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# **Mystique Lite**



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#### Notation

Learn the hazard and information symbols used in the product documentation.



Caution messages indicate a hazardous situation which, if not avoided, could result in permanent loss of data.

Notice messages indicate a hazardous situation which, if not avoided, could impact the application.

Information messages provide additional information, emphasize or provide a useful tip.

# Content

Getting started with Mystique
Mystique editions
System recommendations
Computer and software requirements
Network requirements
Camera recommendations
Supported projectors
Product documentation
Installing operating system patches
Installing Mystique
Connecting the control computer to a projector and a camera
Connecting a Pandoras Box Manager as a projector
Selecting the display theme
Licensing Mystique
Requesting an updated license
Uninstalling Mystique
Technical support
Creating a Mystique Lite configuration
Understanding content overlap
Realigning the projectors.
Color Matching workflow for supported projectors and CIC 1DLP cameras
Troubleshooting
Mystique cannot locate cameras or projectors
The projector is unresponsive
The alignment results are poor
I cannot find or add a CIC 1DLP camera

# Getting started with Mystique

Mystique allows control, monitoring, and management of up to 256 projectors using a hosted web interface connected to the same network.

Read this guide to help understand the requirements and procedures for getting started.

# **Mystique editions**

Learn the differentiating features of the five editions of Mystique. Each edition has a different license key requirement. For more information, contact your Christie sales representative.

#### Projector and camera support

Feature	Lite	Essentials	Pro Venue	Premium	Large Scale Experience
Channel	Up to 3 projectors wide, no stacking.	Up to 12 projectors (2x3 double stacked)	Unlimited All channels must be visible by a single camera	Unlimited	Unlimited
Camera	One	One	One	Unlimited	Unlimited

#### Screen support

Feature	Lite	Essentials	Pro Venue	Premium	Large Scale Experience
Flat	Supported	Supported	Supported	Supported	Supported
Cylindrical	Not supported	Not supported	Supported	Supported	Supported
Spherical	Not supported	Not supported	Not supported	Supported	Supported
Custom	Not supported	Not supported	Not supported	Supported	Supported
Dual screen	Not supported	Not supported	Not supported	Not supported	Supported

#### Layout support

Feature	Lite	Essentials	Pro Venue	Premium	Large Scale Experience
Wallpaper (Simple)	Supported	Supported	Supported	Supported	Supported
Wallpaper (Advanced)	Not supported	Not supported	Supported	Supported	Supported
Field of view (FOV)	Not supported	Not supported	Not supported	Supported	Supported
Projector centric	Not supported	Not supported	Not supported	Not supported	Supported
3D	Not supported	Not supported	Not supported	Not supported	Supported

#### Additional feature support

Feature	Lite	Essentials	Pro Venue	Premium	Large Scale Experience
Mystique Operate	Not supported	Supported	Supported	Supported	Supported
Generic camera and lens profiles	Supported for two webcams	Supported	Supported	Not supported	Not supported
Anamorphic and fish-eye projector lenses	Not supported	Supported	Supported	Supported	Supported
Black level blending	Not supported	Not supported	Contact your Christie sales representative	Contact your Christie sales representative	Contact your Christie sales representative
Automation controller devices	Not supported	Not supported	Not supported	Supported	Supported
Surface markers	Not supported	Not supported	Supported	Supported	Supported
Pandoras Box support	Supported	Supported	Supported	Supported	Supported
Guardian	Not supported	Available for purchase. Contact your Christie sales representative	Available for purchase. Contact your Christie sales representative	Not supported	Not supported
Color and background uniformity	Not supported	Supported	Supported	Not supported	Not supported
Luminance uniformity	Not supported	Supported	Supported	Not supported	Not supported
Auto focus	Not supported	Supported	Supported	Not supported	Not supported



Feature	Lite	Essentials	Pro Venue	Premium	Large Scale Experience
Electronic convergence	Not supported	Supported	Supported	Not supported	Not supported
Auto color matching with CIC 1DLP cameras	Supported	Supported	Not supported	Not supported	Not supported

#### **Related information**

Requesting an updated license (on page 12)

# **System recommendations**

Understand the hardware and software requirements for Mystique.

## **Computer and software requirements**

Learn the hardware and software recommendations for running Mystique.

