

Crestron **V12 & V15**
V-Panel™ 12" & 15" Touchpanel Displays
Operations Guide



This document was prepared and written by the Technical Documentation department at:



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Regulatory Compliance

As of the date of manufacture, the V12 and V15 have been tested and found to comply with specifications for CE marking and standards per EMC and Radiocommunications Compliance Labelling.



Federal Communications Commission (FCC) Compliance Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following 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.

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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 separation between the equipment and the 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

Industry Canada (IC) Compliance Statement

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

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V-Panel™ 12" and 15" Touchpanel Displays: V12 & V15

Introduction

Crestron® V-Panel™ touchpanels deliver a whole new level of style and function in a fresh new design offering exceptional versatility and the latest Crestron digital touchpanel technology. Sleek and beautiful, our V-Panel Touchpanel Displays are perfectly at home sitting on a contemporary table or desktop but are equally suited for all kinds of custom installations, thanks to integral VESA mount compatibility. Complete connectivity is provided through a single cable connection that allows for long wire runs while affording an extremely clean appearance. V-Panel is also the world's only touchpanel control solution to support HDCP for complete compatibility with today's digital sources.

The V12 or V15 V-Panel display, together with a DGE Digital Graphics Engine (sold separately), delivers an elegant and powerful touchpanel control solution featuring blazingly fast performance with dual window HD video*, streaming multimedia, IP intercom and Web browsing. The panels' brilliant 12" SVGA (V12) and 15" widescreen WXGA (V15) displays produce stunning 24-bit color graphics and video. Adjust AV and lighting settings, surf the Internet and browse your music and movie libraries with a natural sweep of the finger using new DNav gestures.

For simplicity within this guide, the term "V12/15" is used except where noted.

Features and Functions

- Sleek, beautiful, versatile
- 12" (V12) and 15" widescreen (V15) touchscreen display
- 800 x 600 SVGA (V12) and 1280 x 768 WXGA (V15) resolution
- High performance graphics and video (V12)
- High definition graphics and video* (V15)
- Industry's only HDCP-ready touchpanel controller
- VESA compatible mounting affords endless install options
- Tabletop tilt model features clean, modern design

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* Support for dual video windows, high definition, RGB/VGA, HDMI, HDCP and annotation requires a DGE-2 Digital Graphics Engine (sold separately). A DGE-1 (sold separately) supports a single video window displaying standard definition analog via a BNC input connection.

Features and Functions

(Continued)

- Wall mount model installs flush in shallow spaces
- Contemporary appearance blends in anywhere
- Significantly reduced wiring via DigitalMedia™ technology
- Digital Graphics Engine (DGE) (sold separately) installs up to 200 feet (61 meters) away*
- Also works with the DVPHD Digital Video Processor (sold separately)
- Built-in microphone and speakers
- USB keyboard/mouse port
- Cool, quiet fanless design
- Available in white or black

Sleek, Versatile Design

Our V-Panels have been designed with appearance and versatility in mind. By separating the graphics engine hardware from the display, V-Panel allows the visible touchpanel element to be built smaller, lighter, cooler and quieter. In fact, the V12/15 display is less than 2 inches (51 millimeters) deep and contains no cooling fans, so it is compact and silent. It can be mounted virtually anywhere using a third-party VESA 75 compliant mounting bracket or stand. Pre-configured tabletop tilt models (V12-TILT and V15-TILT) are offered, each supplied with its own ultra stylish, smooth tilt base to deliver a sleek looking, low profile control solution for desktops, counters and other level surfaces. Wall mount models (V12-WALL and V15-WALL) are also offered, affording the same V-Panel style and function in a thoroughly modern, yet unimposing, flush mount design.

Digital Graphics Engine

For every V-Panel application, a DGE Digital Graphics Engine (sold separately) is required. The DGE gets installed away from the touchpanel, typically at the central equipment location, dramatically simplifying its connection to the head end AV sources, switchers and control network. A choice of DGEs is offered, allowing V-Panel to fit a range of applications and budgets. A single DigitalMedia™ (DM) cable* connects the V12/15 to the DGE over a wiring distance of up to 200 feet (61 meters), affording great installation flexibility while minimizing cost and complexity.

Touchpanel Control

Crestron touchpanels offer an ideal user interface for multimedia presentation, home automation and much more, providing a wide open canvas for the creation of custom control screens tailored to the needs of the end user. Touchpanels do away with piles of remote controls, cryptic control panels and cluttered wall switches, simultaneously expanding and simplifying control over a broad range of complex devices and systems.

* For wiring between the V-Panel and DGE, use DM-CBL DigitalMedia cable, CresCAT®D or quality CAT5e/CAT6 cable. Do NOT use low skew cable. That maximum allowable cable length is 200 feet (61 meters) for DM-CBL, 150 feet (46 meters) for others. In addition, the V12 and V15 models include (1) V-CBL-T3 three foot (~0.9 meter) V-Cable and V-IMCW interface module and the V12-TILT and V15-TILT models include (1) V-CBL-T15 15 foot (~4.6 meter) V-Cable and V-IMCW wall mount interface module. The V12-WALL and V15-WALL models include no cable or interface modules.

Embedded PC

In combination with a DGE graphics engine, the V12/15 delivers embedded PC functionality with built-in Windows Media® Player and RealPlayer®, Internet Explorer, Adobe® Acrobat® Reader and Microsoft® Office document viewers. While simultaneously controlling the home, boardroom or lecture hall, the V12/15 and DGE provide everything needed for enjoying online music and movies, viewing Web pages and accessing most types of digital media without necessitating a separate computer. In addition, VNC Viewer support delivers enhanced cross platform interaction with computers over the network or Internet, allowing remote access and control of desktop applications to unleash all kinds of new presentation and system integration possibilities.

HD Video and RGB Display*

The V12/15 can simultaneously display up to two fully scalable, full motion video windows*, each supporting standard video, HDTV*, and high resolution RGB* signals from external AV and computer sources. All connections are made at the DGE (sold separately) using conventional BNC, HDMI® and VGA type cables*.

HDCP Support*

Industry leading support for HDCP (High-bandwidth Digital Content Protection) ensures seamless compatibility with content protected DVD, Blu-ray Disc™, digital HDTV and multimedia computer sources.

Streaming Video

Streaming video can also be viewed on the V12/15, supporting a variety of formats to enable access to everything from online digital media to live Web security cameras and servers like the Crestron CEN-NVS100 (sold separately).

Speakers and Microphone

Built-in front firing speakers provide clear audio for external AV sources, streaming media and internal PC applications and enable 2-way intercom in combination with the integrated microphone. Customized WAV files can be used to add dimension to the touchscreen graphics with personalized sounds, button feedback and voice prompts.

