

# Crestron **DTT-15V3**

## DualTouch™ Technology Touchpanel

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### Operations Guide



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# DualTouch™ Technology Touchpanel: DTT-15V3

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## Introduction

The DTT-15V3 is a 15" touchpanel designed for use with the UPX-2 Universal Presentation System to support all of the control capabilities of a Crestron touchpanel, plus pen-based annotation and computer-based multimedia presentation.

## Features and Functions

- User interface for the Crestron UPX-2 Universal Presentation Processor
- 15" LCD color touchscreen display
- 1024 x 768 XGA resolution
- DualTouch Technology - delivers a combination of touchpanel control and pen-based annotation
- Ergonomic Design - allows more natural drawing capability than ordinary touchpanels
- Completely flat bezel for enhanced drawing comfort
- Battery-free cordless annotation pen
- VGA pass-thru and (2) USB mouse/keyboard ports
- Includes tilt stand, pen slot and tether, interface cables, and power supply
- Conforms to VESA 75 mounting standard

## *DualTouch™ Technology*

This Crestron® feature combines fingertip operated touchpanel control with a precision drawing tablet to produce an amazingly flexible presentation solution. Crestron DualTouch Technology touchpanels employ a combination of analog resistive touch sensing for fingertip-operated touchpanel control and Wacom® Penabled® technology for precise drawing and annotation.

DualTouch Technology allows the presenter to touch the screen with a fingertip to control AV and lighting functions, and then annotate freely over video and graphic presentation sources using the wireless pen provided. Switching between modes is automatic and instantaneous, disabling the analog membrane whenever the pen is sensed allowing the palm of the hand to be rested naturally on the screen while drawing.

### Enhanced Ergonomics

The DTT-15V3 features a completely flat bezel for drawing comfort and reduced overall size. The adjustable stand allows the touchpanel to be tilted between 17 and 73 degrees. The pressure-sensitive pen is both cordless and battery-free for performance and reliability.

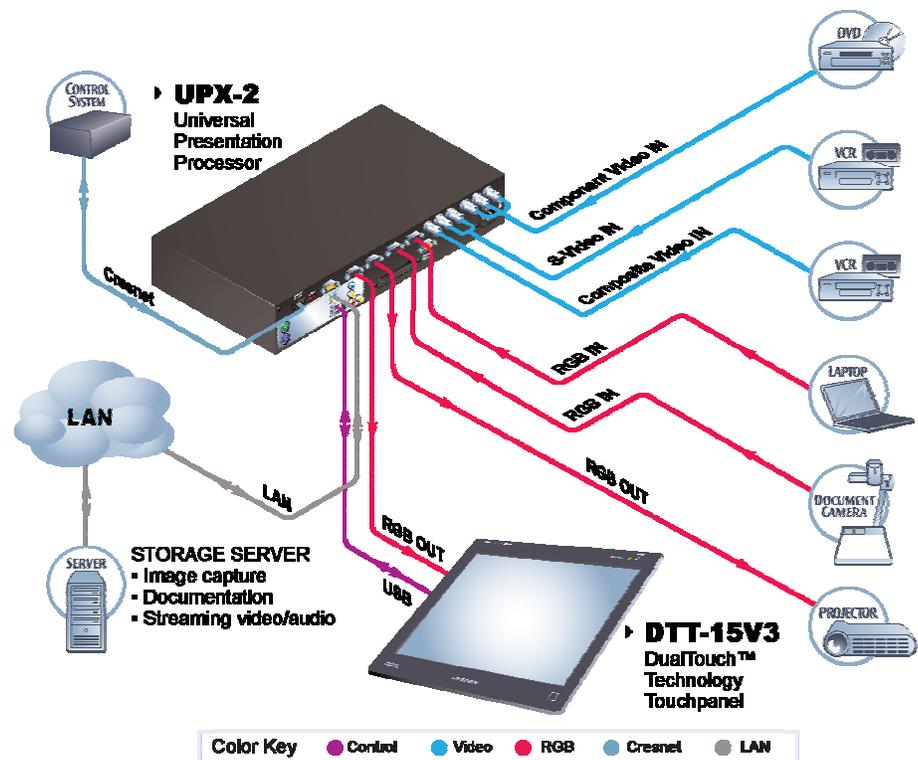
### Versatile Installation Features

The DTT-15V3 ships complete with tilt stand, cables, and power supply. Different installation options are available using any third-party VESA 75 compliant mounting solution. An integral security slot enables securing the touchpanel using a Kensington® compatible security cable (not included). A rear-panel storage slot and 24-inch tether are included to keep the annotation pen at hand. USB ports are provided on either side of the panel to support the connection of a mouse and keyboard (not included), and a VGA pass-thru port enables the connection of a secondary monitor display.

### Applications

The following diagram shows a DTT-15V3 in a lecture hall application.

*DTT-15V3 in a Lecture Hall Application*



## Specifications

Specifications for the DTT-15V3 are listed in the following table.

### *DTT-15V3 Specifications*

SPECIFICATION	DETAILS
Touchscreen Display	
Display	TFT active matrix color LCD
Screen Size	15 inch (38.1 cm) diagonal
Resolution	1024 x 768 pixels (XGA)
Color Depth	16.2 million (18 bit + FRC)
Contrast Ratio	500:1
Brightness	250 nits (cd/m <sup>2</sup> )
Viewing Angle	± 70 degrees horizontal, -60 to +65 degrees vertical
Touchscreen	Resistive Membrane
Pen/Tablet	
Pen Switches	Side rocker switch; Assigned in UPX-2 Setup menu; For more information, refer to the latest version of the UPX-2 Operations Guide (Doc. 6276) which can be downloaded from the Crestron website ( <a href="http://www.crestron.com/manuals">www.crestron.com/manuals</a> ).
LCD Active Area	11.98 in x 8.99 in (30.4 x 22.8 cm)
Resolution	508 line per inch (200 lines per cm)
Accuracy	±1 pixel
Reading Height	0.2 in (0.5 cm) maximum
Report Rate	100 points per second maximum
Pressure Levels	512
Reading Technology	Electro-magnetic resonance
Power Requirements	
Touchpanel	40 watts (3.33 Amps) @ 12 Volts DC
External Power Supply (included)	100-240 Volts AC, 50-60 Hz
Enclosure	
Construction	High impact injection-molded case with adjustable tabletop tilt stand; VESA 75mm mounting compliant; Kensington security slot
Screen Tilt	Adjustable 17° to 73° from horizontal
Minimum 2-Series Control System Update File <sup>1, 2, 3</sup>	UPX-2-1GB v2.09.00.25 UPX-2-MSO-2007 v2.09.00.26
Environmental	
Temperature	41° to 95°F (5° to 35°C).
Humidity	20% to 80% RH (non-condensing)
Dimensions (including stand)	
Height	11.49 in (29.19 cm) maximum
Width	13.55 in (34.43 cm)
Depth	12.23 in (31.06 cm) maximum
Weight	10.25 lbs (4.7 kg) – including stand

