Software User Manual

020-100981-04

Entero HB

CHRISTIE®

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Content

Navigate the User Interface 5
Navigate the On Screen Display 5
IR remote 8
Disable the remote control 8
Overview of IR remote commands 9
Wired remote 11
Change the interface language 11
Configure the display wall 13
Configure network settings 13
Connect the displays to WiFi (WiFi model only) 14
Map and number the display 14
Unmap the display 16
Create a subarray 16
Disable a subarray 16
Delete a subarray 17
Update display date and time 17
Configure power settings 17
Setup EDID 18
Select the active input source 18
Adjust the Image 20
Adjust color and brightness 20
Change the color and brightness for individual displays 21
Enable brightness uniformity 22
Set the brightness threshold of the weakest tile 23
Adjust image orientation 23
Manually adjust the image size 24
Automatically scale the image 25
Monitor and Maintain the Display Wall 26
Configure SNMP 26
Restore factory defaults 26
Upgrade the firmware 27
Check the current firmware version 27

Download the firmware upgrade 27
Upgrade the firmware 28
Check the system status 28
View the errors in the array 29
Communication errors 30
Fan errors 30
Version errors 30
Color errors 31
Temperature errors 31
Temperature warnings 31

Navigate the User Interface

The two user interface systems used to control the display wall are the On Screen Display (OSD) and the Web User Interface (WebUI). For the most part, the OSD and WebUI contain the same features and functionality. The WebUI is faster to operate, but requires a network connection, as well as a device with a web browser. The OSD is accessed via the IR remote.

Navigate the On Screen Display

Basic controls of the displays are accessible through the on screen display (OSD) menu system. When the OSD is activated, it appears on each display in the array. Locked items or items that do not pertain to the current action or condition appear dimmed and cannot be selected.

If the OSD and WebUI are used simultaneously, the OSD menus may not display correctly. If a menu button is pressed, but does not appear on the display after a few seconds, press the Exit key several times and re-enter the selection(s).

If there is no signal present, all source-dependent adjustments are disabled. After 15 minutes of inactivity, the display exits the menus and returns to the presentation. The Status menu is read-only.

1. To access the OSD, from the IR remote press **Menu**.
2. With the Main menu displayed, use the arrow keys on the remote to highlight the desired option and press **Enter**, or use the number keypad on the remote to make the corresponding selection.
3. Enter the number corresponding to the function menu you wish to access, such as 2 for the Display Configuration menu.
4. To scroll through a list of items, use the up and down arrow keys.
5. To return to the previous level of options, press **Exit** once.

   To return to the Main menu, press **Menu** at any time.

Slide bars in menus

- To gradually adjust the setting up or down, use the left and right arrow keys.
- Press **Enter** to activate a slide bar text box for specific number entry via the keypad.
- Press **Enter** to save (or press **Exit** to cancel).

Check boxes

- Highlight the item and press **Enter**.
- Highlight the item and use the right arrow key to check and the left arrow key to clear the checkbox.
- If a check box is numbered, press its number to toggle the check box.

