# Christie® FHD651-P, FHD651-T

Technical Frequently Asked Questions (FAQs)

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#### 1 Models

#### 1.1 What is the difference between the Christie FHD651-P and FHD651-T?

The Christie FHD651-P is a non-touch model, and the FHD651-T is a touch model.

The panels are very similar in appearance, with the same size bezels and overall aesthetics. The touch model features a glass overlay and is slightly deeper.

# 2 Physical installation

#### 2.1 What mounts can be used with the panels?

Standard VESA mounting locations, 600x400 mm, are provided on the panels, allowing the use of wide range of VESA-compatible mounts from third party providers.

#### 2.2 Can the panels be mounted in portrait orientation?

Yes.

#### 2.3 Can the panels be mounted under 4" from the wall?

Yes, both panels can be installed under 4" using a thin profile mount from a third party, such as Peerless, Premier or Chief. This may be useful to meet regulations such as the ADA (Americans with Disabilities Act). See below for details.

#### 2.4 Are the panels ADA compliant?

The ADA (Americans with Disabilities Act) sets standards in the USA for the construction of accessible public facilities. These standards may dictate the way that a flat panel is installed and used in a space. For example, the 2010 ADA Standards for Accessible Design states that:

**307.2 Protrusion Limits.** Objects with leading edges more than 27 inches (685 mm) and not more than 80 inches (2030 mm) above the finish floor or ground shall protrude 4 inches (100 mm) maximum horizontally into the circulation path.

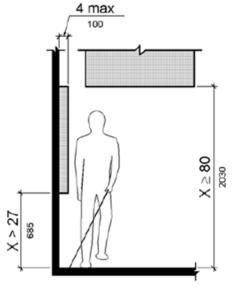


Figure 307.2 Limits of Protruding Objects

Obviously, it may be easier to meet these regulations with a flat panel that is thinner than its competition. To this extent, the Christie FHD651-P and FHD651-T are ideal (see previous section).

#### 2.5 How does the touch model (FHD651-T) connect to a computer for touch interactivity?

Simply connect a USB cable (provided) from the flat panel to a USB port on a computer.

#### 2.6 Is the touch model (FHD651-T) protected with a glass overlay?

Yes, the touch model includes a protective layer of 4mm tempered glass.

#### 2.7 Do the panels work with Christie Brio?

Yes, the Christie FHD651-P and FHD651-T are ideal choices for Christie Brio.

Two panels can be mounted side-by-side to take full advantage of the windowing and content sharing functionality of Christie Brio.

When connecting a FHD651-T panel to Christie Brio with a USB connection, the panel is recognized automatically as a touch input device and works seamlessly with Christie Brio whiteboard application.

Christie Brio is a highly flexible, multisite collaboration solution. For more information, please visit www.christiedigital.com

# 3 Touch (FHD651-T only)

#### 3.1 Is the touch panel HID compliant?

Yes. This means that a connected computer with a modern operating system will automatically detect the panel as either a touch device, without installing drivers, in the same way that a USB mouse or keyboard would be detected.

#### 3.2 Which operating systems are supported, with or without drivers?

Windows 8 and Windows 7 Home Premium and above support multi-touch natively, without the need to install drivers. Earlier versions of Windows may offer basic touch support natively or with the supplied drivers, however, these earlier versions are not recommended and have not been validated by Christie.

Mac does not recognize external multi-touch devices natively. However, with the supplied drivers, multi-touch is supported in Mac OS X 10.7 and above.

At this time, Christie has not validated other operating systems. However, this multi-touch technology is designed to work with Linux Ubuntu 12.10 and above, and Linux Fedora 17.0 and above, as well as Android 3.0, 3.2, 4.0 and above with installed drivers.

#### 3.3 Does Christie offer any built-in touch applications?

The panel is not shipped with any built-in touch applications. However, with the advent of Windows 8, a growing number of Windows applications now support multi-touch gestures. Simply connect a Windows 8 computer to access these applications.

For a tightly integrated whiteboard solution, Christie recommends Christie Brio. In fact, Christie Brio allows whiteboard sharing and collaboration across multiple touch panels, such as the Christie FHD651-T. For more information on Christie Brio, refer to question 2.7 above.

#### 3.4 Do I have to use my finger or a special stylus to register a touch?

No, the touch system will recognize any object.

#### 3.5 What is the difference between infrared and optical touch?

For large flat panels, the most common ways to provide a multi-touch experience is by using either infrared or optical touch technology.

Optical touch technology is a very affordable technology, but with significant functional drawbacks. In a typical configuration, optical involves placing one camera in each of the four corners of the display; as a result, the cost for a large panel is similar to the cost for a small panel.

However, cameras require time-consuming alignment, are easily over-saturated with ambient light, and do not provide as accurate or as many simultaneous touch points.

Generally speaking, infrared touch technology provides better performance than optical touch. Infrared involves placing sensors around one or two sides of the display, and LEDs around the other sides; as a result, the cost increases as the size of the display increases. Infrared touch is capable of a much higher accuracy and number of touches than optical, does not require field calibration or alignment, and is better suited for high ambient light conditions — although it is possible to over-saturate the sensors.

#### 4 Power

#### 4.1 What is the power consumption of the panel?

Refer to panel datasheets for the latest specifications.

#### 4.2 How can the panel be woken from sleep mode?

When in sleep mode, the panel can be woken through the IR remote, an active VGA signal, or an RS-232 command. In order to restrict power consumption during sleep mode to ≤1W, an active DVI source will not wake the panel under its default settings. However, the panel can be configured to wake from DVI, if required.

# 5 Reliability

#### 5.1 What is the expected lifetime of the panel?

Each component of the panel is long-lasting and reliable. The solid state LED backlight is rated by the manufacturer for 50,000 hours of operation.

#### 5.2 What is the difference between image sticking and burn-in?

If a static image is displayed continuously on an LCD panel for an extended period of time, a faint remnant of the image may be visible on the panel even when a different image is displayed. This is commonly referred to as "image sticking". Image sticking can be reversed by resting the panel.

If static images are allowed to persist on a panel for much longer periods of time, "burn-in" may occur. Burn-in looks similar to image-sticking, except it permanently damages the panel and cannot be reversed.

Both image sticking and burn-in may be referred to as forms of "image retention".

#### 5.3 How can I reduce the risk of image retention?

Turning off or using power management for 4 hours per day will extend the life of the product and minimize the risk of image retention. In circumstances where a static image must be displayed over long periods of time, activating the Image Retention Frame Motion (IRFM) feature will help to avoid image retention (refer to section 2.3.7).

#### 5.4 What are the reliability differences between consumer and commercial grade LCDs?

Consumer grade LCD panels are designed to operate for much shorter periods of time, are more prone to burn-in, cannot be mounted in portrait orientation, are lower brightness, have shorter product lifecycles, and are more reflective in well lit environments.