# 5.7" Wireless Touch Screen

- > Advanced wireless touch screen controller
- > Compact, lightweight contoured design
- > 5.7" TFT active matrix color LCD display
- > Capacitive touch screen technology
- > Smart Graphics™ support [1]
- > High-performance H.264 streaming video [3]
- > Rava® SIP intercom and phone technology [3]
- > Customizable audio feedback
- > Built-in microphone and speakers
- > Illuminated buttons and engravable backlit text [2]
- > No-button front bezel option included
- > Dual-mode RF wireless performance Extended Range 2.4 GHz RF plus Wi-Fi® <sup>[8]</sup>
- > Instant-Waking® behavior like an IR remote with all the benefits of 2-way RF!
- > Supports ER roaming for extended wireless coverage
- > Fast charging, long lasting Li-lon battery
- > Low-profile table dock charger [9,10]
- > Available in smooth black or white, or textured black finishes

The Crestron® TST-600 Wireless Touch Screen delivers enhanced wireless control for the home, boardroom, or classroom in a stylish, ergonomic design. Featuring a high-contrast 5.7" capacitive touch screen, advanced Smart Graphics™, Rava® SIP Intercom, high-performance H.264 streaming video, audio feedback, optional backlit pushbuttons, and dual-mode RF wireless performance, the TST-600 offers a mobile touch screen experience like no other.

#### **Advanced Touch Screen Control**

A Crestron touch screen offers an ideal user-interface for controlling all the technology in your home, boardroom, classroom, courtroom, or command center. Touch screens do away with piles of remote controls, cluttered wall switches, and cryptic computer screens, simplifying and enhancing the way you use technology. For controlling audio, video, lighting, shades, HVAC, security, and other systems, Crestron touch screens are fully-customizable with easy-to-use controls and icons, true feedback and real-time status display, live streaming video, and advanced navigation of digital media servers, tuners, and other devices.

#### Smart Graphics™[1]

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, metadata, embedded apps, and full-motion video for a deeply engaging and ultra-intuitive touch screen experience.



Crestron Smart Graphics include the following enhancements:

- Cool-looking graphical buttons, sliders, knobs, and gauges are intuitive and fun to use.
- Kinetic effects enhance the feeling of realism with lists and toolbars that scroll with momentum at the flick of a fingertip.
- Drag-and-drop objects snap into place offering an easy way to switch sources.
- Dashboard widgets personalize the touch screen with clocks, weather, news, and other information.
- Customizable themes allow a completely different look and feel for every user, event, or season.
- Fully-developed SmartObjects® enable sophisticated control over complex devices with minimal programming.

#### **Tactile Pushbuttons**

In addition to its touch screen display, the TST-600 features illuminated tactile pushbuttons for quick access to volume adjustment, channel selection, and on-screen menu navigation functions. Eight additional pushbuttons, elegantly trimmed by illuminated button dividers, flank the edges of the touch screen to support additional programmable functions.

High-quality backlit laser-engraving lends a crisp, legible appearance to button text in both darkened and fully lit rooms. [2] The pushbuttons come pre-engraved with labeling suited to a typical home theater or multimedia presentation application. If needed, customized engraving can be attained simply using Crestron Engraver software. [2] A no-button front bezel is also included with the TST-600, which may be installed in place of the button bezel for a very clean appearance with no front panel pushbuttons.

Two additional "trigger" style buttons are positioned on top of the TST-600 for easy control of the display brightness, sleep mode, and other programmable functions.



# **On-Screen Keyboard/Mouse**

On-screen keyboard and mouse capabilities enable the TST-600 to provide full control of computers running TouchPoint® Virtual Mouse & Keyboard Software (VMK-WIN).