IP Intercom

V-Panels support both wired and IP intercom. Wired intercom is facilitated through a single CAT5 audio connection to a C2N-IADS30X24 (sold separately) or any other Crestron Home® CAT5 switcher or processor. Crestron IP intercom enables direct panel-to-panel intercom and monitoring right over the LAN without requiring special wiring.

* Support for dual video windows, high definition, RGB/VGA, HDMI, HDCP and annotation requires a DGE-2 Digital Graphics Engine (sold separately). A DGE-1 (sold separately) supports a single video window displaying standard definition analog via a BNC input connection.

Presentation Output

Through an RGB or HDMI connection at the DGE*, the V12/15 screen image can be sent to additional displays, allowing videos, PowerPoint presentations, annotation and other on-screen media to be shared with a live audience. Music and presentation audio is also available for sharing with listeners throughout the home, office or auditorium via digital and analog outputs, providing simple connectivity to Adagio®, DigitalMedia and other audio distribution systems.

MediaMarker™ Annotation

Whether conducting a high level boardroom meeting, training seminar or watching sports in your home theater, annotation helps put the fine point on any presentation. Crestron MediaMarker annotation provides the ability to illustrate your thoughts on the fly, letting you draw and write over high definition video and computer images and sketch out ideas on a whiteboard screen, without leaving the podium or your favorite chair, while other viewers watch on the big screen*.

DVPHD Integration

In addition to the DGE, V-Panel is also compatible with the award winning DVPHD High Definition Digital Video Processor, enabling the display of up to eight simultaneous video windows along with HD touchpanel graphics and annotation. The DVPHD supports high definition video and computer signals from a wide variety of digital and analog sources. Its DVI output connects to the V12/V15 via a DM CAT transmitter or DM switcher, enabling cable runs up to 450 feet (137 meters).

Keyboard/Mouse Extender

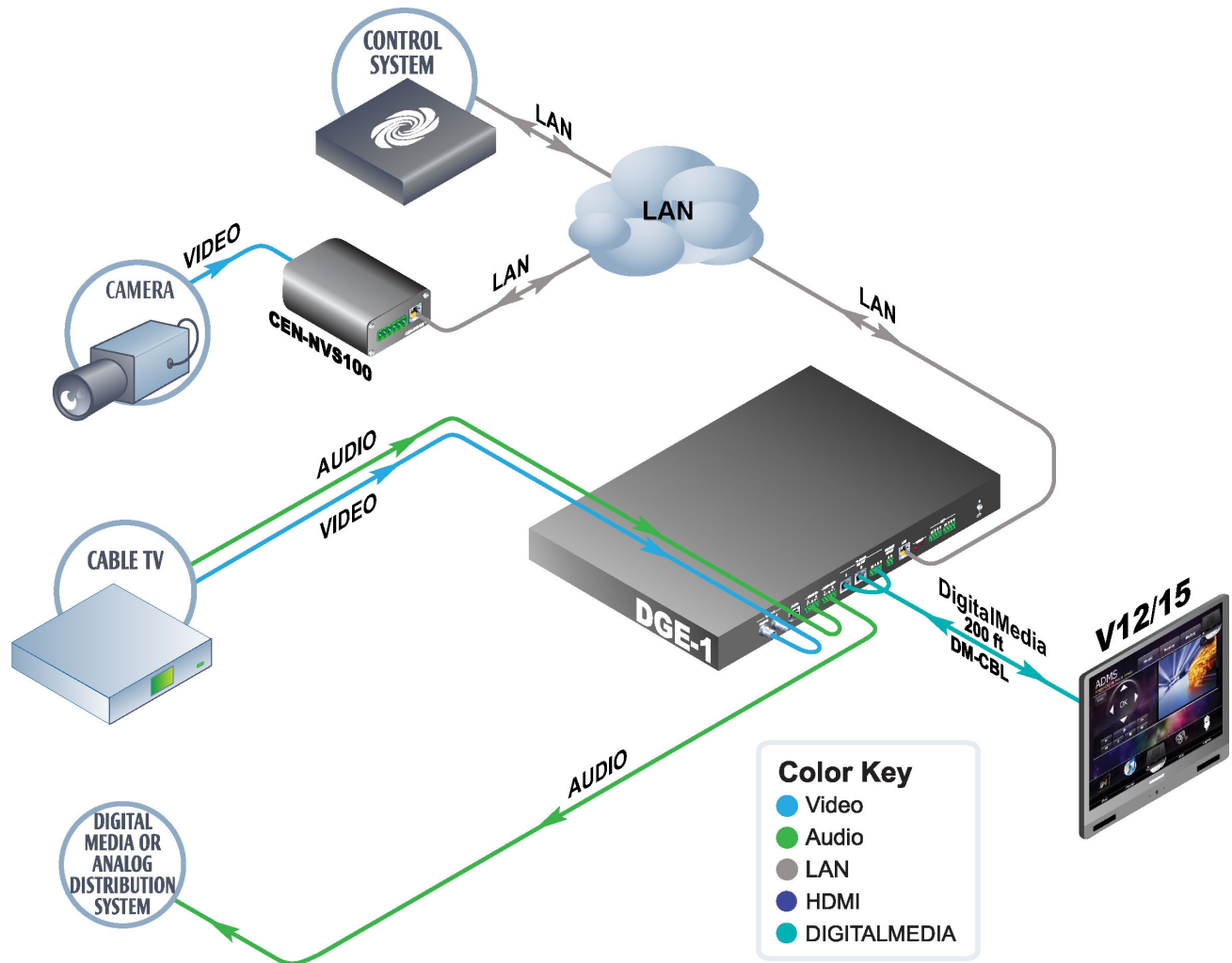
The V12/15 includes a USB port for the connection of a keyboard and mouse, allowing full tactile control of the embedded PC. The same keyboard and mouse signal can also be routed through the system to control remote computers and other USB HID-compliant host devices.

* Support for dual video windows, high definition, RGB/VGA, HDMI, HDCP and annotation requires a DGE-2 Digital Graphics Engine (sold separately). A DGE-1 (sold separately) supports a single video window displaying standard definition analog via a BNC input connection.

Applications

The following diagram shows a V12/15 in a typical application.

V12/15 in a Typical Application



Specifications

Specifications for the V12/15 are listed in the following table.

