

TSD-2020

V-Panel™ 20" HD Touch Screen Display

1 Introduction

The V-Panel™ TSD-2020 merges Crestron® touch screen control and high-definition video into one slim, lightweight touch screen display. Its 20" (508 mm) full HD 1080p display offers a spacious user interface for controlling AV, lighting, climate, and other technologies while simultaneously delivering excellent video performance as an HDTV or computer display. Its high-sensitivity capacitive surface affords exceptional touch response, whether using fingertip gestures or the included annotation pen.

The TSD-2020 is designed for use with a DGE-2 Digital Graphics Engine (sold separately), providing an elegant and powerful touch screen control solution that features advanced Smart Graphics™, dual-window HD video, high-performance H.264 streaming video, onboard multimedia and web browsing, audio feedback, and built-in annotation.

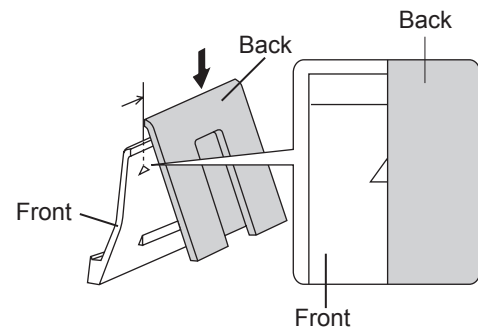
2 Install the TSD-2020

Its thin profile and VESA mount capability allow the TSD-2020 to be installed virtually anywhere using an off-the-shelf wall mounting bracket, desk stand, or articulating arm. In addition, the TSD-2020 ships with an easel-type stand for tabletop use and includes a flip-out flap and tabs on its rear panel to allow for use as a low-angled or lay-flat tablet.

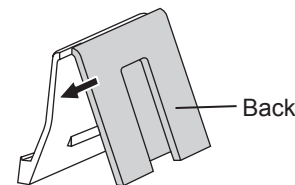
Standing Position

The stand is designed for using the TSD-2020 in landscape orientation. It cannot be used for portrait orientation. To assemble the stand, use the following procedure.

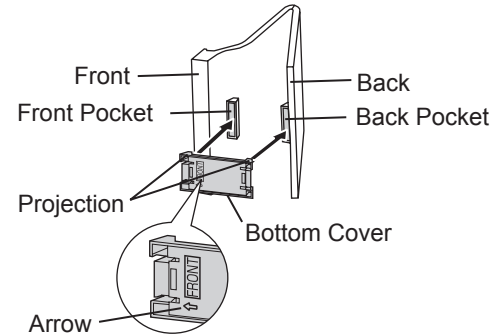
1. Insert the back part of the stand into the front part. Align the mark (△) on the front part with the edge of the back part and insert the back part from above.



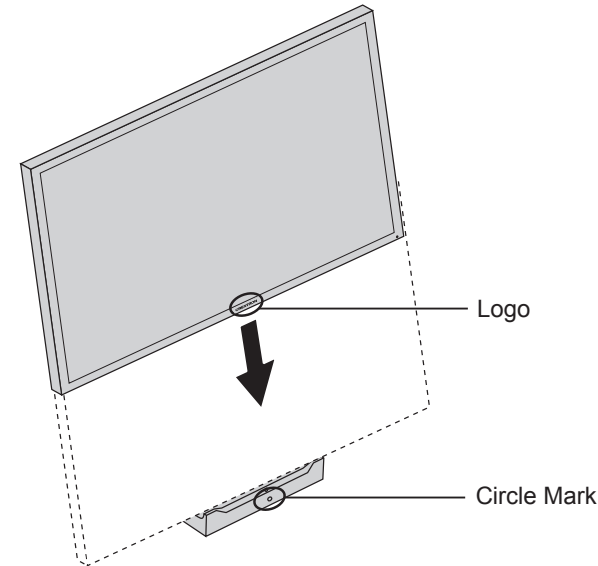
2. Slide the back part across the front part until it clicks into place.



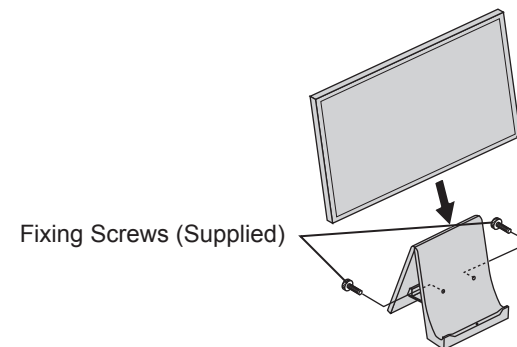
3. Attach the bottom cover by aligning the arrow on the bottom cover so it points toward the front part and press the projections on the bottom cover into the pocket on the front and back parts.



