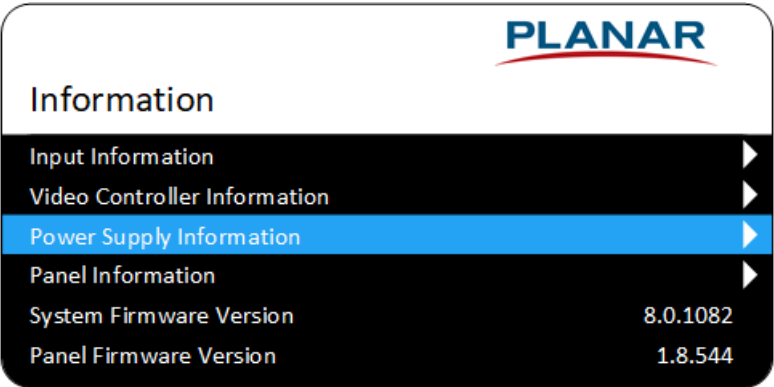
Field	Description
Temperature & Fan Details	See "Temperature & Fan Details Menu" on page 188.
Runtime	The amount of time in minutes:seconds the video controller has been operating.
Firmware Version	The loaded version of the firmware on the equipment.

Temperature & Fan Details Menu



Field	Description
VC	The active video controller for which the status information will be displayed. You can change this value to any video controller number in the system. To change the value, use the left or right arrow keys or the numeric keypad.
Temperature Status	Indicates if the critical system temperature is above threshold.
Inlet Air Temperature	The inlet air temperature for the equipment.

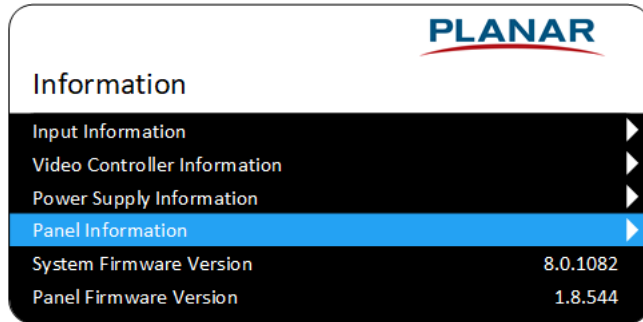
Power Supply Information Menu



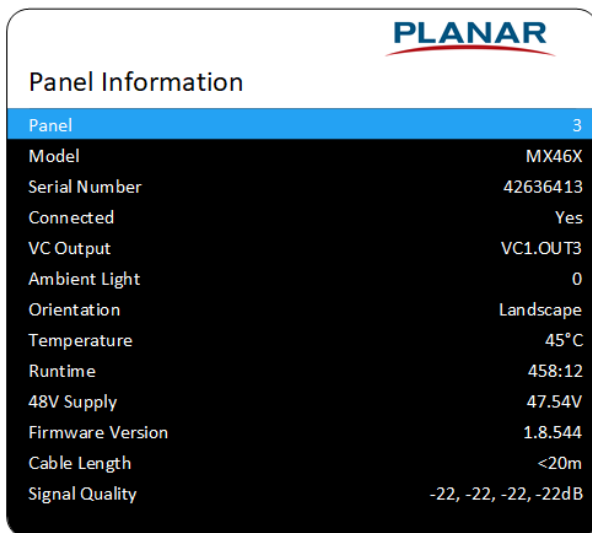
Field	Description
PS	The active power supply for which the status information is displayed. You can change this value to any power supply in the system. To change the value, use the left or right arrow keys or the numeric keypad.
Model	The type of power supply.
Serial Number	The factory serial number of the equipment.
Connected	Yes indicates that the power supply is connected and communication is active. No indicates there is a communication error between the master and the power supply.
PS Module 1 Status	The status of the power supply in position 1. The possible status is OK, Fault or Not Present.
PS Module 2 Status	The status of the power supply in position 2. The possible status is OK, Fault, blank or Not Present.

Field	Description
PS Module 3 Status	The status of the power supply in position 3. The possible status is OK, Fault, blank or Not Present.
PS Module 4 Status	The status of the power supply in position 4. The possible status is OK, Fault or Not Present.
Temperature	Denotes the current temperature of the electronics in the power supply.
Runtime	The amount of time in minutes:seconds the power supply has been operating.
Firmware Version	The loaded version of the firmware on the equipment.

