TST-902

8.7 in. Wireless Touch Screen

Product Manual

Crestron Electronics, Inc.

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Contents

Overview 1
Features 2
TST-902 Features 3
TST-902-BTP Features 7
TST-902-DS Features 8
TST-902-DSW Features 9
TST-902-DSW-BB Features 10
TST-902-DSW-BBI Features 11
TST-902-DSW-PMK Features 12
TST-902-DSW-WMKM Features 13
TST-902-DSW-WMKT Features 14
Specifications 15
TST-902 Specifications 16
Product Specifications 16
Dimension Drawings 19
TST-902-BTP Specifications 21
TST-902-DS Specifications 22
Product Specifications 22
Dimension Drawings 23
TST-902-DSW Specifications 24
Product Specifications 24
Dimension Drawings 26
TST-902-DSW-BB Specifications 28
Product Specifications 28
Dimension Drawings 28
TST-902-DSW-BBI Specifications 29
Product Specifications 29
Dimension Drawings 29
TST-902-DSW-PMK Specifications 30
Product Specifications 30
Dimension Drawings 30
TST-902-DSW-WMKM Specifications 31
Product Specifications 31
Dimension Drawings 32
TST-902-DSW-WMKT Specifications 33
Product Specifications 33
Dimension Drawings 34
Installation 35
TST-902 Installation 36

In the Box 36
Install the Battery Pack 36
Place the TST-902 39
TST-902-BTP Installation 40
In the Box 40
Remove the Existing Battery Pack 40
Install the TST-902-BTP 42
Charge the TST-902-BTP 42
Store the TST-902-BTP 43
Recycle the TST-902-BTP 43
TST-902-DS Installation 44
In the Box 44
Install the TST-902-DS 44
TST-902-DSW Installation 46
In the Box 46
Install the Mounting Hardware 46
Install the TST-902-DSW 47
Dock the Touch Screen 50
Undock the Touch Screen 50
TST-902-DSW-BB Installation 53
In the Box 53
Install the Back Box 53
TST-902-DSW-BBI Installation 58
In the Box 58
Install the Back Box 58
TST-902-DSW-PMK Installation 60
In the Box 60
Install the Mounting Kit 60
TST-902-DSW-WMKM Installation 66
In the Box 66
Prepare for Installation 66
Install the Mounting Kit 67
TST-902-DSW-WMKT Installation 76
In the Box 76
Prepare for Installation 76
Install the Mounting Kit 77

Configuration 82

Initial Setup 83
Access the Setup Screens 83
Set Up an Extended Range RF Connection 83
Set Up a Wi-Fi Network Connection 85
Upgrade Firmware 89
Local Configuration 90

RF Setup 91
Audio Setup 92
Display Setup 93
Standby Timeout 94
Wi-Fi Setup 96
Diagnostics 100
About 111
Perform a Factory Restore 112

Operation 113

Resources 114

Crestron Support and Training 114
Programmer and Developer Resources 114
Product Certificates 114
Related Documentation 114

Overview

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. 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.

This section provides the following information:

- Features on page 2

Features

Refer to the following sections for more information on the features provided by the TST-902 and its accessories.

- TST-902 Features on page 3
- TST-902-BTP Features on page 7
- TST-902-DS Features on page 8
- TST-902-DSW Features on page 9
- TST-902-DSW-BB Features on page 10
- TST-902-DSW-BBI Features on page 11
- TST-902-DSW-PMK Features on page 12
- TST-902-DSW-WMKM Features on page 13
- TST-902-DSW-WMKT Features on page 14

TST-902 Features

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.

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]

Key features include:

- 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

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.

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]

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.

TST-902-BTP Features

The TST-902-BTP is a replacement Lithium Ion rechargeable battery pack for the TST-902 wireless touch screen. The user-replaceable battery pack 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.

> **NOTE:** Lithium Ion batteries must be stored at 50% charge and cycled every three months.

TST-902-DS Features

The TST-902-DS is a stylish table dock designed for charging a single TST-902 wireless touch screen 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.

One table dock is included with the TST-902. Additional table docks can be purchased separately to accommodate multiple docking locations.

TST-902-DSW Features

The TST-902-DSW is an optional wall dock for the TST-902 wireless touch screen. Placing the touch screen into the wall dock allows it to be used as a stationary touch screen while simultaneously charging its internal battery.

When docked in the TST-902-DSW, the touch screen sits nearly flush with the outer bezel, affording a clean appearance while preventing unauthorized removal. By entering a pass code or pressing a button on the touch screen, the mechanism gently tilts the touch screen outward, allowing it to be released for wireless use. A hardware key is included to release the touch screen in the event of a power outage.

The TST-902-DSW is designed for flush-mount installation in a flat, vertical wall structure.[1] Installation of the wall dock requires additional hardware (not included):

- The TST-902-DSW-BB and TST-902-DSW-BBI back boxes are available for both framed and masonry construction.
- The TST-902-DSW-PMK, TST-902-DSW-WMKM, and TST-902-DSW-WMKT mounting kits are available for preconstruction and postconstruction applications that do not require a back box.

Note:

1. The TST-902-DSW docking mechanism works as intended when mounted in a standard vertical orientation (such as within a wall). The maximum allowable tilt is 16° back. The mechanism will not eject properly at an angle greater than this.

TST-902-DSW-BB Features

The TST-902-DSW-BB provides a recess wall-mounted metal back box for the TST-902-DSW wall dock. Designed for preconstruction applications, the TST-902-DSW-BB can be fastened to the left or right-hand stud of a framed wall prior to drywall installation. Conduit knockouts are provided on the top and bottom of the back box. A blank cover plate is also included to temporarily cover the back box opening during construction.

TST-902-DSW-BBI Features

The TST-902-DSW-BBI provides a recess wall-mounted metal back box for the TST-902-DSW wall dock. The TST-902-DSW-BBI is designed specifically for installation in masonry and concrete applications. Conduit knockouts are provided on the top and bottom of the back box.

TST-902-DSW-PMK Features

The TST-902-DSW-PMK provides a preconstruction mounting solution for the TST-902-DSW wall dock. The TST-902-DSW-PMK can be fastened to the left or right-hand stud of a framed wall prior to drywall installation. A blank cover plate is also included to temporarily cover the back box opening during construction.

TST-902-DSW-WMKM Features

The TST-902-DSW-WMKM provides a simple solution for installing the TST-902-DSW wall dock in an existing framed wall or similar flat surface. Designed for postconstruction applications, the TST-902-DSW-WMKM includes a mud ring to compensate for any imperfections in the drywall cutout.

TST-902-DSW-WMKT Features

The TST-902-DSW-WMKT provides a simple solution for installing the TST-902-DSW wall dock in an existing framed wall or similar flat surface. Designed for postconstruction applications, the TST-902-DSW-WMKM includes a trim ring to provide a smooth edge around the drywall cutout.

Specifications

Refer to the following sections for more information on specifications for the TST-902 and its accessories.

- TST-902 Specifications on page 16
- TST-902-BTP Specifications on page 21
- TST-902-DS Specifications on page 22
- TST-902-DSW Specifications on page 24
- TST-902-DSW-BB Specifications on page 28
- TST-902-DSW-BBI Specifications on page 29
- TST-902-DSW-PMK Specifications on page 30
- TST-902-DSW-WMKM Specifications on page 31
- TST-902-DSW-WMKT Specifications on page 33

TST-902 Specifications

Product specifications for the TST-902 are provided below.

Product 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	3000 hours typical under normal use (10% active duty cycle with standby/power down turned on); 9 hours continuous when using default settings
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

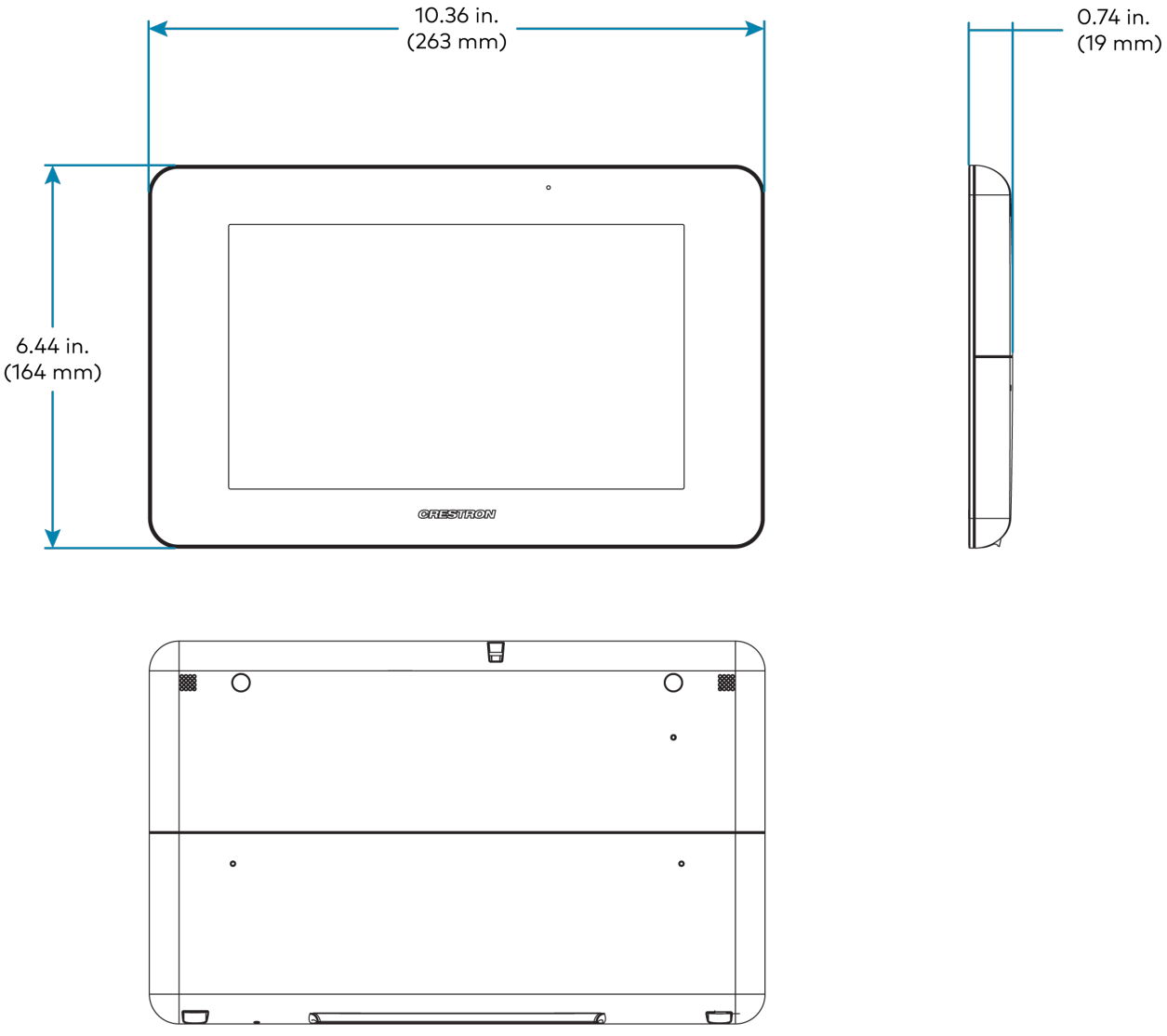
28.5 oz (808 g)

Compliance

IC, CE, FCC Part 15 Class B digital device

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

Dimension Drawings



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.

TST-902-BTP Specifications

Product specifications for the TST-902 are provided below.

Battery

Composition	Lithium Ion
Output Voltage	7.4V
Capacity	9100 mAh
Usage per Charge	3000 hours typical under normal use (10% active duty cycle with standby/power down turned on); 9 hours continuous when using default settings
Charging Time	Up to 6 hours (typical)

Compliance

CE

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

TST-902-DS Specifications

Product specifications for the TST-902-DS are provided below.