V12/15 Specifications

SPECIFICATION	DETAILS
Touchscreen Display	
Display Type	TFT Active Matrix Color Display
Size	
V12	12 inch (305 mm) diagonal
V15	15 inch (381 mm) diagonal
Aspect Ratio	
V12	4:3 SVGA
V15	15:9 WXGA
Resolution	
V12	800 x 600 pixels
V15	1280 x 768 pixels
Brightness	
V12	450 nits
V15	470 nits
Contrast	
V12	1000:1
V15	700:1
Color Depth	24-bit, 16.7 million colors
Illumination	Backlit fluorescent
Viewing Angle	
V12	±89° horizontal, ±89° vertical
V15	±85° horizontal, ±85° vertical
Touchscreen	Resistive membrane
Video	Refer to DGE-1 or DGE-2 specification for additional information
Audio	Refer to DGE-1 or DGE-2 specification for additional information
Hardware Features	Built-in microphone and amplified speakers
Amplification	3 Watts x two channels
USB	
Protocols	Supports USB HID (Human Interface Device) class devices
Power Requirements	
DMNet Power Usage	
V12	30 Watts (1.25 Amps @ 24 Volts DC), normally powered from DGE (sold separately) via DMNet connection
V15	42 Watts (1.75 Amps @ 24 Volts DC), normally powered from DGE (sold separately) via DMNet connection

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V12/15 Specifications (Continued)

SPECIFICATION	DETAILS
Environmental	
Temperature	41° to 113° F (5° to 45° C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	
V12	103 BTU/Hr
V15	144 BTU/Hr
Enclosure	
V12	Plastic case, VESA 75 x 75 mm mountable; V12-TILT model includes tabletop tilt stand with 0° to 35° adjustable screen tilt, optional swivel mount sold separately; V12-WALL model includes WMKC-V12 wall mount conversion kit with plastic front bezel, additional mounting accessories sold separately
V15	Plastic case, VESA 75 x 75 mm mountable; V15-TILT model includes tabletop tilt stand with 0° to 35° adjustable screen tilt, optional swivel mount sold separately; V15-WALL model includes WMKC-V15 wall mount conversion kit with plastic front bezel, additional mounting accessories sold separately
Dimensions	
V12	
Height	10.22 in (260 mm)
Width	11.72 in (298 mm)
Depth	1.66 in (42 mm)
V12-TILT	
Height	10.81 in (275 mm) max at 0° tilt
Width	11.72 in (298 mm)
Depth	8.11 in (206 mm)
V12-WALL	
Height	11.54 in (293 mm)
Width	13.04 in (332 mm)
Depth	1.92 in (49 mm)
V15	
Height	11.10 in (282 mm)
Width	15.33 in (390 mm)
Depth	1.85 in (47 mm)
V15-TILT	
Height	11.69 in (297 mm) max at 0° tilt
Width	15.33 in (390 mm)
Depth	8.35 in (212 mm) max at 35° tilt

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V12/15 Specifications (Continued)

SPECIFICATION	DETAILS
Dimensions (Continued)	
V15-WALL	
Height	12.44 in (316 mm)
Width	16.67 in (424 mm)
Depth	2.21 in (57 mm)
Weight	
V12	5.0 lbs (2.3 kg)
V12-TILT	9.0 lbs (4.1 kg)
V12-WALL	8.3 lbs (3.8 kg)
V15	7.5 lbs (3.4 kg)
V15-TILT	11.5 lbs (5.2 kg)
V15-WALL	11.8 lbs (5.4 kg)
Available Models	
V12-B	V-Panel 12" VESA Mount Touchpanel Display, Black
V12-W	V-Panel 12" VESA Mount Touchpanel Display, White
V12-TILT-B	V-Panel 12" Tilt Touchpanel Display, Black
V12-TILT-W	V-Panel 12" Tilt Touchpanel Display, White
V12-WALL-B	V-Panel 12" Wall Mount Touchpanel Display, Black
V12-WALL-W	V-Panel 12" Wall Mount Touchpanel Display, White
V15-B	V-Panel 15" VESA Mount Touchpanel Display, Black
V15-W	V-Panel 15" VESA Mount Touchpanel Display, White
V15-TILT-B	V-Panel 15" Tilt Touchpanel Display, Black
V15-TILT-W	V-Panel 15" Tilt Touchpanel Display, White
V15-WALL-B	V-Panel 15" Wall Mount Touchpanel Display, Black
V15-WALL-W	V-Panel 15" Wall Mount Touchpanel Display, White
Included Accessories	
V12	
V-CBL-T-3	V-Cable Triamese Cable, 3 feet (~0.9 meters) (Included with V12 models only)
V-CBL-T-6	V-Cable Triamese Cable, 6 feet (~1.8 meters) (Included with V12-TILT models only)
V-IMCW	V-Panel Interface Module (Included with V12 and V12-TILT models only)
WMKC-V12	Wall Mount Conversion Kit for V12 (Included with V12-WALL models only)

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V12/15 Specifications (Continued)

SPECIFICATION	DETAILS
Included Accessories (Continued)	
V15	
V-CBL-T-3	V-Cable Triamese Cable, 3 feet (~0.9 meters) (Included with V15 models only)
V-CBL-T-6	V-Cable Triamese Cable, 6 feet (~1.8 meters) (Included with V15-TILT models only)
V-IMCW	V-Panel Interface Module (Included with V15 and V15-TILT models only)
WMKC-V15	Wall Mount Conversion Kit for V12 (Included with V15-WALL models only)
Available Accessories	
BB-V12	Pre-Construction Wall Mount Back Box for V12-WALL
BB-V15	Pre-Construction Wall Mount Back Box for V15-WALL
DGE-1	Digital Graphics Engine
DGE-2	Digital Graphics Engine
DM-CBL	DigitalMedia™ Cable
DM-CONN	DigitalMedia™ Cable Connector
MMK-V12	Mud Ring for BB-V12 or PMK-V12
MMK-V15	Mud Ring for BB-V15 or PMK-V15
PMK-V12	Pre-Construction Wall Mounting Kit for V12-WALL
PMK-V15	Pre-Construction Wall Mounting Kit for V15-WALL
SMK-V15	Swivel Mount Kit for V12-TILT and V15-TILT
V-CBL-T	V-Cable Triamese Cables
V-IMCW	V-Panel Interface Module
WMKC-V12	Wall Mount Conversion Kit for V12
WMKC-V15	Wall Mount Conversion Kit for V15
WMKM-V12	Post-Construction Wall Mounting Kit with Mud Ring for V12-WALL
WMKM-V15	Post-Construction Wall Mounting Kit with Mud Ring for V15-WALL
WMKT-V12	Post-Construction Wall Mounting Kit with Trim Ring for V12-WALL
WMKT-V15	Post-Construction Wall Mounting Kit with Trim Ring for V15-WALL

Physical Description

This section provides information on the connections, controls and indicators available on your V12/15.