4. Place the TSD-2020 on the stand so the Crestron logo in the center is aligned with the circle mark on the stand.

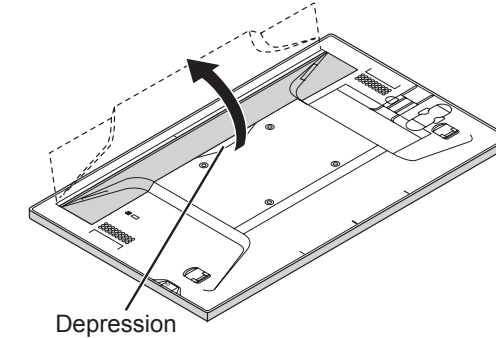


5. Secure the TSD-2020 to the stand using the included fixing screws.



Pen-Writing Position

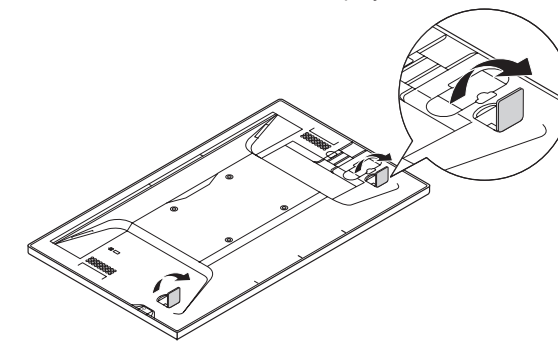
To use the TSD-2020 at an angle on a table or other level surface, locate the flap by the depression on the back and pull the flap up.



CAUTION: Do not exert a large amount of force on the TSD-2020 from above. Doing so may damage the flap.

Horizontal Position

To use the TSD-2020 in a horizontal position on a table or other level surface, lift up the two tabs on the rear of the display.



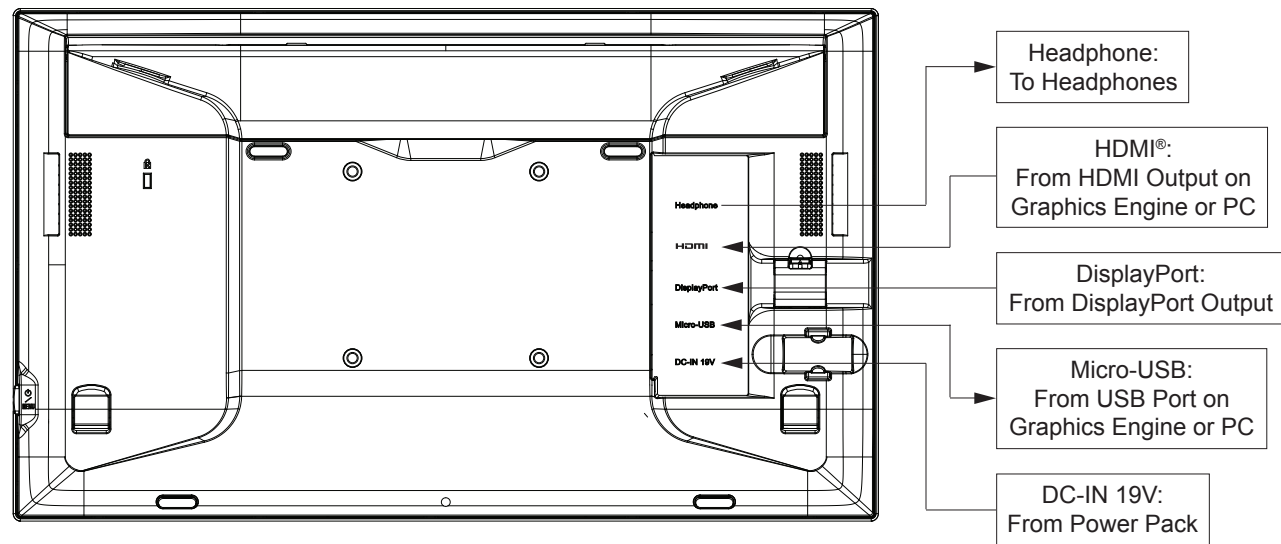
CAUTION: Do not exert a large amount of force on the TSD-2020 from above. Doing so may damage the tabs.

3 Hardware Hookup

Make the necessary connections as called out in the illustration below. Apply power after all connections have been made.

