

# TSW-770-GV

## 7 in. Wall Mount Touch Screen, Government Version



- Next generation Crestron® wall mount touch screen
- 7 in. (178 mm) widescreen active-matrix color display and 1280 x 800 WXGA display resolution
- Capacitive touch screen display
- Custom-programmable virtual control buttons
- Supports Crestron HTML5 and Smart Graphics® software custom user projects
- Built-in speakers
- H.265, H.264, or MJPEG streaming video display
- Built-in web browsing
- Single wire Ethernet connection with PoE or PoE+ power
- Dual USB 2.0 ports for room availability accessories
- Enterprise grade security and authentication
- Web or device-based configuration
- Electrical box mounting with provided mounting bracket

The Crestron® TSW-770-GV is a stylish and versatile wall mount touch screen that is ideal for residential and enterprise applications. The TSW-770-GV features a 7 in. (178 mm) capacitive touch screen display with custom-programmable control buttons and support for Smart Graphics® software and HTML5-based custom UI projects. PoE connectivity and a comprehensive assortment of mounting accessories simplify new and retrofit installations.

**NOTE:** The TSW-770-GV series is a modified version of the TSW-770 series, which eliminates the microphone, the Bluetooth® communications beacon, and Wi-Fi® network connectivity to comply with government applications demanding extra privacy and security.

### Advanced Touch Screen Control

The TSW-770-GV offers a sleek and powerful user interface for controlling technology in a home, boardroom, classroom, or command center. The touch screen provides an intuitive interface that is fully customizable with easy-to-use capacitive controls, true feedback, and real-time status display. A built-in proximity sensor wakes the screen without requiring any user interaction, and automatic brightness controls ensure optimal visibility under varying lighting conditions.

### Custom-Programmable Virtual Buttons

The TSW-770-GV provides a universal status bar that is populated with virtual buttons for quick access to common touch screen functions. The touch screen comes preconfigured with virtual buttons for Power, Home, Lights, Up, and Down. Each button can be programmed via a Crestron control system to provide custom functionality, and unused buttons can be hidden individually. The universal status bar is expanded or hidden using simple swipe gestures on touch screen display.

### Dynamic User Interfaces

The TSW-770-GV supports custom user interfaces created with [Crestron HTML5 User Interface](#) and Smart Graphics technologies, allowing greater flexibility for UI developers and programmers.

- Crestron HTML5 User Interface enables UI designers to develop rich, front-end user interfaces with increased reusability and efficiency using modern web methodologies. Crestron HTML5 User Interface development tools are provided to simplify creating user interfaces built on standard web technologies
- Smart Graphics enables programmers to integrate fluid gesture-driven controls, animated feedback, rich metadata, embedded apps and widgets, and full-motion video into their user interfaces. Smart Graphics provides dynamic features such as graphical buttons and sliders, lists and toolbars, drag-and-drop objects, dashboard widgets, screensavers, and customizable themes.<sup>1</sup>

### Streaming Video

Native support for H.265, H.264, and MJPEG formats allows the TSW-770-GV to display live streaming video from an IP camera, a streaming encoder (Crestron [DM-TXRX-100-STR](#), or similar), or a [DigitalMedia™ switcher](#).<sup>2</sup> Video is delivered to the touch screen over Ethernet, eliminating the need for any extra video wiring.

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### Sonos App

[Sonos and Crestron](#) have partnered to provide a powerful whole-house music experience. From any touch screen in the house, browse for tracks, artists, or playlists using all the services available from Sonos and instantly play them in any room using Sonos® wireless speakers or a Crestron [Sonnex® multiroom audio system](#). The Sonos app runs natively on the TSW-770-GV, enabling enhanced control of Sonos products as part of a complete Crestron system. The app checks for updates nightly so it's always current, and support for the Sonos S2 App is provided.<sup>1</sup>