#### **Computer requirements**

Minimum	Recommended
Intel i5 or compatible processor	Intel Core i7-4700 or higher
5 GB of free disk space	10 GB of free disk space
4 GB RAM	<ul> <li>8 GB RAM (up to eight HD or four 4K projectors)</li> <li>16 GB RAM (up to 24 HD or 12 4K projectors)</li> <li>32 GB RAM (up to 48 HD or 24 4K projectors)</li> </ul>
A true color (32 bit) display with a minimum resolution of 1024 x 768 and support for Open GL 3.3 or later	A true color (32 bit) display with a resolution of 1920 x 1080 and support for Open GL 3.3 or later For Mystique Lite, Christie recommends an NVIDIA graphics card with Mosaic mode.
1 Gbps Ethernet port	1 Gbps Ethernet port
$Microsoft^{ ensuremath{\mathbb{B}}}$ Windows <sup>ee</sup> 10 64-bit	Microsoft Windows 10 64-bit

#### **Computer requirements**

 To set up content overlap, Christie recommends using an NVIDIA video card with Mosaic mode or a media server.

#### Supported software

• Adobe Reader 11 or later



## **Network requirements**

Learn the network requirements for Mystique.

- Unmanaged Gigabit Ethernet switch (quantity 1)
   Typically, managed switches are compatible with Mystique, however they may be challenging
   to configure when placed between the control computer and an Ethernet camera.
   Christie provides support only for managed networking equipment supplied by Christie.
   The switch must support jumbo packets, and jumbo packets must be enabled on the control
   computer.
- Ethernet cable for each network device, such as computers, projectors, and cameras (quantity 1)
- 1 Power over Ethernet (PoE) injector or a PoE switch (if using a PoE camera)

### **Camera recommendations**

Mystique Lite only supports the following cameras:

- Logitech C922 HD Pro Webcam
- Logitech C920 HD Pro Webcam
- Logitech C920s HD Pro Webcam
- CIC 1DLP (required for color matching on supported GS Series, 4K860-iS, DWU15-HS, DWU19-HS, DWU23-HS, and 4K22-HS projectors)

Webcams built into a laptop are not supported.

Mystique Lite only supports using a single camera per configuration.

#### CIC 1DLP

This camera (P/N: 156-155102-XX) works with Mystique (Mystique Lite and Mystique Essentials only) and the following projectors:

- GS Series projectors
- DWU15-HS, DWU19-HS, and DWU23-HS
- 4K22-HS
- 4K860-IS

To use this camera, perform these steps:

- 1. Connect the camera to a supported projector in your configuration, using the supplied USB cable.
- 2. Launch Mystique and add your projector(s).
- 3. Add your camera.







- The projector with an attached camera must be added to your configuration and powered on before you can add the camera to Mystique.
- To use the Color Matching feature on supported projectors, each projector must be paired with its own camera. For example, a two projector blended array, would require two CIC 1DLP cameras, which would each be connected to the respective projectors. Three projectors would need three cameras, and so on. For more information, refer to *Color Matching workflow for supported projectors and CIC 1DLP cameras* (on page 18).

## **Supported projectors**

Use Mystique Lite with one of the following supported projectors or with Pandoras Box.

- Boxer Series projectors, main software version 1.7.0 or later
- Crimson Series projectors, main software version 1.1.0 or later
- D4K40-RGB and Mirage 4K40-RGB projectors, main software version 1.2.0 or later
- Mirage SST, main software version 1.0.1 or later
- Griffyn Series, main software version 1.2.0 or later
- Christie M RGB Series, main software 1.0.0 or later
- D16WU-HS, D16HD-HS, D20WU-HS, and D20HD-HS laser projectors, main software version 1.6.0 or later
- D13WU2-HS, D13HD2-HS laser projectors, main software version 1.6.0 or later
- 4K7-HS and 4K10-HS laser projectors, main software version 1.3.0 or later
- DWU760-iS, DWU760A-iS, DWU860-iS, DWU960-iS, and DWU960ST-iS, main software version 1.0.0 or later
- 4K860-IS, main software 1.0.0 or later
- DWU880-GS, DWU880A-GS, DWU1100-GS, DWU1400-GS, DWU1400A-GS, main software version 1.0.0 or later
- DWU15-HS, DWU19-HS, DWU23-HS, main software 1.1.0 or later
- 4K22-HS, main software 1.2.0 or later

Mystique Lite does not support legacy projectors, third-party projectors, or Christie cinema projectors.

#### Other supported hardware

• Pandoras Box 6.5 or later When using Pandoras Box, blend quality is dependent upon projector support for gamma 2.2.