1. The latest software versions can be obtained from the Crestron website. Refer to the NOTE following these footnotes.
2. Crestron 2-Series control systems include the AV2 and PRO2. Consult the latest Crestron Product Catalog for a complete list of 2-Series control systems.

- When loading VisionTools Pro-e files or firmware through the RS-232 port of the control system, be sure that the baud rate is at 38400 (Cresnet speed) or lower. Otherwise, Toolbox may post the "Transfer Failed" message.

**NOTE:** Crestron software and any files on the website are for authorized Crestron dealers and Crestron Authorized Independent Programmers (CAIP) only. New users may be required to register to obtain access to certain areas of the site (including the FTP site).

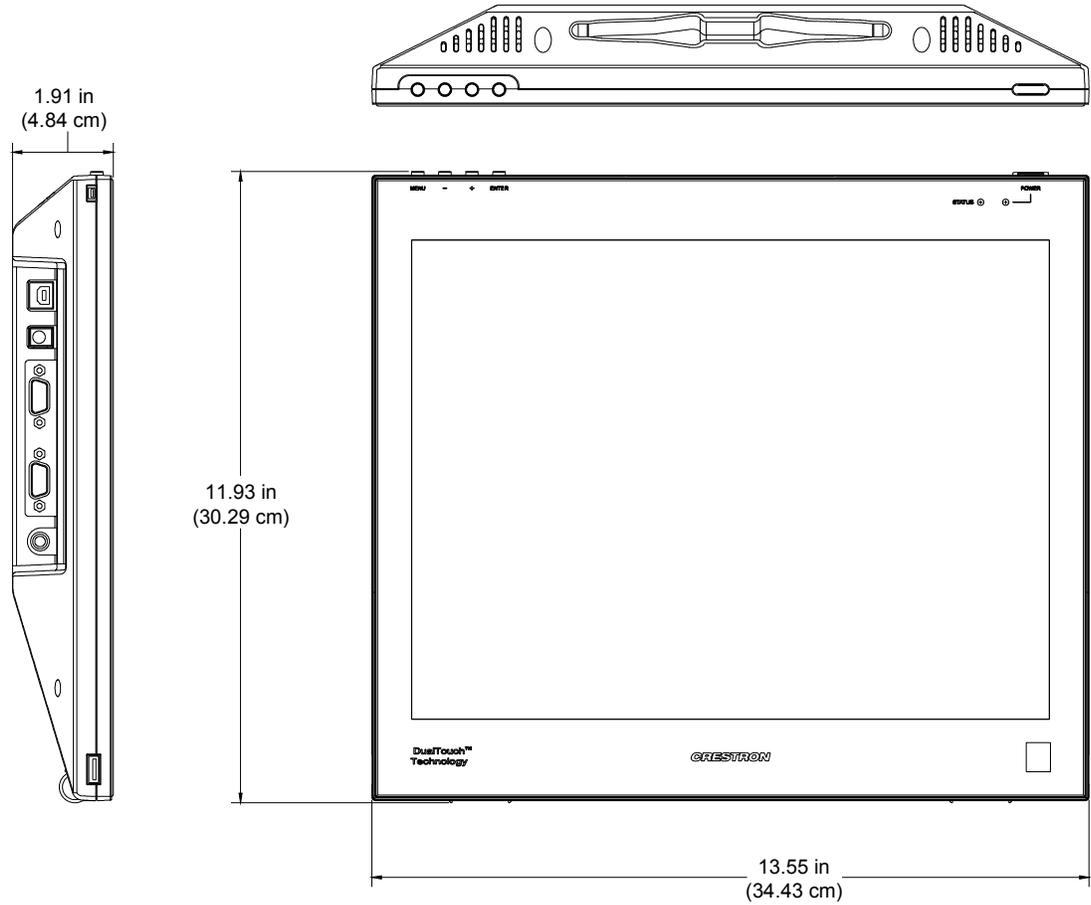
## Physical Description

This section provides information on the connections, controls and indicators available on your DTT-15V3.

