

**User Manual**

020-101771-08

# Phoenix Quad-T



## NOTICES

### COPYRIGHT AND TRADEMARKS

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Every effort has been made to ensure accuracy, however in some cases changes in the products or availability could occur which may not be reflected in this document. Christie reserves the right to make changes to specifications at any time without notice. Performance specifications are typical, but may vary depending on conditions beyond Christie's control such as maintenance of the product in proper working conditions. Performance specifications are based on information available at the time of printing. Christie makes no warranty of any kind with regard to this material, including, but not limited to, implied warranties of fitness for a particular purpose. Christie will not be liable for errors contained herein or for incidental or consequential damages in connection with the performance or use of this material. Canadian manufacturing facility is ISO 9001 and 14001 certified.

### WARRANTY

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.
- d) Problems or damage caused by combination of a product with non-Christie equipment, such as distribution systems, cameras, DVD players, etc., or use of a product with any non-Christie interface device.
- e) Problems or damage caused by the use of any lamp, replacement part or component purchased or obtained from an unauthorized distributor of Christie lamps, replacement parts or components including, without limitation, any distributor offering Christie lamps, replacement parts or components through the internet (confirmation of authorized distributors may be obtained from Christie).
- f) Problems or damage caused by misuse, improper power source, accident, fire, flood, lightning, 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 (if applicable)

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.

CAN ICES-3 (A) / NMB-3 (A)

이 기기는 업무용(A급)으로 전자파적합등록을 한 기기이오니 판매자 또는 사용자는 이점을 주의하시기 바라며, 가정 외의 지역에서 사용하는 것을 목적으로 합니다.

## 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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# Safety precautions

The following are the safety precautions for Phoenix Quad-T.



This symbol indicates the presence of dangerous voltage within the product enclosure that may be significant enough to cause a risk of electrical shock.

- Do not use this apparatus near liquids. Do not place objects containing liquids on top of or near the unit. Never spill liquid of any kind on the product.
- Never push objects of any kind into this product through cabinet slots, as they may touch dangerous voltage points or short out parts resulting in the risk of fire or electric shock.
- Clean only with a clean, lint-free, and dry cloth. Do not use abrasive cleaners or solvents.
- Do not block any ventilation openings. Install the product in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles (electrical receptacles), and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket or table specified by the manufacturer or sold with the apparatus. When a cart is used, take caution when moving the cart/apparatus combination to avoid injury or serious damage to the product from the cart tipping over.
- If an extension cord is used with this product, make sure that the total ampere ratings on the products plugged into the extension cord do not exceed the extension cord ampere rating.
- Do not attempt to service this product yourself. Opening or removing covers may expose you to dangerous voltage points and/or other risks, and may void your warranty. Refer all servicing to Authorized Service Personnel.
- Unplug the apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Operate the equipment under the following conditions:
  - Operating temperature range: 5°C to 40°C (41°F to 104°F)
  - Storage temperature: -20°C to 60°C (-4°F to 140°F)
  - Relative humidity: 10-85% non-condensing
  - Operating altitude: maximum of 2000 m (6562 ft) above sea level
- Avoid installing this product in an area that is exposed to excessive dust.

## Warnings

### Service warning



The unit has no field-serviceable parts. The enclosure surrounding the unit should not be removed. Failure to follow these instructions may void the warranty.

For protection against the risk of electrical shock, always disconnect all cables from the wall outlet before servicing, modifying or installing the equipment.

### Class I construction warning



An apparatus with Class I construction shall be connected to a MAINS socket outlet with a protective earthing connection.

## Labeling glossary

	<p>This symbol indicates the hardware is RoHS compliant.</p>		<p>These symbols warn where potentially hazardous voltages exist.</p>
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## End-of-life disposal

Properly recycle the Phoenix Quad-T unit when it is permanently removed from service. This product has been designed such that a large percentage of the product material can be recycled. Follow local and/or national regulations regarding disposal of electronics equipment.

# Welcome to Phoenix Quad-T

The Phoenix Quad-T is a four channel input HDMI video capture device with a single Ethernet output port. Each HDMI channel is separately encoded to the H.264/AVC main profile and streamed over the network to Phoenix nodes. The Phoenix Quad-T can also send keyboard and mouse commands back to a PC over the network for each input using four mini USB reachback ports.