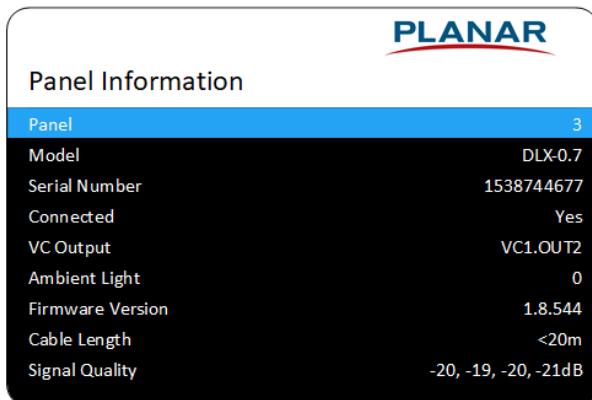
Panel Information Menu



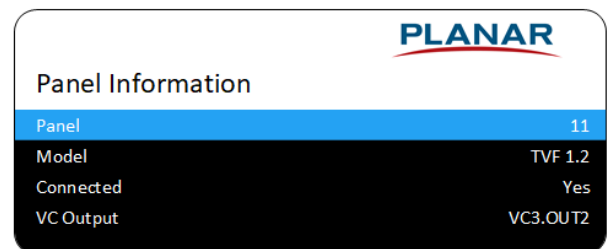
LCD



LED - 2k Pixel
Architecture



LED - Open Pixel
Architecture



Field	Description
Panel	The active panel for which the status information is displayed. You can change this value to any panel in the system. To change the value, use the left or right arrow keys or the numeric keypad.
Model	The type of panel.
Serial Number	<i>(LCD and LED 2k pixel architecture only)</i> The factory serial number of the equipment.
Connected	Yes indicates that the panel is connected and communication is active. No indicates there is a communication error between the master and the panel.
VC Output	<i>(1920x1080 products only)</i> Indicates the VC output the selected panel is connected to.
Ambient Light	<i>(LCD and LED 2k pixel architecture only)</i> The panel the first ambient light sensor is attached, if any.
Orientation	<i>(LCD products only)</i> The panel sensor orientation reading.
Temperature	<i>(LCD products only)</i> The panel temperature value.
Runtime	<i>(LCD products only)</i> The amount of time in minutes:seconds the backlight has been operating.
48V Supply	<i>(LCD products only)</i> The 48V DC supply value.
Firmware Version	<i>(LCD and LED 2k pixel architecture only)</i> The loaded version of the firmware on the equipment.
Panel Connection	<i>(3840x2160 LCD products only)</i> This item is selectable and will cycle between Primary and Secondary. All information following this item pertains to the specific selection.
Connected	<i>(3840x2160 LCD products only)</i> Indicates if the panel connection is communicating for the selection above.
VC Output	<i>(3840x2160 LCD products only)</i> Indicates the VC output the selection above is connected to. Odd channels must be connected to each other and are primary. Even channels must be connected to each other and must immediately come in numeric order to the primary.
Cable Length	<i>(LCD and LED 2k pixel architecture only)</i> Rough approximation of the cable length from the VC to the panel.
Signal Quality	<i>(LCD and LED 2k pixel architecture only)</i> Diagnostic tool to determine if there may be cable issues causing display anomalies. Values less than -12dB may cause image display issues. Also, differences greater than 4dB between any of the four values may cause image display issues.

Video Controller Front Panel



The Video Controller front panel has basic functionality to perform the more common maintenance functions on the system. Access to the menu items is accomplished by pushing any button except exit on the front panel display of the video controller. This will transition away from the information display to a navigable menu as described below. To navigate, either the ENTER or right arrow will select the highlighted field. The up and down arrows will scroll through the menu options moving the highlight line to selectable fields. The EXIT or left arrow will transition to the previous menu.

If a menu line has a > symbol on the right, this indicates there is an additional menu that can be accessed if selected. If a menu item is bracketed by < >, then an action will occur when selected. Menu items that have parameters that can be changed are denoted by [] and can be changed by using the arrow keys to highlight and then pressing enter. The highlight will then focus on the parameter to be changed and then the arrow keys may be used to alter the value. Pressing Enter after changing will be when the change will take affect.