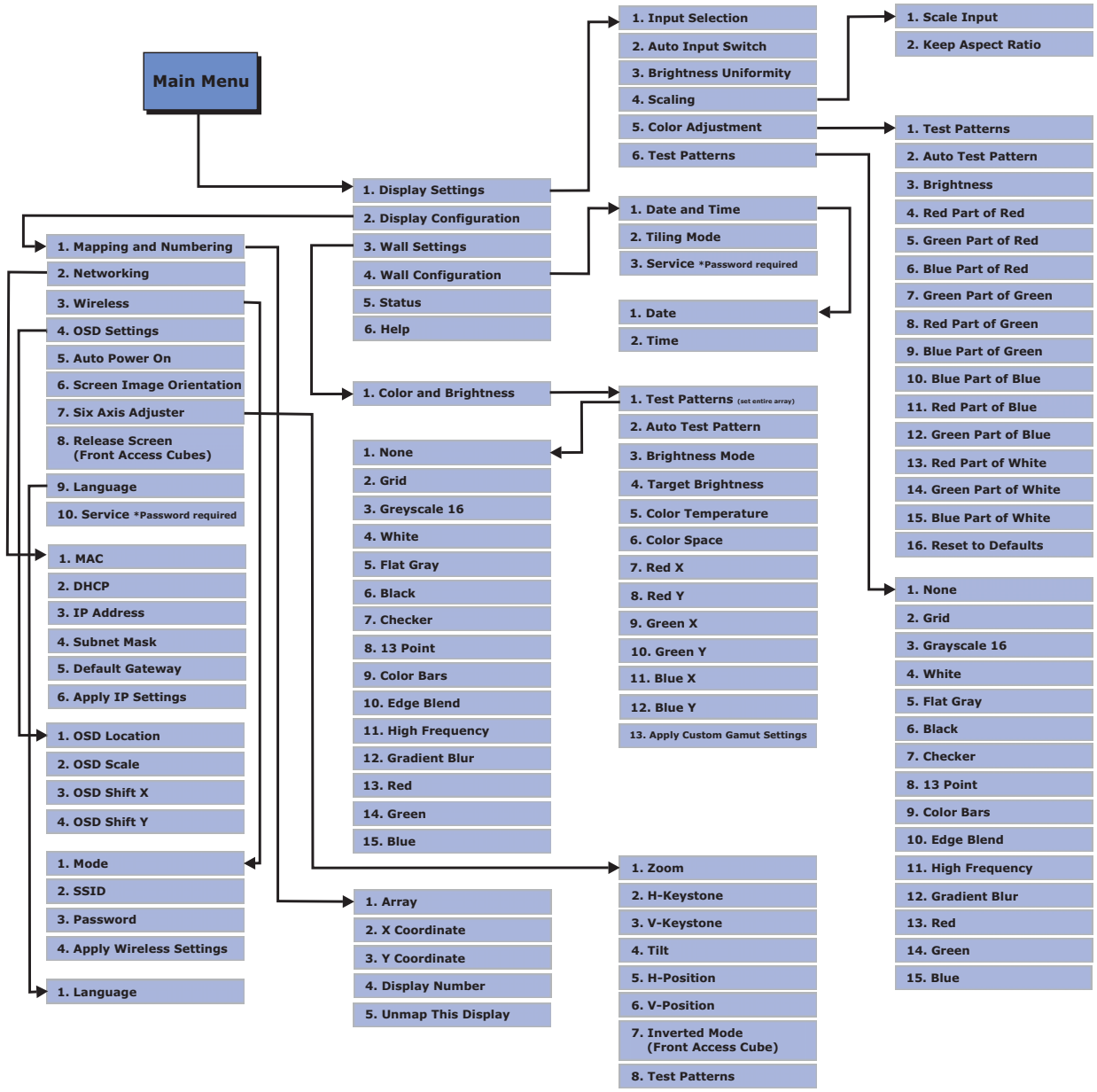
Drop-down lists

- To see a list of options available for a given parameter,
  - Highlight the list and press **Enter.**
  - Enter the menu option number.
- To navigate within the list, use the up/down arrow keys.
- To choose an option from the list, press **Enter**. To cancel any change, press **Exit** while in a drop-down list.

OSD functionality

- Adjust display window offsets
- View input properties
- Display a test pattern
- Select all displays in an array
- Map the displays in an array
- Number the displays in an array
- Power the display array On and Off
- Set date and time
- View display status (i.e., properties, firmware versions, IP address, etc.)
- Access the Help menu

OSD menu flowchart



IR remote

Caution! Failure to comply with the following could result in minor or moderate injury.

- Laser radiation is emitted from the laser diode in the remote. Do not look directly into the laser beam.

The IR remote is included with the User Kit (P/N: 139–100102–xx), which is shipped separately.

The standard IR remote can be used as a wired or wireless control. Under optimal conditions, the wireless keypad can communicate with a display over a 30 ft (10 m) distance. In wireless mode, the standard IR remote communicates with a battery-powered infrared (IR) transmitter. A laser pointer is built into the standard IR remote.

How to use the IR remote

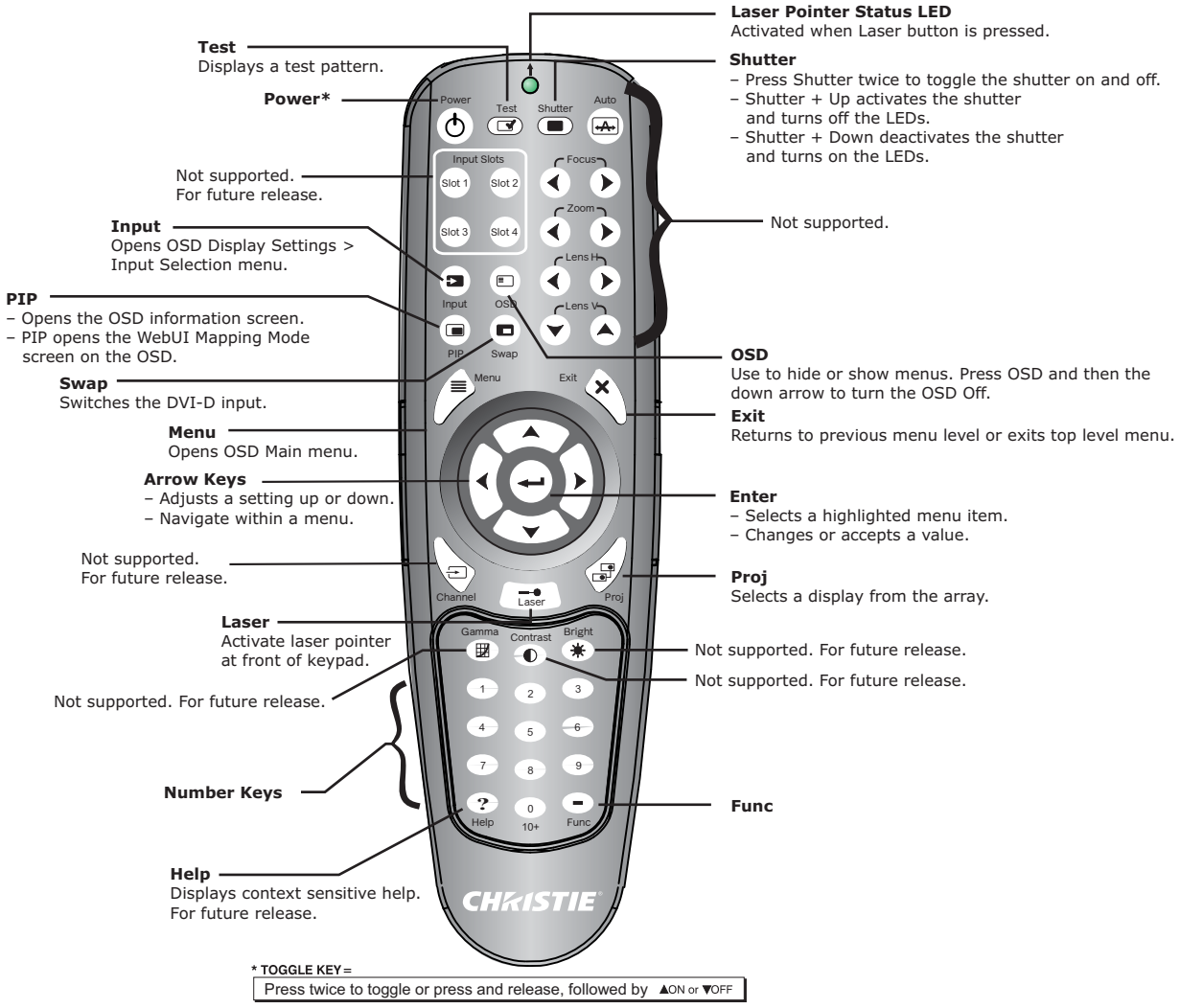
- Press one key at a time; there are no simultaneous key combinations required.
- To enable power, press **Power**, and then press the up arrow to switch On or the down arrow to switch Off. You can also press the button twice quickly.
- In serial networks, pause briefly between adjustments to make sure that distant displays can keep pace with the commands. If you press a key while the display is still responding to the previous action, such as during a power-up, the second key press may not take effect.
- For a description of the keys provided on the standard IR remote keypad, see *Overview of IR remote commands* on page 9.