Product Specifications

Connectors

Power	(1) Attached 6 ft (1.83 m) cable with inline 1.7 x 4.0 mm DC power connector; 24VDC power input (for included power pack)

Power

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)

Construction

Metal, black

Dimensions

Height	5.14 in. (131 mm); 6.82 in. (174 mm) with touch screen docked
Width	6.66 in. (170 mm); 10.37 in. (264 mm) with touch screen docked
Depth	5.08 in. (129 mm); 5.25 in. (134 mm) with touch screen docked

Weight

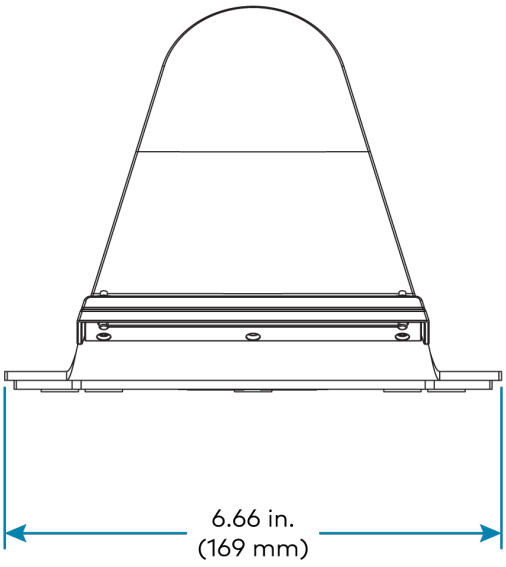
37 oz (1049 g)

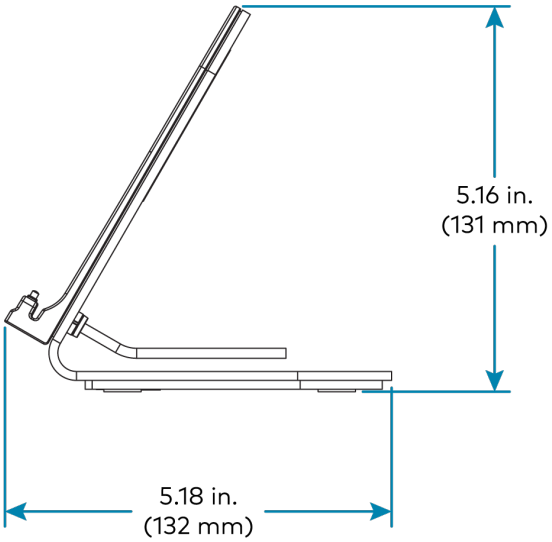
Compliance

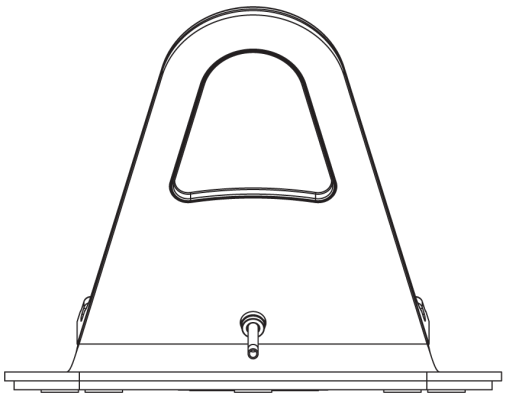
CE

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

Dimension Drawings







TST-902-DSW Specifications

Product specifications for the TST-902-DSW are provided below.

Product Specifications

Connectors

24VDC	(1) 2-pin 3.5 mm detachable terminal block; 24VDC power input; Wire size: 18 AWG (0.75 mm^2) maximum

Controls

OPEN	(1) Push button, accessible when touch screen is not docked; Releases the docking mechanism that allows the TST-902 to be docked

Power Requirements

Cresnet® Power Usage	11 W (0.46A @ 24VDC) with touch screen docked

> **NOTE:** May be powered by Cresnet network power or a dedicated Cresnet power supply. Does not support Cresnet data communication (only power).

Environmental

Temperature	41° to 112°F (5° to 45°C); 50° to 104°F (10° to 40°C) while charging
Humidity	10% to 90% RH (noncondensing)
Heat Dissipation	38 BTU/hr (with touch screen docked)

Enclosure

Chassis	Metal, flush-mountable in a vertical wall structure (with optional mounting accessories, sold separately)[1]

Dimensions

Height	8.02 in. (204 mm)
Width	11.86 in. (302 mm)
Depth	3.20 in. (82 mm); 3.25 in. (83 mm) total depth when touch screen is docked

Weight

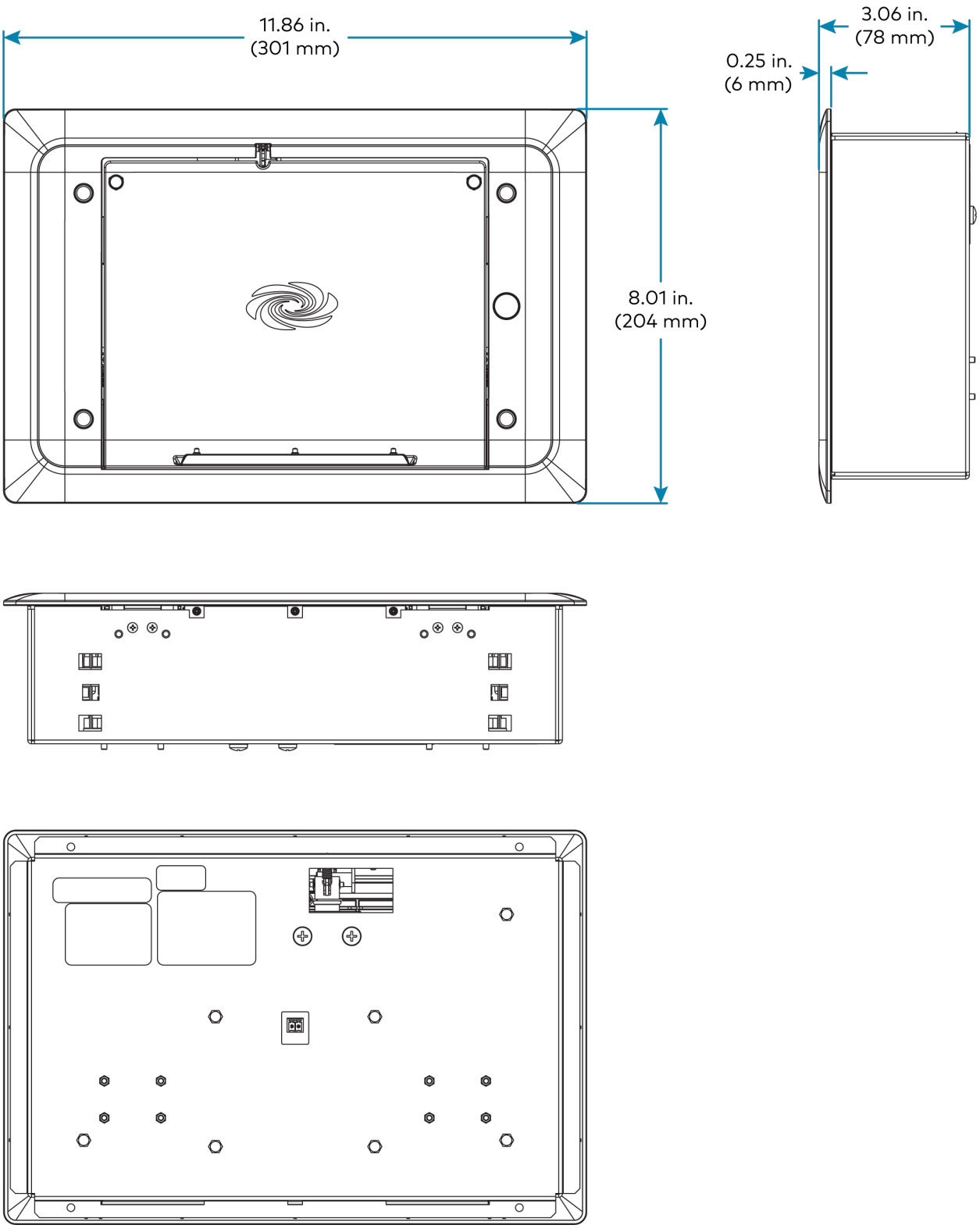
5.0 lb (2.3 kg)

Compliance

IC, CE, FCC Part 15 Class B digital device

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

Dimension Drawings



Note:

1. The TST-902-DSW docking mechanism works as intended when mounted in a standard vertical orientation (such as within a wall). The maximum allowable tilt is 16° back. The mechanism will not eject properly at an angle greater than this.

TST-902-DSW-BB Specifications

Product specifications for the TST-902-DSW-BB are provided below.

Product Specifications

Construction

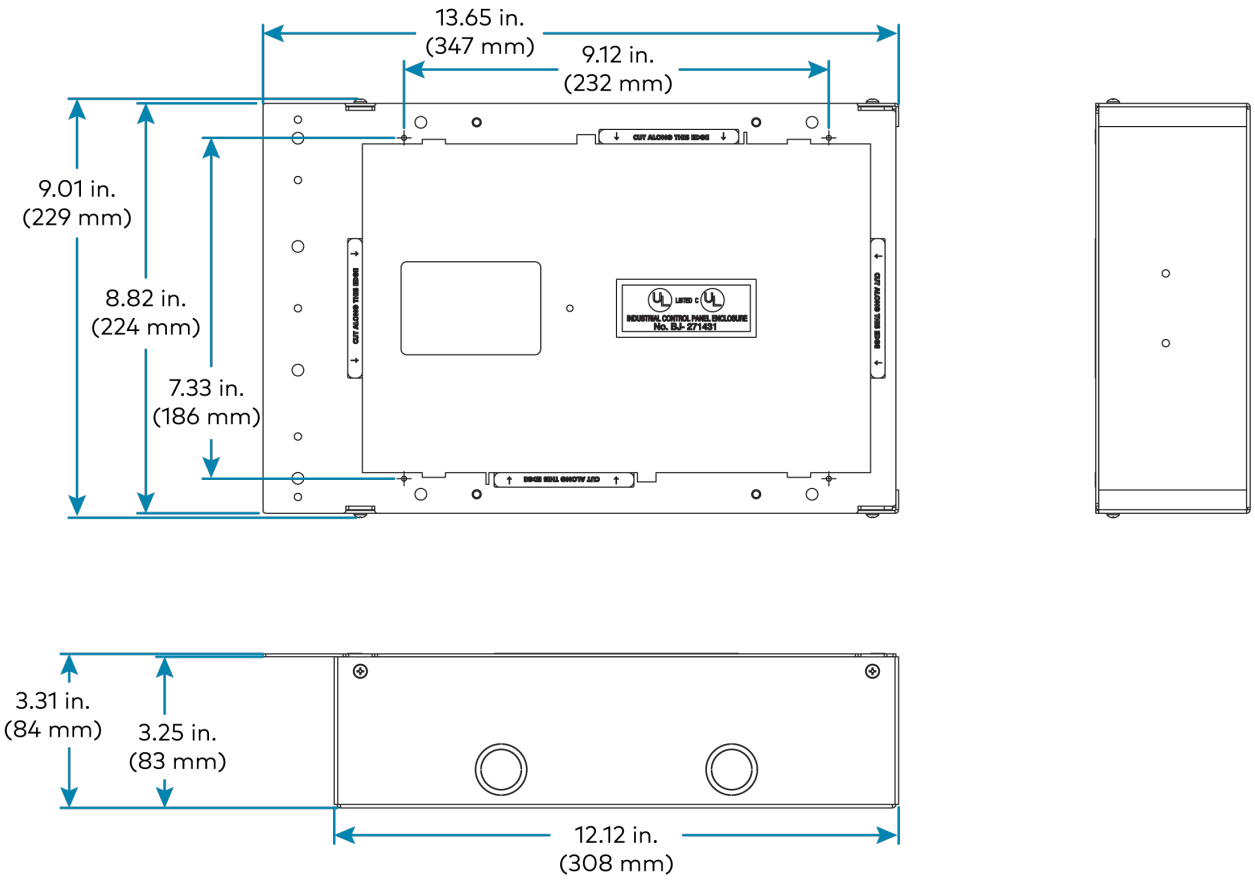
Metal box, front mounting plate with integral stud mounting flange, metal cover plate

Dimensions

Height	9.01 in. (229 mm)
Width	13.65 in. (347 mm)
Depth	3.32 in. (85 mm)

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

Dimension Drawings



TST-902-DSW-BBI Specifications

Product specifications for the TST-902-DSW-BBI are provided below.