Main Menu



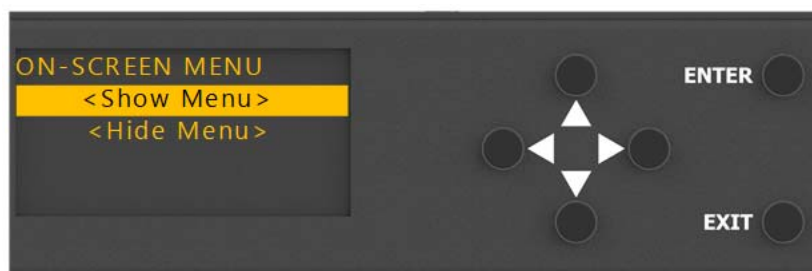
Field	Description
Power & Brightness	Navigates to the power settings and brightness menu.
On-Screen Menu	Navigates to the on screen menu parameters menu.
Information	Navigates to the equipment information menu.
Advanced Settings	Navigates to the advanced settings menu.

Power & Brightness Menu



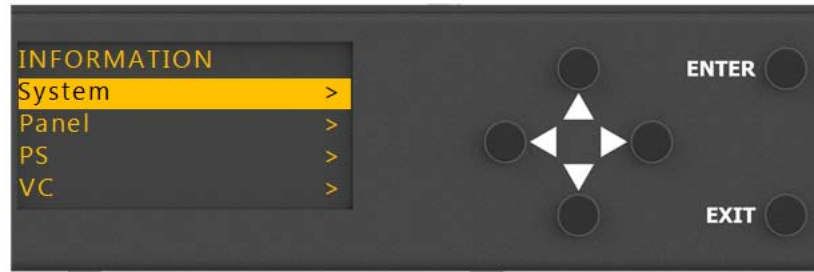
Field	Description
System Power	Selecting ON will turn the system on in fast start mode. Selecting OFF will turn the system power off. Depending on the standby mode selected, this may disable power to the video controller and thus requiring a power on by another method.
Brightness	The backlight intensity value for all panels within the video wall. The higher the number, the brighter the display and the more power the video wall uses.
Standby	This value sets the behavior of the system when a user interface applied power command is used. The options are Fast Start or Low Power. Fast Start saves power by turning off the lights at the panels. Low Power saves power by turning off all power to the system except for the minimum required at each power supply.

On-Screen Menu



Field	Description
Show Menu	Selection will display the panel IDs and OSD on the panels.
Hide Menu	Selection will disable panel IDs and OSD from displaying on the panels.

Information Menu



LCD and LED - 2k
Pixel Architecture



LED - Open Pixel
Architecture

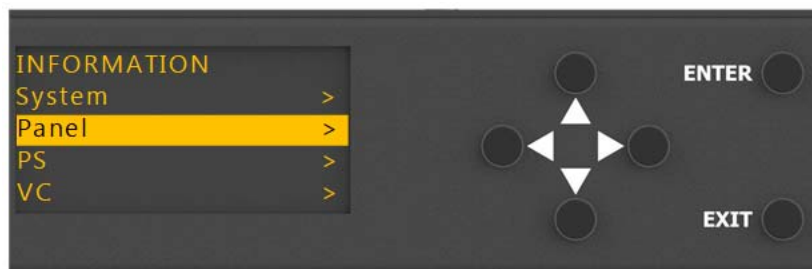
Field	Description
System	Navigates to window containing information about the system.
Panel	<i>(LCD and LED 2k pixel architecture only)</i> Navigates to window containing information about the panels in the system.
PS	<i>(LCD and LED 2k pixel architecture only)</i> Navigates to window containing information about the remote power supplies in the system.
VC	Navigates to window containing information about the video controllers in the system.

System Menu

LCD and LED - 2k
Pixel ArchitectureLED - Open Pixel
Architecture

Field	Description
Version	Firmware version of the master component.
Panels	Firmware version of attached panels/cabinets.
Master S/N	Master component serial number.

Panel Menu



Field	Description
Panel	Selection of the equipment to display the information. Use the left and right arrows to change.
Version	Firmware version of the selected equipment.
S/N	Serial number of selected equipment.

PS Menu



Field	Description
PS	Selection of the remote power supply to display the information. Use the left and right arrows to change.
Version	Firmware version of the selected equipment.
S/N	Serial number of selected equipment.

VC Menu



LCD and LED - 2k
Pixel Architecture



Field	Description
VC	Selection of the video controller to display the information. Use the left and right arrows to change.
Version	Firmware version of the selected equipment.
S/N	Serial number of selected equipment.