Disable the remote control

Disable the IR remote control on specific displays. This feature is useful in instances where there is interference with the Infrared port. The Remote Control window is only accessible through the WebUI.

1. Login with the Service account.
2. Select **Display Configuration** > **Remote Control**.
3. Select the desired display(s) either from the Detailed System Status section or the Display Grid, or click **Select All**.
4. Set the **IR Remote Control** to **Off**.

Overview of IR remote commands



Power On/Off

Press the **Power** button twice quickly or press and release the **Power** button followed immediately by the up (on) or down (off) arrow keys.

Press **Power** + **Func** + **Power** to reboot the display.

Test

Press to display the internal test patterns. Use the left or right arrow keys, to cycle in either direction through the patterns. Press **Exit** to return to the current input.

Input

Press to open the **Display Settings** > **Input Selection** window in the OSD.

OSD

Press **OSD** and then the down arrow to hide the display's menu system during use. Even though the menu is hidden, if you are very familiar with the organization of the menu you can interact with the menu without displaying the options.

To show the menus:

- Press and release **OSD** followed immediately by the up arrow.
- Press OSD **twice**

PIP

Press to open the information page, which displays the network parameters on each of the displays in the array. This includes the input signal on both DVI ports, the IP address, the MAC address, the mapped coordinates and the display number.

Swap

Press to instantly swap the primary DVI-D input and the secondary DVI-D input.

Menu

Press to access the **Main** menu.

Number keys

To enter a value in a text box or to select a menu item, press 1 through 9.

Arrow keys

Use the left and right arrow keys to:

- change a slide bar value
- to select a different option within a drop-down list without having to first scroll through options or navigate within a menu, drop-down list, or text box.

Help

Press to display context-sensitive help. Press a second time to close the help window.

Function (Func)

To access a specific test pattern, press **Func** + number + number. For example, to access test pattern 1 press **Func +0 + 1**.

To reboot the display press **Power** + **Func** + **Power**.

Use the **Func** button to enter a minus (-) symbol when needed.

Laser

To activate the laser pointer on the remote, press and hold the **Laser** button. Point the remote at the screen to highlight an area.

Exit

To return to the previous menu, press **Exit**. This command does not save changes within text editing boxes (including number editing of a slide bar value) or within drop-down lists.

Enter

To select a highlighted item, to toggle a check box, or to accept a parameter adjustment and return to the previous menu or image, press **Enter**.

Projector (Proj)

To set whether only a specific display is listening for IR commands, or if all displays are listening for IR commands, press the Proj button.

Ensure you are standing far enough back from the display wall that all displays receive commands from the IR remote.

- To control a specific display, press **Proj** and then enter the 3-digit number assigned to the display.

  A checkmark indicates that the connected display is listening; if there is no check mark, it indicates that a different display is being communicated with.

- To broadcast to multiple displays, press **Proj** twice without entering a display number.

  Keypad commands now affect all displays, and all displays have a checkmark indicating they are listening for commands.

Wired remote

You can convert the standard IR remote into a wired remote using an optional cable. Connect one end into the standard IR remote, and the other into the designated port on the rear output panel of the electronic module. The wired remote is recommended when the lighting conditions are unsuitable for proper IR transmission. Batteries are only needed for the wired remote if the laser pointer is required.

Change the interface language

From the OSD

1. To access the Main Menu on the OSD, press **Menu** on the IR remote.
2. Select **Display Configuration > Language**.
3. Select the language from the list.

   The language of the display and the OSD is changed immediately.

If the language is changed to the wrong language, the numbered menu items to access the Language selection is: 2 (Display Configuration) > 9 (Language).

