Software User Manual

Christie E400 LED Display Control System

CHRISTIE®

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Products are warranted under Christie's standard limited warranty, the complete details of which are available by contacting your Christie dealer or Christie. In addition to the other limitations that may be specified in Christie's standard limited warranty and, to the extent relevant or applicable to your product, the warranty does not cover:

- a. Problems or damage occurring during shipment, in either direction.
- b. Projector lamps (See Christie's separate lamp program policy).
- c. Problems or damage caused by use of a projector lamp beyond the recommended lamp life, or use of a lamp other than a Christie lamp supplied by Christie or an authorized distributor of Christie lamps.
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- f. Problems or damage caused by misuse, improper power source, accident, fire, flood, lightening, earthquake or other natural disaster.
- g. Problems or damage caused by improper installation/alignment, or by equipment modification, if by other than Christie service personnel or a Christie authorized repair service provider.
- h. Problems or damage caused by use of a product on a motion platform or other movable device where such product has not been designed, modified or approved by Christie for such use.
- i. Problems or damage caused by use of a projector in the presence of an oil-based fog machine or laser-based lighting that is unrelated to the projector.
- j. For LCD projectors, the warranty period specified in the warranty applies only where the LCD projector is in "normal use" which means the LCD projector is not used more than 8 hours a day, 5 days a week.
- k. Except where the product is designed for outdoor use, problems or damage caused by use of the product outdoors unless such product is protected from precipitation or other adverse weather or environmental conditions and the ambient temperature is within the recommended ambient temperature set forth in the specifications for such product.
- l. Image retention on LCD flat panels.
- m.Defects caused by normal wear and tear or otherwise due to normal aging of a product.

The warranty does not apply to any product where the serial number has been removed or obliterated. The warranty also does not apply to any product sold by a reseller to an end user outside of the country where the reseller is located unless (i) Christie has an office in the country where the end user is located or (ii) the required international warranty fee has been paid.

The warranty does not obligate Christie to provide any on site warranty service at the product site location.

PREVENTATIVE MAINTENANCE

Preventative maintenance is an important part of the continued and proper operation of your product. Please see the Maintenance section for specific maintenance items as they relate to your product. Failure to perform maintenance as required, and in accordance with the maintenance schedule specified by Christie, will void the warranty.

REGULATORY

The product has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the product is operated in a commercial environment. The product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of the product in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's own expense.
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Environmental

The product is designed and manufactured with high-quality materials and components that can be recycled and reused. This symbol 🚫 means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from regular waste. Please dispose of the product appropriately and according to local regulations. In the European Union, there are separate collection systems for used electrical and electronic products. Please help us to conserve the environment we live in!

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Product overview

Christie LED display systems (LED025-M) are modular, high-quality image display units that can be configured into any size or shape. The low energy consumption and the long service life of LED technology create display walls that last. LED display systems can be quickly and easily deployed into small display configurations, while providing the additional features required for larger and more complex installations.

Terminology

Term	Definition
Tile	A cabinet containing several LED modules.
Array	A group of connected tiles forming a larger display.
Control unit	Controls the LED display system array and video input source.
Pixel	A group of one red, one green, and one blue dot.
Subpixel	A pixel is comprised of three subpixels, one for each color: red, green, and blue. Each subpixel in LED display technology is an LED chip.
Pixel pitch	Specifies the shortest distance from the center of one pixel to the center of the next pixel.
SMD package size	A technical supplier specification related to the pixel size, and denotes the size of the surface-mounted diode (SMD) itself, for example, the 2.5 mm LED tile has a 2121 SMD package size (2121 = 2.1 mm by 2.1 mm).
Fill factor	Indicates the ratio between the area covered by pixels and the area not covered by pixels.

Related documentation

- Christie 2.5 mm LED Display System Installation Manual (P/N: 020-101412-xx)

Configure the array

Perform the following tasks to configure the array.

Adjust the screen brightness

1. From the Tools menu, select **Brightness**.

2. From the Display Adjustment page, use the slider to adjust the brightness.

3. If the brightness is uneven across the tiles, set all brighness values to zero and raise them to the desired brigtness to resync the tiles.