Advanced Settings Menu

Set ID/Master Menu



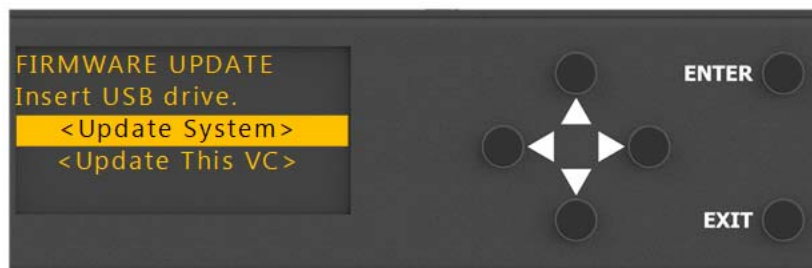
Field	Description
This VC ID	The numeric value may be changed by pressing the left or right arrow keys to increment the number. The value is dynamically changed, so there is no need to press ENTER.
System Master	The current master component of the system.
This VC is Master	This allows the selection of a VC to be the system master. Be sure that no other component connected to the system is a master before setting a VC as master. Note: If a VC is set as the master component, the front panel information display will change as shown below for easy recognition.

Menus



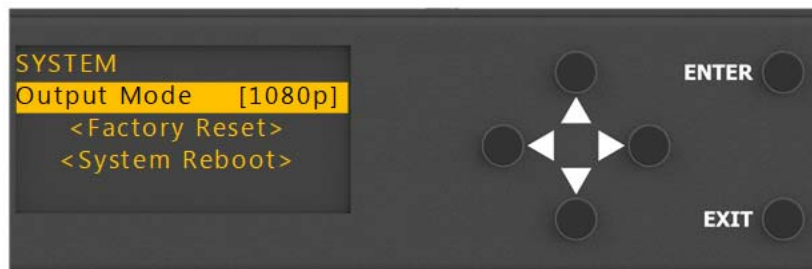
Field	Description
On-Screen Panel	Indicates which panel the OSD is active on. To change this value, use the left or right arrow keys or the numeric keypad.
Position	This sets the position on individual panels where the OSD should appear. Selections are Top Left, Top Right, Bottom Left, Bottom Right and Center. Center is the default.
Timeout	Sets the time in seconds from the last button press to when the menu will disappear from the screen due to inactivity. The settings are OFF, 30, 60, 120 and 240. The OFF setting enables the menu to always be on the screen until a user intervenes.

Firmware Update Menu



Field	Description
Update All	Selecting will start the firmware update process on all components using the USB drive inserted into the VC.
Update This VC	Selecting will start the firmware update process on the connected component if there is valid software on the inserted USB drive.

System Menu



Field	Description
Output Mode	Indicates the resolution of the VC's video outputs. Selecting and changing has no effect, as this is determined by the connected product.
Factory Reset	Pressing ENTER will revert the system back to factory settings except for panel color balance settings. This will be followed by a confirmation dialog box. A reboot will be required to take effect. A Cancel Factory Reset option will appear if "Yes" is selected.  Choosing and confirming this selection will disregard the reset request.
System Reboot	Pressing enter will perform an electronic reboot of the system.



Index

I

IR commands
for WallDirector, 150

O

OSM

Backlight Menu

- Ambient Light, 167
- Ambient Sensor Panel, 167
- Ambient Threshold, 167
- Control Mode, 167
- Dimmed Intensity, 167
- Intensity, 167
- Local Dimming, 167
- Max Intensity, 167

Big Picture Menu

- Input, 155
- One to One, 155
- Signal, 155
- VC, 155

Color Balance Menu

- All/Red/Green/Blue color points, 162
- All/Red/Green/Blue gammas, 162
- Backlight Adjustment, 163
- Color Temperature, 162
- Copy to Clipboard, 163
- Gray Test Pattern, 162
- Recall from Clipboard, 163
- Reset to Factory, 163
- Reset to Native, 163
- Select Panel, 162
- White Test Pattern, 162

Color Menu

- All, 164
- Color Temperature, 164
- Red, Green and Blue, 164

EDID Menu

- EDID Type, 178
- Enable HDR10, 179
- Fully Specified, 179
- Horizontal Active, 179