V12-TILT Physical View (Shown in Black)



V12-WALL Physical View (Shown in White)

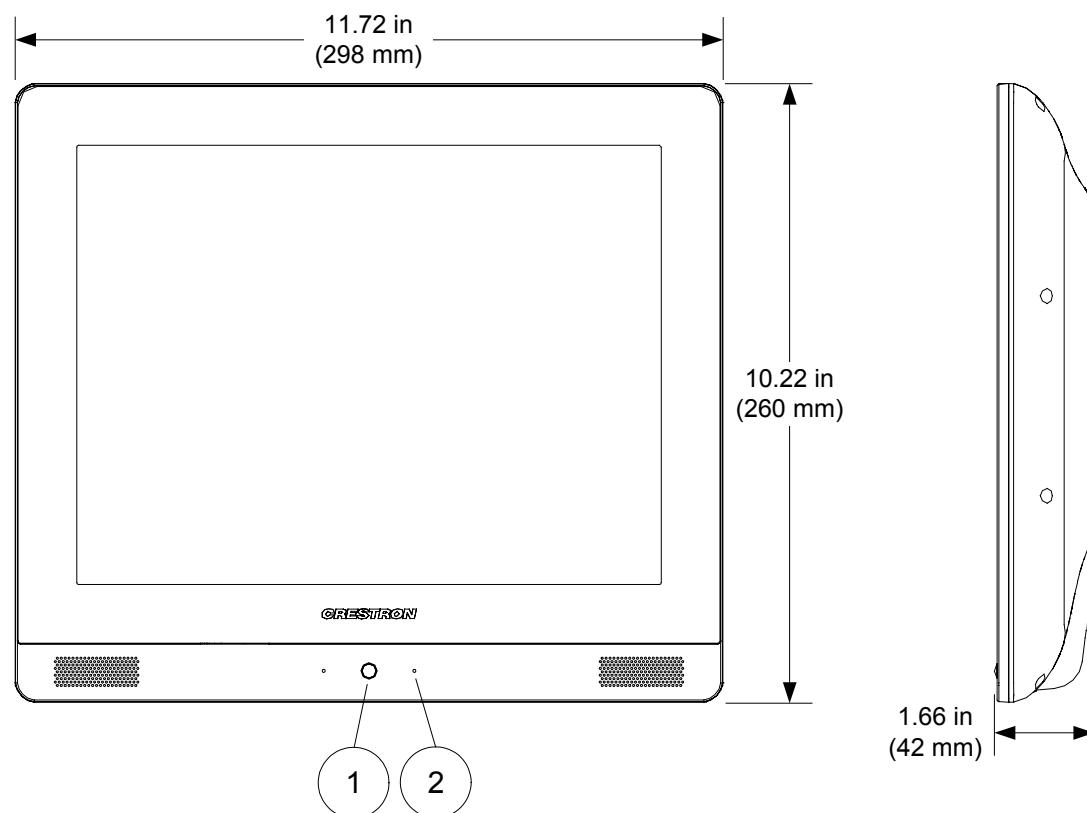
V15-TILT Physical View (Shown in Black)

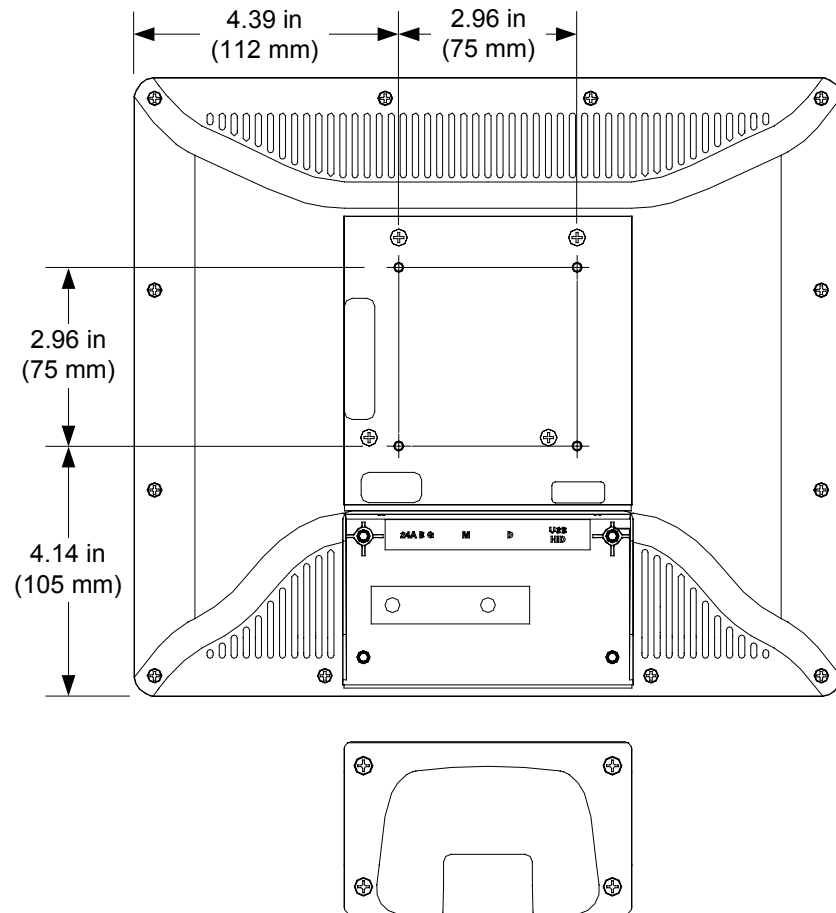
V15-WALL Physical View (Shown in White)