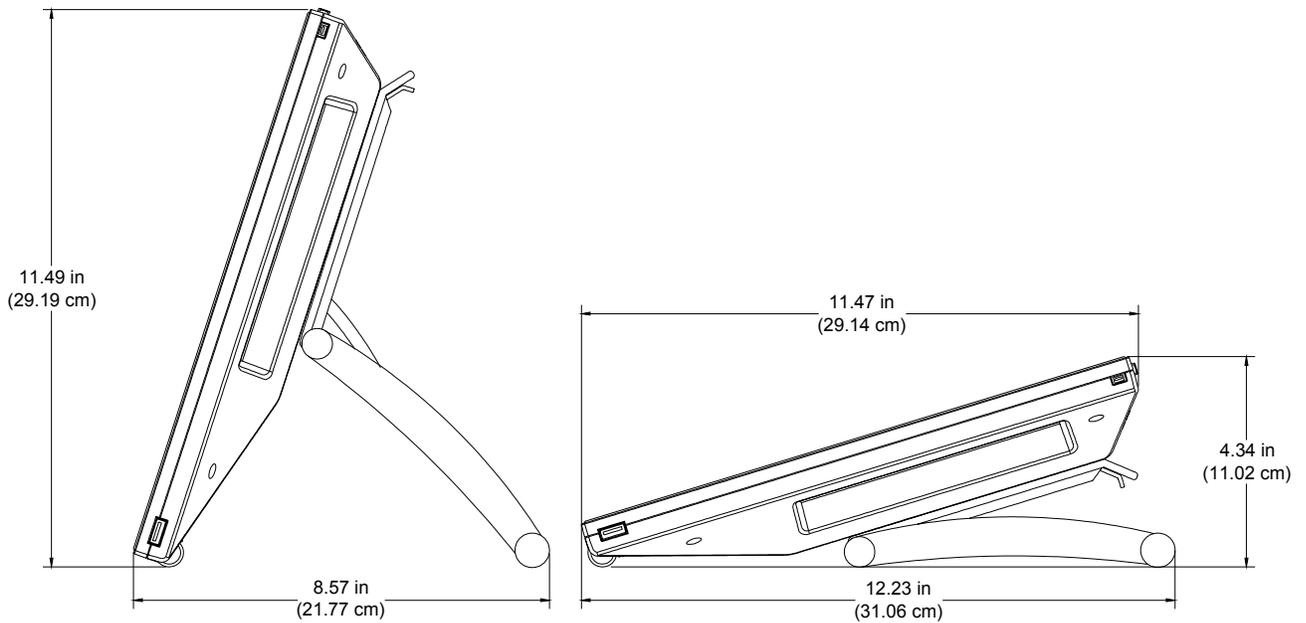
### *DTT-15V3 Physical View*



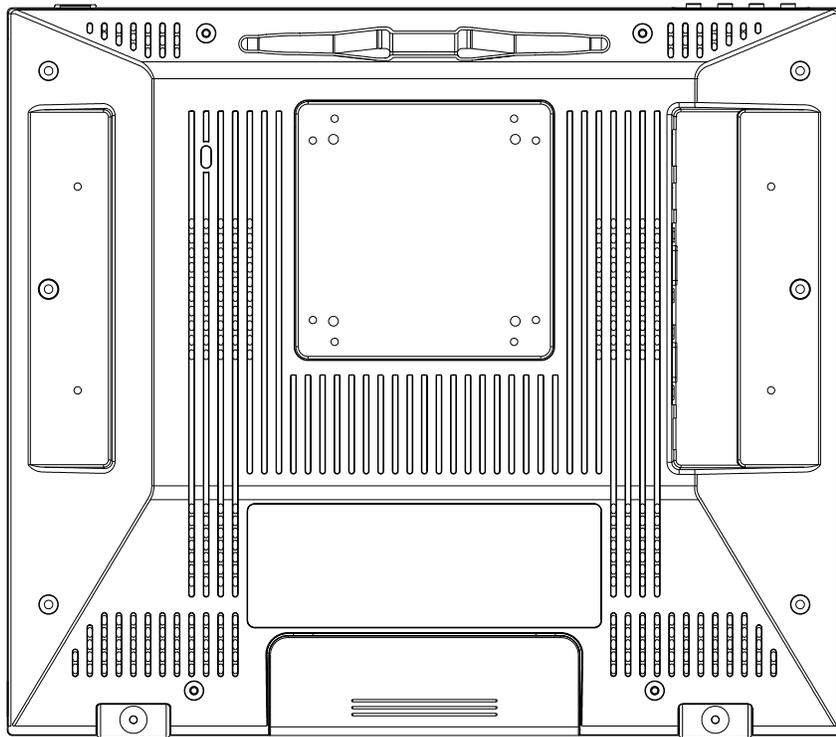
*DTT-15V3 Physical View*



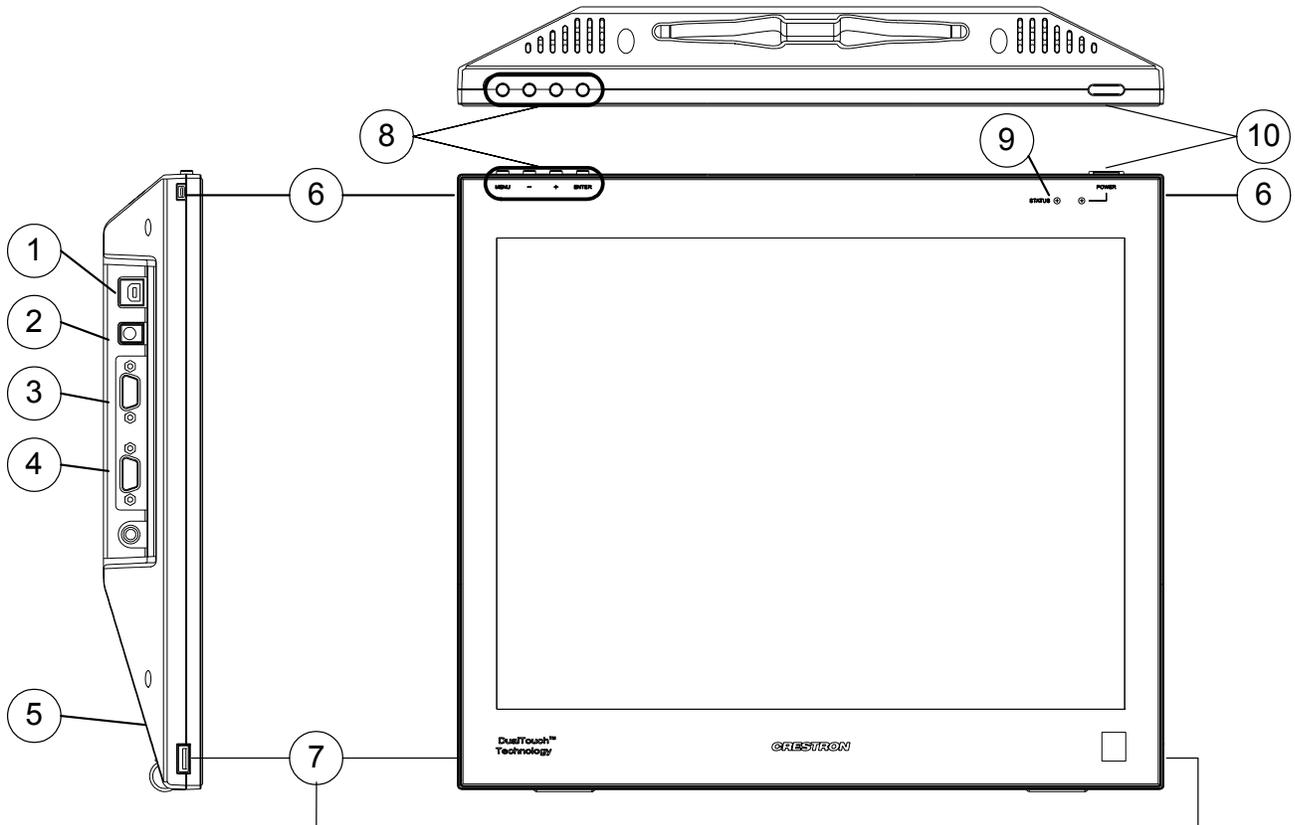
*DTT-15V3 Physical View – Right Side (Maximum and Minimum Height)*