# **Product documentation**

For installation, setup, and user information, see the product documentation available on the Christie website. Read all instructions before using or servicing this product.

- 1. Access the documentation from the Christie website:
  - Go to this URL: *http://bit.ly/2INXz54* or *https://www.christiedigital.com/en-us/business/products/mystique*.



• Scan the QR code using a QR code reader app on a smartphone or tablet.



2. On the product page, select the edition and switch to the **Downloads** tab.

# Installing operating system patches

The following patches must be installed on the operating system before installing Mystique

#### Windows 10 64-bit (version 17134 or later)

• No patches are recommended at this time.

#### Windows 11 64-bit

• No patches are recommended at this time.

# **Installing Mystique**

To load Mystique, complete the following steps.

If a restart prompt appears before the installation is complete, select No.

- 1. Make sure all operating system patches are installed.
- 2. Download the Mystique installation file on the Christie website at *https://www.christiedigital.com/products/warping-blending/mystique/mystique-lite/*
- 3. Double-click the **MystiqueSetup.msi**.
- 4. Select Next.
- 5. To proceed with the Mystique installation, select Next.
- 6. Select I accept the terms in the License Agreement and select Next.
- 7. Select Install.
- 8. Select Finish.

The Mystique installation is complete.

9. When the installation is complete, restart the computer.

#### **Related information**

Installing operating system patches (on page 10)

# Connecting the control computer to a projector and a camera

A minimum of one camera and one Mystique-enabled projector must be connected to the control computer.

1. Connect a computer to a network switch with an Ethernet cable.

A wireless connection is not recommended with network (GigE) cameras.

2. Connect an Ethernet cable from each projector to the network switch.

Each projector requires a unique IP address and must be added to the same network subnet as the control computer. For more information, refer to the projector documentation.

3. Using the USB cable supplied with the camera or a high quality equivalent, connect the camera to the control computer.

Cameras connected with a USB connection are typically connected directly to the control computer, but a high quality USB hub or repeater can also be used. To determine what extenders or hubs are supported, see the camera supplier website.

Typically, cameras work correctly with Mystique without modifying their settings. If you need to modify camera settings, see the documentation provided by the camera manufacturer or visit their website. Software tools provided by the camera manufacturer are installed in **Start** > **Mystique**.

4. To automatically adjust the camera exposure in the Camera preview next to where the camera is listed, select **AE**.

# **Connecting a Pandoras Box Manager as a projector**

Learn how to add a Pandoras Box Manager as a projector in Mystique.

When connecting to a Pandoras Box Manager, each output in a Pandoras Box project appears as a projector in Mystique. While Mystique can connect to one Pandoras Box Manager at a time, multiple Pandoras Box clients can be connected to a single Manager.

Mystique, the Pandoras Box Manager, and all Pandoras Box Clients must be configured for, and run on, the same network.

For a blend for Pandoras Box to appear as expected, Christie recommends using projectors that can support a gamma curve of 2.2, such as Christie 3-chip DLP projectors. Otherwise, blend quality can vary.

- 1. In Pandoras Box Manager, verify the project file containing the content is open.
- 2. Do one of the following.
  - If the Pandoras Box Manager is installed on the computer used to run Mystique, from the Projector Search Results list, select **PB Devices**.
  - If the Pandoras Box Manager is installed on another computer, or PB Devices does not appear in the Search Results list, in the Main Menu beside the Mystique Lite label, select **Pandoras Box Manager IP**, enter the IP address of the Pandoras Box Manager, and select **OK**. Your Pandoras Box devices should now show in the Projector Search Results list.



Once you connect to a Pandoras Box Manager, canvases for warping, blending, and test patterns are created in the Pandoras Box project. Establishing a consistent communication stream might take longer than expected.

When Mystique is run, warps and blends are added to the output and activated in Pandoras Box Manager.



Each Mystique configuration is limited to a single Pandoras Box domain. Pandoras Box devices aligned in the same Mystique project must connect to Mystique through the same Pandoras Box Manager.

# **Selecting the display theme**

You can select either a light or dark mode for the Mystique display theme.

- 1. Select the Main menu.
- 2. To switch between light and dark themes, select Toggle Dark Mode.

# **Licensing Mystique**

All editions of Mystique, except Mystique Lite, require a license dongle and valid license to identify the available features within the software.

### **Requesting an updated license**

To upgrade Mystique Lite to the Essentials or Pro Venue license, contact Christie Customer Service at orders@christiedigital.com.