Product Specifications

Construction

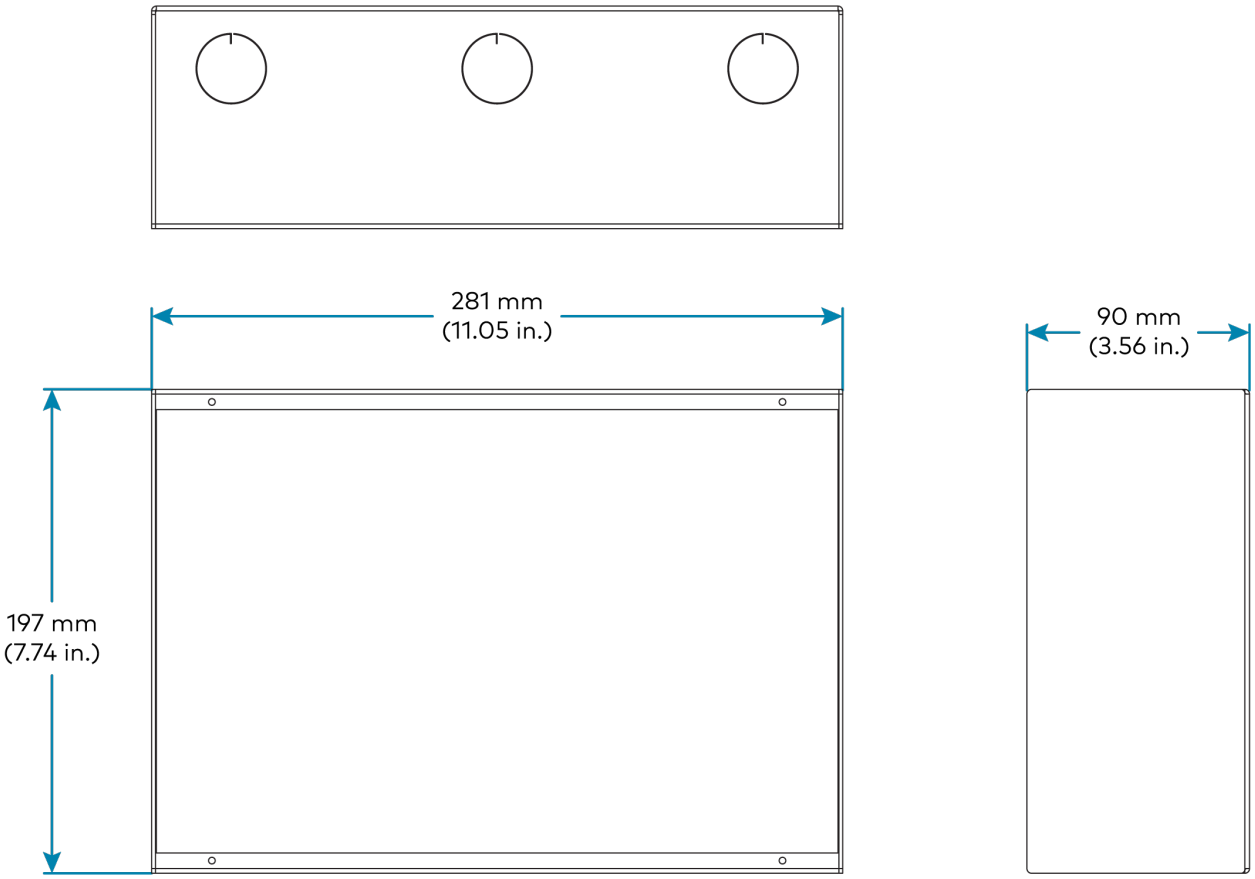
Metal box

Dimensions

Height	197 mm (7.74 in.)
Width	281 mm (11.05 in.)
Depth	91 mm (3.56 in.)

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

Dimension Drawings



TST-902-DSW-PMK Specifications

Product specifications for the TST-902-DSW-PMK are provided below.

Product Specifications

Construction

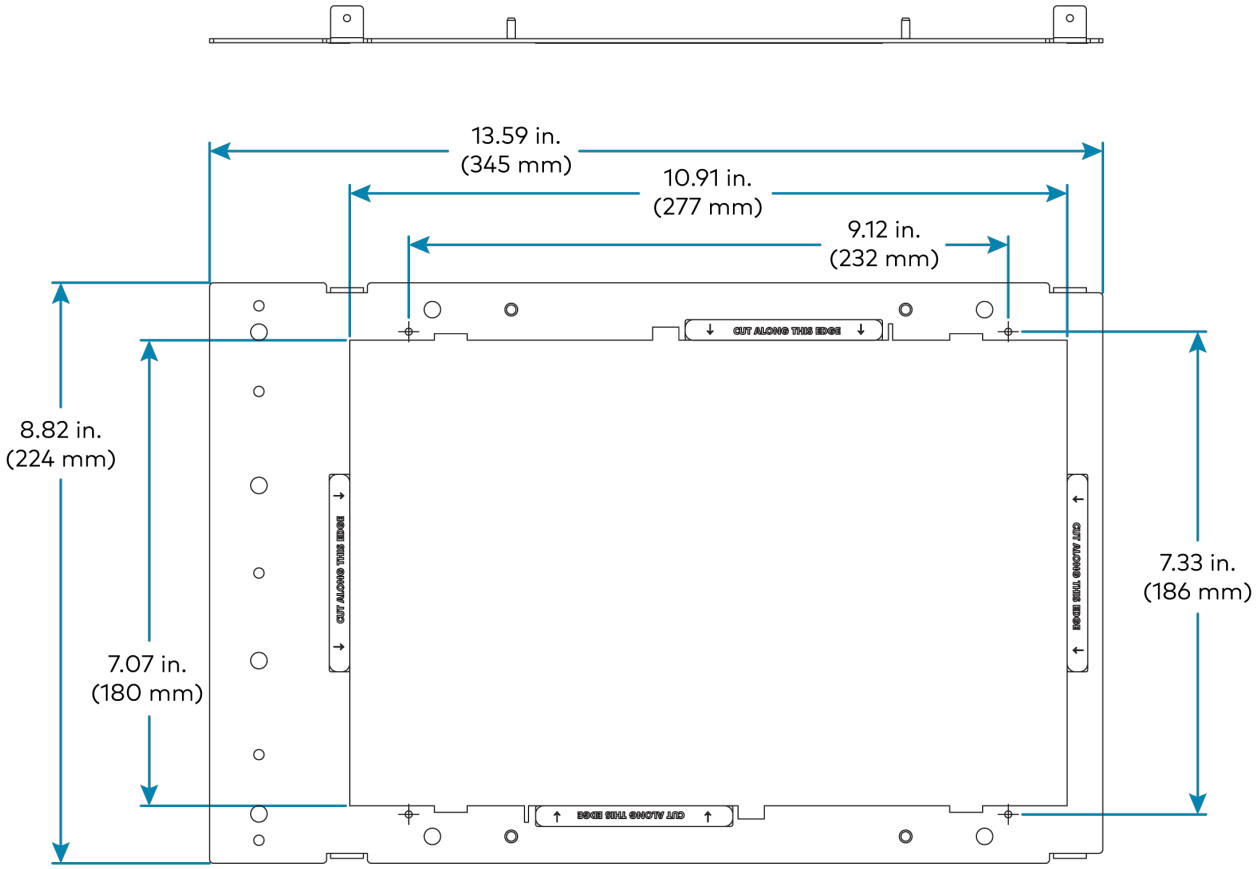
Metal mounting plate and cover plate

Dimensions

Height	8.82 in. (224 mm)
Width	13.59 in. (346 mm)

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

Dimension Drawings



TST-902-DSW-WMKM Specifications

Product specifications for the TST-902-DSW-WMKM are provided below.

Product Specifications

Construction

Metal mounting plate and mud ring

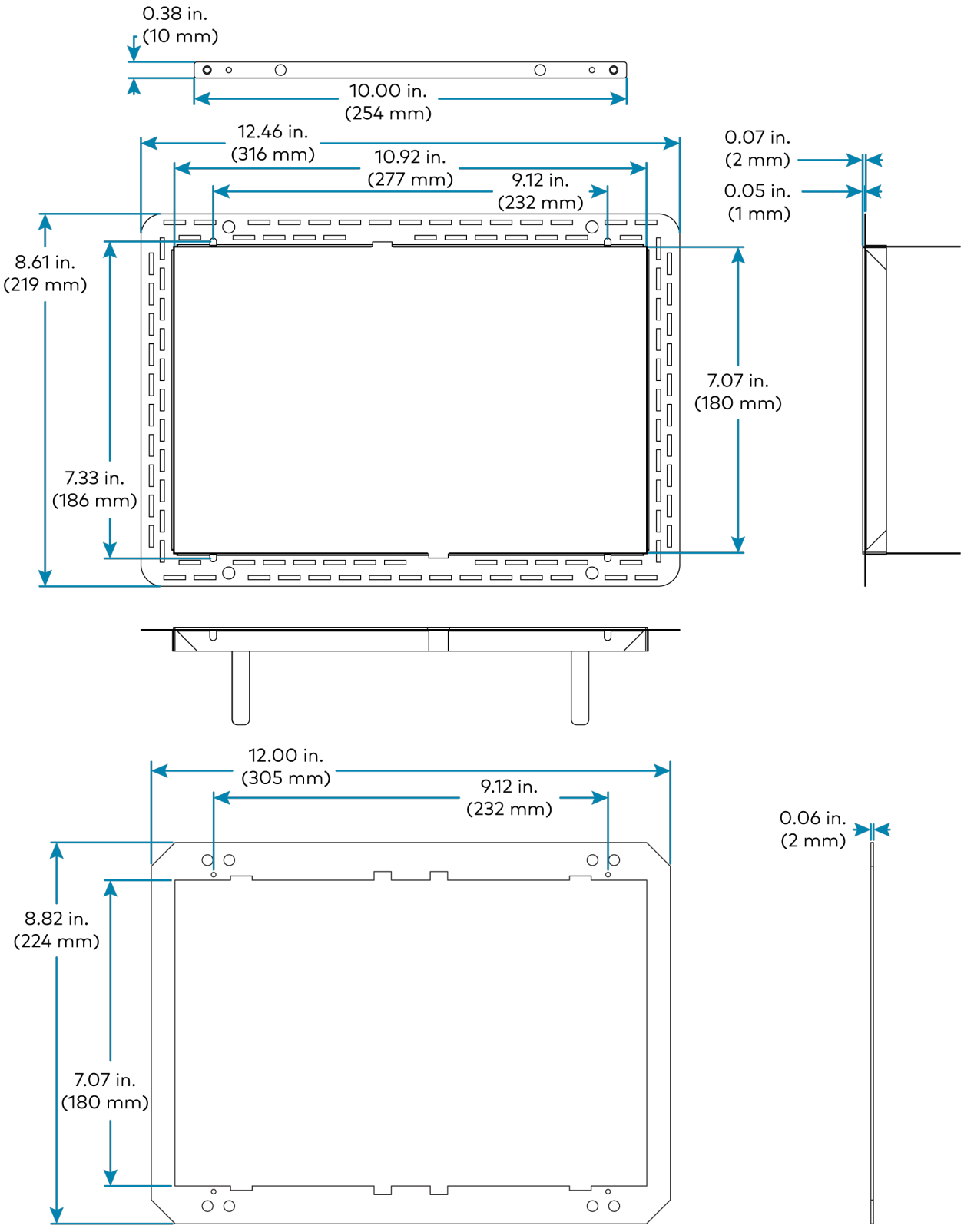
Dimensions

Height	8.82 in. (224 mm)
Width	12.46 in. (316 mm)

> **NOTE:** Dimensions shown are overall. Refer toTST-902-DSW-WMKM Installation on page 66 for actual cutout dimensions, clearances, and complete mounting instructions.

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

Dimension Drawings



TST-902-DSW-WMKT Specifications

Product specifications for the TST-902-DSW-WMKT are provided below.

