TST-902

8.7 in. Wireless Touch Screen

Featuring a high-contrast 8.7 in. capacitive touch screen with Smart Graphics® technology, the TST-902 allows completely customizable control over media presentation and teleconferencing systems, lighting and shades, HVAC, home theater, and a host of other technologies. Additional advanced features include voice commands for controlling touch screen functions, full-motion streaming video from cameras and other sources, Rava® SIP intercom, and an internet browser.[2,3]

Smart Graphics Technology

Smart Graphics® technology 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.[1]

Voice Recognition

With built-in voice recognition, spoken commands can be issued to the TST-902 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.[2,3]

Streaming Video

Native support for H.264 and MJPEG formats allows the TST-902 to display live streaming video from an IP camera, a streaming encoder (DM-TXRX-100-STR or similar), or a DigitalMedia™ switcher.[3]

Rava SIP Intercom

Rava SIP Intercom Technology enables hands-free VoIP communication with other Rava-enabled touch screens and door stations. Rava works over a network connection, supporting 2-way intercom and paging without requiring any special wiring. Built-in echo cancellation affords half-duplex performance for clear, seamless voice communication using the integrated microphone and speakers.[2]

Web Browser

Using its built-in web browser, the TST-902 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.[3]

Multitouch Support

The capacitive touch screen display affords enhanced capabilities for browsing web pages using multitouch control.

On-Screen Keyboard

Typing in passwords, URLs, and text searches is facilitated using the on-screen multilanguage keyboard.

- *Advanced wireless touch screen controller with thin tablet design*
- *8.7 in. LED backlit color LCD display*
- *Capacitive touch screen display*
- *Supports Smart Graphics® technology custom user projects*
- *Built-in speakers and microphone*
- *Built-in Rava® SIP intercom*
- *Voice recognition capability*
- *H.264 or MJPEG streaming video display*
- *Built-in web browsing*
- *Multitouch support*
- *Dual-mode RF wireless connectivity (Extended Range 2.4 GHz RF and Wi-Fi® communications)*
- *Roaming support for extended wireless coverage*
- *Instant-Waking® technology*
- *Large-capacity, user-replaceable Lithium Ion battery pack*
- *Included table dock charges battery while allowing for stationary use*
- *Wall dock option sold separately*

The Crestron® TST-902 wireless touch screen is an advanced wireless controller, engineered to deliver ultimate performance, reliability, and customization for controlling a wide range of technologies. Its thin, tablet-style design is easy to hold and moves effortlessly between portable and stationary use.[1] Its large-capacity, rechargeable battery affords several hours of operation between charges. Dual-mode wireless performance with roaming capability assures dependable connectivity throughout a commercial facility or home.

8.7 in. Wireless Touch Screen

Audio Feedback

Customized audio files can be loaded to add another dimension to the touch screen graphics using personalized sounds, button feedback, and voice prompts.

Dual-Mode Wireless Connectivity

The TST-902 delivers high-performing wireless connectivity by employing a combination of Crestron Extended (ER) Range 2.4 GHz RF and Wi-Fi® wireless technologies.

> **NOTE:** Every TST-902 installation requires a Crestron ER wireless gateway to provide essential wireless capability to the touch screen. The TST-902 will not function over Wi-Fi communications alone.

- **Extended Range RF (Required):** Primary functionality is supported via Crestron ER (Extended Range) wireless communications, providing seamless touch screen control with true feedback. A single ER gateway provides dependable wireless performance at a range of up to 200 ft (60 m) indoors.[4,5] Roaming capability allows for even greater coverage using up to eight ER gateways.
- **Wi-Fi Communications (Optional):** Advanced wireless capabilities such as streaming video, voice recognition, web browsing, and dynamic graphics are supported only by using both ER and Wi-Fi communications together (dual-mode). Crestron-enhanced Wi-Fi wireless performance supports up to 50 ft (15 m) of omnidirectional coverage indoors.[5] For Wi-Fi networks with multiple access points, the TST-902 can hand off communication from one access point to another if the active connection is lost.[6] Support for 802.11 b, g, and n protocols affords reliable, high-speed wireless performance in virtually any RF environment.