#### **Related information**

*Mystique editions* (on page 5) *Technical support* (on page 12)

# **Uninstalling Mystique**

Remove Mystique using the Windows Control Panel.

Bonjour, Microsoft<sup>®</sup> Visual C++ 2010, 2012, 2015, 2019 Redistributables, and Microsoft .NET Framework 4 may be in use by other programs and are not uninstalled by the wizard.

- 1. Select Settings > Apps & features
- 2. Right-click Christie Mystique and select Uninstall.
- 3. Select Yes.

# **Technical support**

Technical support for Christie Cinema products is available at:

- Support.cinema@christiedigital.com
- +1-877-334-4267



• Christie Professional Services: +1-800-550-3061 or NOC@christiedigital.com

# Creating a Mystique Lite configuration

Understand the steps for creating a Mystique Lite configuration.

- 1. Connect the camera, projectors, and computer to the same network and subnet. If the components are on different subnets, they cannot find each other.
- 2. Select the camera from the list.

If the camera does not automatically appear in the list, select **Find More**.

For a list of the webcams Mystique Lite supports, see *Camera recommendations* (on page 8).



Mystique Lite uses ports 3141 and 3142 for locating the webcams. Make sure these ports are not being used by other processes.

3. Select the projectors.

If the projector does not automatically appear in the list, select **Find More**. For configurations with less than three projectors, leave any unnecessary projector rows at **IP Address for X Projector**.

To identify the projectors 1, 2, or 3, beside the projector selection select **Identify**.
 A square of color corresponding to the selected projector is displayed in the center of the projection area.

If a square is not projected on the screen after clicking Identify, the selected projector may be in a different location and is not the projector used in this configuration.

To clear the identification square, select **ESC**.

5. Move the blue dots to the corners of the screen.

To zoom the camera, use the mouse scroll wheel.

For more precision at the corners, to zoom on the screen select  $\ensuremath{\textbf{CTRL}}$  and then move the blue dot.

- 6. Specify the size of the overlap for the projectors.
  - **Pixel Overlap**—The number of pixels expected to be overlapped between any two adjacent projectors, as defined in the content.
  - **Total Canvas Resolution**—The dimensions, in pixels, of the projection area as defined in the content.

Only one of the options needs to be specified. Any changes to one of the options causes the other option to update accordingly.

Mystique Lite allows a content overlap between 5 and 60 percent.

To create multi-projector horizontal displays with an NVIDIA video card, use NVIDIA Mosaic mode in combination with Mystique Lite.

https://nvidia.custhelp.com/app/answers/detail/a\_id/3568/~/how-to-setup-mosaic-using-nvidia-control-panel

The settings in Mystique Lite map to the settings in NVIDIA Mosaic mode as follows:



Mystique Lite	NVIDIA
Pixel Overlap	Adjust overlap and bezel correction > Correction Type > Overlap, Correction Value (pixels)
Total Canvas Resolution	Adjust overlap and bezel correction > Total Resolution

For additional information, see Understanding content overlap (on page 15).

#### 7. Select Align Projectors.

During the alignment, any content being shown on the screen is replaced with white and colored dots flashed onto the screen by the projector. The camera analyzes the dots, and sends information to Mystique Lite. The overlap area is then blended together to ensure an invisible transition. When the alignment is complete, the content is displayed on the screen.

8. If the content looks blurry or duplicated after the alignment, select Check Alignment.

A green grid is displayed on the screen.

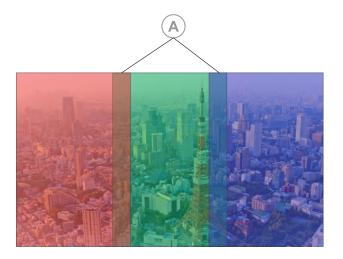
- If the grid looks OK, the overlap in the content does not match the value specified in Mystique Lite. Modify the pixel value so the overlap values are the same.
- If the grid looks blurry or duplicated, there is an issue with the projector alignment. To resolve this, repeat steps 1 to 7.

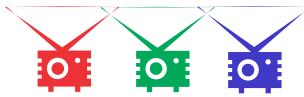
To clear the alignment grid, select **ESC**.

## **Understanding content overlap**

When two or more projectors are throwing content onto a screen, to make sure no gap or line is between the projected images, the content is configured to expect a certain amount of overlap between the projectors.

The content is divided into the number of projectors that will be used in the configuration. Each projector is mapped to a specific area of the screen and includes an area that will overlap with the content of the next projector providing content.