From the WebUI

1. Select **Display Configuration > Language**.
2. Select the display that requires a language change, either from the Detailed System Status chart or the Display Grid.
3. Select the language.

   The language of the display and the WebUI is changed immediately.

Configure the display wall

Configuring the display wall includes mapping and numbering the displays, updating the time and date, and connecting the array to the network.

Configure network settings

From the OSD

1. To access the Main Menu on the OSD, press **Menu** on the IR remote.
2. Select **Display Configuration** > **Networking**.
3. Enter a valid and unique IP address for use on the network to which the display is currently connected.

   This address overwrites any previous IP address, such as the factory-defined display default. It takes approximately 10 seconds for the display to respond at its new address.
4. Set the **Subnet Mask** for the IP address.
5. Set the IP address of the gateway used to reach any non-local IP addresses as the **Default Gateway**.

- MAC displays the unique MAC address assigned to the network.
- DHCP is enabled by default. DHCP should only be disabled if you want to manually enter an IP address.

From the WebUI

1. Select **Display Configuration** > **Networking**.
2. Select the desired display(s) either from the Detailed System Status section or the Display Grid, or click **Select All**.

- If more than one display is selected, only DHCP can be enabled.
- To set a static IP address for the displays, each display must be configured individually.

3. To automatically configure the network settings, set **DHCP** to **On**.

4. To manually configure the network settings for a single display, set **DHCP** to **Off** and fill out each of the network setting fields.

   Each field must be filled out in order for the settings to be applied.

5. Click **Submit**.

Connect the displays to WiFi (WiFi model only)

From the OSD

1. To access the Main Menu on the OSD, press **Menu** on the IR remote.
2. Select **Display Configuration** > **Wireless**.
3. Select **Wifi Mode: On**.
4. Select **Apply Wireless Settings**.

From the WebUI

1. Select **Display Configuration** > **Wireless**.
2. Select the desired display(s) either from the Detailed System Status section or the Display Grid, or click **Select All**.
3. Select **Wifi Mode: On**.
4. Click **Apply**.

Map and number the display

The mapping feature is used to physically map each of the displays to the layout of the array. Mapping establishes easy selection and control of the display wall. It also sets the array up so that displays continually monitor and manage color and brightness across the entire display wall. Numbering is used to easily identify each of the displays in the wall.

- When a display is mapped, all the wall and array settings are reset back to the defaults.

From the OSD

1. To access the Main menu on the OSD, press **Menu** on the IR remote.
2. Select **Display Configuration > Mapping and Numbering**.
3. To access the Edit Mapping window, select **Array**.
4. Specify the array number and the XY coordinates of the display.
5. Specify the display number.

Alternatively, the WebUI offers an auto numbering function. Each projector must be given a unique display number.

6. To return to the Mapping and Numbering menu, press **Exit** from the IR remote.

From the WebUI

1. To display the Mapping mode window on each display in the array, press **PIP** on the IR remote.

   Use this window to visualize where each display is located within its real environment and easily map each display in the display wall.

2. To access the WebUI, enter the IP address of one of the displays in a browser.
3. From the WebUI, select **Wall Configuration** > **Mapping**.
4. In the Array section of the window assign a number to the array.

   To create a new array, assign an unused array number.

   To add displays to an existing array, enter an existing array number.

5. Enter the width and height of the display wall.
6. The assigned array number and a representation of the display wall appears in the Display Grid section of the window.
7. Look up the MAC address of the display you want to map in the WebUI Detailed System Status chart.
8. Select the display you want to map from the Detailed System Status chart. Once selected, the bar is highlighted blue.

   Typically, you will start with the display at the top–left corner of the display wall. Only one display can be mapped at a time.

9. Click and drag the selected display from the Detailed System Status chart into the area of the Display Grid that you want the display to be mapped to.

   Select the display in the Detailed System Status chart and then click where you want to map the display to in the Display Grid. The mapped display is illuminated green.

10. Repeat steps 8 and 9 for each display in the array.
11. To automatically number each display in the array, click **Auto Numbering**.

    Once the numbering sequence is complete, the WebUI redirects to the **Display Configuration** > **Display Number** window.

    The Display Number window allows you to assign a number to the mapped displays automatically, in sequence starting from the top–left of the array. Note that the Auto Number selection can only be performed on mapped displays.

    - Auto Number identifies all displays in the array in sequence starting from the top–left of the array. This feature is identical to Auto Numbering.

12. Select all displays in the array.
13. To bring up the Information window on each display, select **Identify On**.

Use this window to confirm that the number and array coordinates are correct.

14. If necessary, select an individual display from either the Detailed System Status chart or the Display Grid, and manually enter the number in the **User Display Number** field.

Unmap the display

From the OSD

1. To access the Main menu on the OSD, press **Menu** on the IR remote.
2. Select **Display Configuration** > **Mapping and Numbering**.
3. Select **Unmap this Display**.

From the WebUI

1. Select **Wall Configuration** > **Mapping**.
2. Select the display to unmap in the Display Grid.
3. Click **Delete**.

   The delete icon only appears after a display has been selected.

Create a subarray

A subarray may be used to create multiple tiled regions within a single array, allowing tiled video images to be displayed on the array.

1. Click **Wall Configuration > Subarrays**.
2. Select the tiles to add to the subarray.
3. Click **Add Subarray**.
4. In the Detailed System Status area, select the new subarray.
5. In the Selected Subarray area, click **Activate**.