## Quick start

The following are a few references to help you get started.

<b>Task</b>	<b>Reference</b>	<b>Page</b>
1. Set up the unit.	<a href="#">Setting up the Phoenix Quad-T</a>	8
2. Update the firmware.	<a href="#">Updating the firmware</a>	15
3. Configure the Encoder sources using the Phoenix Quad-T Web Manager.	<a href="#">Administering the Phoenix Quad-T</a>	11
4. Add the Phoenix Quad-T as a RTSP source on your Phoenix system. Select QUADT as the Protocol Type.	Refer to the Phoenix Reference Manual (020-101183-nn).	

## Document conventions

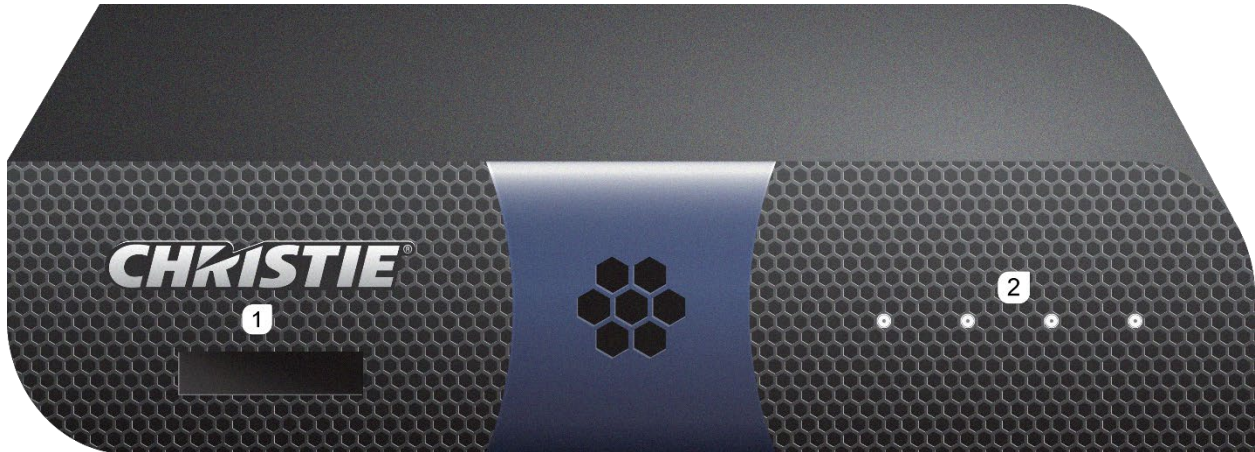
The graphical illustrations in this document are for example purposes only and the hardware and software illustrated may differ from your model.

# Setting up the Phoenix Quad-T

This section describes how to set up the unit.

## Front panel

The front of the unit has the following LEDs:



1. IP address display

2. Status channel LEDs

The status of each LED is as follows:

<b>Device States (all LEDs should be flashing)</b>	
Off	No signal, the source is not streaming.
Flashing blue	Unit is powering on and starting up.
Yellow flashing	Device warning.
Red flashing	Device error.
<b>Channel-Specific States (related to the channel indicated by the status light)</b>	
Solid green	Signal present, the source is streaming.
Solid blue	Signal present, the source is not streaming.
Solid red	Input error, the signal is out of range or incompatible. The source is not streaming.






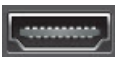



## Rear panel

All of the connections for the unit are on the back of the unit.





