

## 8.9" Wireless Touch Screen

- > Advanced wireless touch screen controller
- > Thin, stylish tablet design
- > Non-slip rear surface
- > 8.9" LED backlit color LCD display
- > Capacitive touch screen technology
- > Smart Graphics™ support<sup>[9]</sup>
- > Voice recognition capability<sup>[1,2]</sup>
- > High-performance H.264 streaming video<sup>[2]</sup>
- > Customizable audio feedback
- > Web browsing<sup>[1,2]</sup>
- > On-screen keyboard and mouse
- > Customizable screensaver
- > Built-in microphone and speakers
- > Dual-mode RF wireless performance — Extended Range 2.4 GHz RF plus Wi-Fi<sup>[6]</sup>
- > Instant-Waking® behavior — like an IR remote with all the benefits of 2-way RF!
- > Supports roaming for extended wireless coverage<sup>[5]</sup>
- > Large-capacity, user-replaceable Li-Ion battery pack
- > Rechargeable using power pack or table dock (both included)<sup>[7,8]</sup>
- > Doubles as a stationary tabletop touch screen while docked



The Crestron® TST-902 Wireless Touch Screen is an advanced wireless controller, engineered to deliver ultimate performance, reliability, and customizability for controlling a wide range of technologies in a corporate, government, classroom, or high-end home environment. Its thin-profile, tablet-style design is easy to hold and moves effortlessly between portable and stationary tabletop use. Its large-capacity rechargeable battery affords several hours or days of operation between charges. Dual-mode wireless performance with roaming capability assures dependable connectivity throughout a commercial facility or luxury residence.

Featuring a high-contrast 8.9" capacitive touch screen with Smart Graphics™, the TST-902 allows completely customizable control over media presentation and teleconferencing systems, lighting and shades, HVAC and BMS, home theater, and a host of other technologies. Additional advanced features include the abilities to control any function using voice commands, view full-motion streaming video from cameras and other sources, and browse the Internet.<sup>[1,2]</sup>

### Smart Graphics™

Crestron touch screens use Smart Graphics to deliver the ultimate user experience *and* the ultimate value by enabling the creation of dynamically rich user interfaces with incredible efficiency and unparalleled functionality. Using Smart Graphics, programmers can swiftly integrate fluid gesture-driven controls, animated feedback, rich metadata, embedded apps and widgets, and full-motion video for a deeply engaging and ultra-intuitive touch screen experience.

Crestron Smart Graphics offers these enhancements and more:

- Cool-looking graphical buttons, sliders, knobs, and gauges that are intuitive and fun to use
- Kinetic effects to enhance the feeling of realism, with lists and toolbars that scroll with momentum at the flick of a fingertip
- Drag-and-drop objects that snap into place, offering an easy way to switch sources
- Dashboard widgets to personalize the touch screen with clocks, weather, news, and other information<sup>[1]</sup>
- A power-saving screensaver, allowing display of time, temperature, and other text content at a reduced brightness level
- Customizable themes allowing a completely different look and feel for every user, event, or season
- Fully-developed SmartObjects™ that enable sophisticated control over complex devices with minimal programming

### Voice Recognition

Some things are easier *said* than *done*, so why not just *say* what you want and let Crestron *do* it for you? With built-in voice recognition, the TST-902 provides the ability to use spoken commands to control virtually anything. Voice recognition can be used to quickly turn devices on or off, choose a lighting scene, select and play a specific media title or playlist, initiate a conference call, or enter a password. Simply press the Voice Recognition button on the touch screen and say a command and Crestron does the rest.<sup>[1,2]</sup>

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## Streaming Video

High-performance streaming video capability makes it possible to view security cameras and other video sources right on the touch screen. Native support for H.264 and MJPEG formats allows the TST-902 to display live streaming video from an IP camera, a streaming server (Crestron [CEN-NVS200](#), [DM-TXRX-100-STR](#), or similar<sup>[3]</sup>), or a [DigitalMedia™](#) switcher.<sup>[2]</sup>

## Web Browsing

Its built-in Web browser allows the TST-902 to be used to access the Internet, providing a useful utility for quickly checking on social media sites, online auctions, stocks, sports, and other online information, and for accessing Web-based setup screens for equipment that may not be fully integrated through the Crestron system.<sup>[1,2]</sup>

## On-Screen Keyboard & Mouse

On-screen multi-language keyboard and mouse capabilities provide for entry of passwords, URLs, and text search items, and enable the TST-902 to be used as a wireless tablet touchpad to control a computer running TouchPoint® Virtual Mouse & Keyboard Software ([VMK-WIN](#)).