- Horizontal Blanking, 179
- Horizontal Front Porch, 179
- Horizontal Sync Width, 179
- Input, 178
- Pixel Clock, 179
- Program EDID, 178
- Revert to Factory, 179
- VC, 178
- Vertical Active, 179
- Vertical Blanking, 179
- Vertical Front Porch, 179
- Vertical Refresh Rate, 179
- Vertical Sync Width, 179

Frame Compensation Menu

- Enable Compensation, 165
- Frame Height, 165
- Frame Width, 165

Genlock Menu

- All VC Outputs Locked, 174
- Auto Genlock, 174
- Disable Genlock, 174
- Panel Vertical Refresh, 174
- Sync Reference, 174
- Sync Reference Frequency, 174
- Sync Reference Present, 174
- VC, 174
- VC Output Locked, 174

Input Information Menu

- Color Depth, 186
- Color Space, 186
- Color Subsampling, 186
- Dynamic Range, 186
- Horizontal Frequency, 186
- Input, 186
- Input Information, 185
- Panel Firmware Version, 185
- Panel Information, 185
- Pixel Frequency, 186
- Power Supply Information, 185
- Signal, 186
- System Firmware Version, 185
- VC, 186
- Video Controller Information, 185

Main Menu, 154

- MASTER DHCP Menu
 - Active, 172
 - Enable DHCP, 172
 - Gateway, 172
 - IP Address, 172
 - Subnet, 172
 - Subnet Mask, 172
- MASTER DNS Menu
 - DNS Server 1, 172
 - DNS Server 2, 172
- MASTER Static IP Menu
 - Active, 171
 - Enable Master Static IP, 171
 - Gateway, 171
 - IP Address, 171
 - Subnet, 171
 - Subnet Mask, 171
- Matrix Layout Menu
 - Auto Layout, 159
 - Layout Type, 160
 - Orientation, 160
 - Panel Model, 160
 - Product, 160
 - Reset Layout, 159
 - Wall Height (LCD), 160
 - Wall Height (LED), 160
 - Wall Width (LCD), 160
 - Wall Width (LED), 160
- Menu and Messages Menu
 - Allow Pop Up Messages, 176
 - Menu Position, 176
 - On-Screen Menu Panel, 176
 - On-Screen Menu Timeout, 176
- Network Menu
 - MAC Address, 171
 - MASTER DHCP, 171
 - MASTER DNS, 171
 - MASTER Static IP, 171
 - System Master, 171
- Panel Information Menu
 - 48V Supply, 192
 - Ambient Light, 192
 - Cable Length, 192
 - Connected, 192
 - Firmware Version, 192
 - Model, 192
 - Orientation, 192
 - Panel, 192
 - Panel Connection, 192
 - Serial Number, 192
 - Signal Quality, 192
 - Temperature, 192
 - VC Output, 192
- Picture Setup Menu
 - Brightness, 156
 - Color Space, 156
 - Contrast, 156
 - Current Input, 156
 - Display Port Type, 157
 - Red/Green/Blue Gain, 156
 - Red/Green/Blue Offset, 157
 - Reset to Default, 156
 - Signal, 157
 - VC, 156
- Power Menu
 - Auto Power On, 169
 - Power Saving Delay, 169
 - Power Saving Mode, 169
 - Standby Mode, 169
- Power Supply Information Menu
 - Connected, 189
 - Firmware Version, 190
 - Model, 189
 - PS, 189
 - PS Module 1-4 Status, 189
 - Runtime, 190, 192
 - Serial Number, 189
 - Temperature, 190
- Presets Menu
 - Name, 157
 - Preset Slot, 157
 - Recall, 157
 - Save, 157
- System Settings Menu
 - Color Temperature, 184
 - Enable HDR, 184
 - Factory Reset, 184
 - Firmware Update, 184
 - Keypad Lock, 184
 - Lock IR Remote, 184
 - Panel Sync, 184
 - Panel Vertical Refresh, 184
 - Source Absent Color, 184
 - System Reboot, 184
- Temperature & Fan Details Menu
 - Inlet Air Temperature, 188
 - Temperature Status, 188
 - VC, 188
- Test Pattern Menu, 180
- Video Controller Information Menu

- Connected, 187
- Firmware Version, 188
- IP Address, 187
- MAC Address, 187
- Model, 187
- Output Mode, 187
- Runtime, 188
- Serial Number, 187
- Temperature & Fan Details, 188
- Temperature & Fan Status, 187
- VC, 187