**i** All connections to the unit should be connected before powering on the unit.

Callout	Connector	Label	Graphic	Usage
1	Power Cord Connector			Connects the unit to a power source.
2	Sync In Sync Out			For future use.
3	Mini USB	KVM1-4		Optionally, used to interact with the input source that is connected to the related Input connector. One end connects to the device running the source and the other end connects to the corresponding KVM connector (for example, if the device is connected to Input 1, the other end connects to KVM 1).
4	1000BASE-T Ethernet Connector	Network		Connects the unit to the primary network. The yellow LED is an activity LED that blinks when there is Ethernet activity. The green LED is on when a link is established at 1000Mbps. Otherwise it is off.
5	Input	Input 1-4		Connects encoded sources.
6	Pushbutton Power Switch			Powers the unit on and off.
7	Recessed pushbutton	RESET		Resets the Network Settings to DHCP and resets the unit to the default login.  When the unit is resetting, the LEDs flash green.  To reset the unit: <ol style="list-style-type: none"> <li>1. Use the Power button to power off the Quad-T.</li> <li>2. Push and hold the Reset button in; and while continuing to hold the Reset button in, press the Power button to power on the Quad-T.</li> <li>3. Verify the LEDs flash green.</li> <li>4. When complete, login using the default Service account credentials. Refer to <a href="#">Access the Phoenix Quad-T Web Manager</a>, page 11 for the default password.</li> </ol>

# Installing the Phoenix Quad-T

Required accessories:

- ✓ One CAT 5E or CAT-6 Ethernet cable
- ✓ A device with a web browser
- ✓ Up to four HDMI cables
- ✓ Phoenix system
- ✓ Managed network configured to support multicast streaming
- ✓ Power
- ✓ Optionally for reachback control, up to 4 mini USB to USB-A cables



Failure to comply with the following may result in product damage, to ensure proper ventilation for the unit, ensure the wiring does not obstruct the air flow to or from the air vents.

1. Unpack the unit and inspect for damage.	If there is any physical damage to the unit, contact your vendor for further instructions.
2. Using the packing list, verify the contents of the shipment.	Unit and accessory kit: <ul style="list-style-type: none"> <li>• 1 Power cord—applies power to the unit.</li> <li>• 1 USB flash drive—contains the documentation.</li> <li>• 4 Feet—self-adhesive non-skid rounds, applied when unit is not mounted (one strip of four).</li> </ul>
3. Connect sources to Input 1-4.	Connect one end of the HDMI cable to the device and the other end to the source.
4. For reachback control, connect a mouse to each mini USB connector.	Connect a mouse to each mini USB if you want to use reachback for the related encoded source (for example, KVM1 is used for the source connected to Input 1).
5. Connect the unit to a network.	Connect an Ethernet cable to the Network connector on the unit and connect the other end to your Gigabit network switch.
6. Power on the unit.	Press the power switch. When ready for use, the IP address of the unit is displayed on the front panel.
7. Connect a browser-enabled device (for example, a laptop) to the same network as the unit.	Contact your system administrator if needed.
8. Connect to the Phoenix Quad-T Web Manager.	Open a browser and browse to the IP address displayed on the front panel. The login page for the web manager is displayed.
9. Log in.	Refer to <a href="#">Access the Phoenix Quad-T Web Manager</a> , page 11 for the default credentials.

# Administering the Phoenix Quad-T

To administer Phoenix Quad-T, the administrator uses an embedded web interface that is protected.



Changes to the settings should not be made when the unit is being used. Some changes require a system restart.

## Phoenix Quad-T Web Manager

The Web Manager is used by administrators to configure the system. It can be accessed using a Web browser.

## Supported browsers

The following Web browsers are supported:



Only the latest of each version is supported.

- Internet Explorer, version 9.x, 10.x, and 11.x.
- Firefox
- Chrome
- Safari
- Microsoft Edge

## Access the Phoenix Quad-T Web Manager

Connect to the Quad-T Manager using a browser-capable device.



The Web Manager only supports one user at any time.

1. From your browser-capable device, connect to the same network and subnet as the Phoenix Quad-T unit.
2. From a browser, type the Phoenix Quad-T unit's IP address in your web browser address field. The login page is displayed:

3. In the **User name** field, type *user name* (default: **service**).
4. In the **Password** field, type the password associated with the default user name:

Manufacturing Date	Default Password
1/1/2020 or later	Serial Number found on the label on the bottom of the unit. For example: Ser : 041B11
2019 and earlier	Service