## Audio Feedback

Customized audio files can be loaded on the TST-902 to add another dimension to the touch screen graphics using personalized sounds, button feedback, and voice prompts.

## Dual-Mode Wireless

To deliver the ultimate in wireless touch screen performance and functionality, the TST-902 employs a combination of Crestron Extended Range 2.4 GHz RF (ER) and Wi-Fi® wireless technologies.

- **Extended Range RF (Required)** — Primary functionality is supported via Crestron ER wireless communications, providing seamless touch screen control with true feedback. Crestron ER wireless communication is enabled via the [CEN-ERFGW-POE](#) Extended Range RF Wireless Gateway<sup>[3]</sup>, affording ultra-dependable wireless performance up to 200 feet (60 m) indoors<sup>[4]</sup>. Roaming is supported between up to eight ER gateways for extended coverage.
- **Wi-Fi (Optional)** — While the TST-902 can be operated using only ER wireless, advanced wireless capabilities such as streaming video, voice recognition, Web browsing, and dynamic graphics can only be supported using both ER and Wi-Fi together (dual-mode). Crestron enhanced Wi-Fi wireless performance achieves a remarkable 50 feet (15 m) omnidirectional coverage indoors<sup>[4]</sup>. For Wi-Fi networks with multiple access points, the TST-902 supports the ability to hand off communication from one access point to another if the active connection is lost.<sup>[5]</sup> The choice of 802.11 b, g, and n protocols affords reliable, high-speed wireless performance in virtually any RF environment. For optimal Wi-Fi performance, Crestron offers the [CEN-WAP-1500](#) High Power Dual-Band Wireless Access Point<sup>[3]</sup>.

**IMPORTANT: EVERY INSTALLATION OF THE TST-902 REQUIRES A CRESTRON ER WIRELESS GATEWAY TO ENABLE ESSENTIAL WIRELESS CAPABILITY. THE TST-902 WILL NOT WORK WITH WI-FI ALONE.<sup>[6]</sup>**

## Instant-Waking®

To ensure the most transparent user experience possible, the TST-902 has been engineered to wake instantly upon touching the touch screen. Commands are sent immediately — just like an IR remote but with none of IR's limitations. So spontaneous actions like muting the audio, pausing the video, or changing the channel can be executed on-the-fly without any waiting.

## Extended Battery Life

The TST-902 features a large-capacity, user-replaceable Li-Ion battery pack to enable up to 9 hours of continuous operation and several days of typical use between charges. Intelligent power management and Lithium Ion battery technology afford a perfect balance of long battery life, light weight, and compact size.

## Table Dock Charger

The TST-902 includes a stylish 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 simply lifted off at any time for portable use. Its sleek appearance achieves a look befitting the most contemporary boardroom or luxury living room.<sup>[7,8]</sup>

## SPECIFICATIONS

*Note: See also TST-902-DS for additional specifications.*

### Touch Screen Display

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**Display Type:** TFT Active matrix color LCD

**Size:** 8.9 inch (226 mm) diagonal

**Aspect Ratio:** 17:10 WSVGA

**Resolution:** 1024 x 600 pixels

**Brightness:** 300 nits (cd/m<sup>2</sup>)

**Contrast:** 700:1

**Color Depth:** 24-bit, 16.7M colors

**Illumination:** LED Backlit

**Viewing Angle:** ±88° horizontal, ±88° vertical

**Touch Screen:** Projected Capacitive

### Buttons & Indicators

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**Battery LED:** (1) White LED, indicates battery condition and charging status when docked

**Reset:** (1) Pinhole recessed button on rear for hardware reset and setup initiation

### Memory

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**LPDDR2 RAM:** 1 GB

**Flash:** 4 GB

**Maximum Project Size:** 512 MB

# TST-902 8.9" Wireless Touch Screen

## Graphics Engine

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Supports Smart Graphics™ [9], multi-language Web browser<sup>[1,2]</sup>, multi-language on-screen keyboard, screensaver

## Languages

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**Smart Graphics:** 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:** 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:** 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

## Wireless Communication (Primary) – Extended Range RF [6]

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**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) @ High Setting; 1 mW (Ch.11-25), 0.5 mW (Ch.26) @ Low Setting

**Range (typical):** 100 to 200 feet (30 to 60 m) maximum indoor, 1000 feet (300 m) outdoor, subject to site-specific conditions