### Crestron Room Scheduling App

As part of a complete enterprise room scheduling solution, the TSW-770-GV can be deployed as a scheduling panel via the Crestron room scheduling app. A Crestron scheduling panel can be installed at the entrance of a meeting room to provide indication of the room's availability and a view of its schedule for the day. If desired, the room can be reserved on the spot for an ad hoc meeting. A [CEN-ODT-C-POE](#) occupancy sensor can also be paired to the touch screen, allowing for occupancy status to be reported instantly to the scheduling app for no-shows and unscheduled room usage.<sup>2,3</sup>

Running the Crestron Scheduling App, the TSW-770-GV integrates directly with [Crestron Fusion®](#) software, Microsoft Exchange Server® software (for users of Outlook® software and Office 365® software), the Google Calendar™ calendaring app (including G Suite™ software), CollegeNET® 25Live® scheduling software, or Ad Astra™ software. IBM® Notes® software is also supported through a Crestron Fusion on-premises server.

### Third-Party Scheduling Apps

The TSW-770-GV also includes support various third-party scheduling applications. New providers are made available via firmware updates. Whatever provider you choose, setup is as simple as connecting the touch screen to the network and choosing an app from the web-based setup menu or built-in setup screens. The selected app downloads from the cloud and installs on the touch screen without any programming or control system required.<sup>4,5</sup>

### Zoom Rooms App

The [Zoom Rooms™](#) conferencing control application enables the TSW-770-GV to be used as a touch screen control panel for a Zoom Rooms software-based conferencing and collaboration solution. The TSW-770-GV offers a superior alternative to a consumer tablet device, providing a more reliable and secure platform. The TSW-770-GV may be configured to run the Zoom Rooms app exclusively, or to allow toggling between the Zoom Rooms app and touch screen control mode. The latter option is used to integrate Zoom Rooms conferencing into a larger AV system while providing touch screen control for both.<sup>6</sup>

**NOTE:** The Zoom ultrasonic proximity signal is supported up to an average of 9 ft (2.74 m) from the TSW-770-GV touch screen to an end user device. The range will vary based on environmental noise, the sensitivity of the end user device, and the orientation to the touch screen.

### Crestron Home OS Control

The TSW-770-GV may be used to control a [Crestron Home™ OS](#) whole home solution. Select the Crestron Home app from the touch screen to control lighting, shades, climate, media, security, and cameras, including the ability to create and recall scenes that create a desired ambiance throughout a home. A TSW-770-GV may be installed in each room to provide easy access to various Crestron Home functions for both the room and the home.

### Web Browsing

Using its built-in web browser, the TSW-770-GV provides access to online program guides and other web-based services, and it can be used to control DVRs and other devices without having to pick up a separate tablet or smartphone.<sup>1</sup>

### Wired Connectivity

An Ethernet LAN connection is all that is required to wire the TSW-770-GV, containing all control, video, intercom, and power signals within a single wire.

### Power over Ethernet

Using PoE technology, the TSW-770-GV gets its operating power directly through the network cable. PoE (Power over Ethernet) eliminates the need for a local power supply or any dedicated power wiring. Crestron PoE switches ([CEN-SW-POE-5](#) or [CEN-SWPOE-16](#)) offer a total networking solution with built-in PoE for multiple touch screens. A PoE Injector ([PWE-4803RU](#)) is also available to support a single touch screen.

**NOTE:** Refer to the "Power" specifications for more details.

### Room Scheduling Accessories

The TSW-770-GV provides dual high-speed USB 2.0 ports for connecting supported Crestron room scheduling accessories to the touch screen.<sup>2</sup>

- The series light bars provide a 180° visual indication of a room's availability status, illuminating green if the room is available and red when reserved, with options for custom color mixing and programming.<sup>2</sup>
- The [SSW](#), [SSW-EL](#), [SSC](#), and [SSC-EL](#) series hallway signs feature a two sided acrylic sign face that can be custom engraved with the room name or number. The [SIW-100](#) offers a lower profile wall mount status indicator.<sup>2</sup>

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### Enterprise-Grade Security

Crestron touch screens employ enterprise-grade networking with robust security features such as 802.1X authentication, TLS encryption, HTTPS connectivity, and Active Directory® service integration. These features are imperative to protect your network against service interruptions and malicious intrusions, and to ensure compliance with your organization's network policies. Cloud-based provisioning and management streamlines the process of configuring, monitoring, and updating every touch screen on the network. Additional support for SNMP allows the touch screen to be monitored by your IT administrator.