Disable a subarray

To return the display to either a single image or to the tile mode display, disable the subarray.

1. Click **Wall Configuration > Subarrays**.
2. In the Detailed System Status area, select the subarray.
3. To deactivate a subarray, in the Selected Subarray area click **Disable**.

   To activate a subarray, in the Selected Subarray area click **Activate**.

Delete a subarray

A subarray cannot be modified after it has been created. To change the tiles included in a subarray, delete the current subarray and create a new one with the correct tiles.

1. Click **Wall Configuration > Subarrays**.
2. In the Detailed System Status area, select the subarray.
3. In the Selected Subarray area, click **Delete**.

Update display date and time

From the OSD

1. To access the Main Menu on the OSD, press **Menu** on the IR remote.
2. Select **Wall Configuration** > **Date and Time**.
3. Enter the current date and time.

From the WebUI

1. Select **Wall Configuration** > **Date and Time**.
2. Enter the current date and time.
3. Click **Apply**.

Configure power settings

The auto power feature is used to control the behavior of the display in the event of a power failure. When **Auto Power On** is enabled, the display automatically returns to its ON state with an image displayed after an AC power interruption.

From the OSD

On the IR Remote, press **Power** + **Func** + **Power** to reboot the display.

1. To access the Main menu on the OSD, press **Menu** on the IR remote.
2. Select **Display Configuration** and set whether Auto Power is On or Off.
   - To require a manual start up after a forced shutdown, select **Auto Power OFF**.
   - To have the display wall automatically power back ON after a forced shutdown, select **Auto Power ON**.

From the WebUI

1. Select **Display Configuration** > **Power**.

2. To require a manual start up after a forced shutdown, set **Auto Power** to **Off**.

   To have the display wall automatically power back on after a forced shutdown, set **Auto Power** to **On**.

3. To manually control the power settings for all the displays in the array, or only for the display(s) selected in the Display Grid, use the settings in **Array Power**.

Setup EDID

The EDID window allows you to create a custom video resolution to send to the graphics card.

- Default settings are specific to SXGA, HD, and WU models.
- When using non-native inputs, make sure EDID settings are compatible with the video source.

From the OSD

1. Login with the Service account.
2. To access the Main Menu on the OSD, press **Menu** on the IR remote.
3. Select **Display Configuration** > **Service** > **Customize EDID**.
4. From the **Port** drop-down list select from **DVI1 EDID** or **DVI2 EDID**.
5. Adjust the **Horizontal Size**, **Vertical Size**, and **Framerate** settings.
6. To apply the changes, click **Apply EDID Settings**.

From the WebUI

1. Login with the Service account.
2. Select **Display Configuration** > **EDID**.
3. Select the desired display(s) either from the Detailed System Status section or the Display Grid, or click **Select All**.
4. From the **Input** drop-down menu select from **Set All EDID**, **Set DVI1 EDID**, and **Set DVI2 EDID**.
5. Adjust the **Horizontal**, **Vertical**, and **Framerate** settings.
6. To apply the changes, click **Submit**.

Select the active input source

Input selection enables you to select and setup an active input source. If the display system is using two inputs when **Auto Input Switch** is enabled, the system automatically switches to

another input when the current one being used fails. You can also select which input to use for a specific display.

The front input panel includes a port for an optional DVI card interface to support a secondary or redundant input source.

From the OSD

1. To access the Main Menu on the OSD, press **Menu** on the IR remote.
2. To access the Display Settings window, press **Input** from the remote.
3. From the **Input Selection** list select **DVI1** or **DVI2**.
4. To apply the changes, press **Enter**.
5. Select **Auto Input Switch**.

From the WebUI

1. Select **Display Settings** > **Input Selection**.
2. Select all displays and activate the **Auto Input Switch**.
3. From the **Primary Input** list, select **DVI1** or **DVI2**.

Adjust the Image

Ensure the content displayed on the display wall has a high quality appearance by manipulating the source and display settings.

Adjust color and brightness

The displays are designed for automatic color matching and brightness. Overriding individual settings is not recommended and should only be performed by experienced users. Color and brightness settings are preset at factory and should not need adjustments.

Color and brightness adjustments are automatically synced between the displays in the wall; however, the system allows these settings to be customized. The settings are adjusted to the optimal levels of the entire display wall and not to individual displays.

From the OSD

1. To access the Main Menu on the OSD, press Menu on the IR remote.
2. Select **Wall Settings** > **Color and Brightness**.
3. Specify the brightness intensity mode through the **Brightness Mode** drop-down.
    - **Fixed Brightness**—The **Target Brightness** setting becomes available. Either enter a specific value or use the scroll bar/arrow keys to make adjustments.
    - **Economy**—Each display in the array operates in a power efficient state, but at a lower brightness.
    - **Normal**—Each display in the array operates at the maximum brightness level. This is the default setting.
    - **High Brightness**—Each display in the array operates at the maximum brightness level and the brightness of mid-level whites and non-saturated colors is boosted. In this mode, primary colors relative to secondary colors appear washed out. Color matching is not supported in this mode.
4. To control how warm or cool the video output on the array appears, adjust the color temperature.