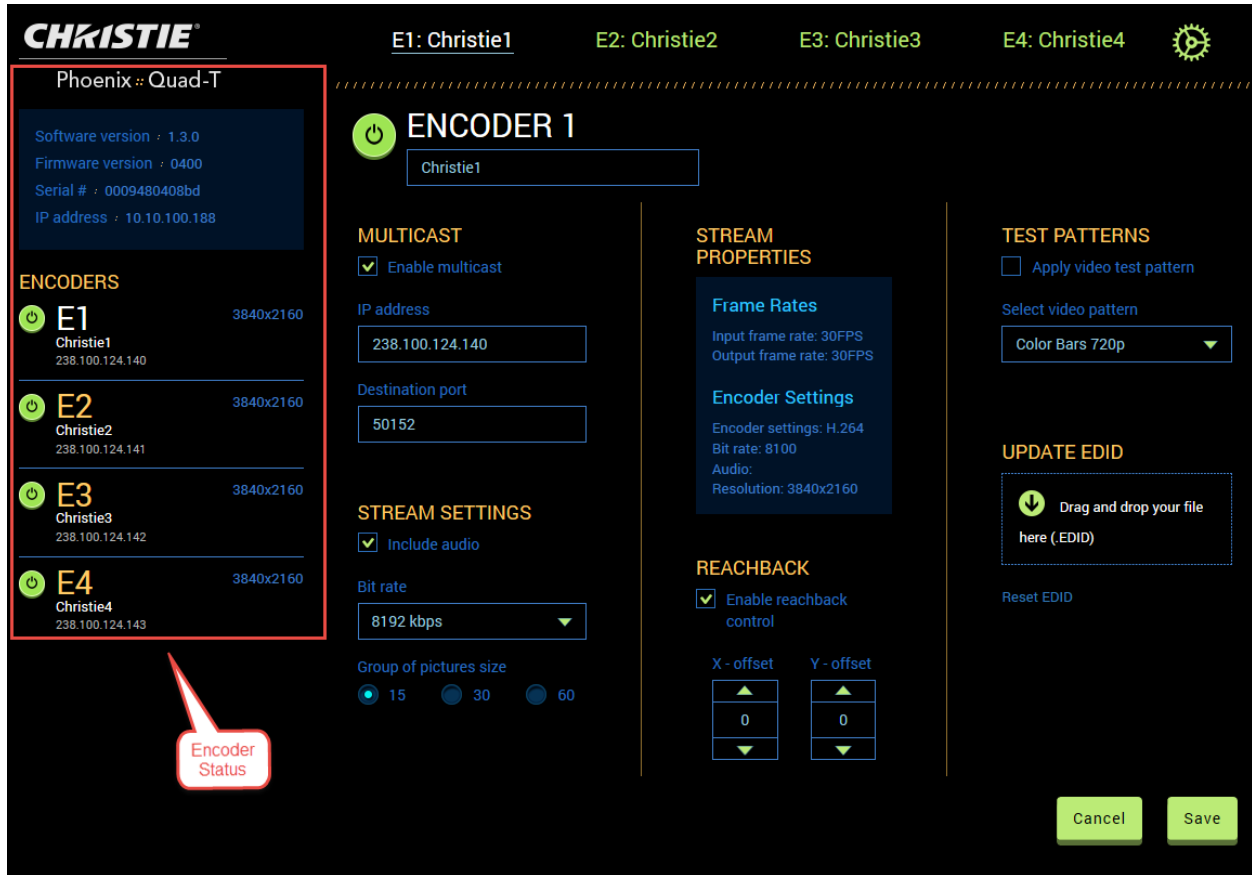
Passwords are case sensitive.

Passwords are masked. To display the password after you type it, click and hold the mouse on the Show Password icon (👁) in the Password field. This icon is not supported in all browsers.



For security purposes, change the default password. Refer to [Changing the default password](#), page 14.

5. Select the desired language.
6. Click **Login**.  
When you are logged in, the Phoenix Quad-T Web Manager Home page is displayed.



The encoder status pane is displayed on the left side of the page. It displays the current status of each encoded source including the detected resolution and the power on or off status. The main pane displays the details for the selected encoded source.