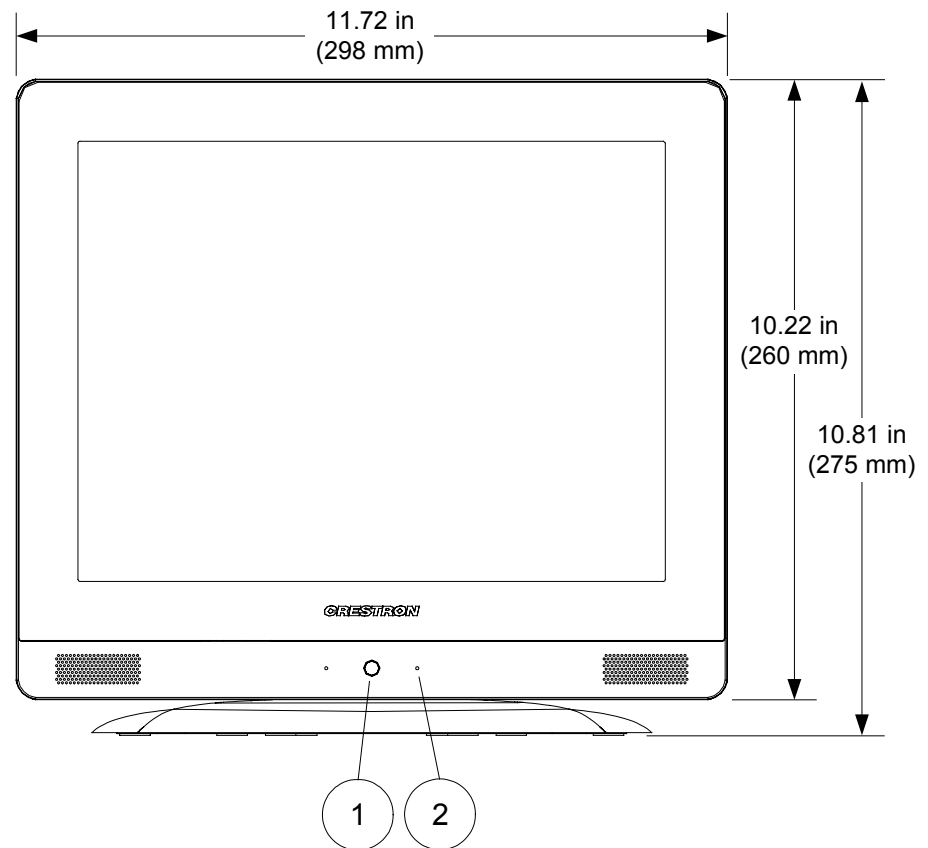
V-Panel Physical View (Rear Showing Connector Ports)

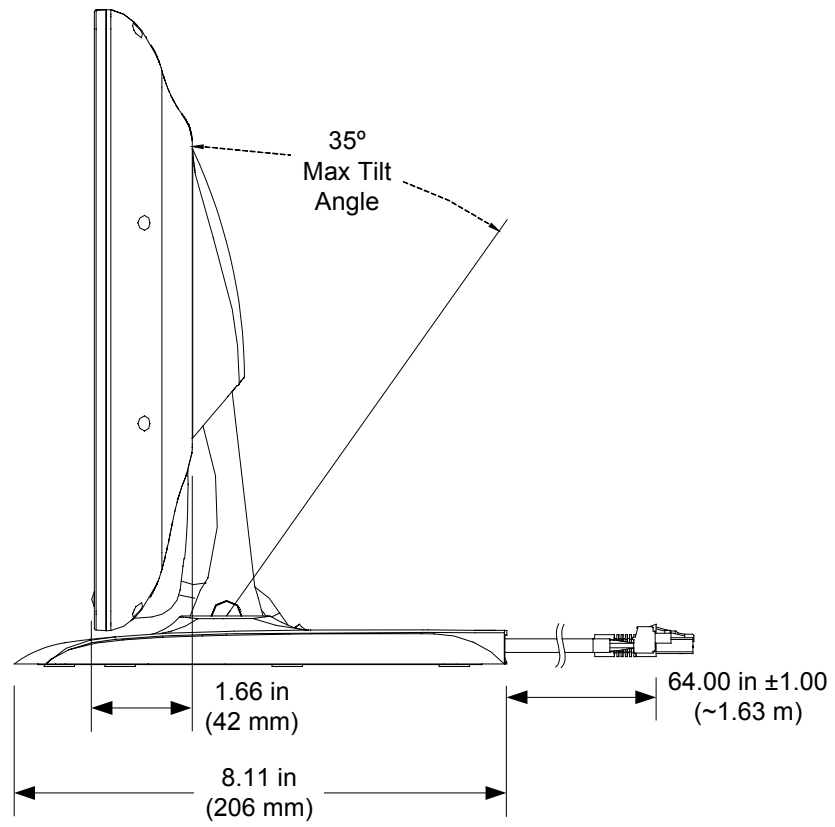


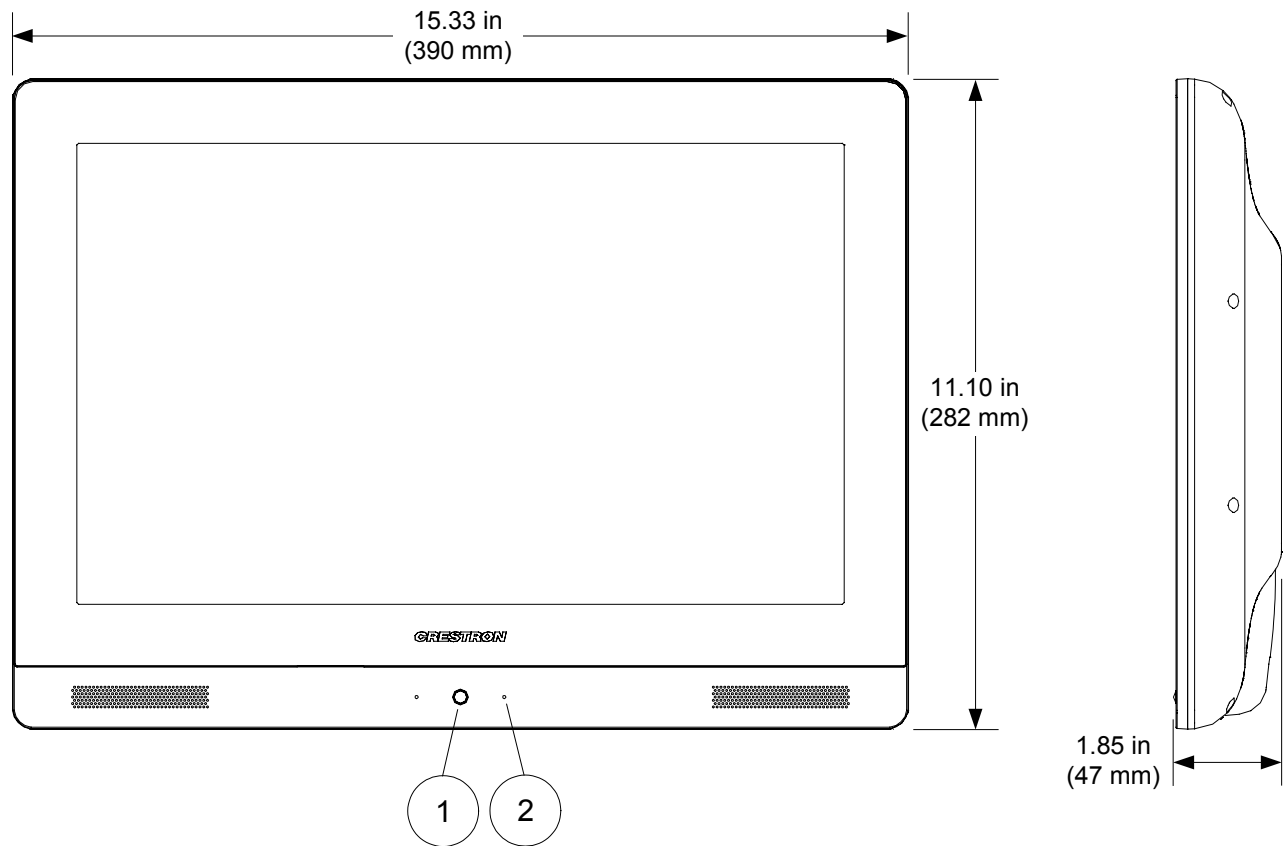
V12 Overall Dimensions (Front and Side Views)