Instant-Waking Technology

The TST-902 has been engineered with Instant-Waking® technology, where the touch screen display wakes instantly after being touched. Commands are also sent immediately, so spontaneous actions like muting audio, pausing video, or changing a channel can be executed without any waiting.

Extended Battery Life

The TST-902 features a large-capacity, user-replaceable Lithium Ion battery pack that allows for up to nine hours of continuous operation and several days of typical use between charges. Intelligent power management and Lithium Ion battery technology work together to provide a lightweight, compact battery with long battery life.

Table Dock Charger

The TST-902 includes a table dock for charging its internal battery while simultaneously allowing it to be used as a stationary tabletop touch screen. The table dock holds the TST-902 firmly at a fixed upright angle while docked, and allows it to be taken off at any time for portable use. Its sleek appearance makes it a perfect fit for any home or office.[1]

Wall Dock Accessory

The optional TST-902-DSW provides a flush mount, in-wall docking solution, allowing the TST-902 to be used as a stationary wall mount touch screen that can be turned into a wireless touch screen at any time.[4]

Specifications

Touch Screen Display

Display Type	TFT active matrix color LCD
Size	8.74 in. (222 m) diagonal
Resolution	1008 x 588 pixels
Brightness	300 nits (cd/m^2)
Contrast	700:1
Color Depth	24 bit, 16.7M colors
Illumination	LED backlit
Viewing Angle	+88° horizontal, +88° vertical
Touch Screen	Projected capacitive, 2-point multitouch capable

Controls and Indicators

Battery LED	(1) White LED, indicates battery condition and charging status when the touch screen is docked
Reset	(1) Pinhole recessed button on rear panel for hardware reset and setup initiation

Graphics Engine

Crestron® Smart Graphics® technology, multilanguage web browser[2,3], multilanguage on-screen keyboard, screensaver, setup and diagnostics via on-screen UI

Languages

Smart Graphics Technology	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
On-screen Keyboard	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

Voice Recognition[2,3]	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)
Web Browser[2,3]	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

Memory

RAM	1 GB LPDDR2
Flash	4 GB
Maximum Project Size	512 MB

Primary Wireless Communications (Extended Range RF)[7]

RF Transceiver	2-way RF, 2.4 GHz ISM Channels 11-26 (2400 to 2483.5 MHz), IEEE 802.15.4 compliant
Transmitting Power	75 mW (Ch.11), 100 mW (Ch.12-23), 15 mW (Ch.24), 3.5 mW (Ch.25), 1 mW (Ch.26) at high setting; 1 mW (Ch.11-25), 0.5 mW (Ch.26) at low setting
Range (Typical)	100–200 ft (30–60 m) maximum indoor; 100 ft (300 m) outdoor; Subject to site-specific conditions
Gateway	Requires a Crestron Extended Range (ER) gateway[4]
Roaming	Supports roaming between a maximum of 8 ER gateways

Secondary Wireless Communications (Wi-Fi® Communications)[7]

Transceiver	IEEE 802.11b/g/n Wi-Fi (2.4 GHz 2-way RF), static IP or dynamic IP via DHCP
Security	64 and 128-bit WEP, WPA and WPA2-PSK with TKIP and AES
Range	Up to 50 ft (15 m); Subject to site-specific conditions
Gateway	Requires a 802.11b/g/n wireless access point and Ethernet-enabled Crestron control system
Handoff	Supports handoff between a maximum of 4 Wi-Fi access points[6]

Wired Communications

USB	USB client for console only (installer setup and firmware updates)

Video

Streaming Formats	H.264 (MPEG-4 part 10 AVC) or MJPEG, up to 1280x720@30 fps[3]