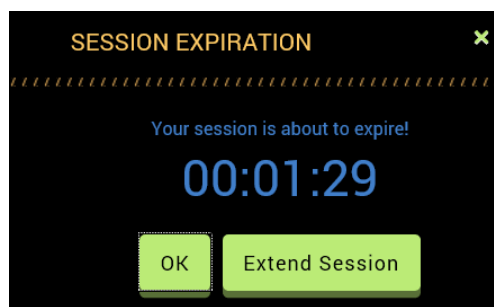
## Session expiration

The web session times out after 20 minutes of user inactivity. An alert dialog is displayed two minutes prior to the session expiration. To extend your session, click **Extend Session**; or click **OK** to return to the login page.

Once the timer expires (it reaches 00:00), a dialog is displayed to notify you the session expired.




Any unsaved changes will be lost if the session expires before saving your changes.




## Changing the default password

For security purposes, change the password for the default user account. Refer to [Access the Phoenix Quad-T Web Manager](#), page 11 for the default password.

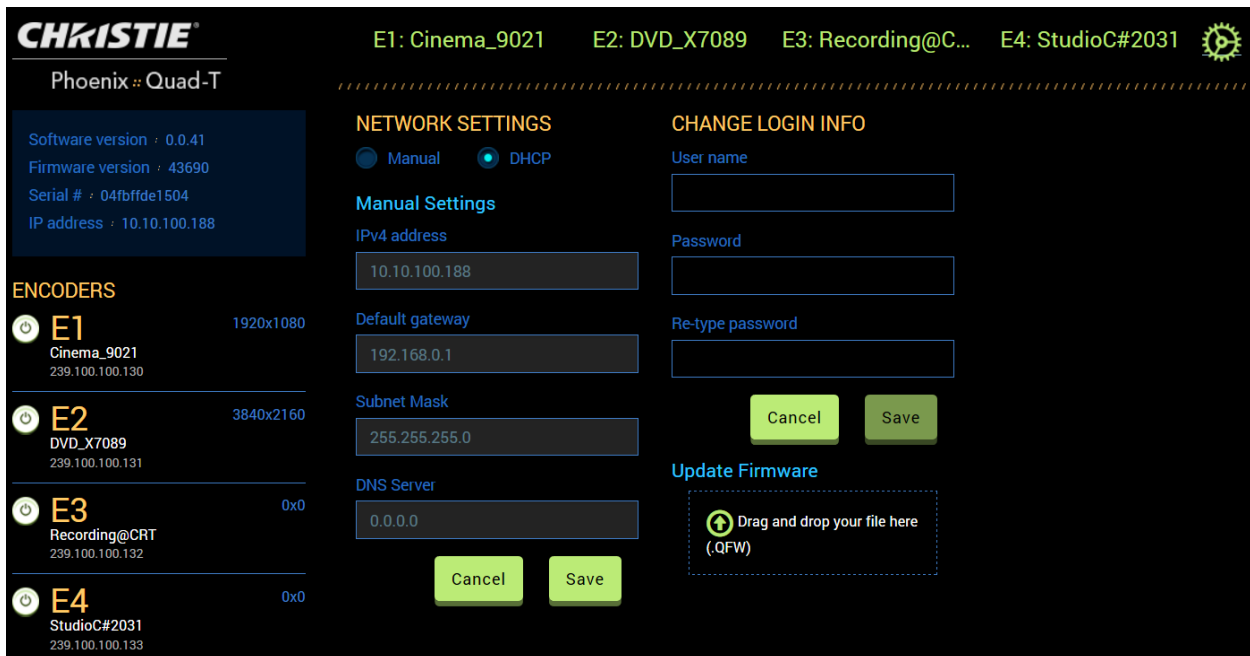
1. To change the password, click .
2. In the **CHANGE LOGIN INFO** pane, type your user name and new password. The password must have a minimum of six characters.

## Changing global settings

To update the global settings for the unit, log in and then click .