4. Click **Save To Hardware**.

Set the input resolution

Set the resolution for the home page display of interface, which must be consistent with the output resolution of the video source.

1. From the main screen, select **Screen Config**.

2. From the Screen Config dialog, select **Config Screen**.

3. Switch to the **Sending Board** tab.

4. In the Sending Board Display Mode section, select the resolution of the video source from the **Resolution** list.

5. Click **Save**.

Load a cabinet configuration file

After the screen is powered on, if the tile fails to display normally, you must load the cabinet files. The cabinet files are sent to the control unit through the Christie E400 Controller software.

1. From the main screen, select **Screen Config**.

2. From the Screen Config dialog, select **Config Screen**.

3. Switch to the **Scan Board** tab.

4. Users accessing the Scan Board tab must accept the warnings that changes on the tab can cause issues with the LED panels. In the first confirmation dialog, click **OK**.

5. In the second confirmation dialog, click **OK**.

6. Click **Load File**.

7. In the Open dialog, navigate to the .rcfg file and click **Open**.

8. Click **Send To HW**.

Adjust initial picture coordinates

Adjust the initial coordinates of the pictures on the screen.

1. From the main menu, rotate the button to select **Advanced Setting** and press the button.

2. From the Advanced Settings submenu, to display the parameters, rotate the button.

3. Rotate the button to select **Offset** > **Horizontal X**.

4. Set the Horizontal offset.

5. Rotate the button to select **Vertical Offset Y**.

6. Set the vertical offset.

Adjust image quality

1. From the Tools menu, select **Brightness**.

2. In the Gamma Adjustment section of the Display Adjustment dialog, use the slider to adjust the darker and lighter tones of the source video.

3. Click **Save To Hardware**.

Set the redundancy backup

If the connection to one tile is lost, the redundancy backup passes information to the other tiles so the display continues to work normally.

1. From the main screen, select **Screen Config**.

2. From the Screen Config dialog, select **Config Screen**.

3. Switch to the **Sending Board** tab.

4. In the Hot Backup Setting section, click **Add**.

   Only tiles in the same cascade chain can have a master-slave redundancy backup relationship.

5. Set the master board and port number.

6. Set the slave board and port number.

   A slave tile can not be set as a master if it is part of a redundancy backup relationship.

7. Click **Add**.

8. Click **Save**.

Testing the communication between the control unit and tiles

1. Launch the Christie E400 LED Display Controller software and login as the administrator.

   a. Click **User > Advanced Login**.

   b. Login with the password **admin**.

2. To confirm the display is connected and recognized by the control unit, in the Local System Info area ensure **Control System** has a value of **1**.

3. Switch to the **Display Control** tab.

4. To confirm the control unit is communicating with all tiles, select a color from the **Self Test** list and click **Send**.

   If the control unit is communicating with all the tiles, each display changes to the selected color.

5. Reset the Self Test to **Normal** and click **Send**.

6. Close the Screen Control dialog.

Reviewing and modifying the tile configuration

1. Click **Screen Config**.

2. Select **Config Screen** and click **Next**.

3. On the Sending Board tab of the Screen Config dialog, select the resolution of the video source and click **Set**.

   • The native display resolution is 320 px by 240 px.

   • Change the X and Y coordinates to move the 320 x 240 window, as long as the source size is not exceeded.

4. Click **Save**.

5. Switch to the **Screen Connection** tab.

6. Click **Read from HW**.

7. Review the configuration of the tiles in the array, and modify as needed.

   The cable layout for the tiles in the array is identified with an **S** where the first CAT-5 cable starts, and the green line shows the path of the daisy chain of cables. **E** identifies the end of the daisy chain.

Restore factory settings

1. From the main screen, select **Screen Config**.

2. From the Screen Config dialog, select **Config Screen**.

3. Switch to the **Sending Board** tab.

4. Click **Factory Restore**.

5. At the confirmation dialog, click **OK**.

   The system is returned to its factory settings.

6. At the completion dialog, click **OK**.

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