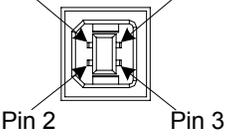
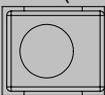
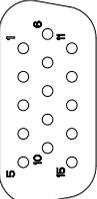
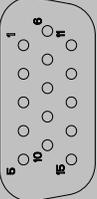
*DTT-15V3 Physical View – Rear (Stand Not Shown)*



*DTT-15V3 Connectors, Controls & Indicators*

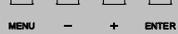


*Connectors, Controls & Indicators*

#	CONNECTORS, CONTROLS & INDICATORS	DESCRIPTION										
1	<p>USB</p> 	<p>(1) USB B female; USB 2.0 port; Connects to any USB port on UPX-2 using 6 ft (2.0 m) USB cable (included)</p> <table border="1"> <thead> <tr> <th>PIN</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>+5 VDC</td> </tr> <tr> <td>2</td> <td>Data -</td> </tr> <tr> <td>3</td> <td>Data +</td> </tr> <tr> <td>4</td> <td>Ground</td> </tr> </tbody> </table>	PIN	DESCRIPTION	1	+5 VDC	2	Data -	3	Data +	4	Ground
PIN	DESCRIPTION											
1	+5 VDC											
2	Data -											
3	Data +											
4	Ground											
2	<p>DC IN (12V)</p> 	<p>(1) DC power jack (power supply included)</p>										
3	<p>ANALOG RGB OUT</p> 	<p>(1) DB15HD female; RGB (VGA) video loop-thru; Passes RGB input through to an additional display device</p> <ul style="list-style-type: none"> <li>Pin 1 Red Video</li> <li>Pin 2 Green Video</li> <li>Pin 3 Blue Video</li> <li>Pin 4 Reserved</li> <li>Pin 5 Ground</li> <li>Pin 6 Red Ground</li> <li>Pin 7 Green Ground</li> <li>Pin 8 Blue Ground</li> <li>Pin 9 No Connect</li> <li>Pin 10 Ground</li> <li>Pin 11 No Connect</li> <li>Pin 12 No Connect</li> <li>Pin 13 Horizontal Sync</li> <li>Pin 14 Vertical Sync</li> <li>Pin 15 No Connect</li> </ul>										
4	<p>ANALOG RGB IN</p> 	<p>(1) DB15HD female; RGB (VGA) video input; Connects to RGB Output A of UPX-2 using 6 ft (2.0 m) DB15HD VGA cable (included)</p> <ul style="list-style-type: none"> <li>Pin 1 Red Video</li> <li>Pin 2 Green Video</li> <li>Pin 3 Blue Video</li> <li>Pin 4 Reserved</li> <li>Pin 5 Ground</li> <li>Pin 6 Red Ground</li> <li>Pin 7 Green Ground</li> <li>Pin 8 Blue Ground</li> <li>Pin 9 No Connect</li> <li>Pin 10 Ground</li> <li>Pin 11 No Connect</li> <li>Pin 12 Monitor Sense</li> <li>Pin 13 Horizontal Sync</li> <li>Pin 14 Vertical Sync</li> <li>Pin 15 Monitor Sense Clock</li> </ul>										

*(Continued on following page)*

*Connectors, Controls & Indicators (Continued)*

#	CONNECTORS, CONTROLS & INDICATORS	DESCRIPTION
5	PEN TRAY	Located on the bottom front edge of the touchpanel; Provides a convenient resting place for the pen. When the display stand is set to its lowest position, place your fingers beneath the tray and slide it out.
6	COMMUNICATIONS PORT 	(2) Communications port for system diagnostics; <b>CAUTION:</b> Do not connect any devices to this port.
7	USB MOUSE/KEYBOARD 	(2) USB Type A female USB 2.0 hub ports for mouse/keyboard (not included) Device Power: 500 mA maximum per port
8	MENU, -, +, ENTER 	(4) Pushbuttons to navigate onscreen setup menu
9	STATUS LED	(1) Blue LED indicates sensing of annotation pen
10	POWER BUTTON & LED	(1) Pushbutton turns unit on/off (1) Dual-color LED; Blue indicates power is on with a valid RGB input signal connected; turns amber when RGB signal is disconnected

## Industry Compliance

As of the date of manufacture, the DTT-15V3 has been tested and found to comply with specifications for CE marking and standards per EMC and Radiocommunications Compliance Labelling.



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**NOTE:** This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and receiver.
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio/TV technician for help.
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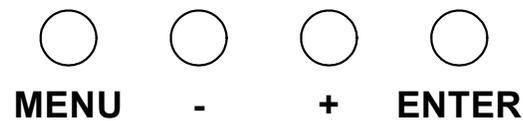
## Setup

### Configuring the Touchpanel

**NOTE:** The only connection required to configure the touchpanel is power. Refer to “Hardware Hookup” on page 17 for details.

The touchpanel display can be configured using the four setup buttons on the top of the DTT-15V3. Power is required to configure the touchpanel. Refer to “Hardware Hookup” on page 17 for information on connecting power.

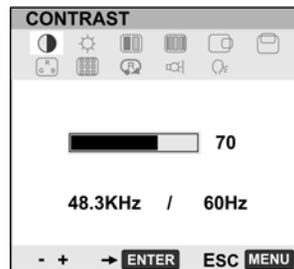
#### Onscreen Setup Buttons



The **Menu** button provides access to the following 11 adjustment menus. Use the Selection (-)/(+) buttons to select a menu or advance forward or backward through the 11 menus. Press the **Enter** button to open and save the selected menu.

