

Christie® JumpStart

Technical Frequently Asked Questions

(FAQs)

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FAQs

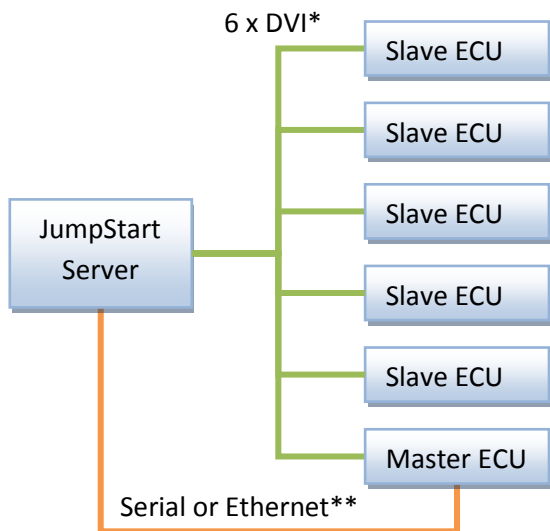
1 Physical installation

1.1 How does the Christie JumpStart server connect to the display?

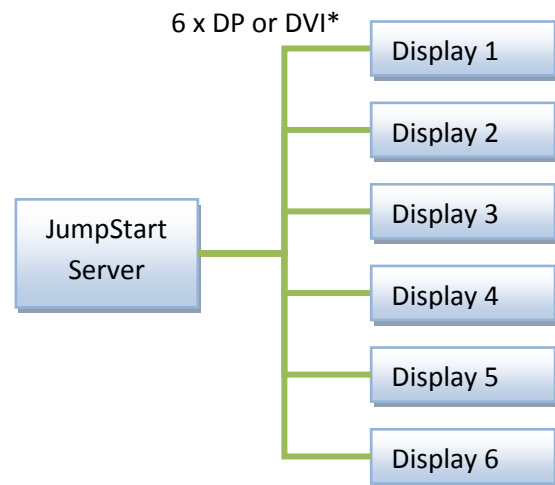
The Christie® JumpStart server is equipped with six video output channels. Each output channel is mini DisplayPort, with optional mini DisplayPort to DVI adapters included. These six output channels can be connected to any compatible digital display. However, in order to utilize the JumpStart software with a non-MicroTiles display, some limitations apply (refer to question 2.5 for details).

When used with a Christie MicroTiles® display, additional functionality is available if the server is connected by either an Ethernet or a Serial connection to the master External Control Unit (ECU), as shown below (for more details about Christie MicroTiles-specific functionality, refer to questions 2.2 and 2.3).

Example 1: MicroTiles



Example 2: FHD551-X or Other Display



* 6 x mini DP to DVI adapters supplied ** USB to Serial adapter and Ethernet cable not supplied

1.2 Does it matter which JumpStart output is connected to which ECU or display?

No. The physical arrangement of the outputs can be adjusted in Windows during the initial setup process to ensure that content is mapped appropriately.

1.3 How do I make a Serial connection between JumpStart and the MicroTiles master ECU?

The JumpStart hardware does not include a Serial port. However, a USB to Serial adapter may be used in order to connect with the Serial port on the master ECU. This adapter is not provided with JumpStart, and must be supplied by the customer if required.

1.4 How do I make an Ethernet connection between JumpStart and the MicroTiles master ECU?

The JumpStart hardware includes an Ethernet port. An Ethernet cable is not provided with JumpStart, and must be supplied by the customer if required.

When connecting JumpStart to MicroTiles via Ethernet, MicroTiles should be configured with a static IP address and DHCP disabled. This can be done through the MicroTiles WebUI.

There are many potential ways for JumpStart to connect to MicroTiles via Ethernet. Two common options include:

1. Connect both JumpStart and the MicroTiles master ECU to the same local area network. For most fixed installations, this will provide the greatest flexibility. A network administrator should ensure both devices are set up properly.
2. A direct connection from JumpStart to the MicroTiles master ECU using a single Ethernet cable. For temporary installations where no local area network is available, this may be convenient. In this instance, the IP address of the JumpStart server must be configured so that it is on the same domain as the MicroTiles master ECU.

1.5 How can I complete the MicroTiles Connection Wizard if I cannot see the display wall from where the JumpStart server is located?

If you do not need all six outputs on the JumpStart server, one option is to connect an extra monitor to one of the available outputs and use this as your primary monitor for the Wizard process. After the server reboots, before disconnecting the extra monitor, rearrange the output displays using Windows so that the extra monitor is on the far right, and the primary output display is on the far left.

Alternatively, you can connect to the server remotely using a virtual desktop application (not supplied with JumpStart), such as RealVNC or TightVNC.

