# TSD-2020 V-Panel™ 20” HD Touch Screen Display

## 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.

## 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.

### 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.

### 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.

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

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<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
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<tbody>
<tr>
<td>3.</td>
<td>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.</td>
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<tr>
<td>4.</td>
<td>Place the TSD-2020 on the stand so the Crestron logo in the center is aligned with the circle mark on the stand.</td>
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<tr>
<td>5.</td>
<td>Secure the TSD-2020 to the stand using the included fixing screws.</td>
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For regulatory compliance information, refer to Doc. 7605.
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

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.
### 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:** 480i, 480p, 720p, 720i, 1080i, 1080p, 1280x720@50/60Hz, 1920x1080@50/60Hz
- **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 input¹

**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.

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

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