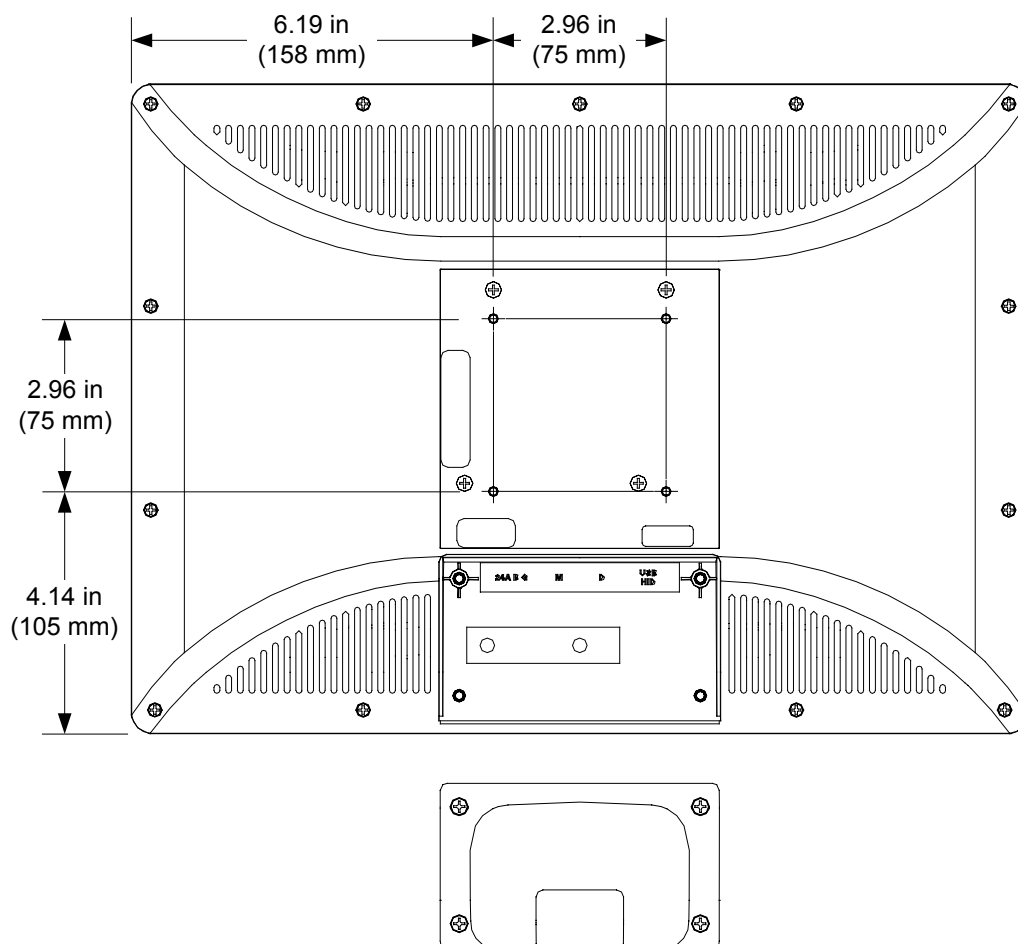
V12 Overall Dimensions (Rear View)

NOTE: In the illustration above, the V12 is shown with the rear cover removed. When making cable connections to the V12, it will be necessary to remove the cover by first removing the four screws holding it in place. Replace the cover when connections have been made.

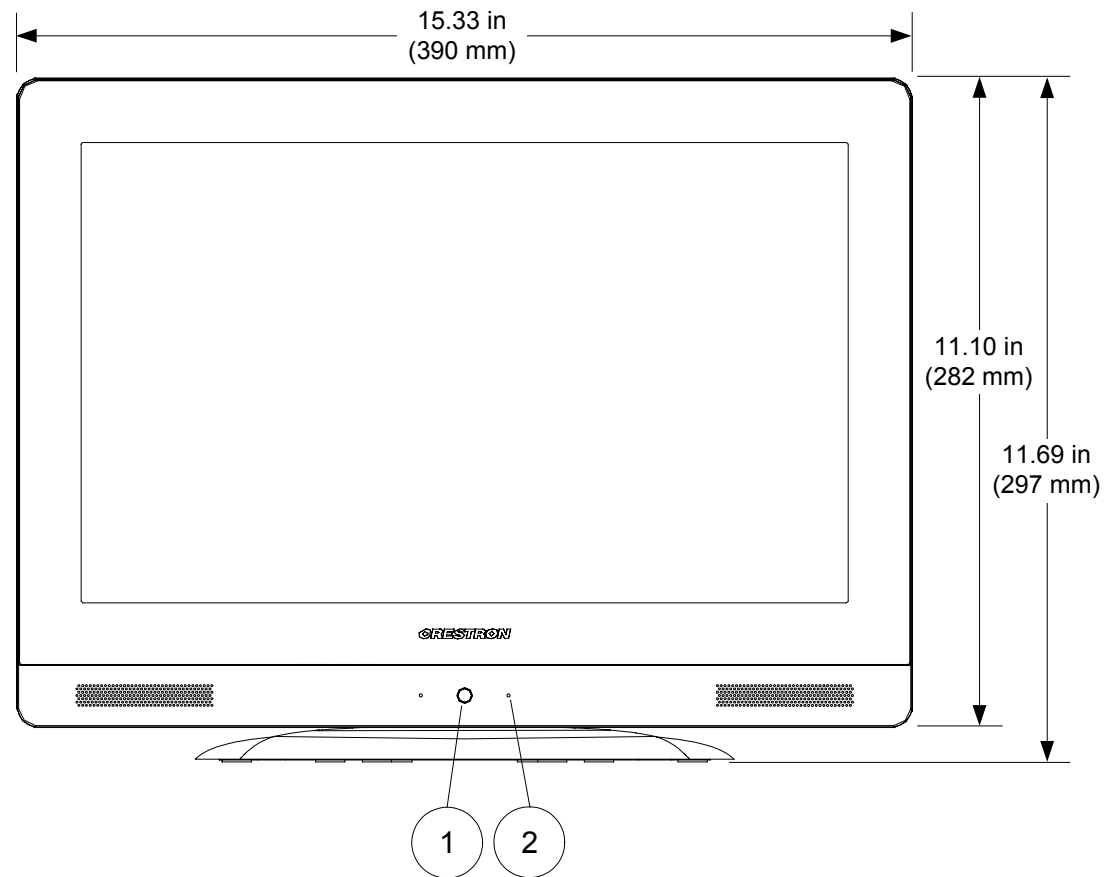
V12-TILT Overall Dimensions (Front View)