Product Specifications

Construction

Metal mounting plate and trim ring

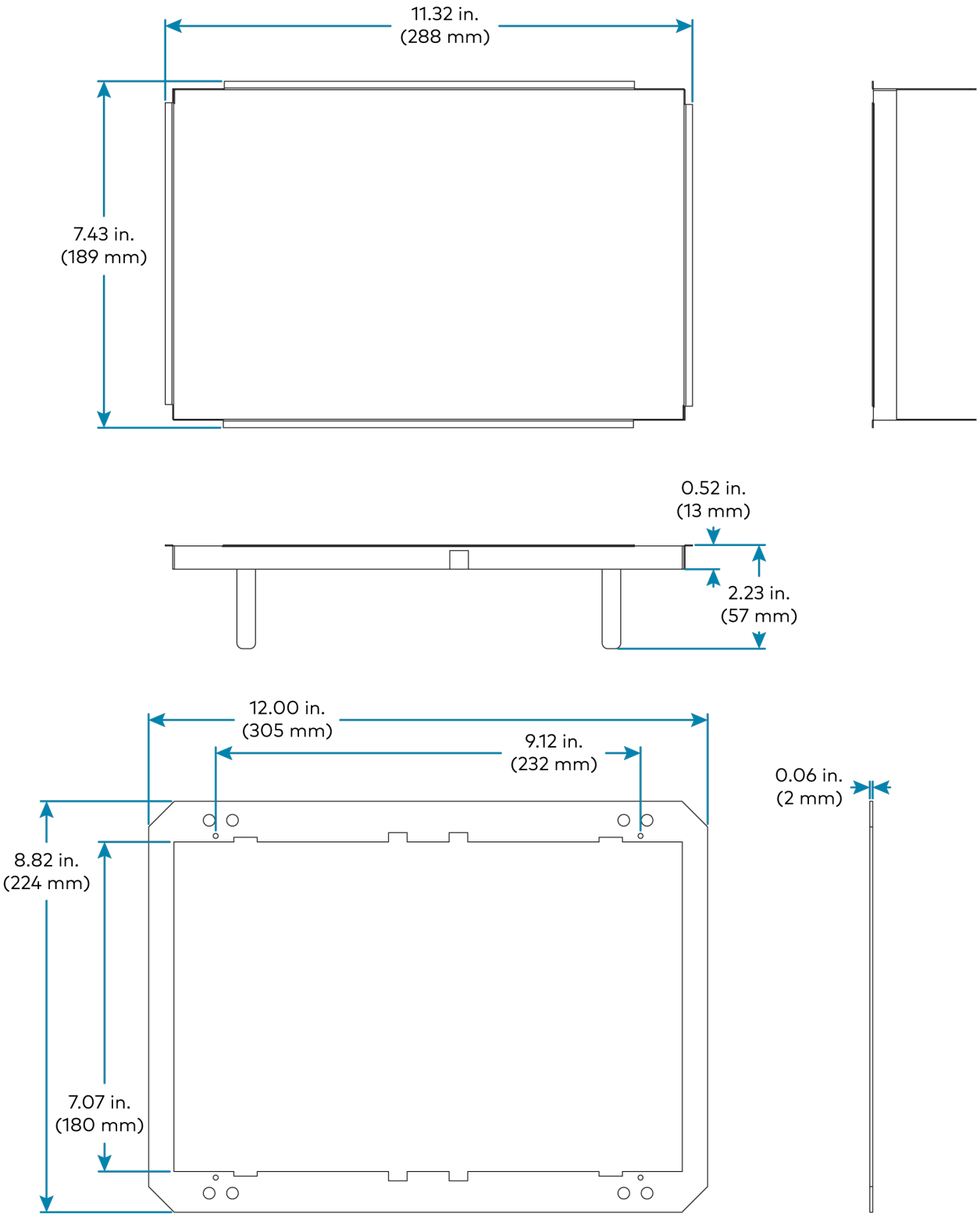
Dimensions

Height	8.82 in. (224 mm)
Width	12.00 in. (305 mm)

> **NOTE:** Dimensions shown are overall. Refer to TST-902-DSW-WMKT Installation on page 76 for actual cutout dimensions, clearances, and complete mounting instructions.

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

Dimension Drawings



Installation

Refer to the following sections for instructions on how to install the TST-902 and its accessories.

- TST-902 Installation on page 36
- TST-902-BTP Installation on page 40
- TST-902-DS Installation on page 44
- TST-902-DSW Installation on page 46
- TST-902-DSW-BB Installation on page 53
- TST-902-DSW-BBI Installation on page 58
- TST-902-DSW-PMK Installation on page 60
- TST-902-DSW-WMKM Installation on page 66
- TST-902-DSW-WMKT Installation on page 76

TST-902 Installation

Use the following procedures to install the TST-902.

In the Box

Qty.	Description
1	TST-902, 8.7 in. Wireless Touch Screen
	Additional Items
1	Battery Pack, Rechargeable, TST-902-BTP (4513771)
1	Docking Station, TST-902-DS (4517187)
1	Power Cord, 6 ft, 7 in. (2.0 m) (2001134)
1	Power Supply, 24VDC @ 0.75A, 100–240VAC (2048337)
1	Tool, T-Pin (2020478)

Install the Battery Pack

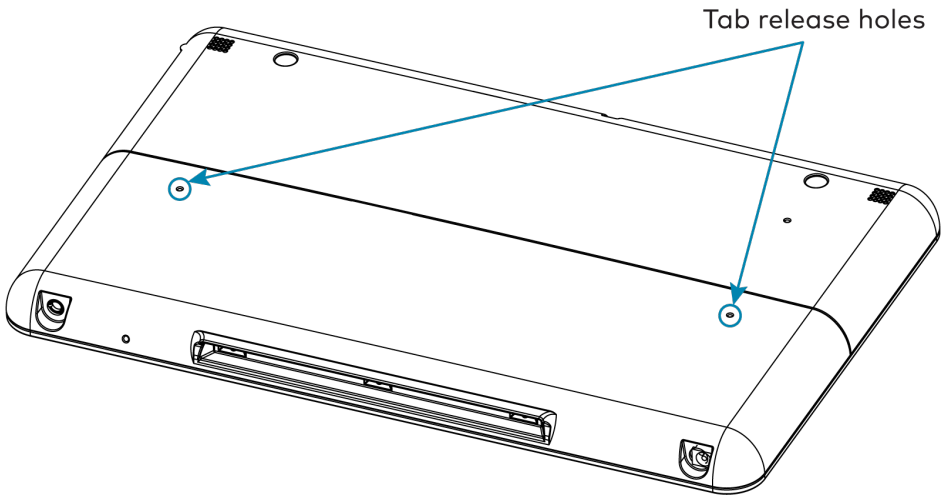
The TST-902 ships with a rechargeable battery pack (TST-902-BTP) that must be installed into the touch screen prior to use.

CAUTION: Note the following to avoid damage to the TST-902 or its battery pack:

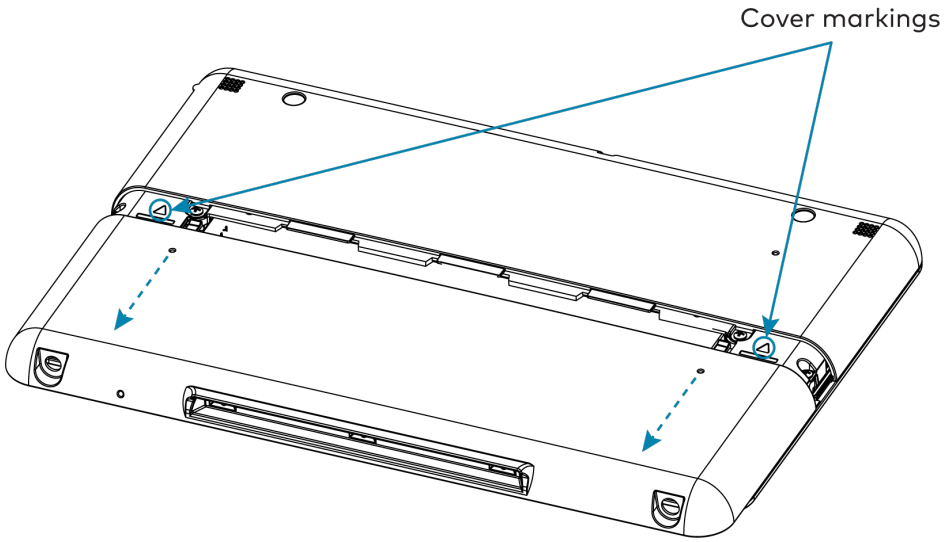
- The TST-902 is sensitive to electrostatic discharge (ESD). To avoid damage to the device, install the battery pack while wearing a grounding strap or while working within a grounded workstation.
- To prevent damage to the multipin connector and wiring, handle the battery pack with care during installation.
- The battery pack is enclosed in a black plastic overwrap that is designed to stay on the battery pack permanently. It must not be removed.

To install the battery pack into the TST-902:

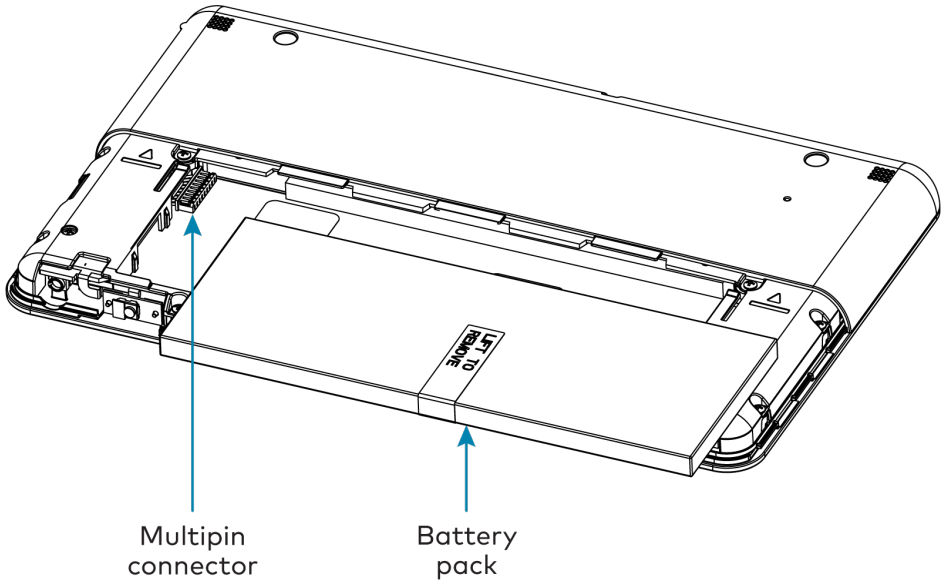
1. Insert the provided t-pin tool into one of the two tab release holes on the rear of the TST-902, and then slide the bottom cover downward to release the tab on that side.
2. Repeat step 1 for the other tab release hole.



3. Slide the bottom cover downward about 3/4 in. (19 mm) to expose the cover markings.
4. Lift the bottom cover upward to remove it from the touch screen.



5. Orient the battery pack so that its "Lift to Remove" tag is visible and the multipin connector is positioned to its left.



6. Ensure the pin side of the multipin connector on the TST-902 is facing upward, and then connect it to the battery pack wire harness as shown in the following image.

7. Place the battery pack gently into the TST-902 battery compartment.
8. Reattach the bottom cover by placing it on the rear of the TST-902 below the cover markings and then sliding it back into place.

Once the battery pack has been installed, it can be charged by placing the TST-902 in the included table dock (TST-902-DS) or the optional wall dock (TST-902-DSW, not included). For more information, refer to Place the TST-902 on page 39.

NOTES:

- Allow the TST-902 to charge overnight completely before removing it from its dock.
- If the TST-902 is in use while charging, the battery may take up to six hours to charge.
- The battery pack should be replaced every 18 to 24 months under normal usage. For more information on replacing the battery pack, refer to TST-902-BTP Installation on page 40.

Place the TST-902

The TST-902 can be used as a portable tablet-style device, or it can it can be placed within the included table dock or optional wall dock for use as a stationary touch screen.

- To place the TST-902 within the included table dock, refer to TST-902-DS Installation on page 44.
- To place the TST-902 within the optional wall dock, refer to TST-902-DSW Installation on page 46.

TST-902-BTP Installation

Use the following procedures to install the TST-902-BTP.

> **NOTE:** One TST-902-BTP is included with the TST-902 touch screen. Additional TST-902-BTP battery packs can be purchased as replacements.