### Wall Mount Options

Using the bracket provided, the TSW-770-GV is easily installed over a 2-gang or 3-gang US electrical box, or a 2-gang European or UK electrical box. A security latch option is included to deter unauthorized removal of the touch screen.

Additional wall mounting options are afforded using the optional [TSW-UMB-70](#) universal mounting bracket, [TSW-UMB-70-PMK](#) preconstruction mounting kit, and [TSW-UMB-70-BBI](#) back box.<sup>2,7</sup>

### Optional Mounting Accessories

The TSW-770-GV supports numerous optional mounting accessories that allow the touch screen to be installed in all kinds of installations:

- The [TSW-770-MSMK](#) multisurface mount kit allows a TSW-770-GV touch screen to be mounted directly to virtually any flat surface, which is ideal for mounting at the entrance to a meeting space for room scheduling applications.<sup>2</sup>
- The [TSW-770/1070-MUMK](#) allows the touch screen to be attached to the mullion of an interior glass wall, window, or partition.<sup>3</sup>
- The [TSW-770/1070-RMB-1](#) and [TSW-770/1070-RMB-2](#) retrofit mounting brackets allow for retrofit installations in place of an older Crestron touch screen (APAD, CT-1000, LC-1000, TPS-4L, or TPS-2000L) without having to tear out the old mounting hardware or patch the wall.<sup>2</sup>
- The [TSW-570/770-RMK-1](#) rack mount kit allows the touch screen to be mounted into a 19 in. rack. When installed, the touch screen occupies three rack spaces.<sup>2</sup>
- The [TSW-770-FP](#) face plate hides the electrical box from view when replacing a TSW-760 or TSS-7 series touch screen with a TSW-770 series touch screen.<sup>2</sup>

The TSW-770-GV is also compatible with Wall-Smart® flush wall mount products via a partnership with Crestron. For more information on supported Wall-Smart hardware, click [here](#).

### Specifications

#### Touch Screen Display

<b>Display Type</b>	TFT active matrix color LCD
<b>Size</b>	7 in. (178 mm) diagonal
<b>Aspect Ratio</b>	16:10 WXGA
<b>Resolution</b>	1280 x 800 pixels
<b>Brightness</b>	350 nits (cd/m <sup>2</sup> )
<b>Contrast</b>	850:1
<b>Color Depth</b>	24 bit, 16.7M colors
<b>Illumination</b>	Edgelit LED with auto brightness control
<b>Viewing Angle</b>	±80° horizontal, ±80° vertical
<b>Touch Screen</b>	Projected capacitive, 5-point multitouch capable

#### Buttons

<b>Virtual Buttons</b>	(5) Virtual buttons in collapsible universal tool bar, per-button show/hide, preconfigured with icons for Power, Home, Lights, Up, and Down, optional custom programming via control system for additional functions
<b>Reset</b>	(1) Pin hole on rear panel for hardware reset

#### Graphics Engine

Crestron HTML5 and Smart Graphics® software technology, multilanguage web browser<sup>1</sup>, multilanguage onscreen keyboard, screensaver, single scalable streaming video window, native room scheduling applications<sup>3,4,5</sup>, native Sonos® app<sup>1</sup>, native Zoom Rooms™ app<sup>6</sup>, native Crestron Home™ OS app, setup and diagnostics via web browser, cloud, or onscreen UI

#### Room Scheduling Support

<b>Crestron Scheduling App</b>	Crestron Fusion® software, Microsoft Exchange Server® and Office 365® software, Google Calendar™ calendaring app and G Suite™ software, CollegeNET® 25Live® software, and Ad Astra™ software (IBM® Notes® software is also supported through Crestron Fusion on-premises server only) <sup>3</sup>
<b>Third-Party Apps</b>	Includes support for various third-party scheduling applications. <sup>4,5</sup>