# Streaming Video[3]

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-600 to display live streaming video from an IP camera, a streaming server (Crestron CEN-NVS200<sup>[4]</sup> or similar), or a DigitalMedia™ switcher. Streaming video is delivered to the touch screen over Wi-Fi® or a wired Ethernet connection. <sup>[3,5]</sup>

### Rava® SIP Intercom[3]

Rava SIP Intercom Technology enables hands-free VoIP communication with other Rava-enabled touch screens and door stations. Rava works over Ethernet (Wi-Fi or wired<sup>[5]</sup>), supporting 2-way intercom, video intercom<sup>[6]</sup>, and paging. VoIP phone capability is also possible through integration with an 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 TST-600's integrated microphone and speakers.

#### 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**

To deliver the ultimate in wireless touch screen functionality and performance, the TST-600 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 control with true feedback using the TST-600's tactile buttons and basic touch screen objects. Crestron ER wireless communication is enabled via the CEN-ERFGW-POE Extended Range RF Wireless Gateway<sup>[4]</sup>, affording ultra-dependable wireless performance up to 200 feet (60 m) indoors<sup>[7]</sup>. Roaming is supported between up to eight ER gateways for extended coverage.
- Wi-Fi (Optional) While the TST-600 can be operated using only ER wireless, advanced wireless capabilities such as streaming video, intercom, 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) omni-directional coverage indoors<sup>[7]</sup>. The choice of 802.11 a, b, and g 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-600 REQUIRES A CRESTRON ER WIRELESS GATEWAY TO ENABLE ESSENTIAL WIRELESS CAPABILITY. THE TST-600 WILL NOT WORK WITH WI-FI (OR WIRED ETHERNET) ALONE. [8]

# Instant-Waking®

To ensure the most transparent user experience possible, the TST-600 has been engineered to wake instantly at the press of a button or touch of the touch screen. Button presses 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 with just a single button press.

#### **Extended Battery Life**

Intelligent power management and robust Lithium Ion battery technology afford up to 3.2 hours of continuous operation and several days of typical use between charges.

#### **Table Dock Charger**

The TST-600 includes a low-profile table dock for charging its internal battery. While docked, the touch screen remains fully operational so you're always in control. The table dock can also provide a wired Ethernet connection for the touch screen in the absence of Wi-Fi. The table dock and touch screen look stylish together sitting on a countertop or side table, and can also fit discreetly in a cabinet or drawer. A single cable connects the table dock to a compact interface module, which provides wired connections for power and Ethernet. The interface module can be installed in a wall-mounted electrical box, or simply attached to any flat surface or a single rack rail. Power can be supplied using the included power pack or 24VDC Cresnet® power. [9,10]

#### **SPECIFICATIONS**

Note: See also TST-600-DS and TST-600-IMCW for additional specifications.

#### **Touch Screen Display**

**Display Type:** TFT Active matrix color LCD **Size:** 5.7 inch (145 mm) diagonal

Aspect Ratio: 4:3 VGA Resolution: 640 x 480 pixels

Brightness: 350 nits (cd/m²)

Contrast: 800:1

Color Depth: 18-bit, 262k colors Illumination: Edgelit LED

Viewing Angle: ±80° horizontal, ±70° vertical

Touch Screen: Projected Capacitive

# Buttons, Switches, & Indicators

**Sleep:** (1) Top-mounted pushbutton (left); programmable, normally initiates "Sleep" mode when docked, turns power on/off when undocked; also resets the unit if held for 5 seconds

**Brightness:** (1) Top-mounted pushbutton (right); programmable, normally sets display brightness level

Hard Keys: (8) Optional pushbuttons, programmable, engravable backlit text<sup>[2]</sup>

Up/Down: (2) Optional backlit translucent "up/down" pushbuttons,

programmable, engravable backlit text on bezel[2]

Thumbpad: (5) Optional backlit translucent pushbuttons for 4-way



directional navigation and "enter", programmable

Battery Switch: (1) Rear panel recessed slide switch, shuts off battery for

long-term storage

Battery LED: (1) Green LED, indicates battery condition and charging

status when docked

#### Memory

LPDDR2 RAM: 1 GB

Flash: 4 GB

Maximum Project Size: 512 MB

# **Graphics Engine**

Supports Smart Graphics<sup>a</sup> [1]