In the Box

Qty.	Description
1	TST-902-BTP, Battery Pack for TST-902
	Additional Items
1	Tool, T-Pin (2020478)

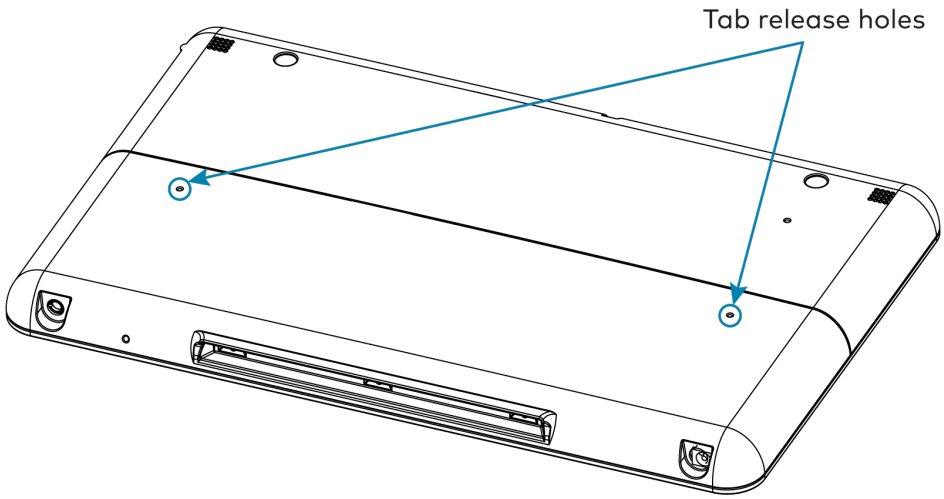
Remove the Existing Battery Pack

The TST-902 battery pack should be replaced every 18 to 24 months under normal usage. The TST-902-BTP installs in place of the existing battery pack.

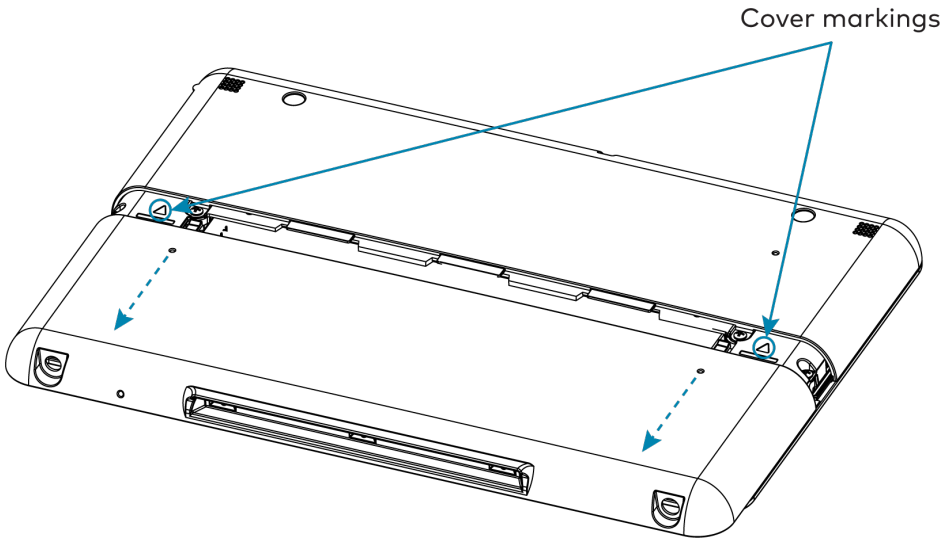
> **CAUTION:** Note the following to avoid damage to the TST-902-BTP or the touch screen:
>
> - The TST-902 touch screen is sensitive to electrostatic discharge (ESD). To avoid damage to the device, install the TST-902-BTP while wearing a grounding strap or while working within a grounded workstation.
> - To prevent damage to the multipin connector and wiring, handle the TST-902-BTP with care during installation.
> - The TST-902-BTP is enclosed in a black plastic overwrap that is designed to stay on the battery pack permanently. It must not be removed.

To remove a battery pack from the TST-902 touch screen:

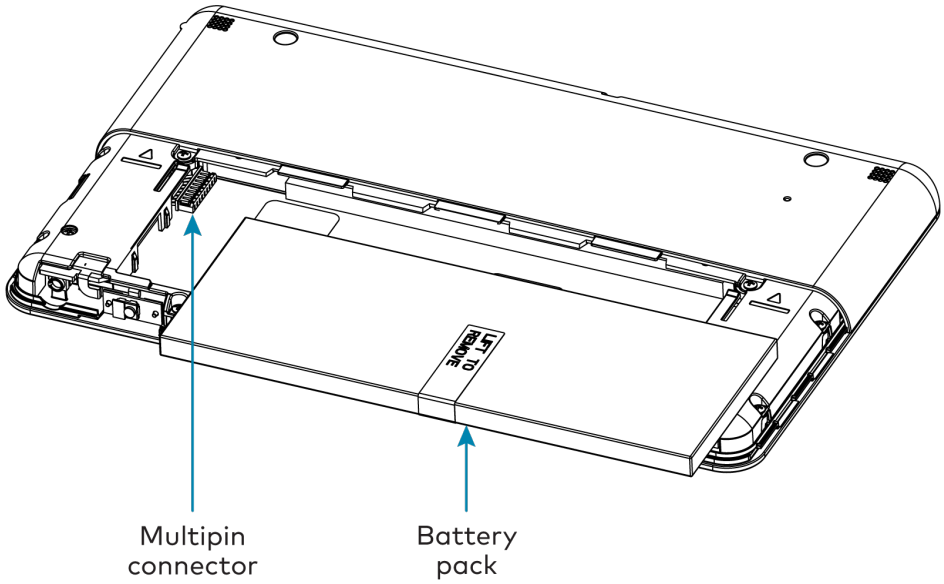
1. Insert the provided t-pin tool into one of the two tab release holes on the rear of the touch screen, and then slide the bottom cover downward to release the tab on that side.
2. Repeat step 1 for the other tab release hole.



3. Slide the bottom cover downward about 3/4 in. (19 mm) to expose the cover markings.
4. Lift the bottom cover upward to remove it from the touch screen.



5. Pull the "Lift to Remove" tag on the battery gently to unseat it from the touch screen.
6. Disconnect the battery pack wire harness from the multipin connector on the touch screen.



Install the TST-902-BTP

To install the TST-902-BTP into the touch screen after the existing battery pack has been removed:

1. Orient the TST-902-BTP so that its "Lift to Remove" tag is visible and the multipin connector is positioned to its left.
2. Ensure the pin side of the multipin connector on the touch screen is facing upward, and then connect it to the TST-902-BTP wire harness as shown in the following image.

3. Place the TST-902-BTP gently into the touch screen battery compartment.
4. Reattach the touch screen bottom cover by placing it on the rear of the touch screen below the cover markings and then sliding it back into place.

Charge the TST-902-BTP

Once the TST-902-BTP has been installed, it can be charged by placing the TST-902 in its included table dock (TST-902-DS) or the optional wall dock (TST-902-DSW, not included).

NOTES:

- Allow the TST-902-BTP to charge overnight completely before removing it from its dock.
- If the touch screen is in use while charging, the TST-902-BTP may take up to six hours to charge.

Store the TST-902-BTP

The TST-902-BTP can be stored in a temperate, dry location (removed from the touch screen and docking station) for up to 3 months without risking significant, irreversible performance degradation. The self-discharge rate is a function of temperature and internal resistance. Storage at high temperature reduces charge retention. Best results occur if the TST-902-BTP is stored at a temperature between 32°F and 95°F (0°C and 35°C).

NOTE: Lithium-ion batteries must be stored at 50% charge and cycled every three months.

Recycle the TST-902-BTP

The TST-902-BTP contains a lithium-ion battery. When the unit can no longer retain a charge, it must be recycled or disposed of properly. Follow local ordinances and regulations for disposal.

NOTE: The battery must be recycled. Deliver the battery pack to an appropriate recycling facility.

TST-902-DS Installation

Use the following procedures to install the TST-902-DS.

NOTE: One TST-902-DS is included with the TST-902 touch screen. Additional TST-902-DS table docks can be purchased to support multiple docking locations within an installation.

In the Box

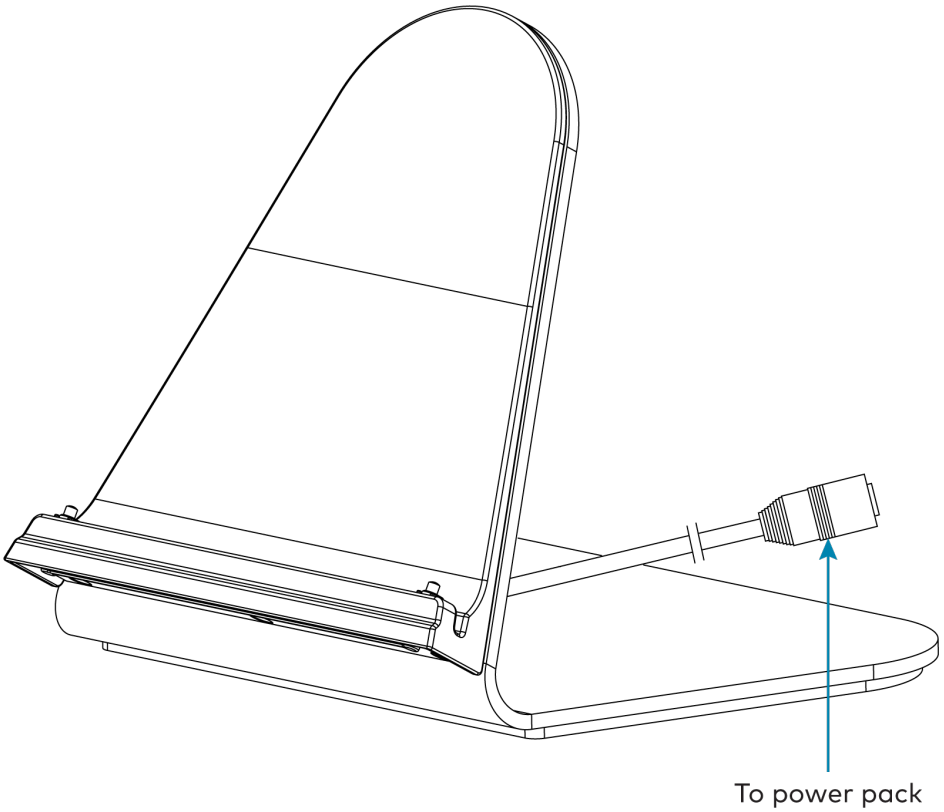
Qty.	Description
1	TST-902-DS, Table Dock for TST-902
	Additional Items
1	Power Cord, 6 ft, 7 in. (2.0 m) (2001134)
1	Power Supply, 24VDC @ 0.75A, 100–240VAC (2048337)

Install the TST-902-DS

Place the TST-902-DS on a flat, level surface. The only required connection is from the fixed 6 ft (1.83 m) power cord on the TST-902-DS to the included power pack.

NOTES:

- Use Crestron power supplies for Crestron equipment.
- The included power cord cannot be extended.



After power has been applied to the TST-902-DS, place the TST-902 touch screen on the TST-902-DS by aligning its three charging contacts with the bottom of the charging dock. The touch screen should be seated firmly on the charging dock once attached, and the touch screen battery will begin to charge.

TST-902-DSW Installation

Use the following procedures to install the TST-902-DSW.

NOTE: The TST-902-DSW wall dock is designed for flush-mount installation in a flat, vertical wall structure. Installation of the wall dock requires additional mounting hardware (not included):

- The TST-902-DSW-BB and TST-902-DSW-BBI back boxes are available for both framed and masonry construction.
- The TST-902-DSW-PMK, TST-902-DSW-WMKM, and TST-902-DSW-WMKT mounting kits are available for preconstruction and postconstruction applications that do not require a back box.