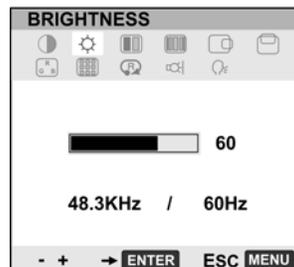
1. Contrast – Use the selection (-)/(+) buttons to decrease or increase contrast, press the **Enter** button to save.

#### Contrast Control



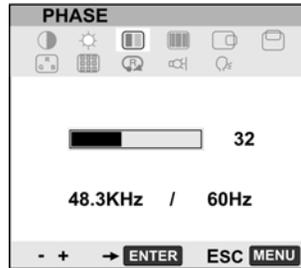
2. Brightness – Use the (-)/(+) buttons to decrease or increase brightness, press the **Enter** button to save.

#### Brightness Control



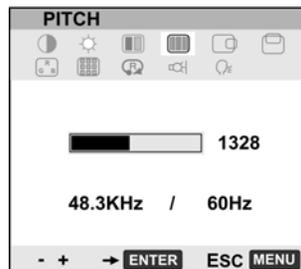
- Phase – Use the (-)/(+) buttons to manually reduce horizontal distortion lines. The **Reset** option  is used for automatic adjustment. Press **Enter** to save.

#### *Phase Control*



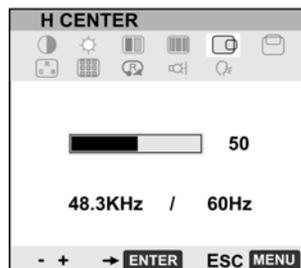
- Pitch – Use the (-)/(+) buttons to manually reduce vertical distortion lines. The **Reset** option  is used for automatic adjustment. Press **Enter** to save.

#### *Pitch Control*



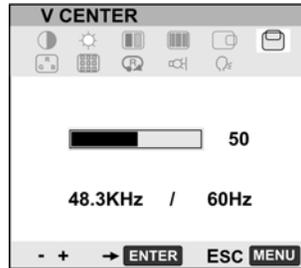
- Horizontal Center – Use the (-)/(+) buttons to manually move the image left or right. The **Reset** option  is used for automatic adjustment. Press **Enter** to save.

#### *Horizontal Center Control*



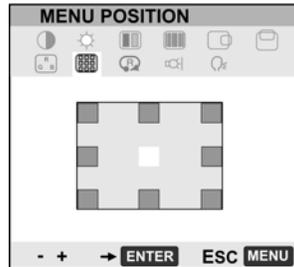
6. Vertical Center – Use the (-)/(+) buttons to manually move the image down or up. The **Reset** option  is used for automatic adjustment. Press **Enter** to save.

*Vertical Center Control*



7. Menu Position – Use the (-)/(+) buttons to move the menu to one of the available nine positions. Press **Enter** to save. Default is center position.

*Menu Position Control*



8. Reset – Use **AUTO ADJUST** to reset only the image parameters (menus 1 through 6). Use **RECALL** to reset all screen options to the factory default\*. Select the exit icon to leave this menu without making any changes.

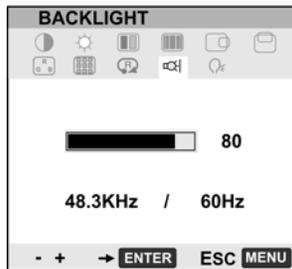
*Auto Adjust Control*



\* Defaults for contrast, brightness, phase, pitch, and center (horizontal and vertical) depend on the UPX-2's Display Output settings. For more information, refer to the latest version of the UPX-2 Operations Guide.

9. Backlight – Use the (-)/(+) buttons to decrease or increase the backlight brightness. Press **Enter** to save. Default is 80.

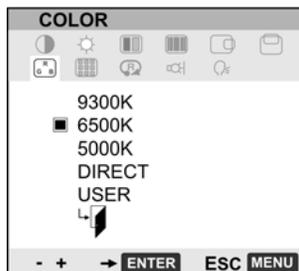
**Backlight Control**



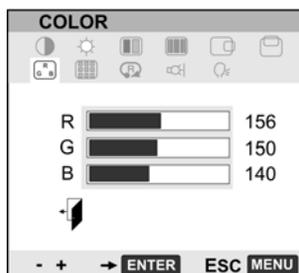
10. Color – Provides a color temperature selection of 9300K, 6500K, 5000K, DIRECT (no adjustment to the incoming signal) and a USER option to use the independent RGB adjustment.

Click the  icon to allow an independent adjustment of red, green and blue. Press **Enter** to save. Defaults are shown as follows.

**Color Control**



**RGB Level Control**




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**NOTE:** Manual changes invalidate the standard profile settings.

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11. Language – Use the (-)/(+) buttons to select a language for the display adjustment menus. Press **Enter** to save. Default is English.

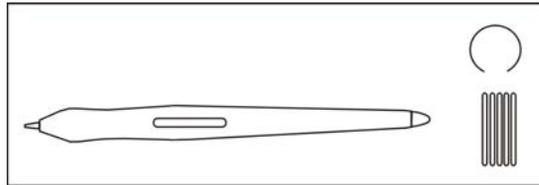
#### *Language Control*



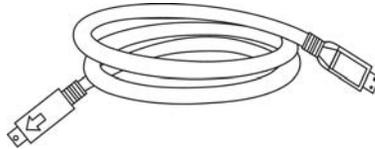
## Supplied Equipment

The DTT-15V3 is shipped with the following accessories.

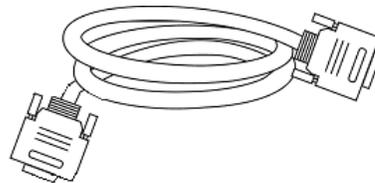
- (1) Pen (with five tip replacements)



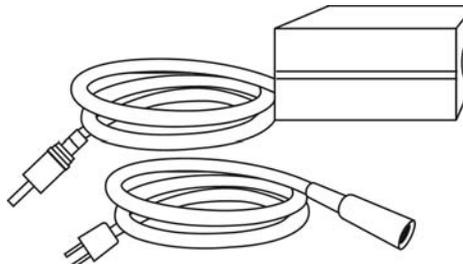
- (1) USB Cable; Approximately 6-feet long.