    The higher the color temperature, the cooler and bluer the image. The lower the color temperature, the warmer and redder the image. Color temperatures range from 3200K to 9600K.
5. Adjust color space by selecting from **Max**, **sRGB**, and **Custom Gamut** in the drop-down menu.

- **Max**—Apply the maximum available RGB color spectrum. This is the default setting.
- **sRGB**—Apply standard RGB color space to the array.
- **Custom Gamut**—Manually adjust the XY coordinates of the RGB color spectrum.

From the WebUI

1. Select **Wall Settings** > **Color and Brightness**.
2. Select a Test Pattern from the drop-down menu.
3. Specify the intensity mode from the **Brightness Mode** drop-down list.

   When switching brightness modes it can take up to 5 minutes for the brightness levels to stabilize across the array.

   - **Fixed Brightness**—The **Target Brightness** setting becomes available. Either enter a specific value or use the scroll bar/arrow keys to make adjustments.
   - **Economy**—Each display in the array operates in a power efficient state, but at a lower brightness.
   - **Normal**—Each display in the array operates at the maximum brightness level. This is the default setting.
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   - **sRGB**—Apply standard RGB color space to the array.
   - **Custom Gamut**—Manually adjust the XY coordinates of the RGB color spectrum.

Change the color and brightness for individual displays

The following procedure should only be performed by trained personnel.

Color adjustment is used to fine-tune the color and brightness for individual displays that do not match the array. These adjustments compensate for the projection system as a whole, including

color shift due to lens, mirror or screen. For example, the mirror might not reflect blue 100%, or the screen might absorb more blue.

From the OSD

1. To access the Main Menu on the OSD, press Menu on the IR remote.
2. Select **Display Settings** > **Color Adjustment**.
3. Make a selection from the **Test Patterns** drop-down menu.
4. To change the system background color to the target color being adjusted, enable **Auto Test Pattern**.
5. To make display specific color adjustments to the selected target color space, use the **Red Part / Green Part / Blue Part of 'x'** options.
6. If necessary, to set the red/green/blue part of each color back to the default values set at the factory, select **Reset to Defaults**.

From the WebUI

1. Select **Display Settings** > **Color Adjustment**.
2. Select the display that requires color adjustment, either from the Detailed System Status chart or the Display Grid.

   Color adjustments using the scroll bars can only be done to one display at a time; however, **Restore to Defaults** can be applied to multiple displays.
3. Enable **Auto Test Pattern.**
4. Select which color to adjust.

   After the color is selected, the display background color changes to the target color being adjusted, and the color adjustment menu associated with it is maximized.

   To clear the color from the display, select **No Test Pattern**.
5. To make display specific color adjustments to the selected target color space, adjust the **Red Part / Green Part / Blue Part of 'x'**.

   Use the scroll bars or manually enter a value. A higher value makes the display image brighter.
6. Repeat step 5 until each primary color is matched.
7. After adjusting the primary colors, verify that the white color and brightness still match. If necessary, repeat the process.

Enable brightness uniformity

From the OSD

1. To access the Main menu on the OSD, press **Menu** on the IR remote.

2. Select **Display Settings** > **Brightness Uniformity**.
3. Enable **Brightness Uniformity**.

From the WebUI

1. Select **Display Settings** > **Brightness Uniformity**.
2. Select an individual display from either the Detailed System Status chart or the Display Grid, or click **Select All**.
3. Select a test pattern from the drop-down menu.
4. Set **Brightness Uniformity** to **On**.

Set the brightness threshold of the weakest tile

The maximum brightness of the weakest tile in the array is used as the overall brightness of the array. The Weakest Tile Threshold is the percentage of the calculated maximum brightness that the weakest tile must be above for it to be used when setting the overall brightness of the array.

If the brightness of the weakest tile drops below the Weakest Tile Threshold percentage, the tile is ignored in the overall brightness of the array and the second-weakest tile is used to calculate the maximum brightness. The ignored tile appears dimmer than the rest of the tiles in the array. The default setting is 0.3, or 30%.

From the OSD

5. To access this feature from the OSD, select **Wall Configuration** > **Service**.
6. Type the Service password.
7. Set the Weak Display Threshold by entering the limit in the field.

   The default setting is 0.3, or 30%.

From the WebUI

1. Login with the Service account.
2. To access this feature from the WebUI, select **Wall Configuration** > **Weak Display Threshold**.
3. Set the Weak Display Threshold with the slider, arrows, or by entering the limit in the field.

   The default setting is 0.3, or 30%.

Adjust image orientation

Use the image orientation selections to set the image display for custom applications. The default setting (Normal) assumes rear projection with a mirror inside a cube. For other projection configurations, flip or reverse the image orientation as required.

From the OSD

1. To access the Main Menu on the OSD, press **Menu** on the IR remote.
2. Select **Display Configuration** > **Screen Image Orientation**.
3. Select from **Normal**, **Horizontal Flip**, **Vertical Flip**, and **Horizontal & Vertical Flip**.

From the WebUI

1. Select **Display Configuration** > **Image Orientation**.
2. Select an individual display from either the Detailed System Status chart or the Display Grid, or click **Select All**.
3. To change the image orientation select from the following four options: **Normal**, **Horizontal Flip**, **Vertical Flip**, and **Horizontal & Vertical Flip**.

   The current orientation of the display is shown in the Detailed System Status chart under Image Orientation.