In the Box

Qty.	Description
1	TST-902-DSW, Wall Dock for TST-902

	Additional Items
1	Connector, 2-Pin (2003574)
4	Screw, 6-32 x 1-1/2 in., Flat Head, Phillips (2031703)
4	Plug, 0.35 x 0.50 in., Black (2042641)
4	Screw, 6-32 x 3/4 in., Pan Head, Phillips, Black (2007246)
1	Key, Release Lock (4522222)

Install the Mounting Hardware

One of the available TST-902-DSW mounting accessories (not included) must be installed prior to installing the TST-902-DSW. Refer to the following installation procedures depending on the chosen mounting hardware:

NOTE: Ensure the chosen mounting location allows for an air gap of at least 12 in. (305 mm) in the wall cavity above and below the TST-902-DSW for heat dissipation.

- For preconstruction applications where a back box will be fastened to the left or right-hand stud of a framed wall prior to drywall installation, refer to TST-902-DSW-BB Installation on page 53.

- For preconstruction applications where mounting hardware (without a back box) will be fastened to the left or right-hand stud of a framed wall prior to drywall installation, refer to TST-902-DSW-PMK Installation on page 60.
- For postconstruction applications where a back box will be installed into masonry or concrete, refer to TST-902-DSW-BBI Installation on page 58.
- For postconstruction applications where mounting hardware will be installed in an existing framed wall or similar flat surface using a mud ring, refer toTST-902-DSW-WMKM Installation on page 66.
- For postconstruction applications where mounting hardware will be installed in an existing framed wall or similar flat surface using a trim ring, refer to TST-902-DSW-WMKT Installation on page 76.

Install the TST-902-DSW

The following procedure assumes that the a TST-902-DSW mounting accessory has been installed completely as described in Install the Mounting Hardware on page 46. For preconstruction mounting hardware, it is also assumed that drywall is in place and a cutout for the TST-902-DSW has been made.

To install the TST-902-DSW wall dock:

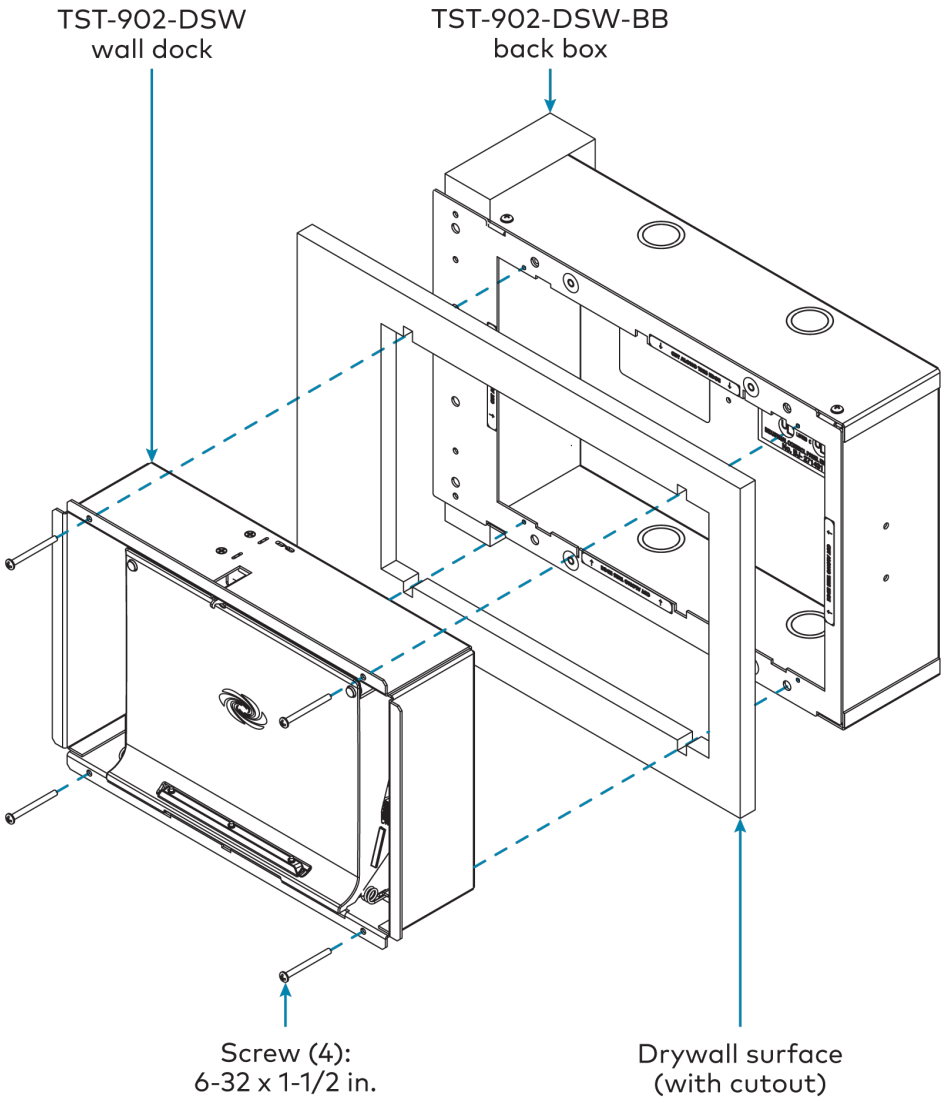
1. Route the wiring for the TST-902-DSW power connection through the rear of the mounting hardware.

   > **NOTE:** The maximum wire size for the power connection is 18 AWG.

2. While holding the TST-902-DSW, connect the flying leads from the wiring to the 2-pin power connector (**24 G**) on the rear of the TST-902-DSW.
3. Attach the TST-902-DSW to the mounting hardware using the four 6-32 x 1-1/2 in. screws.

   The following illustration shows the TST-902-DSW being attached to the TST-902-DSW-BB back box as an example.

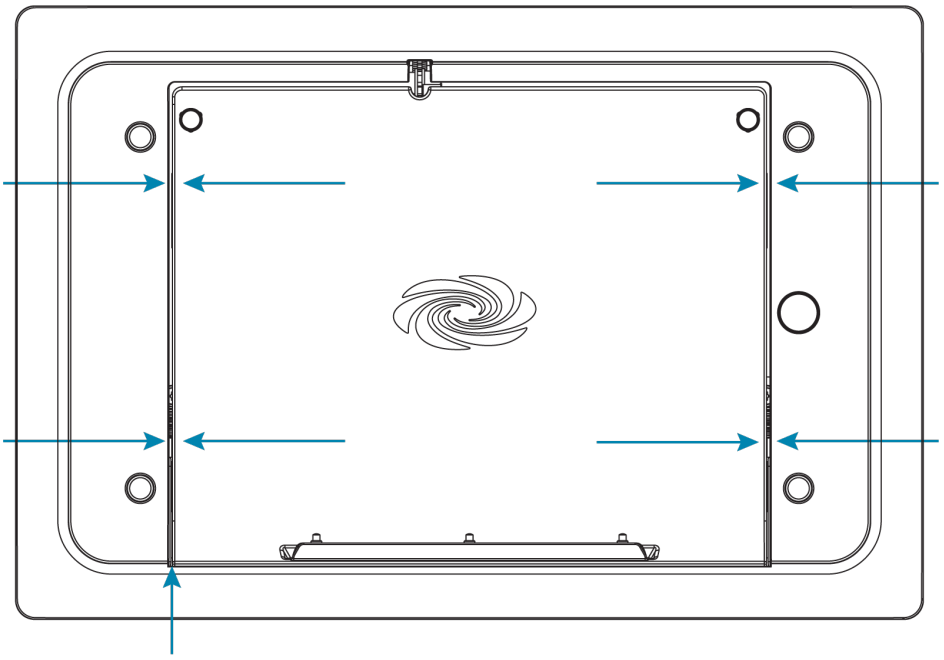
   > **NOTE:** The cradle for the touch screen on the TST-902-DSW should be in the closed position during installation.



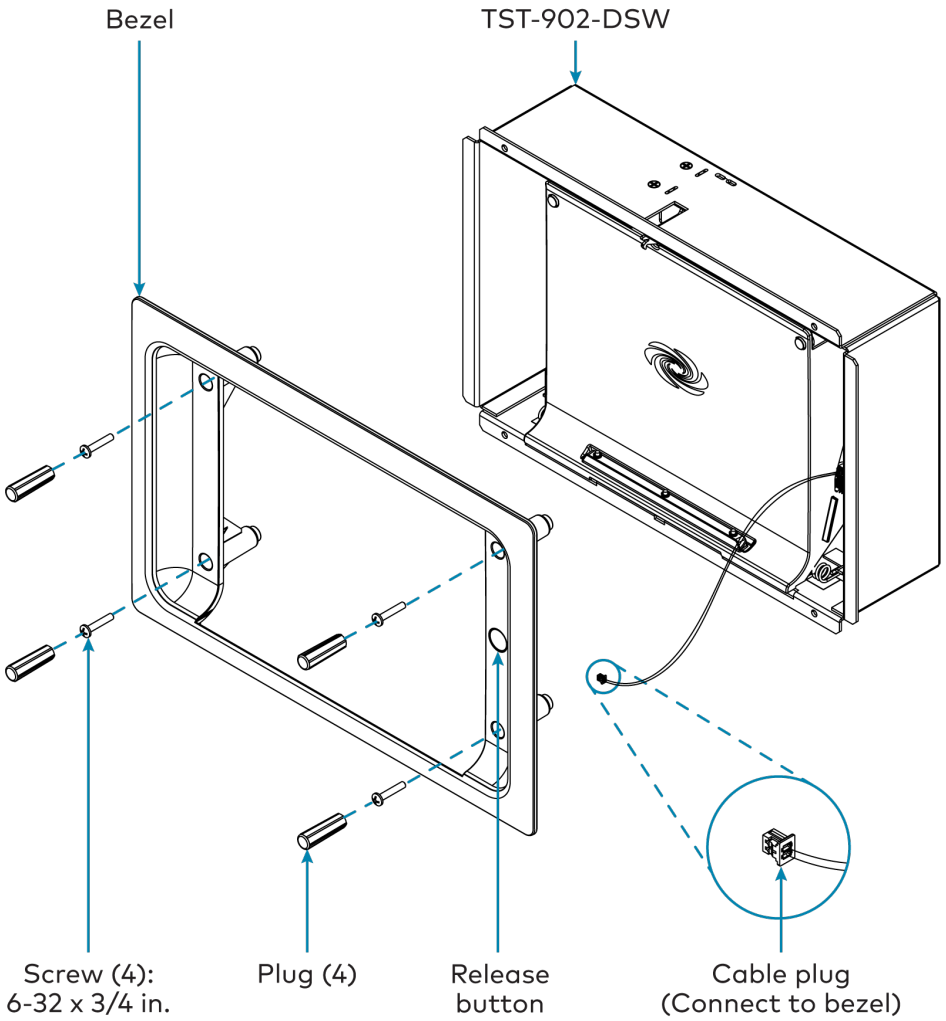
4. While holding the included bezel, connect the small plug attached to the thin cable on the TST-902-DSW to the connector located behind the release button on the right of the bezel. Refer to the illustration below step 7.

   > **NOTE:** If the bezel must be removed for any reason, disconnect this cable carefully prior to removal.

5. Attach the bezel to the TST-902-DSW using the four 6-32 x 3/4 in. screws, but do not tighten the screws. Refer to the illustration below step 7.
6. While viewing the assembly from the front, ensure that the gaps to the left and right of the cradle are about equal. Then, tighten the screws fully to secure the bezel.



7. Attach the four plastic plugs to cover the screws. Each plug should be pushed fully into its opening so that the plug is recessed from the bezel front surface.



8. Test the installation by pushing the release button on the right of the bezel to open the cradle. Then, push the cradle back into place to close it.

Dock the Touch Screen

To dock the TST-902 touch screen once the TST-902-DSW has been installed:

1. Push the release button on the right of the bezel to open the cradle.
2. Insert the bottom of the touch screen into the cradle, and then push the top of the touch screen into place so that it attaches to the TST-902-DSW magnetically.
3. Push the cradle with the touch screen back into place to close it.