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### Languages

<b>Smart Graphics</b>	Arabic, Chinese (Simplified), Chinese (Traditional), Czech, Danish, Dutch, English (UK), English (US), Finnish, French, German, Greek, Hebrew, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Portuguese (Brazilian), Romanian, Russian, Slovak, Spanish, Swedish, Thai
<b>Onscreen Keyboard</b>	Arabic, Chinese (Simplified), Croatian, Czech, Danish, Dutch, English (UK), English (US), Finnish, French (Canada), French (Switzerland), German, Hebrew, Hungarian, Italian, Japanese, Norwegian Bokmal, Polish, Portuguese, Russian, Serbian, Spanish, Swedish, Turkish
<b>Web Browser<sup>1</sup></b>	Arabic, Bulgarian, Catalan, Chinese, Croatian, Czech, Danish, Dutch, English, Filipino, Finnish, French, German, Greek, Hebrew, Hindi, Hungarian, Indonesian, Italian, Japanese, Korean, Latvian, Lithuanian, Norwegian Bokmal, Pashto, Persian, Polish, Portuguese, Romanian, Romansh, Russian, Serbian, Slovak, Slovenian, Spanish, Swedish, Thai, Turkish, Ukrainian, Vietnamese
<b>Room Scheduling<sup>3</sup></b>	Chinese (Simplified), Chinese (Traditional), Danish, Dutch (Netherlands), English (US), English (UK), French, German, Hebrew, Italian, Japanese, Korean, Norwegian, Portuguese (Brazil), Portuguese (Portugal), Russian, Spanish, Swedish

### Memory

<b>RAM</b>	2 GB LPDDR3
<b>Storage</b>	Firmware/Application: 16 GB eMMC pSLC
<b>Maximum Project Size</b>	600 MB

### Wired Communications

<b>Ethernet</b>	100 Mbps, auto switching, auto negotiating, auto discovery, full/half duplex, TCP/IP, UDP/IP, CIP, DHCP, SSL, TLS, SSH, SFTP (SSH File Transfer Protocol), IEEE 802.1X, SNMP, IPv4 or IPv6, Active Directory® service authentication, HTTPS web browser setup, IEEE 802.3at compliant
<b>USB</b>	USB 2.0 host for room scheduling accessories

### Streaming Decoder

<b>Video Formats</b>	H.265, H.264 (MPEG-4 part 10 AVC, MJPEG)
<b>Audio Formats</b>	AAC Stereo
<b>Bitrates</b>	Up to 25 Mbps (20 Mbps maximum recommended)
<b>Input Resolutions</b>	Up to 1920x1080@30fps
<b>Protocol</b>	RTSP

### Audio

<b>Features</b>	Built-in speakers
<b>Audio Feedback Formats</b>	MP3

### Connectors

<b>LAN PoE</b>	(1) 8-pin RJ45 connector, female, with 2 LED indicators; 100BASE-TX Ethernet port; PoE+ PD port; Green and yellow LEDs indicate Ethernet port status
<b>USB</b>	(2) USB Type A connectors, female; USB 2.0 host ports; For optional room scheduling accessories <sup>2</sup>

**NOTE:** The touch screen supports the use of a single light bar or status indicator accessory.

### Power

<b>PoE (Power over Ethernet)</b>	IEEE 802.3at Type 2 compliant PoE+ PD (Powered Device); Requests 15 W from an 802.3at Type 2 PSE with LLDP advanced power management; Requests 30 W (PoE+ Class 4) from an 802.3at Type 2 PSE without LLDP; Requests 15.4 W (PoE Class 0) from an 802.3af (or 802.3at Type 1) PSE
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### Environmental

<b>Temperature</b>	32 to 104 °F (0 to 40 °C)
<b>Humidity</b>	10% to 95% RH (noncondensing)
<b>Heat Dissipation</b>	44 BTU/hr