**Gateway:** Requires a CEN-ERFGW-POE Extended Range RF Gateway<sup>[3]</sup>

**Roaming:** Supports roaming between a maximum of eight gateways

## Wireless Communication (Secondary) – Wi-Fi® [6]

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**Transceiver:** IEEE 802.11b/g/n Wi-Fi (2.4 GHz 2-way RF), static IP or dynamic IP via DHCP

**Security:** 64 & 128-bit WEP, WPA & WPA2-PSK with TKIP & AES

**Range:** Up to 50 feet (15 m), subject to site-specific conditions

**Gateway:** Requires a CEN-WAP-1500 or similar 802.11b/g/n wireless access point and Ethernet-enabled Crestron control system

**Handoff:** Supports handoff between a maximum of four Wi-Fi wireless access points<sup>[5]</sup>

## Wired Communications

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**USB:** USB client for console only

## Video

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**Streaming Formats:** H.264 (MPEG-4 part 10 AVC) or MJPEG, up to 1280x720 @ 30 fps<sup>[2]</sup>

## Audio

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**Features:** Built-in microphone and speakers, multi-language voice recognition<sup>[1,2]</sup>

**Audio Feedback Formats:** MP3

## Connectors

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**Power:** (1) 1.7 x 4.0 mm DC power connector; 24 Volt DC power input (power pack included)

**Docking Connector:** (3) contacts; Mates with the docking port on the charging dock (included)

**Headphones:** (1) 3.5 mm TRS mini phone jack; Stereo headphone output

**USB:** (1) Mini-B USB console port behind battery compartment cover, for installer use only; Mini-B to A USB cable included

## Battery

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**Rechargeable Battery:** Li-Ion, 7.4 Volt, 9100 mAh, model TST-902-BTP, user replaceable

**Usage per Charge:** 300 hours typical under normal use (10% active duty cycle with standby/power down enabled); 9 hours continuous using default settings

**Charging Time:** Up to 6 hours (typical)

## Power Requirements

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**Power Pack:** 0.75 Amps @ 24 Volts DC; 100-240 Volts AC, 50/60 Hz power pack, model PW-2407WURA included

*Note: Power connection can be via the charging dock or onboard DC power connector*

**Power Consumption:** 7 Watts

## Environmental

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**Temperature:** 32° to 112°F (0° to 45°C); 50° to 104°F (10° to 40°C) while charging

**Humidity:** 10% to 90% RH (non-condensing)

**Heat Dissipation:** 20.5 BTU/hour

## Construction

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Plastic, non-slip rear surface, integral docking port

# TST-902 8.9" Wireless Touch Screen

## 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)

## MODELS & ACCESSORIES

### Available Models

TST-902: 8.9" Wireless Touch Screen

### Included Accessories

TST-902-DS: Table Dock for TST-902 (Qty. 1 included)  
TST-902-BTP: Battery Pack for TST-902 (Qty. 1 included)  
PW-2407WURA: Wall Mount Power Pack, 24VDC, 0.75A, 1.7mm, Universal (Qty. 1 included)

### Available Accessories

CEN-ERFGW-POE: Extended Range RF Wireless Gateway  
CEN-WAP-1500: High Power Dual-Band Wireless Access Point  
CEN-NVS200: Network Video Streamer  
DM-TXRX-100-STR: HD Streaming Transmitter/Receiver  
SW-VMK-WIN: TouchPoint® Virtual Mouse & Keyboard Software for Windows®

## Notes:

1. Voice recognition, Web browsing, weather information, and certain other functions require an Internet connection via Wi-Fi.
2. Voice recognition, streaming video, Web browsing, and dynamic graphics capabilities require dual-mode wireless (ER + Wi-Fi).
3. Item(s) sold separately.
4. Wireless range subject to site-specific conditions.
5. 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 amongst up to four pre-designated Wi-Fi wireless access points, wherein the last successful Wi-Fi connection is maintained indefinitely until that connection is lost, at which point communication is handed off to the next nearest access point. 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.
6. 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.
7. The TST-902 ships with (1) TST-902-DS Table Dock included. Additional docks may be ordered separately. Refer to the TST-902-DS spec sheet for additional information.
8. Wall dock option coming soon.
9. Supports Smart Graphics only. Not compatible with "traditional" UI projects.

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at [www.crestron.com/salesreps](http://www.crestron.com/salesreps) or by calling 800-237-2041.

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

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