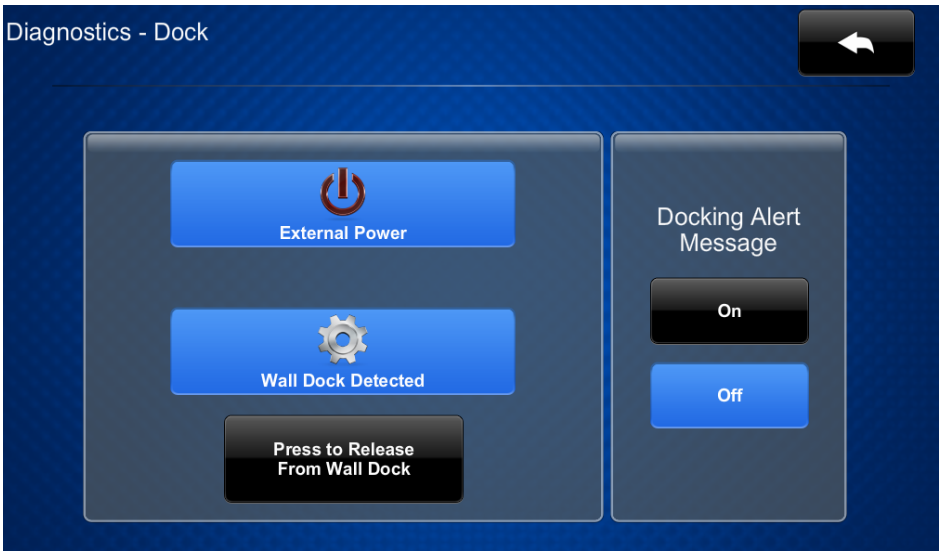
Undock the Touch Screen

To undock the TST-902 touch screen from the TST-902-DSW:

1. Access the touch screen setup screens as described in Access the Setup Screens on page 83.

2. Navigate to **Diagnostics** > **Dock Test**. The **Diagnostics - Dock** screen is displayed.

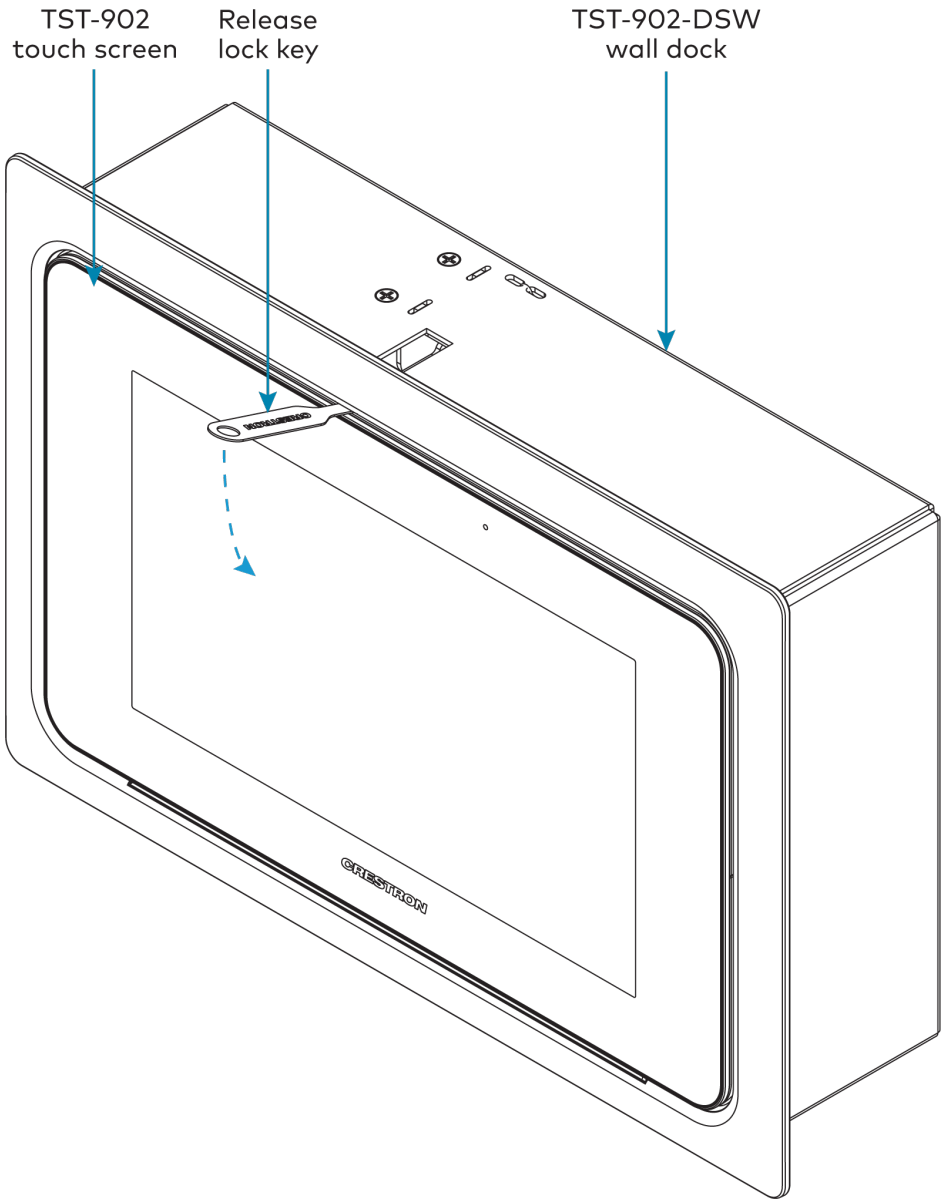
> **NOTE:** Both the **External Power** and **Wall Dock Detected** icons should be active.



3. Tap **Press to Release From Wall Dock**. The cradle will open automatically so that the touch screen can be removed.

In the event of a power failure, the touch screen can be unlocked and removed from the TST-902-DSW manually.

1. Insert the provided release lock key into the gap between the top of the touch screen and the TST-902-DSW. Ensure that the machined text on the key is facing upward.
2. Rotate the key downward as shown in the following illustration.



3. Remove the key to open the cradle so that the touch screen can be removed.

TST-902-DSW-BB Installation

Use the following procedures to install the TST-902-DSW-BB.

NOTE: The TST-902-DSW-BB wall mount back box is a TST-902-DSW mounting accessory that is designed for preconstruction applications where a back box will be fastened to the left or right-hand stud of a framed wall prior to drywall installation.

In the Box

Qty.	Description
1	TST-902-DSW-BB, Wall Mount Back Box for TST-902-DSW

	Additional Items
1	Screw, 8-8B x 1/4 in., Pan Head, Phillips (2007277)
4	Screw, 6-32 x 1-1/2 in., Pan Head, Phillips (2007254)
1	Cover Plate, Metal (2042716)

Install the Back Box

To install the TST-902-DSW-BB wall mount back box:

NOTES:

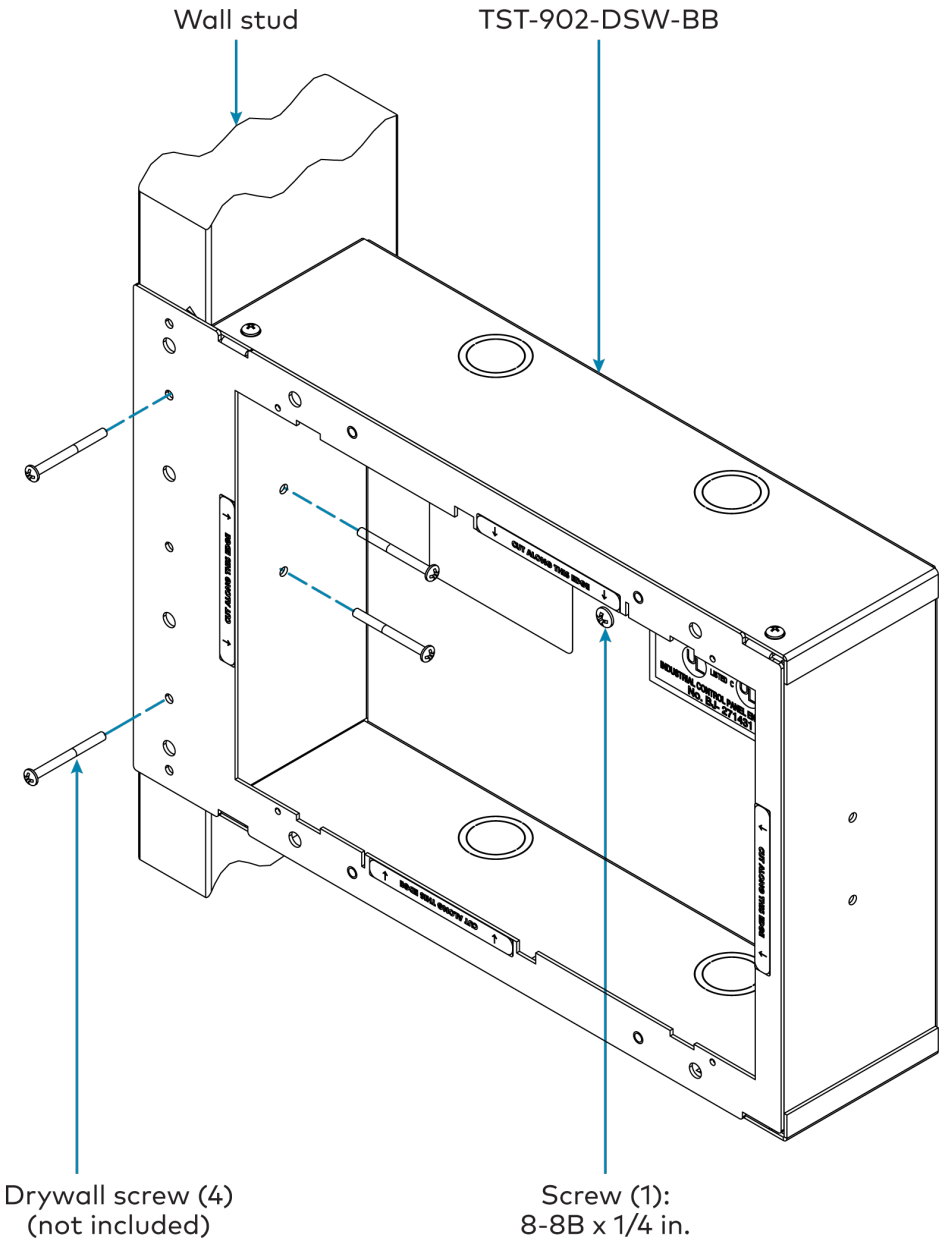
- Ensure the chosen mounting location allows for an air gap of at least 12 in. (305 mm) in the wall cavity above and below the TST-902-DSW for heat dissipation.
- Depending on the installation, forced venting may be required.
- The knockout holes are intended for Class 2 wiring and are 1-1/8 in. (29 mm) in diameter.
- The 8-8B x 1/4 in. self-tapping screw is intended for grounding purposes and should be installed in the rear of the back box mounting enclosure as described in the following procedure.
- If the back box will not be installed onto a wooden stud, consider the specific requirements for the installation. For example, installation onto steel studs will require a different type of screw than installation onto wooden studs.

1. Remove the appropriate knockout(s) on the TST-902-DSW-BB for routing wiring to the TST-902-DSW wall dock.

2. Position the back box against the left or right side of the stud so that the extended edge of the attached mounting plate covers the front end of the stud. Ensure the side of the back box is directly against the side of the stud.

   > **NOTE:** If mounting the back box to the left side of a stud, the back box must be rotated so that the extended edge of the attached mounting plate is on the right.

