TST-902

8.7” Wireless Touch Screen

- *Advanced wireless touch screen controller*
- *Thin, stylish tablet design*
- *Non-slip rear surface*
- *8.7” LED backlit color LCD display*
- *Capacitive touch screen technology*
- *Multi-touch capable*
- *Smart Graphics™ support*
- *Voice recognition capability[2,3]*
- *High-performance H.264 streaming video[3]*
- *Customizable audio feedback*
- *Built-in Web browsing[2,3]*
- *On-screen multi-language keyboard*
- *Customizable screensaver*
- *Built-in microphone and speakers*
- *Dual-mode RF wireless performance — Extended Range 2.4 GHz RF plus Wi-Fi®[7]*
- *Instant-Waking® behavior — like an IR remote with all the benefits of 2-way RF!*
- *Supports roaming for extended wireless coverage[6]*
- *Large-capacity, user-replaceable Li-Ion battery pack*
- *Rechargeable using power pack or table dock (both included)[1]*
- *Doubles as a stationary tabletop touch screen while docked*
- *Wall dock option available separately*



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, tablet-style design is easy to hold and moves effortlessly between portable and stationary tabletop or in-wall use.[1] 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 8.7” 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.[2,3]

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[2]
- 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
- A consistent look and feel across multiple touch screens of varying sizes

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.[2,3]

TST-902 8.7” Wireless Touch Screen

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 encoder (Crestron CEN-NVS200, DM-TXRX-100-STR, or similar[4]), or a DigitalMedia™ switcher.[3]

Web Browsing

Using its built-in Web browser, the TST-902 provides quick access to online program guides and other Web-based services at the touch of a button, allowing enhanced touch screen control of DVRs and other appliances without having to pick up a separate tablet or smartphone. If a device can be controlled or managed through a Web browser, it can be integrated into the Crestron system through the TST-902. Of course, the Web browser may also be used to simply browse the Internet, watch online videos, and check up on social media.[2,3]

Multi-Touch Support

The TST-902’s capacitive touch screen affords enhanced capabilities for browsing Web pages using multi-touch gestures.

On-Screen Keyboard

An on-screen multi-language keyboard allows for quick entry of passwords, URLs, and text searches.

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 (Extended Range) wireless communications, providing seamless touch screen control with true feedback. A single ER gateway[4] enables ultra dependable wireless performance at a range of up to 200 feet (60 m) indoors.[5] Roaming capability allows for even greater coverage using up to eight ER gateways.
- **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.[5] 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.[6] 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[4].

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.[7]

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.[1]

Wall Dock Option

Available separately, the 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 with the ability to go wireless at any time.

SPECIFICATIONS

Note: See also TST-902-DS for additional specifications.[1]

Touch Screen Display

Display Type: TFT Active matrix color LCD
Size: 8.74 inch (222 mm) diagonal
Resolution: 1008 x 588 pixels
Brightness: 300 nits (cd/m²)
Contrast: 700:1
Color Depth: 24-bit, 16.7M colors
Illumination: LED Backlit
Viewing Angle: ±88° horizontal, ±88° vertical
Touch Screen: Projected Capacitive, multi-touch capable

Buttons & Indicators

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

TST-902 8.7” Wireless Touch Screen

Memory

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

Graphics Engine

Crestron® Smart Graphics™, multi-language Web browser [2,3], multi-language on-screen keyboard, screensaver

Languages

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 [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) @ 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 Crestron Extended Range (ER) Wireless Gateway [4]
Roaming: Supports roaming between a maximum of eight gateways

Wireless Communication (Secondary) – Wi-Fi® [7]

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 [6]

Wired Communications

USB: USB client for console only (installer setup and firmware update)

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, multi-language voice recognition [2,3]
Audio Feedback Formats: MP3

Connectors

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

Battery

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

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

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/hr

TST-902 8.7” Wireless Touch Screen

Construction

Plastic, non-slip 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)

MODELS & ACCESSORIES

Available Models

TST-902: 8.7” 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

TST-902-DSW: Wall Dock for TST-902
CEN-RFGW-EX: infiNET EX® & ER Wireless Gateway
CEN-GWEXER: infiNET EX® & ER Wireless Gateway
MC3: 3-Series Control System® w/infiNET EX® & ER Wireless Gateway
DIN-AP3MEX: DIN Rail 3-Series® Automation Processor w/infiNET EX® & ER 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

Notes:

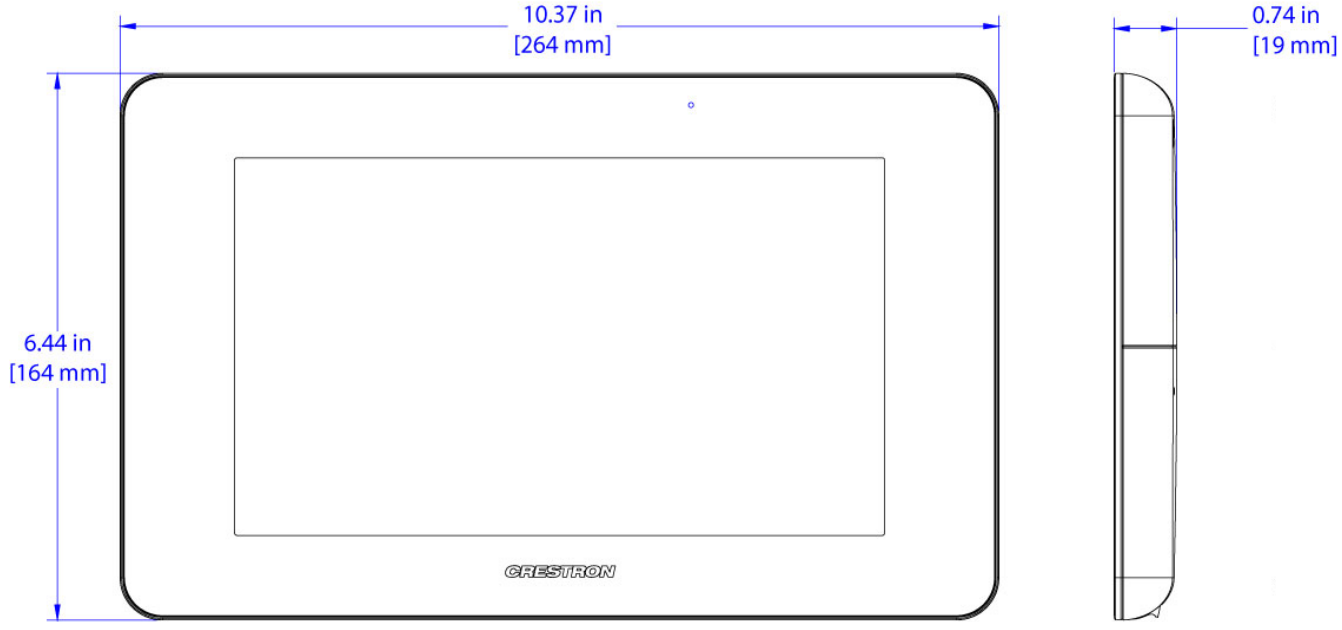
1. The TST-902 ships with (1) TST-902-DS Table Dock included. Additional table docks, or the TST-902-DSW wall dock, may be ordered separately. Refer to the TST-902-DS and TST-902-DSW spec sheets for additional information.
2. Voice recognition, Web browsing, weather information, and certain other functions require an Internet connection via Wi-Fi.
3. Voice recognition, streaming video, Web browsing, and dynamic graphics capabilities require dual-mode wireless (ER + Wi-Fi).
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 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.
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 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 or by calling 800-237-2041.

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

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

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