Settings include:

- Viewing or changing Network settings
- Updating software and firmware
- Changing the password



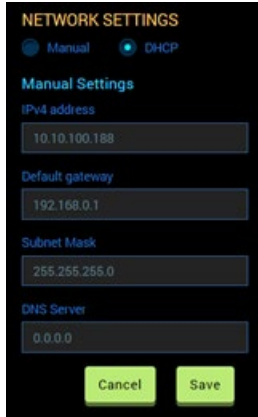
The screenshot shows the CHKISTIE Phoenix Quad-T web interface. At the top, it displays the unit ID: E1: Cinema\_9021, E2: DVD\_X7089, E3: Recording@C..., and E4: StudioC#2031. The interface is divided into several sections:

- Software Information:** Software version: 0.0.41, Firmware version: 43690, Serial #: 04fbffde1504, IP address: 10.10.100.188.
- ENCODERS:** A list of four encoders:
  - E1: Cinema\_9021 (1920x1080, 239.100.100.130)
  - E2: DVD\_X7089 (3840x2160, 239.100.100.131)
  - E3: Recording@CRT (0x0, 239.100.100.132)
  - E4: StudioC#2031 (0x0, 239.100.100.133)
- NETWORK SETTINGS:**
  - Mode: Manual (selected) / DHCP
  - Manual Settings:
    - IPv4 address: 10.10.100.188
    - Default gateway: 192.168.0.1
    - Subnet Mask: 255.255.255.0
    - DNS Server: 0.0.0.0
  - Buttons: Cancel, Save
- CHANGE LOGIN INFO:**
  - Fields: User name, Password, Re-type password
  - Buttons: Cancel, Save
- Update Firmware:**
  - Instruction: Drag and drop your file here (.QFW)

## Configuring network settings

To view or set network settings for the unit:


1. From the **NETWORK SETTINGS** pane, set the details using the information in the following table.

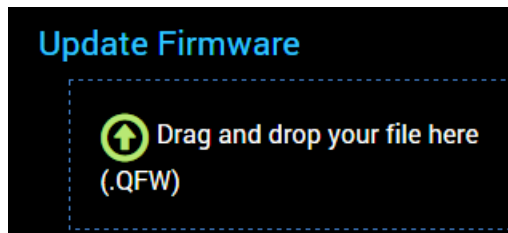


2. Click **Save**.

Setting	Description
Manual	Enables input of the LAN (Local Area Network) settings. ⓘ A Default Gateway value is required for Phoenix Quad-T systems when using Manual settings.
DHCP	Uses DHCP (Dynamic Host Configuration Protocol) to obtain the LAN settings automatically.  If a DHCP server is unavailable and an IP address has not been set on the Quad-T in Network Setting, the factory default address (192.168.1.100) is assigned. ⓘ To avoid changes to the IP addresses, use static IP addresses.
IPv4 address	Sets the IP (Internet Protocol) address for the unit (version 4). The valid format is: nnn.nnn.nnn.nnn.  The factory default is set to DHCP. If DHCP is not available, the factory default IP address is 192.168.1.100. ⓘ The IP addresses need to be updated from the default setting for every Phoenix Quad-T in a system to prevent addressing conflicts.
Default Gateway	Sets Phoenix Quad-T on the network that the network software uses when an IP address does not match any other routes in the routing table.
Subnet Mask	Sets the subnet mask for the network address.
DNS Server	Sets the DNS server for resolving domain names.

### Updating the firmware

1. Download the .qfw file from the Christie web site with the latest firmware.
2. From the **Update Firmware** area on Settings page, drag and drop a .qfw file onto the Firmware box, or click  to browse for the desired .qfw file.



3. When prompted, select **Yes** to initiate the update. The system is updated and restarted.

## Configuring the encoders

There is a page for each encoded input (E1-E4). The numbers relate to the Input connectors on the back of the unit.


Input 1	Input 2	Input 3	Input 4
E1	E2	E3	E4

1. Select the desired encoder tab.





2. Configure the details using the information in the following table.
3. Click **Save**.

<b>Encoder 1-4 Settings</b>	
	Powers the encoder source on/off.
Name	User-defined name for the encoder source.
<b>MULTICAST</b>	
Enable Multicast	Enables multicast protocol for the encode source. To use this setting, the network switch must support multicasting. If not selected, Unicast is used. The valid format for an IPv4 address is: nnn.nnn.nnn.nnn.
IP address	Sets the IP (Internet Protocol version 4) address for the unit. This address is the destination for the multicast content. The valid format is: nnn.nnn.nnn.nnn.  Ensure that multicast addresses used for the encoder channel on a single Quad-T unit or multiple Quad-T units do not conflict with each other.  ① The factory default is set to DHCP. If DHCP is not available, the factory default IP address is 192.168.1.100.
Destination Port	The Network Application Port used for the UDP streaming traffic from a Quad-T encoder channel.
<b>STREAM SETTINGS</b>	
Include audio	Turns audio off or on for the source connected to the related Input connector.