### Construction

<b>Housing</b>	Plastic, smooth black or white finish, edge-to-edge glass with black or white surround
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**Mounting** Surface mount over a 2 or 3-gang US electrical box, 2-gang European (DIN 49073) electrical box, or 2-gang UK (BS 4662) electrical box;  
Lectern mount over a 2 in. H x 3-3/4 in. W (51 mm H x 96 mm W) cutout;  
1-3/8 in. (35 mm) minimum mounting depth;  
Wall mount, surface mount, and rack options available separately

### Dimensions

**Height** 4.17 in. (106 mm)  
**Width** 6.80 in. (173 mm)  
**Depth** 1.99 in. (51 mm)

*Dimensions do not include mounting bracket or add-on accessories*

### Weight

14.11 oz (400 g)

### Compliance

**Regulatory Model: M201923002**

IC, CE, FCC Part 15 Class B digital device

### Models

**TSW-770-GV-B-S**

7 in. Wall Mount Touch Screen, Government Version, Black Smooth

**TSW-770-GV-W-S**

7 in. Wall Mount Touch Screen, Government Version, White Smooth

### Available Accessories

For supported accessories, visit the appropriate TSW-770-GV product page at [www.crestron.com](http://www.crestron.com).

### Notes:

1. Web browsing, weather information, and certain other functions require an Internet connection.
2. Item(s) sold separately. Refer to each product's spec sheet for complete information.
3. Room scheduling mode requires the TSW-770-GV to be designated exclusively for room scheduling use, which precludes use of certain features and functions described in this spec sheet. For design assistance, contact the Crestron True Blue support team at [www.crestron.com/support](http://www.crestron.com/support).
4. Refer to the firmware release notes for a list of all scheduling apps that are supported by that firmware release.
5. Additional subscriptions and/or licenses may be required. Refer to each provider's website for details about the capabilities and requirements of its scheduling application and services. Third-party apps typically run on the TSW-770-GV as they do on a tablet device. The TSW-770-GV runs only one app, which is selected at setup. Only the apps approved and delivered by Crestron can run on the TSW-770-GV.
6. A complete Zoom Rooms solution requires a mini PC or Mac computer running Zoom software, a Zoom Rooms subscription, plus additional peripherals and cables. Visit [zoom.us/zoomrooms](http://zoom.us/zoomrooms) for more information about Zoom Rooms capabilities, hardware requirements, and subscription plans. For design assistance, contact the Crestron True Blue support team at [www.crestron.com/support](http://www.crestron.com/support).
7. The TSW-UMB-70 is also compatible with older TSW-UMB-PMK series preconstruction mounting kits and TSW-BBI series back boxes, allowing the TSW-770-GV to be installed in place of a previous generation touch screen.

This product may be purchased from select authorized Crestron dealers and distributors. To find a dealer or distributor, please contact the Crestron sales representative for your area. A list of sales representatives is available online at [www.crestron.com/How-To-Buy/Find-a-Representative](http://www.crestron.com/How-To-Buy/Find-a-Representative) or by calling 855-263-8754.

This product is covered under the Crestron standard limited warranty. Refer to [www.crestron.com/warranty](http://www.crestron.com/warranty) for full details.

The specific patents that cover Crestron products are listed online at [patents.crestron.com](http://patents.crestron.com).

Certain Crestron products contain open source software. For specific information, please visit [www.crestron.com/opensource](http://www.crestron.com/opensource).