R

remote control, 149

V

Video Controller Front Panel

- Firmware Update Menu
 - System Reboot, 205
 - Update All, 204
 - Update This VC, 204
- Firmware Version - Panel Version menu
 - Panel, 199
 - S/N, 199
 - Version, 199
- Firmware Version - PS/VC Version menu
 - Master S/N, 198
 - Panels, 198
 - Version, 198
- Information Menu
 - Panel, 197
 - PS, 197
 - System, 197
 - VC, 197
- On-Screen Menu
 - Hide Menu, 196
 - Show Menu, 196
- Output Mode, 205
- Power Menu
 - Brightness, 195
 - Standby, 195
 - System Power, 195
- PS Version menu
 - PS, 200
 - S/N, 200
 - Version, 200

Reset Menu

- Factory Reset, 205

Set ID Menu

- On-Screen Panel, 203
- Position, 203
- System Master, 202
- This VC ID, 202
- This VC is Master, 202
- Timeout, 203

VC Version menu

- PS, 201
- S/N, 201
- Version, 201

W

WallDirector Web UI

- Admin Menu
 - Configuration, 18
 - Factory Reset, 27
 - Firmware Updates, 22
 - System Reboot, 27
 - Users, 28
- buttons and icons
 - Alerts, 57
 - Brightness, 56
 - Pan, 58
 - Pencil, 17
 - Power, 56
 - Snap Grid, 57
 - Sources, 59
 - User, 14
 - Zoom, 58
 - Zoom to Fit, 59
- Cabinet Details
 - Column, 123, 128
 - Connected, 123
 - HDMI 1 Present, 123
 - HDMI 2 Present, 123
 - Input, 123
 - Model, 123, 128
 - Power Status, 128
 - PS1 Status, 128
 - PS2 Status, 128
 - PS3 Status, 128
 - Receiver 2 Firmware Version, 128
 - Receiver Firmware Version, 128
 - Row, 123, 128
 - Temperature, 128

EDID Menu

- EDID Type, 95
- Enable HDR10, 96
- Fully Specified, 96
- Horizontal Active, 96
- Horizontal Blanking, 96
- Horizontal Front Porch, 96
- Horizontal Sync Width, 96
- Input, 95
- Pixel Clock, 96
- Program EDID, 95
- Revert to Factory, 96
- Vertical Active, 96
- Vertical Blanking, 96
- Vertical Front Porch, 96
- Vertical Refresh Rate, 96
- Vertical Sync Width, 96

Genlock Menu

- All VC Outputs Locked, 73
- Auto Genlock, 73
- Disable Genlock, 73
- Panel Vertical Refresh, 73
- Sync Reference, 74
- Sync Reference Frequency, 74
- Sync Reference Present, 74
- VC, 73
- VC Output Locked, 74

Module Details

- Input Current, 133
- Input Voltage, 133
- Output Current, 133
- Output Voltage, 133
- Runtime, 133
- Status, 133
- Temperature, 133

Monitor Tab, 115

Panel Details

- 48V Supply, 122
- Ambient Light, 122
- Cabinet Input, 122
- Cable Length, 122
- Column, 122
- Connected, 121
- Connected - Primary/Secondary, 122
- Firmware Version, 122
- ID #, 121
- IP Address, 121
- Model, 121
- Orientation, 122
- Row, 122

Runtime, 122

- Serial Number, 121
- Signal Quality, 122
- Temperature, 122
- VC Output, 121
- VC Output - Primary/Secondary, 122
- X, 122
- Y, 122

Panel Setup

- 48V Supply, 84
- All/Red/Green/Blue color points, 87
- All/Red/Green/Blue gamma, 87
- Ambient Light, 84
- Backlight Adjustment, 87
- Cabinet Auto Layout, 85
- Cabinet Input, 85
- Cabinet Pattern, 85
- Cable Length, 84
- Clipboard, 88
- Color Temperature, 86
- Connected, 84
- Connected - Primary/Secondary, 84
- Copy to Clipboard, 88
- Firmware Version, 84
- Gray Test Pattern, 87
- ID#, 84
- IP Address, 84
- Model, 84
- Orientation, 84
- Panel Position, 85
- Recall from Clipboard, 88
- Reset to Factory, 88
- Reset to Native, 88
- Runtime, 84
- Send Cabinet Settings, 85
- Serial Number, 84
- Signal Quality, 84
- Temperature, 84
- VC Output, 84
- VC Output - Primary/Secondary, 84
- White Test Pattern, 86

