

# TS-770

## 7 in. Tabletop Touch Screen



- Next generation Crestron® tabletop 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 Rava® SIP intercom
- Built-in speakers and microphone
- H.265, H.264, or MJPEG streaming video display
- Native apps for Crestron Home™ OS, Sonos® home sound control, Zoom Rooms™ conferencing control, and various room scheduling services
- Built-in Bluetooth® communications beacon
- Built-in web browsing
- Single wire Ethernet connection with PoE or PoE+ power
- Wi-Fi® network connectivity
- USB 2.0 port
- Enterprise grade security and authentication
- Web, cloud, or device-based configuration

The Crestron® TS-770 is a stylish and versatile tabletop touch screen that is ideal for residential and enterprise applications. The TS-770 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 and Wi-Fi® network connectivity and a modern tabletop design allow the touch screen to be deployed just about anywhere.

### Advanced Touch Screen Control

The TS-770 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 TS-770 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, Down, and Microphone. 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 TS-770 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.

### Voice Recognition

With built-in voice recognition, spoken commands can be issued to the TS-770 to quickly turn devices on or off, select and play a specific media source, change the channel, choose a lighting scene, lower the window shades, lock the doors, arm the security system, or enter a password. Simply say a command and Crestron does the rest.<sup>1,2</sup>

### Streaming Video

Native support for H.265, H.264, and MJPEG formats allows the TS-770 to display live streaming video from an IP camera, a streaming encoder (Crestron [DM-TXRX-100-STR](#), or similar), or a [DigitalMedia™ switcher](#).<sup>3</sup> Video is delivered to the touch screen over Ethernet, eliminating the need for any extra video wiring.

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### Rava SIP Intercom

[Rava SIP Intercom Technology](#) enables hands-free VoIP communication with other Rava-enabled touch screens and door stations. Rava works over Ethernet, supporting 2-way intercom and paging without requiring any special wiring. VoIP phone capability is also possible through integration with a SIP-compatible IP phone system or SIP server, allowing hands-free telephone functionality complete with speed-dialing, caller ID, custom ringers, and other enhancements. Built-in echo cancellation affords full-duplex performance for clear, seamless voice communication using the integrated microphone and speakers.<sup>2</sup>

### 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 TS-770, 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 TS-770 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>3,4</sup>

Running the Crestron Scheduling App, the TS-770 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 TS-770 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>5,6</sup>

### Zoom Rooms App

The [Zoom Rooms™](#) conferencing control application enables the TS-770 to be used as a touch screen control panel for a Zoom Rooms software-based conferencing and collaboration solution. The TS-770 offers a superior alternative to a consumer tablet device, providing a more reliable and secure platform. The TS-770 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>7</sup>

**NOTE:** The Zoom ultrasonic proximity signal is supported up to an average of 9 ft (2.74 m) from the TS-770 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 TS-770 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 TS-770 may be installed in each room to provide easy access to various Crestron Home functions for both the room and the home.

### Bluetooth Beacon

The built-in Bluetooth® proximity detection beacon enhances the intelligence and personalization of a Crestron system by enabling a smartphone or tablet device to always know what room it is in. It works with the Crestron Go App and Crestron App to determine when the mobile device is in or near the same room as the beacon, and signals the mobile app to automatically display the appropriate controls and information for the room.<sup>2,8</sup>

### Web Browsing

Using its built-in web browser, the TS-770 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 and Wi-Fi Connectivity

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

For deployments without access to Ethernet, the touch screen can also be connected the network over Wi-Fi communications via a local wireless access point (WAP).

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### Power over Ethernet

Using PoE technology, the TS-770 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<sup>3</sup>](#)) offer a total networking solution with built-in PoE for multiple touch screens. A PoE Injector ([PWE-4803RU<sup>3</sup>](#)) is also available to support a single touch screen.

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

### High-Speed USB Port

The TS-770 provides a high-speed USB 2.0 port for connecting supported Crestron accessories to the touch screen.<sup>3</sup>

### 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.

### XiO Cloud Service

The TS-770 is compatible with the XiO Cloud® service, which is an IoT (Internet of Things) based platform for remotely provisioning, monitoring, and managing Crestron devices across an enterprise or an entire client base. Built on the Microsoft® Azure® software platform and utilizing Microsoft's industry-leading Azure IoT Hub technology, XiO Cloud enables installers and IT managers to deploy and manage thousands of devices in the time it previously took to manage just one. Unlike other virtual machine-based cloud solutions, Azure services provide unlimited scalability to suit the ever-growing needs of an enterprise. For more information, visit [www.crestron.com/xiocloud](http://www.crestron.com/xiocloud).