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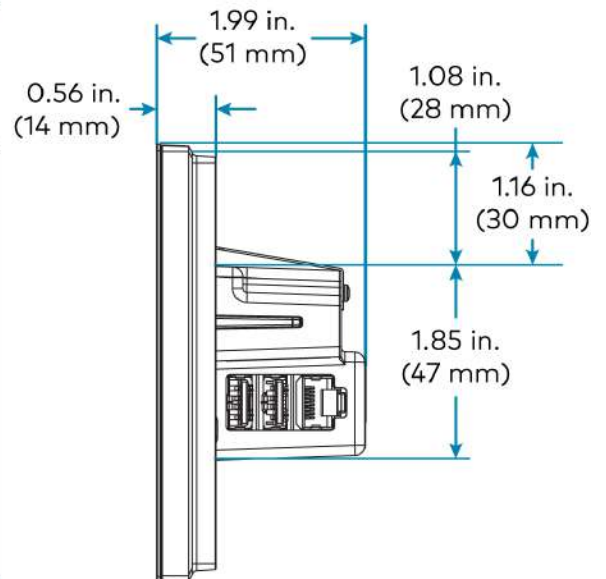
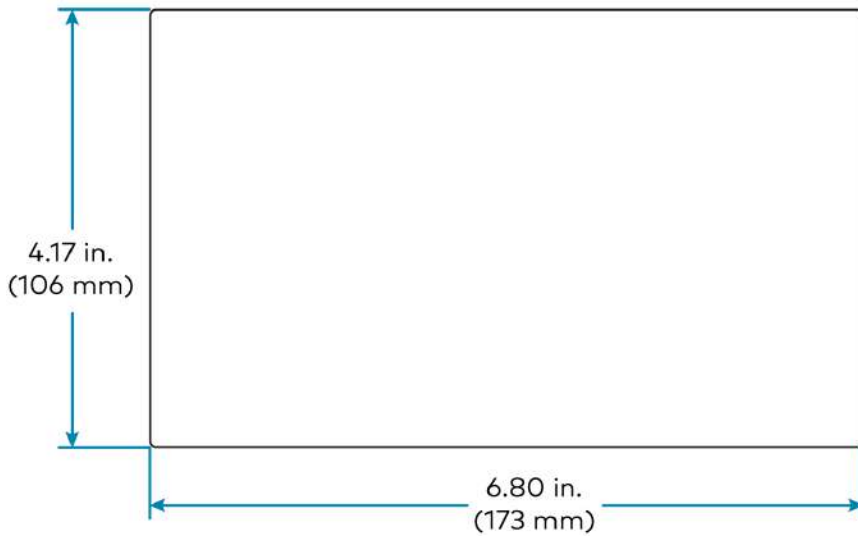
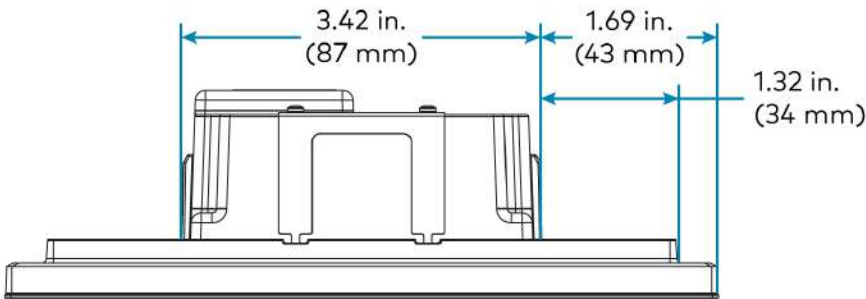
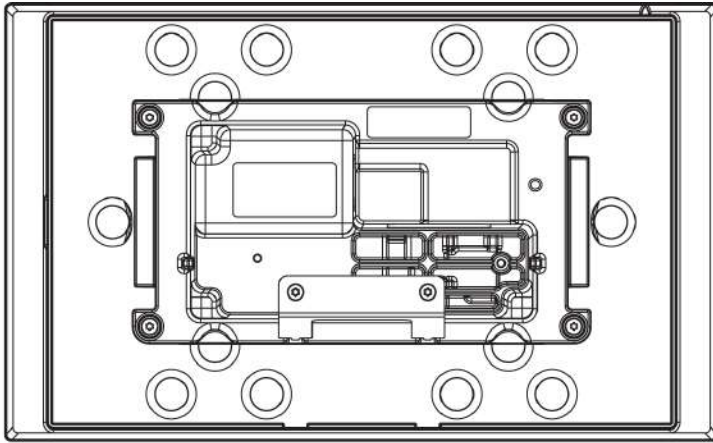
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