Picture Setup Menu

- Brightness, 94
- Color Space, 94
- Contrast, 94
- Current Input, 94
- Display Port Type, 95
- Red/Green/Blue Gain, 94
- Red/Green/Blue Offset, 94
- Reset to Default, 94

- Signal, 95
- Port Details
 - Height, 127
 - Port Mapping, 127
 - Width, 127
 - X or Y, 127
- Power Supply Details
 - Connected, 132
 - Firmware Version, 132
 - ID #, 132
 - Model, 132
 - PS Module 1-4 Status, 132
 - Runtime, 132
 - Serial Number, 132
 - Temperature, 132
- Power Supply Setup
 - Connected, 110
 - Exhaust Temperature, 110
 - Firmware Version, 110
 - ID #, 110
 - Model, 110
 - PS Module Status, 110
 - Runtime, 110
 - Serial Number, 110
 - Standby Power Status, 110
 - Temperature, 110
- Power Switch Details
 - Connected, 134
 - Group, 134
 - ID#, 134
 - IP Address, 134
 - Name, 134
 - Power State, 134
 - Tie ALL to system power, 134
 - Tie to system power, 134
- Power Switches Settings
 - Connected, 112
 - Group, 112
 - ID #, 112
 - IP Address, 112
 - Name, 112
 - ON/OFF, 112
 - Power State, 112
 - Tie to system power, 112
- Power Switches Setup
 - Connection Password, 111
 - Control Switch Group, 111
 - ON/OFF, 111
 - Tie ALL to system power, 111
- Preset Information
 - Duplicate Preset, 144
 - Preset Name, 144
 - Preset Slot, 144
 - Save Preset, 144
- Presets Tab, 136
- Senor Hub Setup
 - Connected, 114
 - Hub Temperature, 114
 - Model, 113, 114
 - Port Number, 113
- Sensor Hub Details
 - Connected, 135
 - Hub Temperature, 135
 - Model, 135
 - Port Number, 135
 - Sensors, 135
- Settings Menu
 - Diagnostics, 43
 - Logs, 54
 - Network Status, 43
 - Serial Settings, 45
 - System Settings, 51
- Setup Tab, 62
- Source Details
 - Color Depth, 129
 - Color Space, 129
 - Color Subsampling, 129
 - Dynamic Range, 129
 - Horizontal Frequency, 129
 - Image, 129
 - Input Assignment, 129
 - Monitor for Source Absent Alert, 129
 - Name, 129
 - Pixel Frequency, 129
 - Resolution, 129
 - Source Present, 129
- Source Setup
 - Color Depth, 102
 - Color Space, 102
 - Color Subsampling, 103
 - Dynamic Range, 103
 - Horizontal Frequency, 102
 - Image Name, 102
 - Input Assignment, 102
 - Monitor for Source Absent, 103
 - Pixel Frequency, 102
 - Resolution, 102
 - Source Name, 102
 - Source Present, 102
- Video Controller Details