Please note:

- You must stop any running scenarios before opening the virtual desktop application and restart them after disconnecting.
- Christie does not promote, warrant or support any third party applications, such as virtual desktop applications.

1.6 Can the JumpStart server be rack mounted?

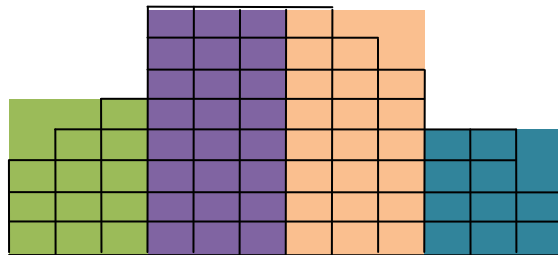
Yes. The JumpStart server is designed to be mounted in a rack if required. The server occupies 4U and a sliding rail rack mount kit is available from Christie using part number 128-100102-01.

2 Resolution and canvas

2.1 How big of a total canvas can be supported?

When used with MicroTiles, JumpStart can support video signals up to 150MHz on each of the six outputs, which works out to a maximum 15 megapixel canvas at 60Hz with six ECUs. The actual resolution of the canvas depends on the number and arrangement of tiles on each ECU, as demonstrated in the following examples:

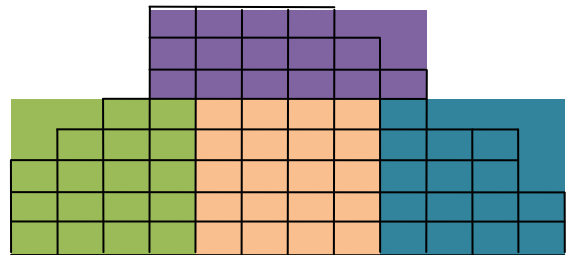
Example 1: 67 MicroTiles with 4 ECUs



| | | |
|-------|-----|-----------|
| ECU 1 | 3x5 | 1104x1308 |
| ECU 2 | 3x8 | 1104x2208 |
| ECU 3 | 3x8 | 1104x2208 |
| ECU 4 | 3x4 | 1104x1104 |

| | |
|------------------|----------|
| Largest subarray | 24 tiles |
| MPixels visible | 6.8 |
| Per tile | 368x276 |
| Pixel pitch (mm) | 1.1 |

Example 2: 67 MicroTiles with 4 ECUs



| | | |
|-------|-----|-----------|
| ECU 1 | 4x5 | 1632x1530 |
| ECU 2 | 4x5 | 1632x1530 |
| ECU 3 | 4x5 | 1632x1530 |
| ECU 4 | 6x3 | 2448x918 |

| | |
|------------------|----------|
| Largest subarray | 20 tiles |
| MPixels visible | 8.3 |
| Per tile | 408x306 |
| Pixel pitch (mm) | 1.0 |

As can be seen above, a higher canvas resolution is achieved by balancing the number of tiles per ECU in such a way that it minimizes the size of the largest subarray. The size of a subarray is defined by the smallest rectangle which encapsulates all the tiles connected to the output side of an ECU (HSSL2).

Note: Site requirements may constrain the physical placement of ECUs and, in turn, limit what subarray arrangements are practical.

When used with Christie FHD551-X or another display, the size of the canvas is limited by the same factors: the supported resolutions of that display and the output capabilities of the JumpStart server's outputs, as specified on the product datasheet.

For more information on JumpStart output specifications, refer to the product datasheet available at www.christiedigital.com.

2.2 Can JumpStart set up the MicroTiles resolution automatically?

Yes. Simply follow the MicroTiles Connection Wizard on screen and JumpStart will pick the best resolution for the connected MicroTiles display and set this up on both the ECUs and Windows directly.

2.3 Is JumpStart able to “see” a map of MicroTiles and show this in the client software?

Yes. This is a key feature of JumpStart for making it easy to position content onto a MicroTiles display. After successfully connecting to a master ECU and completing the MicroTiles Connection Wizard, JumpStart detects the location of every tile in the canvas and represents this in the client software, including the location of missing tiles.

2.4 What version of MicroTiles firmware is required?

In order for the MicroTiles Connection Wizard to work properly, all MicroTiles and ECUs must be on firmware version 13 or later. When using the Wizard, JumpStart will check the firmware on the MicroTiles and prompt if it is older than firmware version 13.

It is still possible to use JumpStart with older firmware versions; however, certain features will not function properly. For instance, with MicroTiles firmware earlier than version 13, the Extended Display Identification Data (EDID) resolution of each ECU must be adjusted manually and each ECU subarray will be treated like a single display monitor.

Download firmware version 13 from the MicroTiles downloads page at www.christiedigital.com.