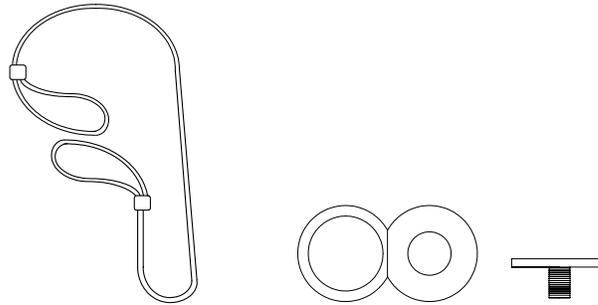
- (1) VGA to VGA Cable; Approximately 6-feet long.



- (1) Power Supply and Power Cable



- (1) Pen Tether and Tether Hardware



## Installation

### VESA Mount

The DTT-15V3 may be removed from the adjustable stand and remounted to a VESA® conforming mount arm or stand. The Video Electronics Standards Association (VESA) is an international non-profit corporation that supports and sets industry-wide interface standards for the PC, workstation, and computing environments. VESA's Flat Display Mounting Interface (FDMI) Standard defines a set of mounting interface standards for the complete range of flat displays with viewing areas ranging in size from 102 mm (4") to 2286 mm (90") diagonal. FDMI supports a broad range of mounting options including desktop, wall, overhead, mobile and specialty mounting applications. Corresponding standards describe the interface mounting pads, wall mount brackets and other mounting apparatus to be provided by mounting equipment manufacturers. The complete standard is available on the VESA website. The DTT-15V3 is VESA MIS-D, 100/75, C compliant, and is equipped with a 75 x 75 mm mounting hole pattern.

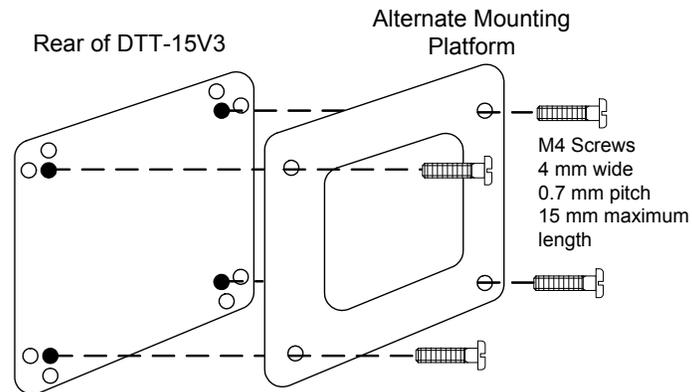
Follow these instructions for removing the adjustable stand and attaching the DTT-15V3 to an alternative VESA conforming mount.

1. Turn off the system and disconnect all cables.
2. Protect the screen surface by placing the DTT-15V3 facedown on a soft cloth.
3. Remove the four screws that secure the stand.
4. Use four M4 regular screws, no longer than 15 mm, 7 mm wide with a 0.7 mm pitch to attach the new mounting.

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**NOTE:** Screws longer than 15 mm could damage the DTT-15V3.

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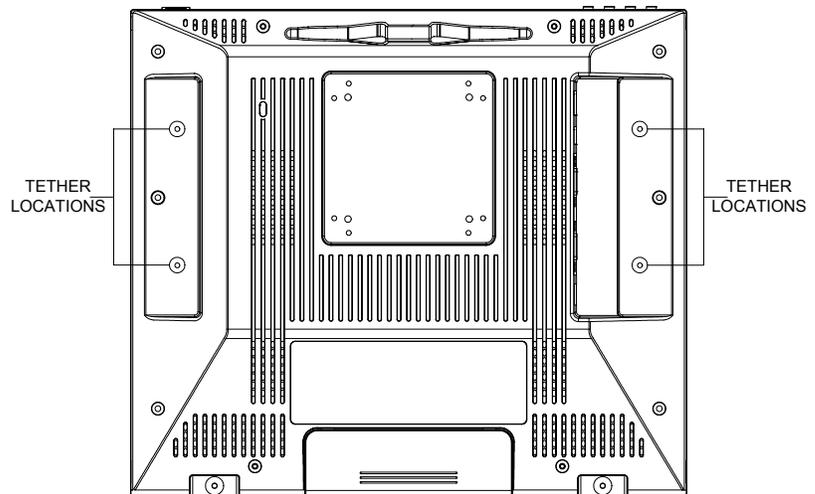
*VESA Mounting*

**CAUTION:** When attaching the DTT-15V3 to an alternate mounting platform, be sure to follow all instructions supplied by the manufacturer.

**Install Pen Tether**

The pen can be tethered to the DTT-15V3 using the supplied tether and tether hardware.

- Use a flat-head screwdriver to mount the tether hardware to one of four tether locations on the back of the DTT-15V3 as shown in the following diagram.

*Tether Locations*

- Loop the tether through the eyelet on the tether hardware and the eyelet on the stylus.

**Kensington Security Slot**

The Kensington Security Slot is an industry standard that gives customers the best option for the physical security of computer and electronic equipment. The security slot is located on the rear of the DTT-15V3 as shown in the Hardware Connections diagram on page 18. To prevent unauthorized removal, you can attach one end of a Kensington security cable to this slot and the other end to an immovable object. Refer to the Kensington website for additional details (<http://www.kensington.com>).

## Hardware Hookup

Refer to the following diagram and complete the connections as specified. Ensure that the UPX-2 and the DTT-15V3 are both powered down before beginning.