V12-TILT Overall Dimensions (Side View)

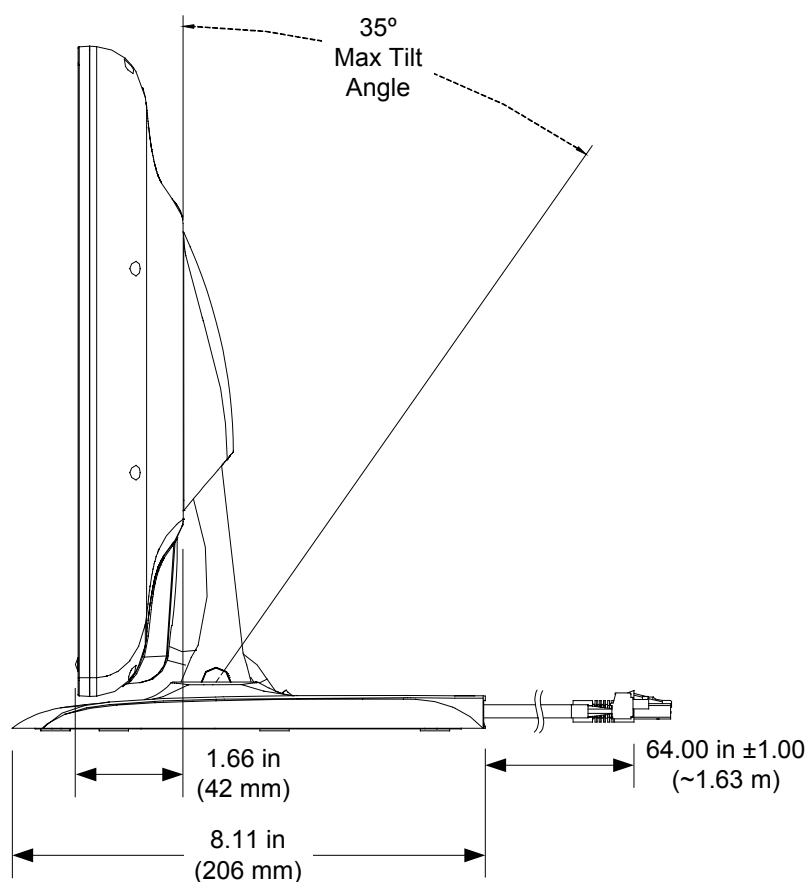
V15 Overall Dimensions (Front and Side Views)

V15 Overall Dimensions (Rear View)

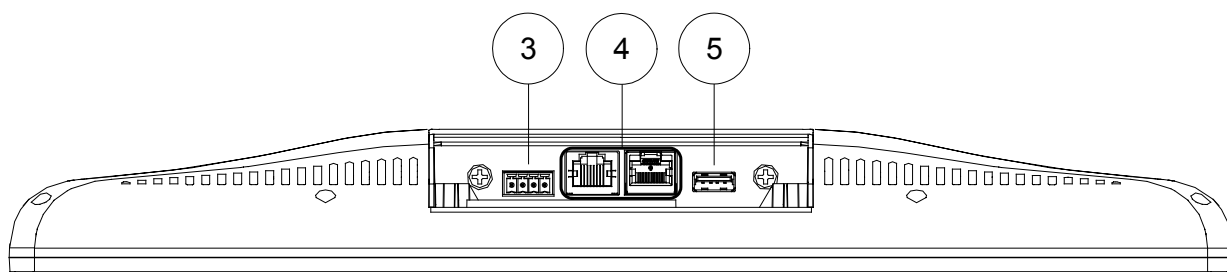
NOTE: In the illustration above, the V15 is shown with the rear cover removed. When making cable connections to the V15, it will be necessary to remove the cover by first removing the four screws holding it in place. Replace the cover when connections have been made.

V15-TILT Overall Dimensions (Front View)

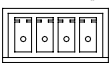
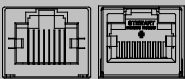

V15-TILT Overall Dimensions (Side View)



V12/15 Overall Dimensions (Rear View – V15 Shown)

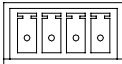


Connectors, Controls & Indicators

#	CONNECTORS ¹ , CONTROLS & INDICATORS	DESCRIPTION
1	HARD KEY	(1) Programmable pushbutton, also resets DGE if held for five seconds
2	DM LINK LED	(1) Green LED, indicates power and connection to a DGE or other DM device
3	24 A B G ² 	(1) 4-pin 3.5 mm detachable terminal block, DMNet port; Connects to DMNet port of a DGE, DM transmitter or DM switcher (all sold separately) via DB-CBL or CresCAT-D cable ^{3,4}
4	DM INPUT D & M ^{5,6} 	(1) DM CAT output comprised of (2) 8-pin RJ-45 female, shielded; Connects to DM CAT output of a DGE, DM transmitter or DM switcher (all sold separately) via DB-CBL or CresCAT-D cable ^{3,4}
5	USB 	(1) USB Type A female; USB 1.1, supports HID (Human Interface Device) class devices


1. Interface connectors for **24 A B G** and **DM INPUT** ports are provided with the unit.
2. Refer to the following table for the **24 A B G** connector pinouts.

24 A B G Port

24 A B G 			
PIN #	SIGNAL	DESCRIPTION	WIRE COLOR
24	24V DC	DC Power	Red
A	DMNet+	DMNet	White
B	DMNet-	DMNet	Blue
G	Ground	DC Ground	Black

3. For wiring between the DGE and V-Panel, use DM-CBL DigitalMedia cable, CresCAT®D or quality CAT5e/CAT6 cable. Do NOT use low skew cable. That maximum allowable cable length is 200 feet (61 meters) for DM-CBL, 150 feet (46 meters) for others.
4. DMNet wiring is not compatible with Cresnet® wiring. DMNet wiring cannot be daisy chained.
5. To determine which is pin 1 on the cable, hold the cable so the end of the eight pin modular plug is facing away from you, with the clip down and copper side up. Pin 1 is on the far left.
6. The **DM INPUT** port consists of two separate RJ-45 connectors labeled **D** and **M**. The **D** port carries HDMI signal. The **M** port carries data. Refer to the following table for the connector pinouts.