### Wireless Communication (Primary) - Extended Range RF [8]

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>[4]</sup> Roaming: Supports roaming between a maximum of eight gateways

#### Wireless Communication (Secondary) - Wi-Fi® [8]

Transceiver: IEEE 802.11a/b/g Wi-Fi (5.8 or 2.4 GHz 2-way RF), static IP or dynamic IP via DHCP, 64 and 128-bit WEP encryption

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

roaming is not supported

Gateway: Requires a CEN-WAP-1500 or other 802.11a/b/g wireless

access point and Ethernet-enabled Crestron control system

#### Wired Communications

Ethernet<sup>[5]</sup>: (Via table or wall dock) 10/100 Mbps, auto-switching, auto-

negotiating, auto-discovery, full/half duplex, DHCP

USB: USB client for console

# Video

Streaming Formats: H.264 (MPEG-4 part 10 AVC), MJPEG [3]

#### Audio

Features: Built-in microphone and speakers, Rava® SIP Intercom [3]

Audio Feedback Formats: MP3

# Connectors

Docking Connector: (1) multi-pin connector;

Mates with the docking port on the table or wall dock [9]

**USB:** (1) Mini-B USB console port, for installer use only;

Mini-B to A USB cable included

NOTE: See TST-600-IMCW interface module specification for additional connectors [9]

#### **Battery**

Internal Battery: Li-ion, 3.7 Volt, 3200 mAh, model TST-600-BTP[11] Usage per Charge: 3.2 hours continuous, 90 hours under normal use (10% active duty cycle with standby/power down enabled)

Charging Time: 2.5 hours with touch screen in standby, 3.5 to 5 hours

during use

# **Power Requirements**

Power Pack: 0.75 Amps @ 24 Volts DC;

100-240 Volts AC, 50/60 Hz power pack, model PW-2407WU included

Cresnet® Power Usage: 18 Watts (0.75 Amps @ 24 Volts DC), includes

TST-600-IMCW module[9]

Note: May be powered by power pack or Cresnet network power, not both. Does not support Cresnet data communication, only power. All power connections are made via the TST-600-IMCW interface module[9]

#### **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: 40 BTU/hour

#### **Enclosure**

Construction: Plastic, non-slip grips/feet, integral docking port Front Bezels: Plastic, button and no-button bezels included, button bezel includes white translucent illuminated Up/Down and Thumbpad buttons and 8 hardkey buttons with illuminated dividers and default backlit text engraving, optional custom backlit text engraving sold separately[2]

#### **Dimensions**

Height: 5.10 in (130 mm) Width: 8.08 in (206 mm) **Depth:** 1.59 in (41 mm)

Note: Combined height of the TST-600 touch screen docked on the

TST-600-DS table dock<sup>[9]</sup> is 3.30 in (84 mm)

#### Weight

22.5 oz (636 g) without table dock or interface module



# **MODELS & ACCESSORIES**

#### **Available Models**

TST-600-B-S: 5.7" Wireless Touch Screen, Black Smooth TST-600-B-T: 5.7" Wireless Touch Screen, Black Textured TST-600-W-S: 5.7" Wireless Touch Screen, White Smooth

#### **Included Accessories**

TST-600-BTP: Battery Pack for TST-600 (Qty. 1 included)

**TST-600-DS-B-S:** Table Dock for TST-600, Black Smooth (Qty. 1 included with TST-600-B-S)

**TST-600-DS-B-T:** Table Dock for TST-600, Black Textured (Qty. 1 included with TST-600-B-T)

TST-600-DS-W-S: Table Dock for TST-600, White Smooth (Qty. 1 included with TST-600-W-S)

**TST-600-IMCW:** Interface Module for TST-600-DS (Qty. 1 included) **PW-2407WU:** Wall Mount Power Pack 24VDC, 0.75A, Universal (Qty. 1 included)

TST-600-FPB-S-NB\_FRONT\_BEZEL: No-Button Bezel Kit for TST-600, Black Smooth (Qty. 1 included with TST-600-B-S)