2.5 Can I override the resolutions selected by JumpStart?

Yes. As always, the EDID resolution of each ECU can be altered manually through the MicroTiles WebUI. However, this should not be necessary when using JumpStart and could lead to problems if resolutions are chosen which are incompatible with the graphics cards on the JumpStart server.

Warning: If adjusting MicroTiles EDID resolutions manually, you must ensure the following:

- The resolution displayed on every tile in the canvas must be identical. JumpStart does not support MicroTiles in the same canvas having different resolutions.
- To ensure stable performance of the JumpStart graphics cards, do not exceed a video signal of 150MHz per ECU.
- The width resolution per tile must be divisible by 8.

2.6 Can JumpStart support other displays besides MicroTiles?

Yes. JumpStart can support other display types; however, the resolution of each display must be the same. For instance, JumpStart can be connected to six FHD551-X panels, each being driven at 1920x1080 resolution, but not if one is 1600x1200 and the other three are 1920x1080.

2.7 What is the maximum number of ECUs that can be supported by JumpStart?

Six.

2.8 Can JumpStart support multiple MicroTiles canvases?

A MicroTiles canvas is defined as a single connected group of tiles and ECUs, where one ECU is functioning as the master.

JumpStart is designed to be connected to a single canvas with no more than six ECUs. In this configuration, JumpStart's advanced functionality for MicroTiles is available, as described in questions 2.2 and 2.3.

If it is necessary to connect JumpStart to multiple MicroTiles canvases (i.e., multiple master ECUs), this can be done by treating each MicroTiles ECU as a generic display. To treat MicroTiles as a generic display, any settings in the MicroTiles Connection Wizard should be cleared, and **each ECU must be set to the same resolution** (as with other display types, see question 2.5). In the JumpStart client, the location of each tile will not be shown (i.e., feature described in question 2.3 is unavailable).

3 Content and playback

3.1 What is the JumpStart client software?

The JumpStart client software is the interface which enables users to connect to a JumpStart server, manage the content on that server, place and schedule content on a display that is connected to the server, and manage scenarios (see question 3.2).

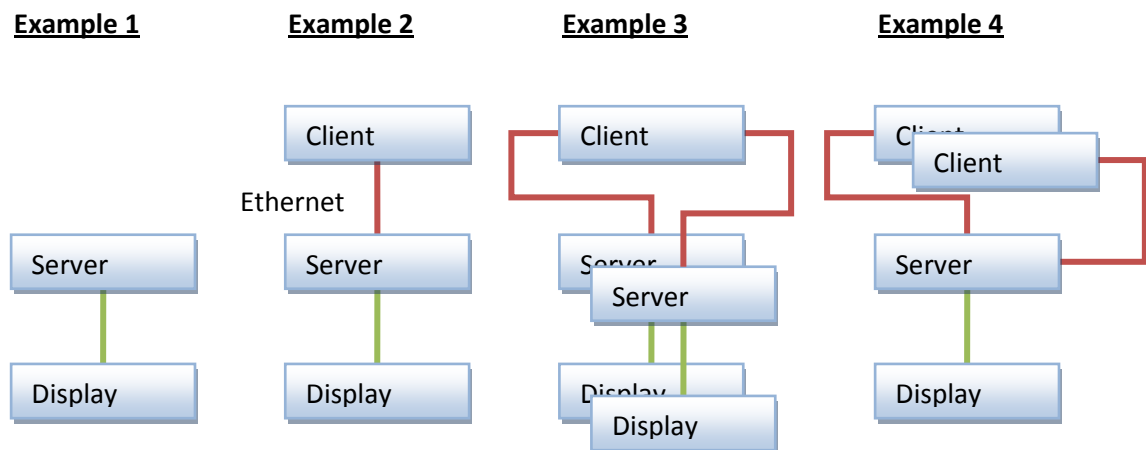
3.2 What is a JumpStart scenario?

Content can be positioned on the display through the client software and ordered along a timeline. Any particular arrangement of content is referred to as a scenario. Multiple scenarios can be created for any particular display.

3.3 Do I need to install the client software on a remote PC?

No. In a simple installation, everything you need is on the JumpStart server, including a copy of the JumpStart client software.

However, in many instances it may be useful to run the client software on a remote PC. The CD which ships with JumpStart allows users to load a copy of the JumpStart client software onto one or more remote computers, which can then be connected to one or more JumpStart servers as follows:



The above examples illustrate:

1. The client software can be run locally to manage content on the display.
2. A single remote PC with the client software can be used to manage content on a single server.
3. A single client computer can be used to manage content on multiple servers. Tip: To manage multiple servers concurrently from a single computer, open multiple instances of the client software.
4. A single server can be managed by multiple clients.