### Crestron One™ App Support

The TS-770 is compatible with the [Crestron One™ mobile room control app](#). The Crestron One app creates a peer-to-peer network over Bluetooth communications between a mobile device and the TS-770 in the room, allowing mobile-optimized room controls to be pushed to the device from the touch screen. Programmers can specify the controls that display on the mobile app by mapping joins from Smart Graphics projects to the mobile project. A [SW-MOBILITY](#) license is required to enable mobile room control functionality.

### Optional Mounting Accessories

The [TS-770/1070-SMK](#) allows the touch screen to be mounted permanently to a tabletop and permits up to 330 degree swivel rotation.

## 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>	(6) Virtual buttons in collapsible universal tool bar, per-button show/hide, preconfigured with icons for Power, Home, Lights, Up, Down, and Microphone, optional custom programming via control system for additional functions
<b>Reset</b>	(1) Pin hole on bottom 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>4,5,6</sup>, native Sonos® app<sup>1</sup>, native Zoom Rooms™ app<sup>7</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>4</sup>
<b>Third-Party Apps</b>	Includes support for various third-party scheduling applications. <sup>5,6</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>Voice Recognition<sup>1</sup></b>	Afrikaans (South Africa); Chinese, Mandarin (China, Simplified); Chinese, Mandarin (Hong Kong, Simplified); Chinese, Mandarin (Taiwan, Traditional); Chinese, Yue (Hong Kong, Traditional); Czech (Czech Republic); Dutch (Netherlands); English (Australia); English (Canada); English (Generic); English (India); English (New Zealand); English (South Africa); English (UK); English (US); French (France); German (Germany); isiZulu (South Africa); Italian (Italy); Japanese (Japan); Korean (South Korea); Polish (Poland); Portuguese (Brazil); Russian (Russia); Spanish (Spain); Turkish (Turkey)
<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>4</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, XiO Cloud® client, IEEE 802.3at compliant
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### Wireless Communications

<b>Transceiver</b>	IEEE 802.11a/b/g/n/ac Wi-Fi (2.4 or 5 GHz 2-way RF), static IP or dynamic IP via DHCP
<b>Security</b>	64 and 128-bit WEP, WPA and WPA2-PSK with TKIP and AES
<b>Range</b>	Up to 50 ft (15 m), subject to site-specific conditions
<b>Bluetooth® Hardware</b>	Crestron Bluetooth beacon <sup>2,8</sup>

### 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 microphone and speakers, Rava® SIP Intercom, voice recognition <sup>1,2</sup>
<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>	(1) USB Type A connector, female; USB 2.0 host port

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### 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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### Dimensions

<b>Height</b>	4.02 in. (102 mm)
<b>Width</b>	6.87 in. (175 mm)
<b>Depth</b>	4.37 in. (111 mm)

### Weight

1.33 lb (605 g)

### Compliance

**Regulatory Model: M201923005**

IC, CE, FCC Part 15 Class B digital device

### Models

**TS-770-B-S**

7 in. Tabletop Touch Screen, Black Smooth

**TS-770-W-S**

7 in. Tabletop Touch Screen, White Smooth

### Available Accessories

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

### Notes:

1. Voice recognition, web browsing, weather information, and certain other functions require an Internet connection.
2. The microphone and Bluetooth® transceiver may be defeated programmatically at any time.
3. Item(s) sold separately. Refer to each product's spec sheet for complete information.
4. Room scheduling mode requires the TS-770 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).
5. Refer to the firmware release notes for a list of all scheduling apps that are supported by that firmware release.
6. 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 TS-770 as they do on a tablet device. The TS-770 runs only one app, which is selected at setup. Only the apps approved and delivered by Crestron can run on the TS-770.
7. 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).
8. The TS-770 provides an integrated, equivalent alternative to the standalone **PP-100-W** beacon. For more details, refer to the PP-100-W spec sheet. Bluetooth technology is used solely for proximity detection and does not transmit or receive any control, multimedia, or personal data. Crestron Bluetooth beacons are only visible to Bluetooth enabled devices that are specifically programmed and configured to work with them.

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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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