TST-600-FPB-T-NB\_FRONT\_BEZEL: No-Button Bezel Kit for TST-600, Black Textured (Qty. 1 included with TST-600-B-T)

TST-600-FPW-S-NB\_FRONT\_BEZEL: No-Button Bezel Kit for TST-600, White Smooth (Qtv. 1 included with TST-600-W-S)

### **Available Accessories**

TST-600-FP-BKLT-B-S\_FRONT\_BEZEL\_BLANK: Button Bezel Kit, No Engraving, Black Smooth

TST-600-FP-BKLT-B-S\_FRONT\_BEZEL\_ENGRAVED: Button Bezel Kit w/Custom Backlit Engraving, Black Smooth

TST-600-FP-BKLT-B-T\_FRONT\_BEZEL\_BLANK: Button Bezel Kit, No Engraving, Black Textured

TST-600-FP-BKLT-B-T\_FRONT\_BEZEL\_ENGRAVED: Button Bezel Kit w/Custom Backlit Engraving, Black Textured

TST-600-FPW-S\_FRONT\_BEZEL\_BLANK: Button Bezel Kit, No Engraving, White Smooth

TST-600-FPW-S\_FRONT\_BEZEL\_ENGRAVED: Button Bezel Kit w/Custom Engraving, White Smooth

TST-600-SMK: Swivel Mount Kit for TST-600-DS

TST-600-DSW: Wall Dock for TST-600

CEN-ERFGW-POE: Extended Range RF Wireless Gateway
CEN-WAP-1500: High Power Dual-Band Wireless Access Point

TPS-6X-DS: Desktop Docking Station for TPS-6X (TST-600 compatible)
TPS-6XNL-DS: Desktop Docking Station for TPS-6X (TST-600 compatible),
No-Lock

**TPS-6X-DS-C:** Desktop Docking Station for TPS-6X (TST-600 compatible), Charging Only

TPS-6XNL-DS-C: Desktop Docking Station for TPS-6X (TST-600

compatible), Charging Only, No-Lock

TPS-6X-DSC-LP: Low-Profile Desktop Docking Station for TPS-6X

(TST-600 compatible), Charging Only SMK-6X: Swivel Mount Kit for TPS-6X-DS

CBL-CAT5E-P-50: Ethernet LAN Cable, Plenum, 50 ft

CEN-NVS200: Network Video Streamer

SW-VMK-WIN: TouchPoint® Virtual Mouse & Keyboard Software for

Windows®

#### Notes:

- 1. Supports Smart Graphics only. Not compatible with "traditional" UI projects.
- Text engraving is not backlit on the white model. All models include a button bezel with default engraving. Custom engraving is sold separately. All buttons may be removed using the TST-600-FP-NB No-Button Bezel (included).
- 3. Streaming video, intercom, and dynamic graphics capabilities require dual-mode wireless (ER + Wi-Fi) or a wired Ethernet connection.
- 4. Item(s) sold separately.
- 5. Touch screen must be docked to enable wired Ethernet communication.
- 6. H.264 compatible IP camera required.
- 7. Wireless range subject to site-specific conditions.
- 8. ER (Extended Range) RF wireless communication supports basic wireless touch screen functionality, and is required for all wireless applications. For advanced functionality including streaming video, intercom, and dynamic graphics, Wi-Fi wireless communication is also required (dual-mode). The TST-600 will not work with Wi-Fi alone. Advanced functionality can also be enabled while docked through a wired Ethernet LAN connection.
- TST-600-DS Table Dock and TST-600-IMCW Interface Module included. Other docking accessories are available separately. See individual product specifications for additional information.
- 10. The TST-600 is also compatible with any 24VDC powered TPS-6X series docking station as long as power is provided using the power pack that ships with the TST-600 (or Cresnet power where supported). When docked in a TPS-6X series docking station, the TST-600 does not interface with Cresnet data or wired analog video.
- 11. Internal battery pack included. Battery pack replacement must be performed by a Crestron qualified technician.

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 <a href="https://www.crestron.com/salesreps">www.crestron.com/salesreps</a> or by calling 800-237-2041.

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

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