3.4 What kind of content can be played on a JumpStart server?

A wide range of content can be played, including:

- Videos, such as mov, mpeg, wmv and avi files
- Pictures, such as jpeg, gif, png, bmp and tif files
- Applications can be opened and positioned as part of a scenario
- Input channels, such as a remote video feed or computer input (only available with the JumpStart 4/6 server)
- Text windows
- Color windows

3.5 Can video and pictures be streamed onto the server?

Video and pictures must be copied onto the server either locally, through connecting a USB or disc storage device to the server, or through a network connection to the server.

Third party applications that stream content from the Internet or other remote sources can be run on the server and, depending upon the application, the position and some parameters may be controlled through the JumpStart client software.

3.6 Once an application is open on the server, how can I interact with it?

Simply connect a mouse and keyboard to the server, or set up a remote desktop application on the server (provided by a third party) and take control of it remotely.

3.7 Can a scenario be scheduled to start on a specific date and time?

Scenarios are like playlists which can be started and stopped. JumpStart supports serial over IP commands, which can be used to trigger a scenario to start or stop at a particular date and time using a third-party device, such as a script running on another PC or controller.

3.8 Can JumpStart scenarios be controlled through RS232 commands or similar event triggers?

Yes. JumpStart scenarios can be started and stopped through serial over IP commands.

3.9 Can JumpStart send RS232 or serial commands to other devices?

Yes. Serial over IP commands can be added to any point in a scenario. For instance, you can schedule a command to be sent to an external device at the same time as a particular content window appears in a scenario.

3.10 Can scenarios on two different JumpStart servers be synchronized to play back at the same time?

Synchronization between multiple JumpStart servers is an upcoming feature which is not fully supported at this time; however, customers can enable the beta version of this functionality by contacting Christie.

3.11 After stopping a scenario, can I play another scenario immediately?

JumpStart is not designed to switchover immediately from one scenario to another. If a seamless transition between layouts is required, it may be possible to achieve this effect by scheduling content within a single scenario instead. If it is necessary to switch from one scenario to another, it is recommended that the user wait 15 seconds before starting a new scenario to ensure smooth playback.

3.12 Does JumpStart support HDCP?

JumpStart can play back High-bandwidth Digital Content Protection (HDCP) content which is stored locally on the server, including movie files stored on the hard drive or Blu-ray™ movies in the disc drive. However, in the 4/6 model of JumpStart, the DVI capture cards do not support HDCP, and therefore you cannot connect an external HDCP source to JumpStart.

3.13 Are interlaced video signals recommended as external sources?

No. Interlaced video signals connected as an external source to the JumpStart box may play back with image artifacts, such as missing lines. This is more noticeable when viewed up close, especially if the video is upscaled significantly.

3.14 What resolutions are supported on the four optional input channels?

With the 4/6 model of JumpStart, the input cards support capturing of the following resolutions:

- Digital: 640x480 (VGA), 800x600, 1024x768, 1280x1024, 1600x1200, 1920x1080, 1920x1200 (WUXGA)
- Analog: 640x480 (VGA), 800x600, 1024x768, 1280x1024, 1600x1200, 1920x1080, 2048x1536 (QXGA)
- HD modes: 1080p, 720p, 576p, 480p using a Component HD-DVI connector (HDCP not supported)
- Supported frequency: up to 60Hz

Resolutions outside of the above list may still be captured by the input card; however, quality is not guaranteed. Interlaced video signals are not recommended (see question 3.13 for more information).

4 Reliability

4.1 What is the expected lifetime of the server?

The JumpStart server is a professional grade product that has been designed to be long-lasting and reliable. The core platform is manufactured by HP and the expected mean time between failures is in excess of 50,000 hours.

4.2 Can the server be left running 24/7?

Yes. The JumpStart server is a professional grade product that can run 24/7.

4.3 What happens if there is a power outage?

JumpStart is designed so that, after power is restored, whatever scenario was playing prior to the power outage will start playing again.

4.4 Can the software be left running 24/7?

Yes. The JumpStart software is designed for continuous usage. However, if a single scenario is left running for an extended period of time, a small amount of drift will occur in the schedule. To avoid noticeable drift, it is recommended that scenarios are not run continuously for more than 24 hours.

4.5 How can I backup my scenarios and channel settings?

JumpStart does not include an integrated backup or restore feature. To create a copy of the scenarios and channel settings stored on a server, navigate to the following location on the server:

C:\ProgramData\Christie\MASTERSuite\MediaServer\

Copy this folder and its contents to a backup location.

4.6 If the JumpStart server software needs to be reinstalled or upgraded, will I lose my scenarios and channel settings?

Yes. Uninstalling the JumpStart server software deletes any scenarios and channel settings stored on the server. If this information has been backed up (see question 4.5), it may be recovered simply by restoring the backed up files into their original folder location. JumpStart server software should only be modified by a trained technician.