Manually adjust the image size

Manually adjust the width and height of the display to accommodate the particular application. Adjusting the display window settings changes the capture size of the active input window.

The image should not require adjustment if the input of the native source matches the resolution of the display. Scale input does not maintain the original aspect ratio, which can result in a distorted image.

From the OSD

1. To access the Main Menu on the OSD, press Menu from the IR remote.
2. Select **Display Settings** > **Scaling**.
3. To resize the image so that the image fits within the display area, set **Scale Input** to **On** and maximize either the height, width, or both.
4. To make sure that auto setup for any source maintains the input aspect ratio, select **Keep Aspect Ratio**.

From the WebUI

1. Select **Display Settings** > **Scaling**.
2. Select the desired display(s) either from the Detailed System Status section or the Display Grid, or click **Select All**.
3. To scale the image to fill the screen, select **Scale Input**.

   Depending on the resolution of the incoming data the image may be distorted.
4. To scale the image proportionally to the display without distortion, set **Keep Aspect Ratio** to **On**.

Automatically scale the image

Tiling mode allows the input image to be automatically displayed to fill the entire display wall, and the image is automatically scaled without any distortion. To achieve this, a single source input is distributed through all the displays.

When Tiling mode is On, the Scale Input and Keep Aspect Ratio selections on the Display Settings > Scaling window are not available. The default setting for Tiling mode is Off. Tiling mode must remain Off when each display in the array has separate video inputs.

When Tiling Mode is Off, the size and position of the displays may need to be manually set up. See *Setup EDID* on page 18.

From the OSD

1. To access the Main Menu on the OSD, press **Menu** on the IR remote.
2. Select **Wall Configuration**.
3. Enable **Tiling Mode**.

From the WebUI

1. Select **Wall Configuration** > **Tiling**.
2. Select **Tiling Mode On**.

Monitor and Maintain the Display Wall

Review the display wall system information to ensure the components of the array are running properly. If issues are detected in the array, use the log files to identify the problem.

Configure SNMP

Simple Network Management Protocol (SNMP) enables network administrators to monitor their network devices from a single location. Events logged by SNMP can be recorded in SNMP traps, and notification of SNMP events can also be sent to specified email addresses.

1. in the WebUI, select **Display Configuration > SNMP**.
2. From the Detailed System Status chart or the Display Grid, select the displays to monitor.
3. Set SNMP to **On**.
4. Click **Configure SNMP**.
5. In the Configure SNMP window, configure the General Info, Trap Info, Email Info, and Notifications Info.
6. Apply the changes in each of the four sections.
7. Click **Close**.
8. After configuring the SNMP settings for one display, the settings can be used on all other displays in the array.
    a. In the SNMP dialog for the first display, click **Copy SNMP Settings**.
    b. In the Configure SNMP dialog for the other displays, click **Paste SNMP Settings**.
    c. In each of the four Configure SNMP areas, to save the settings click **Apply**.

Restore factory defaults

Reset the entire array or reset selected displays back to the default settings. This is typically done when a new configuration is set up. Restoring factory defaults does not affect network settings, date and time.

From the OSD

1. Login to the OSD with the Service account.
2. To access the Main Menu on the OSD, press **Menu** on the IR remote.
3. Select **Display Configuration** > **Service** > **Restore Factory Defaults**.

From the WebUI

1. Login with the Service account.
2. Select **Display Configuration** > **Restore Factory Defaults**.
3. Select the desired display(s) either from the Detailed System Status section or the Display Grid, or click **Select All**.
4. Click **Restore Selected Displays**.

Upgrade the firmware

Failure to install the latest firmware version on the array can affect system performance.

During a firmware upgrade, the web server will be unresponsive for several minutes and video may be interrupted or temporarily disabled. Do not attempt to use the OSD, the WebUI, or open another web browser.

The firmware upgrade take approximately five minutes to complete.

Check the current firmware version

To determine if the firmware needs to be updated, compare the firmware version installed on the array with the version available online at www.christiedigital.com.

From the OSD

1. To access the Main Menu on the OSD, press **Menu** on the IR remote.
2. Select **Status > Versions**.

From the WebUI

1. Select **Display Configuration > Firmware Upgrade**.

   The current firmware version for each display is listed in **App Version** column of the Detailed System Status chart.

Download the firmware upgrade

1. Login to the Christie Digital web site at www.christiedigital.com.
2. Switch to the **Support** tab, and browse for the Entero HB firmware.

3. Download the firmware file to a computer that will be connected to the display array for the upgrade, or to a USB key.

   We do not recommend saving the firmware file to a network location.

4. Unzip the downloaded firmware file.

Upgrade the firmware

To make sure of proper operation, upgrade all displays to latest version. A display wall with mixed firmware versions is not supported. The firmware upgrade can only be performed through the WebUI.

1. Login to the WebUI with administrator credentials.
2. Select **Display Configuration** > **Firmware Upgrade**.
3. In the Display Grid, click **Select All**.
4. Select whether the firmware files are located on the computer, or on a USB key.
5. Click **Choose File** and browse to the location of the firmware upgrade file.
6. Click **Upgrade**.

   The system is inoperable during the firmware upgrade. Do not turn off the display during the upgrade.

7. After the upgrade is complete, select the displays to update and click **Reset Selected Displays**.
8. After the displays have rebooted, log back in to the WebUI and click **Display Configuration > Firmware Upgrade**.
9. Confirm the firmware version running on the displays is correct.