For example, in this configuration the red projector is configured for 400 pixels of overlap on the right side. The green projector is configured for 400 pixels on the left side and 400px on the right (A). The blue projector is configured for 400 pixels of overlap on the left side.

To make sure the overlapped areas are invisible to viewers, Mystique Lite blends the content in these two areas to even out the brightness and color and match them to the areas without overlapped content.

When initially creating the configuration, make sure the values entered in the Pixel Overlap area match the overlap defined in the content generated by NVIDIA Mosaic or the media server.

When the overlap is incorrectly identified, the projected image may look like this:



In this image, there are duplications of the buildings on the left side of the screen, and a duplicate tower leg on the right side.

With correct values, the overlap creates a seamless image where the overlap occurs.



# **Realigning the projectors**

If the image projected onto the screen does not look clear, or does not line up with the screen bounds, realign the projectors.

1. In Mystique Lite, select the camera from the list.

If the camera does not automatically appear in the list, select **Find More**.

For a list of the webcams Mystique Lite supports, see Camera recommendations (on page 8).



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For more precision at the corners, to zoom on the screen select  $\ensuremath{\textbf{CTRL}}$  and then move the blue dot.

#### 5. Select Align Projectors.

During the alignment, any content being shown on the screen is replaced with white and colored dots flashed onto the screen by the projector. The camera analyzes the dots, and sends information to Mystique Lite. The overlap area is then blended together to ensure an invisible transition. When the alignment is complete, the content is displayed on the screen.



- 6. If the content looks blurry or duplicated after the alignment, select **Check Alignment**. To assist with evaluating the alignment, a green grid is displayed on the screen.
  - If the grid looks OK, the overlap in the content does not match the overlap value specified in Mystique Lite. Modify the pixel value in Mystique Lite so the overlap values are the same as the content.
  - If the grid looks blurry or duplicated, there is an issue with the projector alignment. To resolve this, repeat steps 1 to 5.

To clear the identification square, select **ESC**.

# Color Matching workflow for supported projectors and CIC 1DLP cameras

Supported projectors use a built in Color Matching feature controlled from Mystique.

For a list of supported projectors, see Camera recommendations (on page 8).



The **Image Settings** > **Picture Settings** option must be set identical on each projector in the layout before running Color Matching.

To Color Match the projectors, perform these steps:

- 1. Create a Mystique Lite configuration (on page 14).
- 2. Connect a CIC 1DLP camera to each projector in the layout and make sure it is pointed at the screen.
- 3. In the Main Menu beside the Mystique Lite label, select Color Match Projectors.
- Correct any reported errors and repeat step 3. If successful, the results are automatically saved in the projector as the most recent color match.
- 5. To compare the most recent result with the previous result, in the main menu, select **Restore Previous Color Match**.
- 6. To compare factory default settings, in the main menu, select **Reset Color Match**.

# Troubleshooting

Learn about common issues and their solutions.

# **Mystique cannot locate cameras or projectors**

To locate cameras or projectors in a configuration, try any of the following.

#### Resolution

- Confirm that the computer is connected to a network.
- Check the cable connections (computer, camera, projectors, and so on)
- Make sure that the computer is on the same subnet as the projector.
- Make sure a Mystique supported USB webcam is connected to the computer.
- Try to access the projector's web interface. From the Select Projectors dialog, in the Manual tab, enter the IP address of the projector.
- On the projector, check the version of the Ethernet firmware.
- On the computer, check that no other Christie software application is running.
- On the computer, verify the Bonjour application is installed and that it is operating as expected.

# The projector is unresponsive

If the projector is unresponsive, try any of the following.

#### Resolution

- Check that the power source is turned on.
- Verify all cables are connected.
- Check that the control computer can search for projectors.

# The alignment results are poor

If the alignment results are poor, try any of the following.

#### Resolution

- Verify the following:
  - There is adequate camera coverage on the screen.

• Ambient light or sunlight on the projected surface can result in the camera having trouble seeing the visible light pattern. Consider dimming the lights to see if results improved.

# I cannot find or add a CIC 1DLP camera

To connect a CIC 1DLP camera to a configuration, try the following.

#### Resolution

• Make sure the camera is connected to one of the supported projectors in your configuration using the supplied USB cable.

For a list of supported projectors, see Camera recommendations (on page 8).

- Make sure the projector is powered on.
- Make sure the projector has been added to your configuration.
- If the camera does not automatically appear in the list, select **Find More**.