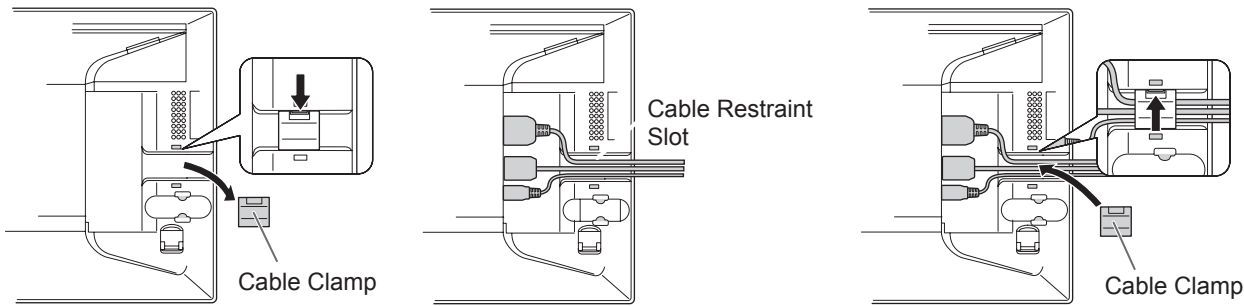
When making connections to the TSD-2020, use Crestron power supplies for Crestron equipment.

Hardware Connections for the TSD-2020



Secure the HDMI® cable, DisplayPort cable, and USB cable using the cable clamp.

1. Remove the cable clamp.
2. Route the cables through the slot.
3. Push the cable clamp down into place.



4 Operation Modes

When power is first applied, the TSD-2020 displays a "Please select the operation mode" message, offering the user a choice between two modes:

Eco Mode: The display powers down after four hours without a touch input. The power button must be pressed to turn the display back on.

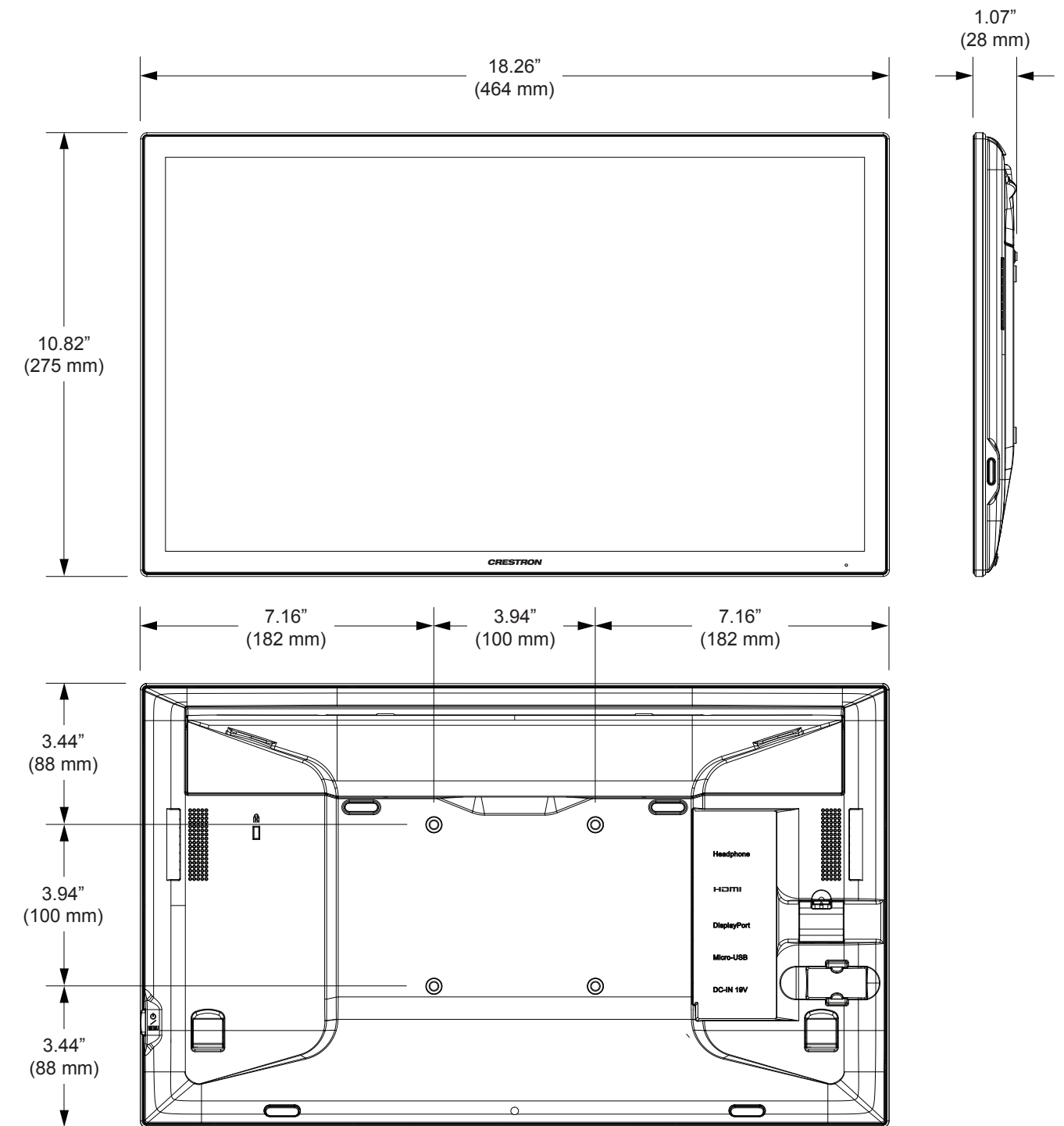
Crestron: The display sleeps if the video signal is lost. When the video signal resumes, the display wakes automatically.