Bitrate	Bitrate per second for encoding the source connected to the Input connector. Options are (in kbps): 4096, 8192, 10240, 12288 (default), 16384, and 20480.
Group of pictures size	The quantity of frames to be shown per group, where each group starts with a reference frame that creates a full image refresh. Shorter Group of Pictures (GOP) lengths can lead to quicker recovery from corrupted video at the cost of less efficient overall compression. The following options are available: 15 - every 15 frames (twice per second at 30 fps) 30 (default) - every 30 frames (once per second at 30 fps) 60 - every 60 frames (once every two seconds at 30 fps)

**STREAM PROPERTIES**

Frame Rates	Input frame rate	Displays the video frame rate at the Input connector.
	Output frame rate	Displays the frame rate for the encoded source.
Encoder settings	Displays the video format.	
	Bit rate	Displays the transmit bit rate of the encoded video source.
	Audio	Displays the audio format.
	Resolution	Displays the resolution (height x width) of the encoding source in pixels.


**REACHBACK**

Enable reachback control	Optionally, enables reachback control for the related KVM connector.	
	X offset	Specifies the mouse position when using more than one display. Sets the X (horizontal) offset coordinate of the display attached.
	Y offset	Specifies the mouse position when using more than one display. Sets the Y (vertical) offset coordinate of the display attached.

**TEST PATTERNS**

Apply video test pattern	Enables test patterns, and then select the pattern from the drop down.
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**UPDATE EDID**

Drag & Drop EDID file here	Drag and drop an .EDID file or click  to browse for the desired .EDID file.
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# Periodic maintenance

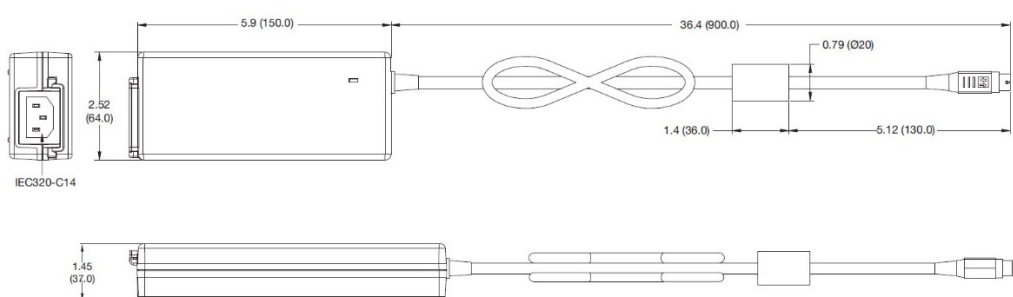
This section contains information on tasks that you should perform to maintain your unit.



The Phoenix Quad-T does not have any user-serviceable internal parts. For issues not covered in this document, or if you are having problems with your unit, contact the support center (<http://www.christiedigital.com/en-us/product-support/support-offices/Pages/default.aspx>)

Task	Schedule
Update software.	When advised
Remove any accumulated dust at the rear panel slots while the unit fans are running.	Periodically