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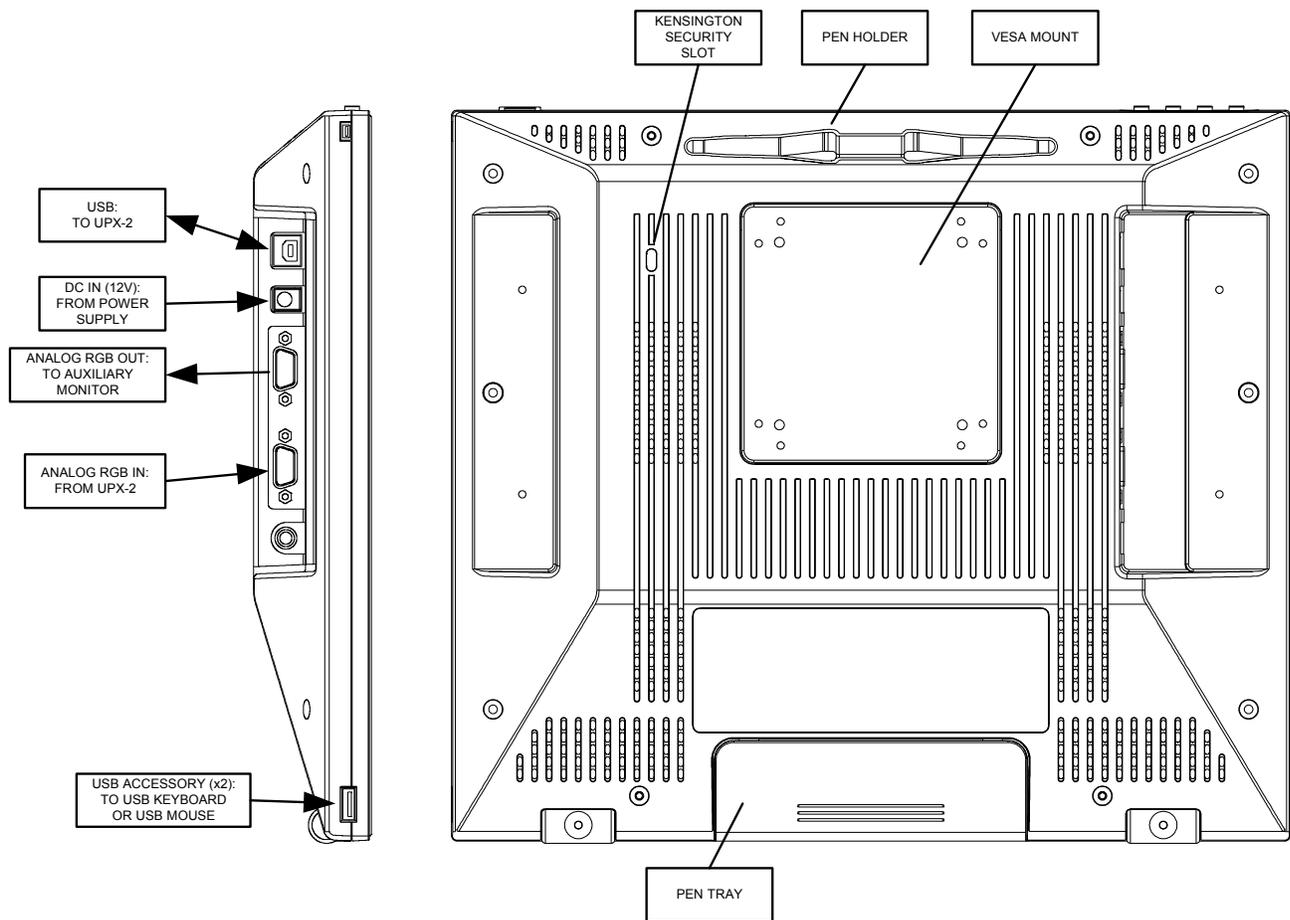
**CAUTION:** To avoid damage to the DTT-15V3 or to your video card, never connect or disconnect the video or power cable while the DTT-15V3 or the UPX-2 are powered up.

**NOTE:** The USB cable may be extended using up to four 16-foot active extensions. Each extension cable must contain a hub (repeater) to regenerate the USB signal (maximum of 64 feet). For longer extensions, Crestron has tested and approved IOGEAR USB Extender model GUCE50, which allows up to 150 feet over CAT5.

**NOTE:** Using high quality cable, the VGA cable may be extended up to a maximum of about 10 meters (32.8 ft.) for analog VGA at 1024 x 768. If you need a longer run, add VGA extenders or VGA distribution amplifiers.

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1. Connect the RGB/VGA cable, linking the UPX-2 RGB OUTPUT A connector to the DTT-15V3 RGB VIDEO IN connector.
2. Connect the USB cable, linking the UPX-2 USB port to the DTT-15V3 USB port.
3. Connect the power supply line cord to an AC outlet and the power supply adaptor.
4. Plug the power adaptor cord into the DTT-15V3 DC IN port.
5. Power up the DTT-15V3. The power indicator should light up amber.
6. Power up the UPX-2. When a video signal is applied to the DTT-15V3, the power indicator will turn blue.

*Hardware Connections for the DTT-15V3*


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**CAUTION:** Do not apply excessive pressure to the touchscreen display during handling. Doing so can crack the screen and damage the touchpanel.

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## Recommended Cleaning

### *Display Casing or Pen*

To clean the pen display casing or the pen, use a soft, damp cloth; you can also dampen the cloth using a very mild soap diluted with water. Do not use paint thinner, benzene, alcohol, or other solvents to clean the unit casing or pen.

### *Display Screen*

To clean the display screen, use an anti-static cloth or a slightly damp cloth. When cleaning, apply only a light amount of pressure to the display screen and do not make the surface wet. Do not use detergent to clean the display screen; this may damage the coating on the screen. Please note that damage of this kind is not covered by the manufacturer's warranty.

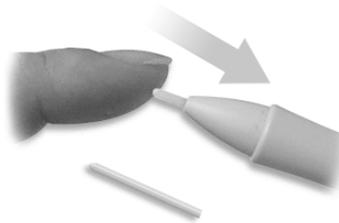
## Replacing Pen Tips

The pen comes with five extra tips. The pen tip will wear with normal use. Worn tips feel more drag when you draw, or it seems as if you are scratching the overlay with your pen. It can be easily replaced with one of the extra pen tips. Replacement pens and a 5-pack of replacement pen nibs are available from the Wacom website (<http://wacomdirect.wacom.com>).

1. Grasp the worn tip with a pair of needle-nose pliers, tweezers, or similar instrument and pull out the tip.



2. Firmly slide the new tip (square end first) into the barrel of the pen and press in until it stops.



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**NOTE:** A badly worn pen tip will damage the screen surface.