NOTE: Crestron is the required selection when using the TSD-2020 with a DGE-2 or DVPHD.

5 Dimensions

TSD-2020 Overall Dimensions (Front, Side, and Rear Views)



6 Specifications

Touch Screen Display

Display Type: TFT active matrix color LCD
Size: 19.5" (495 mm) diagonal
Aspect Ratio: 16:9 Full HD
Resolution: 1920 x 1080 pixels
Brightness: 250 nits (cd/m²)
Contrast: 3000:1
Response Time: 5 ms G-to-G
Color Depth: 24-bit, 16.7 million colors
Illumination: Edgelit LED
Viewing Angle: ±89° horizontal, ±89° vertical
Touch Screen: Capacitive

Annotation Pen

Wireless touch pen, 2 mm wide tip, palm cancellation technology

Button and Indicator

Power/Menu: (1) Push button, press to turn power on, press (while power is on) to access the onscreen menu, press for ≥2 seconds to turn power off
Power/Signal: (1) Dual color LED, green indicates power is on and an input signal is present, orange indicates power is on and no input signal is present

Communications

USB: USB 1.1 Human Interface Device

Video

Input Signal Types: HDMI, DisplayPort
Input Resolutions: 640x480@60Hz, 800x600@60Hz, 720x480@60Hz, 720x576@50Hz, 1024x768@60Hz, 1280x720@50Hz, 1280x720@60Hz, 1920x1080@50Hz, 1920x1080@60Hz

Refer to DGE-2 or DVPHD specifications for additional information.

Audio

Input Signal Types: HDMI, DisplayPort
Hardware Features: Built-in rear-facing amplified speakers
Amplification: 1 Watt x 2 channels

Refer to DGE-2 specifications for additional information.

Connectors

Headphone: (1) 3.5 mm TRS mini phone jack;
 Unbalanced stereo line level or headphone audio output

HDMI: (1) 19-pin Type A HDMI female;
 HDMI digital video/audio input, also supports DVI¹

DisplayPort: (1) 20-pin DisplayPort female;
 DisplayPort digital video/audio input²

Connectors (Continued)

Micro-USB: (1) micro-USB type B, female;
 USB 1.1 device port, 6 ft (1.83 m) micro-USB type B male to USB type A male cable included

DC-IN 19V: (1) DC power connector;
 19 Vdc power input, power pack included

Power Requirements

Power Pack: 19 Vdc;
 100-240 Vac, 50/60 Hz power pack included

Environmental

Temperature: 32° to 95°F (0° to 35°C)
Humidity: 20% to 80% RH (non-condensing)
Heat Dissipation: 89 Btu/h

Enclosure

Plastic case, VESA 100x100 mm mountable (M4 screw size), 75° angled easel-type tabletop stand included, flip-out flap and tabs for 10° angled or lay-flat use

Dimensions

Height: 10.82" (275 mm)
Width: 18.26" (464 mm)
Depth: 1.07" (28 mm)

Weight

5.1 lb (2.3 kg)
 6.4 lb (2.9 kg) with tabletop stand

NOTES

1. The HDMI input requires an appropriate adapter or interface cable to accommodate a DVI signal. CBL-HD-DVI interface cables are available separately.
2. The DisplayPort input only supports native DisplayPort signals. To connect an HDMI source to this input, an active HDMI-to-DisplayPort converter must be used. The DisplayPort input automatically overrides the HDMI input when a DisplayPort signal is connected.

The specific patents that cover Crestron products are listed at patents.crestron.com.

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