# Specifications

Specification	Values
Outputs	1 x Gigabit Ethernet
Inputs	<ul style="list-style-type: none"> <li>4 x HDMI: Support for up to 3840 x 2160 pixels per input (wired connection)</li> <li>HDMI audio inputs</li> <li>Support for HDCP (High-bandwidth Digital Content Protection)</li> <li>Four mini USB ports for reachback</li> </ul>
Network	<ul style="list-style-type: none"> <li>Gigabit Ethernet 1000 Mbps (1Gbps) Ethernet, RJ45 connector</li> <li>Support for IGMP v3, IPv4, RTSP, RTP/UDP, MPEG2-TS/UDP, HTTP, HTTPS, TCP/IP</li> </ul>
Encoding	<ul style="list-style-type: none"> <li>Four high definition HDMI inputs to H.264 video streams @ 30 FPS</li> <li>Four stereo audio streams from HDMI encoded to AAC-LC</li> <li>Support for variable and constant bitrate</li> <li>The following standard resolutions are supported for sources that are encoded by a Quad-T: 640x350, 640x400, 640x480, 768x576, 800x480, 800x600, 960x540, 1024x576, 1024x600, 1024x768, 1152x768, 1152x864, 1280x720, 1280x768, 1280x800, 1280x854, 1280x960, 1280x1024, 1280x1600, 1344x756, 1344x1008, 1366x1024, 1440x240, 1440x1050, 1440x900, 1440x960, 1440x1080, 1600x900, 1600x1200, 1680x1050, 1920x540, 1920x1080, 1920x1200, and 3840x2160.</li> <li>The following resolutions require a special EDID file supplied from Christie: 720x400, 720x480, 720x486, 720x576, 848x480, 852x480, 1360x768, 1360x1024, 1366x768, and 1400x1050. Quad-T can support custom resolution settings in many cases. Contact Christie support for additional details.</li> </ul>
Physical Specifications	<ul style="list-style-type: none"> <li>Size: Unit (W x H x D): 8" x 1.9" x 8.9" (204 x 49 x 225mm) Power Supply: see figure below for details (dimensions shown in inches (mm))</li> </ul>  <ul style="list-style-type: none"> <li>Weight: unit: 1.55 lbs (0.70 kg); power supply: 1.5 lbs (0.68 kg); product weight: 4.1 lbs (1.86kg) with power supply</li> <li>Shipping dimensions: 14 ¼ x 12 1/8 x 4 (outside dimensions in inches)</li> </ul>
Power	<ul style="list-style-type: none"> <li>Voltage range: 100-240VAC (auto-ranging power supply)</li> <li>Current for the power supply: 7A @ 85W</li> <li>Power consumption: 60W (max)</li> <li>The unit is rated at 12V @2.5A max.</li> </ul>
Regulatory	<ul style="list-style-type: none"> <li>CAN/CSA C22.2 No. 60950-1</li> <li>UL 60950-1</li> <li>IEC 60950-1</li> <li>FCC CFR47, Part 15, Subpart B, Class A</li> <li>CAN ICES-3 (A) / NMB-3 (A)</li> </ul>

	<ul style="list-style-type: none"> <li>• CISPR 22/EN 55022, Class A</li> <li>• IEC 61000-3-2/EN61000-3-2</li> <li>• CISPR 24/EN55024</li> <li>• IEC 61000-3-3/EN61000-3-3</li> <li>• IEC 61000-4-2/EN61000-4-2</li> <li>• IEC 61000-4-3/EN61000-4-3</li> <li>• IEC 61000-4-4/EN61000-4-4</li> <li>• IEC 61000-4-5/EN61000-4-5</li> <li>• IEC 61000-4-6/EN61000-4-6</li> <li>• IEC 61000-4-8/EN61000-4-8</li> <li>• IEC 61000-4-11/EN61000-4-11</li> <li>• EU Directive (2011/65/EU) on the restriction of the uses of certain hazardous substances (RoHS) in electrical and electronic equipment and the applicable official amendment(s).</li> <li>• EU Regulation (EC) No. 1907/2006 on the registration, evaluation, authorization and restriction of chemicals (REACH) and the applicable official amendment(s).</li> <li>• EU Directive (2012/19/EU) on waste and electrical and electronic equipment (WEEE) and the applicable official amendment(s).</li> <li>• China Ministry of Information Industry Order No.39 (02/2006) on the control of pollution caused by electronic information products, hazardous substances concentration limits (SJ/T11363-2006), and the applicable product marking requirements (SJ/T11364-2006).</li> <li>• Certification marks: check with Christie for latest update.</li> </ul>
Manufacturing location	Designed, manufactured, and tested by Christie Digital Systems Inc. at our facility in Phoenix, Arizona, USA.
Warranty	Limited two years parts and labor.

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