- Connected, 125
- Firmware Version, 126
- High Speed Link Status, 126
- ID #, 125
- Inlet Air Temperature, 126
- IP Address, 125
- Link# Loop In Connected, 126
- Link# Loop Out Connected, 126
- Loop Out Capacity Used, 126
- Loop Status, 126
- MAC Address, 125
- Model, 125
- Output Mode, 125
- Runtime, 126
- Serial Number, 125
- Subnet, 124
- Subnet Mask, 124
- Temperature & Fan Status, 126
- Temperature Status, 126
- VC Static IP Address, 124
- Video Controller I/O
 - Column, 99
 - Connected, 99
 - Height, 98
 - Model, 99
 - Port Mapping, 98
 - Power Status, 99
 - PS1 Status, 99
 - PS2 Status, 100
 - PSR Status, 100
 - Receiver 2 Firmware Version, 99
 - Receiver Firmware Version, 99
 - Row, 99
 - Temperature, 99
 - VC# - PORT#, 97
 - VC#.DP, 97
 - VC#.HSL, 97
 - VC#.IN#, 97
 - VC#.OUT#, 97
 - Width, 98
 - X or Y, 98
- Video Controller Setup
 - Connected, 91
 - Firmware Version, 91
 - High Speed Link Status, 92
 - ID #, 91
 - Inlet Air Temperature, 93
 - IP Address, 91
 - Link 1/Link 2, 92
 - Loop In Connected, 92
 - Loop Out Capacity Used, 92
 - Loop Out Connected, 92
 - Loop Status, 92
 - MAC Address, 91
 - Model, 91
 - Output Mode, 91
 - Runtime, 91
 - Serial Number, 91
 - Subnet, 90
 - Subnet Mask, 90
 - Temperature & Fan Status, 91
 - Temperature Status, 93
 - VC Static IP Address, 90
- Video Wall Details
 - All VC Outputs Locked, 118
 - Ambient Light, 118
 - Ambient Sensor Panel, 118
 - Ambient Threshold, 118
 - Auto Genlock Enabled, 118
 - Color Temperature, 117
 - Columns, 117
 - Control Mode, 118
 - Dimmed Intensity, 118
 - Enable HDR, 117
 - Enabled, 118
 - Frame Height, 118
 - Frame Width, 119
 - HDR Intensity Offset, 118
 - Height, 117
 - Intensity, 118
 - Layout Type, 117
 - Max Intensity, 118
 - Model, 117
 - On-Screen Menu, 117
 - Orientation, 117
 - Panel Firmware Version, 117
 - Panel Sync, 117
 - Panel Vertical Refresh, 118
 - Product, 117
 - Rows, 117
 - Sync Reference, 118
 - Sync Reference Frequency, 118
 - Sync Reference Present, 118
 - System Firmware Version, 117
 - System Master, 117
 - VC, 118
 - VC Output Locked, 118
 - Video Wall Summary, 117
 - Width, 117
- Video Wall Setup

- All, 79
- Ambient Light, 77
- Ambient Sensor Panel, 77
- Ambient Threshold, 77
- Auto Cloud ID, 72
- Auto Layout, 68
- Cabinet Redundant Power, 67
- Cabinet Size, 71
- Claim This Device, 72
- Clear All, 75
- Cloud Management Agent, 72
- Color Temperature, 69, 78, 79
- Columns, 67
- Control Mode, 76
- Copy to Clipboard, 78
- Dimmed Intensity, 77
- Distance to PS, 67
- Enable Cloud Manager, 72
- Enable Compensation, 80
- Enable HDR, 68
- Frame Height, 80
- Frame Width, 80
- HDR Intensity Offset, 77
- Height, 67
- Intensity, 76
- Last Connection, 72
- Layout Type, 68
- LED Wall Calculator, 68
- Local Dimming, 76
- Max Intensity, 77
- Model, 67, 71
- One to One Sources, 75
- On-Screen Panel, 68
- Orientation, 67
- Output Color Depth, 79
- Panel, 75
- Panel Firmware Version, 69
- Panel Position, 71
- Panel Sync, 68
- Product, 67
- Recall from Clipboard, 78
- Red, Green, Blue, 79
- Reset Layout, 68
- Reset to Factory, 78
- Reset to Native, 78
- Rows, 67
- Send All Telemetries, 72
- Show Menu/Hide Menu, 68
- Sources, 75
- System Firmware Version, 69
- System Master, 69
- Test Pattern, 75
- Video Wall Summary, 69
- Wall Layout, 71
- Wall Size, 71
- Width, 67
- Zone Details
 - Height, 130, 131
 - ID #, 130
 - Justify, 130
 - Position, 130
 - Scale Mode, 130
 - Source, 130
 - Width, 130, 131
 - X, 130
 - Y, 130
 - Zone Position Y, 130
- Zone Settings
 - Height, 140
 - Justify, 139, 141
 - Move Horizontal, 140
 - Move Vertical, 140
 - Overscan, 140
 - Scale Mode, 139, 141
 - Width, 140
 - Zone Position X, 140
 - Zone Position Y, 140
- Zone Setup
 - Bring to Front, 106
 - Delete Zone, 106
 - Duplicate Zone, 106
 - Height, 106
 - ID #, 105
 - Justify, 106
 - Scale Mode, 106
 - Source, 106
 - Width, 105
 - Zone Position X, 105
 - Zone Position Y, 105
- Zone Source Capture
 - Expected Source Height, 106
 - Expected Source Width, 106
 - Height, 107
 - Percent/Pixel, 106
 - Width, 107
 - X, 107
 - Y, 107