Audio

Features	Built-in microphone and speakers, Rava® SIP intercom, multilanguage voice recognition[2,3]
Audio Feedback Formats	MP3

Connectors

Power	(1) 1.7 x 4.0 mm DC power connector; 24VDC power input (for included power pack)
Docking Connector	(3) Contacts; Mates with docking port on included TST-902-DS docking station[1]
Headphones	(1) 3.5 mm TRS miniphone jack; Stereo headphone output
USB	(1) Mini Type-B USB console port; Located behind battery compartment cover for installer use only

Power

Rechargeable Battery	Li-Ion, 7.4V, 910 mAh; Model TST-902-BTP; User-replaceable
Usage per Charge	300 hours typical under normal use (10% active duty cycle with standby/power down turned on); 9 hours continuous when using default settings

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Charging Time	Up to 6 hours (typical)
Power Pack (Included)	Input: 0.6A (maximum) @ 100–240VAC, 50/60 Hz; Output: 0.75A @ 24VDC; DC power connection can be made via charging dock or onboard DC power connector; Includes 6 ft (1.83 m) attached cable with 1.7 x 4.0 mm DC power barrel connector and universal blade kit to accommodate most AC outlet types
Power Consumption	7 W

Environmental

Temperature	32° to 112°F (0° to 45°C); 50° to 104°F (10° to 40°C) while charging
Humidity	10% to 90% RH (noncondensing)
Heat Dissipation	20.5 BTU/hr

Construction

Plastic, nonslip rear surface, integral docking port

Dimensions

Height	6.44 in. (164 mm)
Width	10.37 in. (264 mm)
Depth	0.74 in. (19 mm)

Weight

28.5 oz (808 g)

Compliance

IC, CE, FCC Part 15 Class B digital device

To search for product certificates, refer to support.crestron.com/app/certificates.

Model

TST-902
8.7 in. Wireless Touch Screen

Included Accessories

TST-902-BTP
Battery Pack for TST-902
(Qty. 1 included)

TST-902-DS
Table Dock for TST-902
(Qty. 1 included)

Available Accessories

For a list of available accessories, visit the TST-902 product page.

Notes:

1. The TST-902 ships with one TST-902-DS table dock included. Additional table docks, or the TST-902-DSW wall dock, may be ordered separately.
2. Voice recognition, web browsing, weather information, Rava® SIP intercom, and certain other functions require an internet connection via Wi-Fi® communications.
3. Voice recognition, streaming video, web browsing, and dynamic graphics capabilities require dual-mode wireless (ER and Wi-Fi communications).
4. Item(s) sold separately.
5. Wireless range subject to site-specific conditions.
6. True roaming is supported for ER wireless communication only, affording uninterrupted wireless performance for primary touch screen functions. Wi-Fi handoff capability enables automatic handoff between up to four predesignated Wi-Fi wireless access points (WAPs). The last successful Wi-Fi connection is maintained indefinitely until that connection is lost, at which point communication is handed off to the nearest available WAP. A very brief interruption to wireless Ethernet communication may occur during the handoff. Primary ER wireless communication is unaffected by the Wi-Fi handoff process.
7. ER (Extended Range) RF wireless communication supports basic wireless touch screen functionality, and is required for all applications. For advanced functionality including streaming video, voice recognition, web browsing, and dynamic graphics, Wi-Fi wireless communication is also required (dual-mode). The TST-902 will not work with Wi-Fi alone.

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 or contact us for additional information by visiting www.crestron.com/contact/our-locations for your local contact.

The original language version of this document is U.S. English. All other languages are a translation of the original document.

The product warranty can be found at www.crestron.com/warranty.

The specific patents that cover Crestron products are listed online at www.crestron.com/legal/patents.

Certain Crestron products contain open source software. For specific information, please visit www.crestron.com/opensource.

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10.36 in.
(263 mm)

0.74 in.
(19 mm)

6.44 in.
(164 mm)

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