D and M Ports

			
PIN #	WIRE COLOR	PIN #	WIRE COLOR
1	Orange/White	5	Blue/White
2	Orange	6	Green
3	Green/White	7	Brown/White
4	Blue	8	Brown

Setup

Configuring the V-Panel

The V-Panel is configured from the setup menu using the DGE Digital Graphics Engine (sold separately). Refer to the Operations Guide that came with your DGE.

Hardware Hookup

Ventilation

The V12/15 should be used in a well-ventilated area.

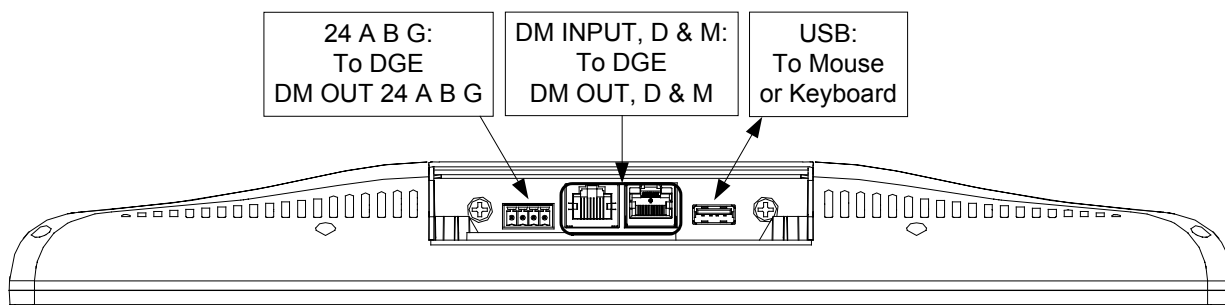
To prevent overheating, do not operate this product in an area that exceeds the environmental temperature range listed in the table of specifications.

Connect the Device

Make the necessary connections as called out in the illustration that follows this paragraph. Apply power after all connections have been made.

When making connections to the V12/15, use Crestron power supplies for Crestron equipment.

Hardware Connections for the V12/15 (V15 Shown)

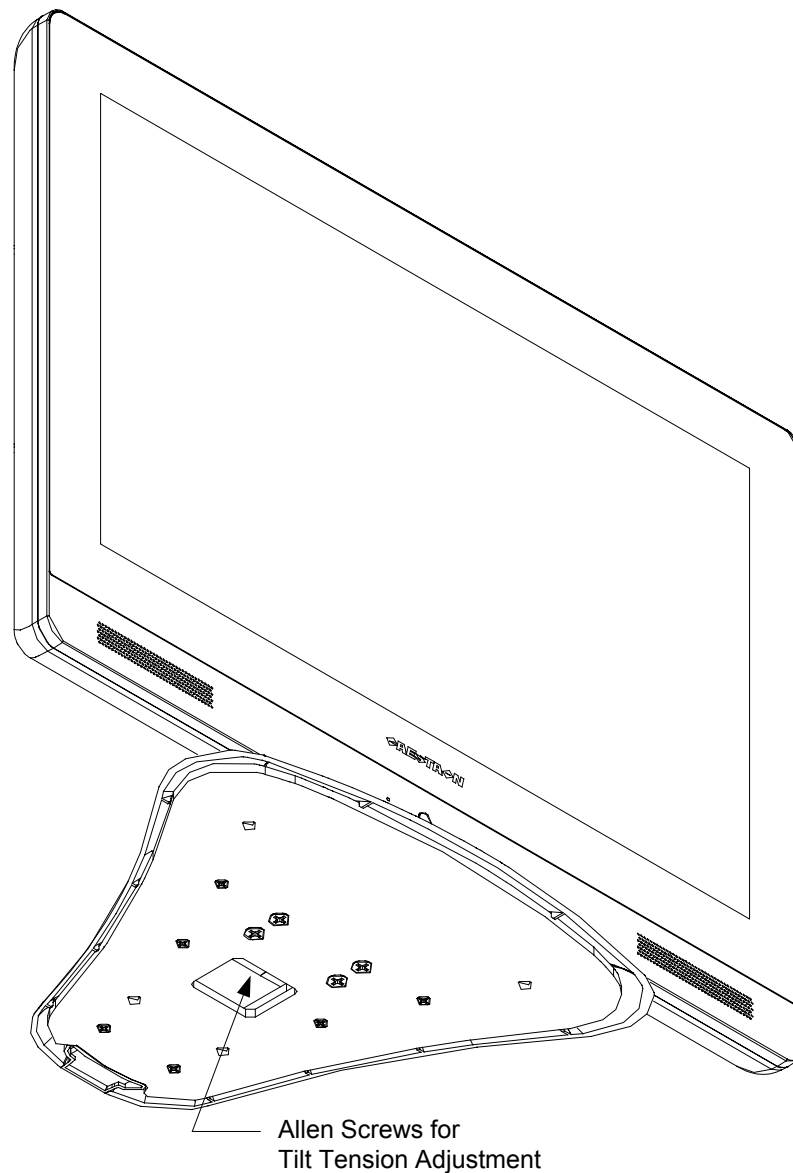


NOTE: For wiring between the DGE and V-Panel, use DM-CBL DigitalMedia cable, CresCAT®D or quality CAT5e/CAT6 cable. Do NOT use low skew cable. That maximum allowable cable length is 200 feet (61 meters) for DM-CBL, 150 feet (46 meters) for others.

NOTE: DMNet wiring and Cresnet® wiring are not compatible.

Tilt Tension Adjustment

Tilt tension on the V12 and V15 is preset at the factory to allow the panel to be tilted anywhere within its 35 degree tilt range and maintain its position during use. To tighten tilt tension or to fix the panel at a given tilt position, use the three Allen screws accessed through the hole in the touchpanel base, as shown in the following illustration.

Position of Allen Screws for Tilt Tension Adjustment**Recommended Cleaning**

Keep the surface of the touchscreen free of dirt, dust or other materials that could degrade optical properties. Long-term contact with abrasive materials can scratch the surface, which may detrimentally affect image quality.

For best cleaning results, use a clean, damp, non-abrasive cloth with any commercially available non-ammonia glass cleaner. Bezels may not provide a complete watertight seal. Therefore, apply cleaning solution to the cloth rather than the surface of the touchscreen. Wipe touchscreen clean and avoid getting moisture beneath the bezels.

Resources

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) 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 V12/15, 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.

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.

Trademark Information

All brand names, product names and trademarks are the sole property of their respective owners. Windows is a registered trademark of Microsoft Corporation. Windows95/98/Me/XP/Vista/7 and WindowsNT/2000 are trademarks of Microsoft Corporation.

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Specifications subject to
change without notice.