Check the system status

Review the display system information to ensure the components of the array are running properly. If issues are detected in the array, use the log files to identify the problem.

From the OSD

1. To access the Main Menu on the OSD, press **Menu** on the IR remote.
2. To view the Detailed Status window, select **Status**.

From the WebUI

1. Select **Status > Array Status**.

2. Select the desired display(s) either from the Detailed System Status section or the Display Grid, or click **Select All**.

A green status indictor indicates the display is powered ON and running with no errors.

A yellow status light indicates an non-critical error has occurred.

A red status light indicates a critical system error has occurred. The display will shutdown.

3. To add or remove columns of data in the Detailed System Status chart, turn on and off the Status Filters.
4. To display the status of one display, click **Single Selection: Status**.

   Use the left and right arrows at the top of the window to scroll through the selected displays.
5. To display current system status on the selected display(s), click **Status Onscreen: Show**.
6. To generate data for a single display for troubleshooting purposes, display the Manager, Display, Errors, or Temps logs.
7. To view the last 24 hours of temperature of a single display in the array, click **Single Selection: Temps**.

   Change the time period reflected in the chart by adjusting the slider at the top.

   To include or exclude any of the temperatures from displaying in the chart, click the temperature label in the legend.
8. To view the logs and settings for all displays in the array, and combine them into a single zip file, click **Full System Status: Download**.

View the errors in the array

1. On the WebUI, select **Status > Array Status**.
2. Select the desired display(s) either from the Detailed System Status section or the Display Grid, or click **Select All**.
3. To display the error and warning viewer for the selected display only, in the Details System Status area click the small colored indicator beside the display number.
4. To open an error and warning viewer for all displays, click **Errors: Show** or click the large colored indicator in the Quick Status area.

   Any errors and warning generated by the array are displayed in the dialog. Errors fall into the following categories:

   - *Communication errors* on page 30.
   - *Temperature errors* on page 31.
   - *Temperature warnings* on page 31.
   - *Version errors* on page 30.
   - *Color errors* on page 31.
   - *Temperature warnings* on page 31.
5. To export the errors and warnings, in the Error dialog click **CSV**.

Communication errors

Error Code	Description	Possible Causes
LE01	Could not establish initial communication with the light engine.	• The Control-E cable from the Light Engine to the Electronic Module (EM) may be bad or lose. • Light engine may require servicing.
LE02	Could not get color calibration data from the light engine at startup.	• The Control-E cable from the Light Engine to the Electronic Module (EM) may be bad or lose. • Light engine factory calibration values may be corrupted. Recalibrate the light engine.
LE03	Communication with the light engine failed repeatedly sometime after initialization This error only triggers when repeated communication attempts fail.	• The Control-E cable from the Light Engine to the Electronic Module (EM) may be bad or lose. • Light engine may require servicing.
LE04	Reading the color sensor data fails repeatedly. This error only triggers when repeated attempts to read the data fails.	• The Control-E cable from the Light Engine to the Electronic Module (EM) may be bad or lose. • The color sensor in the Light engine may require servicing.
LE05	The color sensor has stopped responding and the drive levels of the LEDs cannot be set. This error only triggers when repeated attempts fail	• The Control-E cable from the Light Engine to the Electronic Module (EM) may be bad or lose. • Light engine may require servicing.

Fan errors

Error Code	Description
F01	DMD Fan Stalled
F02	Power Fan Stalled
F03	LED Fan Stalled
F04	EM Fan Stalled

Version errors

Error Code	Description	Resolution
V01	There is at least one display in the array with a version of the firmware that is newer and incompatible with the firmware version installed on the display reporting the error.	Upgrade the firmware for the display reporting the error.

Color errors

Error Code	Description	Resolution
C01	The display was removed from the color correction algorithm for falling below the user specified brightness threshold, and the array will no longer color match to this display. This prevents this one bad display from causing the entire array to go dim. The error will remain until the display is rebooted or the color threshold value is changed.	Re-set the Color and Brightness settings for the array. See *Adjust color and brightness* on page 20. If the problem persists, the display needs to be repaired.

Temperature errors

If the array is not automatically set to Standby mode by a temperature error, all temperature errors automatically clear when temperatures drop to 2 degrees below the level that triggered the error. When the system is set to Standby mode due to an error, the error will not clear until the system is set back to ON.

Error Code	Description
T01	Red LED temperature is over the critical level, and the system was set to Standby mode.
T02	Green LED temperature is over the critical level, and the system was set to Standby mode.
T03	Blue LED temperature is over the critical level, and the system was set to Standby mode.
T04	LED Driver temperature is over the critical level, and the system was set to Standby mode.
T05	DMD temperature is over the critical level, and the system was set to Standby mode.
T06	Environment temperature is over the critical level, and the system was set to Standby mode.
T07	Environment temperature is over the warning level, but the array is not put into Standby mode to allow the error to be fixed without completely disabling the system.
T08	Electronic Module CPU temperature is over the critical level, and the system was set to Standby mode.

Temperature warnings

Error Code	Description
W01	Red LED temperature is over the warning level.
W02	Green LED temperature is over the warning level.
W03	Blue LED temperature is over the warning level.
W04	LED Driver temperature is over the warning level.
W05	DMD temperature is over the warning level.
W08	Electronic Module (EM) CPU temperature is over the warning level.

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