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## Using the Pen

While working with the DTT-15V3, you can rest your hand on the surface of the display screen, just as if you were drawing on a sheet of paper. The pen is activated as soon as it enters proximity, about 0.2 inches (5 mm) above the surface. This allows you to position the screen cursor before touching the pen tip to the surface.

When the pen tip contacts the surface of the DTT-15V3, the tip switch is activated. The tip switch simulates clicking and holding a mouse button. Raising the tip above the surface of the DTT-15V3 is the same as releasing a mouse button.

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**NOTE:** Place the pen in the pen holder or pen tray when not in use.

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## Problem Solving

### Troubleshooting

The following table provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

#### *DTT-15V3 Troubleshooting*

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
DTT-15V3 does not function.	The DTT-15V3 is not receiving power (The Power LED is off).	Verify cable connections and power to unit.
	The DTT-15V3 is receiving power. (The Power LED is on.)	Check contrast, brightness and back-light controls. Refer to pages 10 and 13.
Multiple images displayed.	The video cable is over-extended.	Use the video cable without extensions or use a higher quality cable with VGA extenders.
White color appears off-white.	The colors are not set up correctly.	Return to factory settings or adjust the colors as necessary.
VGA display ripples or shows a moiré pattern.	The pitch and/or phase is misadjusted.	Adjust pitch and/or phase. Refer to page 11.
The message: "NO SIGNAL GO TO POWER SAVE" is displayed.	The system may be in power management mode.	Touch the pen tip to the screen, move the mouse connected to the UPX-2, or press any key on the keyboard connected to the UPX-2.
	The video cable connection may be loose or broken.	Check the video cable connection.
The message: "CABLE DISCONNECT GO TO POWER SAVE" is displayed.	The video cable connection may be loose or broken.	Check the video cable connection.
The message: "OUT OF RANGE" is displayed.	Input signal frequency is incorrect or not compatible.	Vertical frequency refresh rate is a value between 45 and 75 Hz (for XGA, vertical refresh rate is 45 to 70 Hz).
	The resolution is set too high.	Set the resolution to a maximum of 1024 x 768.
The message: "Please set the refresh rate at 70Hz or less" is displayed.	The refresh rate is set too high for XGA.	Set the refresh rate for XGA to a value between 45 and 70 Hz.

## Reference Documents

The latest version of all documents mentioned within the guide can be obtained from the Crestron website (<http://www.crestron.com/manuals>). This link will provide a list of product manuals arranged in alphabetical order by model number.

### *List of Related Reference Documents*

DOCUMENT TITLE
UPX-2 Universal Presentation Processor

## Further Inquiries

If you cannot locate specific information or have questions after reviewing this guide, please take advantage of Crestron's award winning customer service team by calling Crestron at 1-888-CRESTRON [1-888-273-7876].

You can also log onto the online help section of the Crestron website ([www.crestron.com/onlinehelp](http://www.crestron.com/onlinehelp)) to ask questions about Crestron products. First-time users will need to establish a user account to fully benefit from all available features.

## Future Updates

As Crestron improves functions, adds new features and extends the capabilities of the DTT-15V3, additional information may be made available as manual updates. These updates are solely electronic and serve as intermediary supplements prior to the release of a complete technical documentation revision.

Check the Crestron website periodically for manual update availability and its relevance. Updates are identified as an “Addendum” in the Download column.

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## Return and Warranty Policies

### Merchandise Returns / Repair Service

1. No merchandise may be returned for credit, exchange or service without prior authorization from CRESTRON. To obtain warranty service for CRESTRON products, contact an authorized CRESTRON dealer. Only authorized CRESTRON dealers may contact the factory and request an RMA (Return Merchandise Authorization) number. Enclose a note specifying the nature of the problem, name and phone number of contact person, RMA number and return address.
2. Products may be returned for credit, exchange or service with a CRESTRON Return Merchandise Authorization (RMA) number. Authorized returns must be shipped freight prepaid to CRESTRON, 6 Volvo Drive, Rockleigh, N.J. or its authorized subsidiaries, with RMA number clearly marked on the outside of all cartons. Shipments arriving freight collect or without an RMA number shall be subject to refusal. CRESTRON reserves the right in its sole and absolute discretion to charge a 15% restocking fee plus shipping costs on any products returned with an RMA.
3. Return freight charges following repair of items under warranty shall be paid by CRESTRON, shipping by standard ground carrier. In the event repairs are found to be non-warranty, return freight costs shall be paid by the purchaser.

### CRESTRON Limited Warranty

CRESTRON ELECTRONICS, Inc. warrants its products to be free from manufacturing defects in materials and workmanship under normal use for a period of three (3) years from the date of purchase from CRESTRON, with the following exceptions: disk drives and any other moving or rotating mechanical parts, pan/tilt heads and power supplies are covered for a period of one (1) year; touchscreen display and overlay components are covered for 90 days; batteries and incandescent lamps are not covered.

This warranty extends to products purchased directly from CRESTRON or an authorized CRESTRON dealer. Purchasers should inquire of the dealer regarding the nature and extent of the dealer's warranty, if any.

CRESTRON shall not be liable to honor the terms of this warranty if the product has been used in any application other than that for which it was intended or if it has been subjected to misuse, accidental damage, modification or improper installation procedures. Furthermore, this warranty does not cover any product that has had the serial number altered, defaced or removed.

This warranty shall be the sole and exclusive remedy to the original purchaser. In no event shall CRESTRON be liable for incidental or consequential damages of any kind (property or economic damages inclusive) arising from the sale or use of this equipment. CRESTRON is not liable for any claim made by a third party or made by the purchaser for a third party.

CRESTRON shall, at its option, repair or replace any product found defective, without charge for parts or labor. Repaired or replaced equipment and parts supplied under this warranty shall be covered only by the unexpired portion of the warranty.

Except as expressly set forth in this warranty, CRESTRON makes no other warranties, expressed or implied, nor authorizes any other party to offer any warranty, including any implied warranties of merchantability or fitness for a particular purpose. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty. This warranty statement supersedes all previous warranties.

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**Operations Guide – DOC. 6632B**  
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