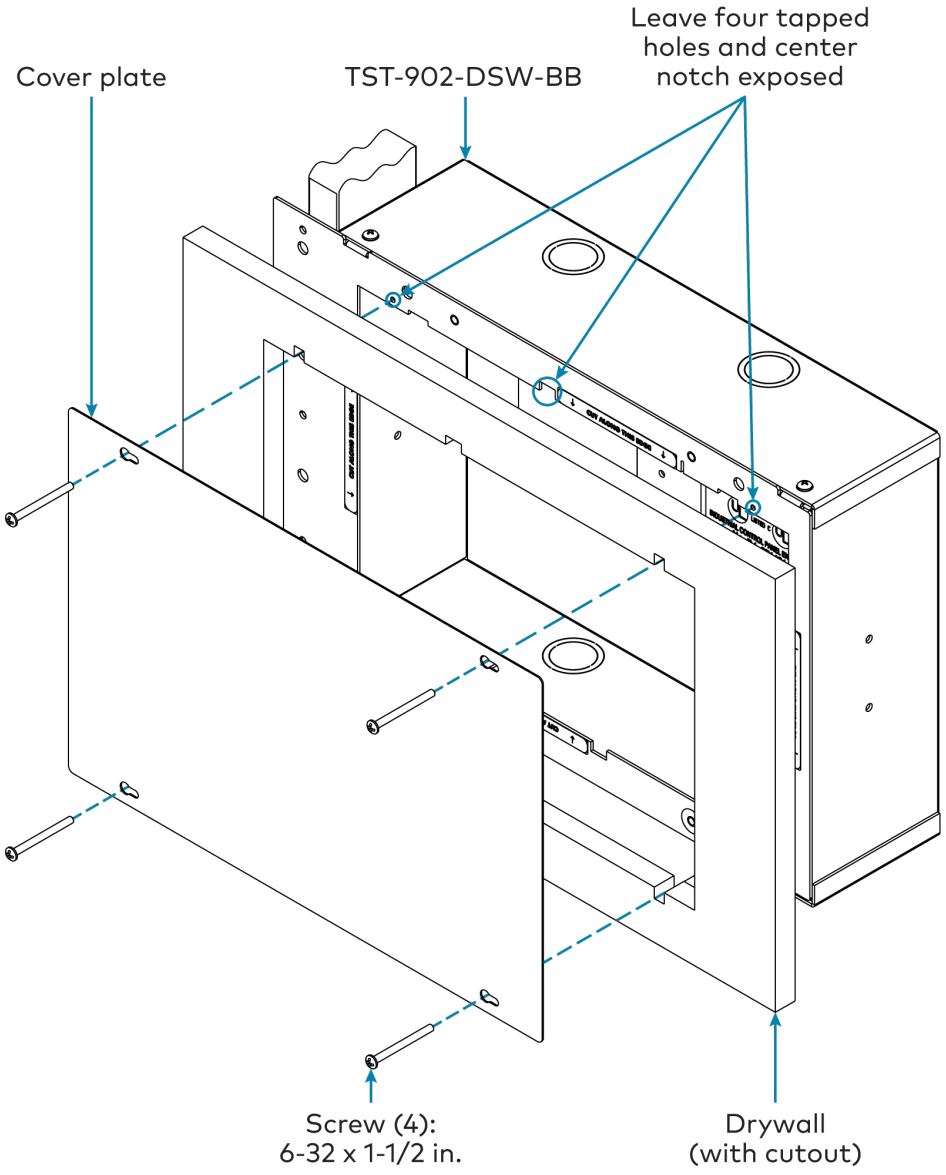
3. Verify that the back box is level prior to proceeding with the rest of the installation.
4. Attach the TST-902-DSW-BB to the left or right side of the stud with four standard drywall screws or nails (not included).
5. Install the 8-8B x 1/4 in. self-tapping screw in the rear of the back box mounting enclosure as shown in the following illustration.



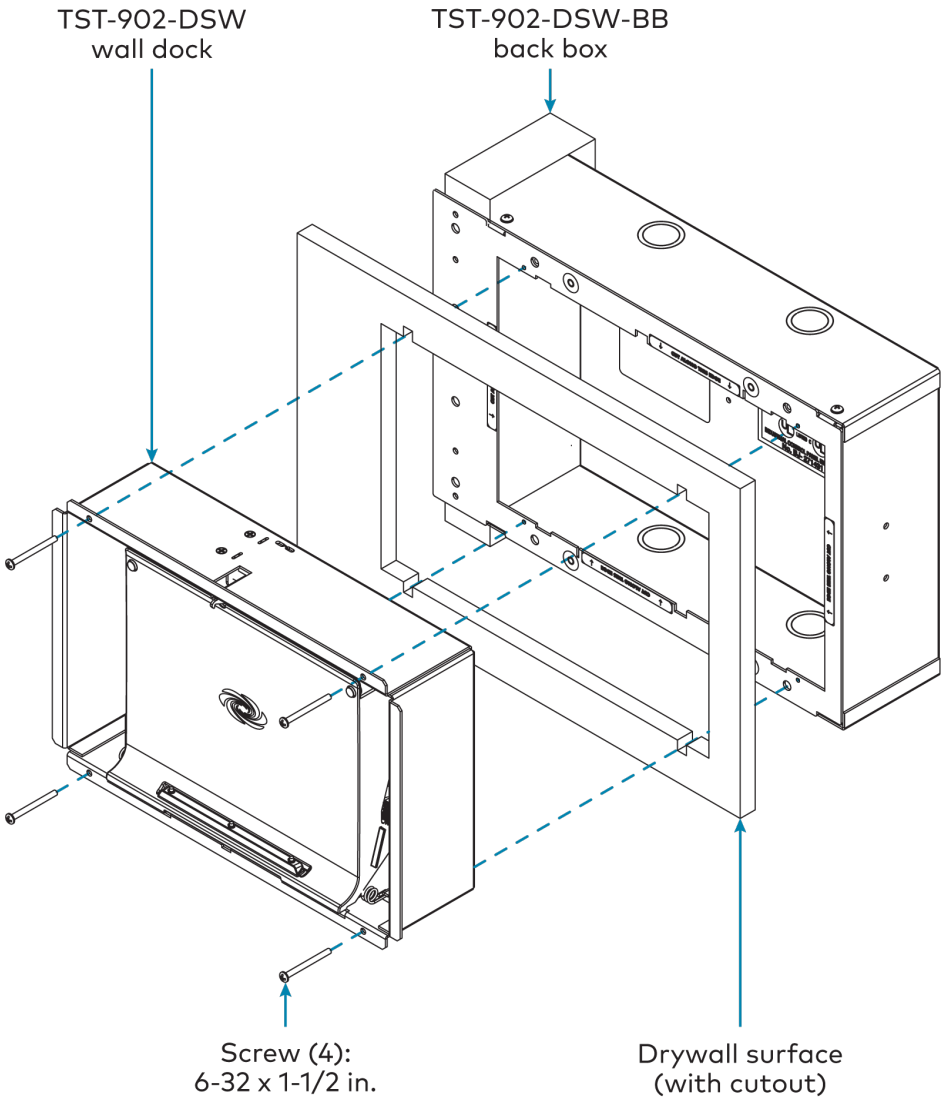
6. Route any wiring for the TST-902-DSW through the appropriate knockout(s) on the back box.
7. Once drywall is installed over the back box, use a standard drywall saw to cut the drywall along the inside edge of the front of the back box. The labels on the front of the back box indicate the perimeter of the drywall cutout. Refer to TST-902-DSW-BB Specifications on page 28 for cutout dimensions.

NOTE: The four tapped holes on the front of the back box must be exposed in order to accept the TST-902-DSW mounting screws. These holes are located along the top and bottom of the drywall opening. The notch at the top center of the back box must also be exposed to accommodate the TST-902-DSW locking latch.

8. (Optional) If required by local building codes, use the 6-32 x 1-1/2 in. screws to install the included cover plate over the back box. The cover plate should remain attached until the TST-902-DSW is installed.



9. Remove the cover plate and 6-32 x 1-1/2 in. screws (if used), and then install the TST-902-DSW wall dock into the TST-902-DSW-BB as described in Install the TST-902-DSW on page 47 with the 6-32 x 1-1/2 in. screws.


TST-902-DSW
wall dock
TST-902-DSW-BB
back box
Screw (4):
6-32 x 1-1/2 in.
Drywall surface
(with cutout)

TST-902-DSW-BBI Installation

Use the following procedures to install the TST-902-DSW-BBI.

> **NOTE:** The TST-902-DSW-BBI wall mount back box is a TST-902-DSW mounting accessory that is designed for postconstruction applications where a back box will be installed into masonry or concrete.

In the Box

Qty.	Description
1	TST-902-DSW-BBI, Wall Mount Back Box for TST-902-DSW
	Additional Items
4	Screw, 6-32 x 1-1/2 in., Pan Head, Phillips (2007254)

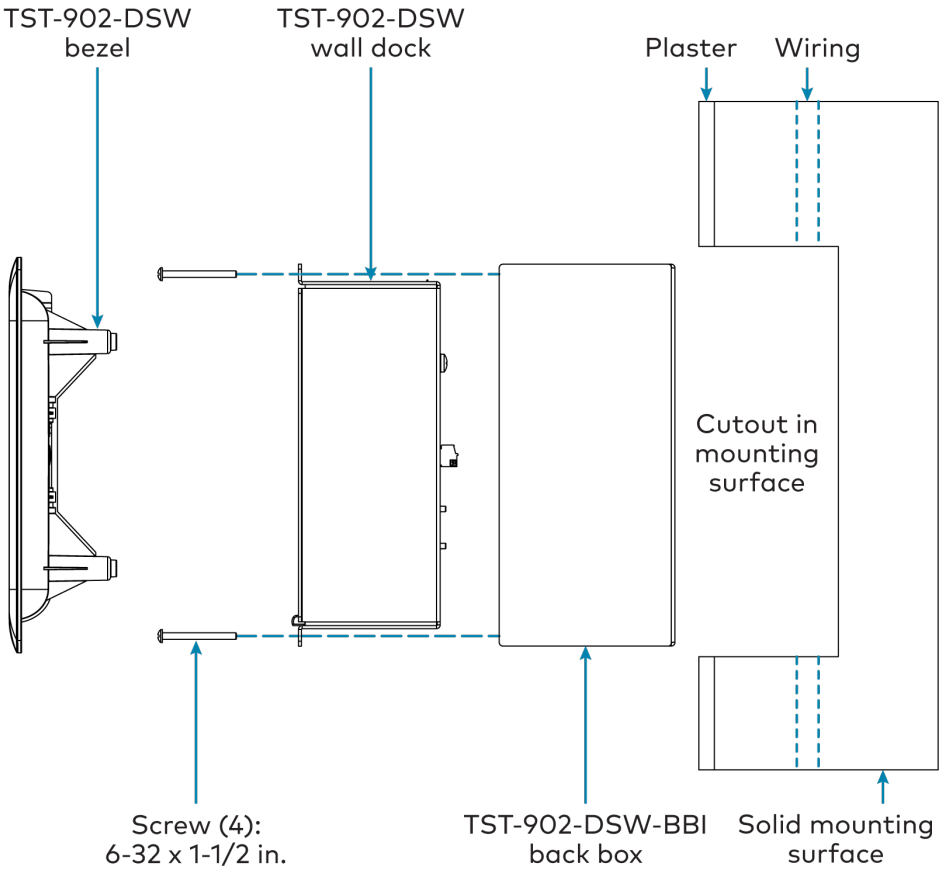
Install the Back Box

To install the TST-902-DSW-BBI wall mount back box:

> **NOTES:**
>
> - Depending on the installation, forced venting may be required.
> - The knockout holes are intended for Class 2 wiring and are 1-1/8 in. (29 mm) in diameter.

1. Remove the appropriate knockout(s) on the TST-902-DSW-BBI for routing wiring to the TST-902-DSW wall dock.
2. Route any wiring for the TST-902-DSW through the appropriate knockout(s) on the back box.
3. Use the dimensions listed within TST-902-DSW-BBI Specifications on page 29 to create an appropriately sized cutout in the mounting surface. No minimum clearances are required.
4. Mount the TST-902-DSW-BBI into the cutout in the mounting surface as shown in the following illustration. Ensure the arrow on the label inside the back box is facing upward prior to installation.
5. Install the TST-902-DSW wall dock into the TST-902-DSW-BBI as described in Install the

TST-902-DSW on page 47 using the included 6-32 x 1-1/2 in. screws.



TST-902-DSW-PMK Installation

Use the following procedures to install the TST-902-DSW-PMK.

> **NOTE:** The TST-902-DSW-PMK preconstruction mounting kit is a TST-902-DSW mounting accessory that is designed for preconstruction applications where mounting hardware (without a back box) will be fastened to the left or right-hand stud of a framed wall prior to drywall installation.

In the Box

Qty.	Description
1	TST-902-DSW-PMK, Preconstruction Mounting Kit for TST-902-DSW
	Additional Items
1	Wire Jumper, Black (2007838)
4	Screw, 6-32 x 1-1/2 in., Pan Head, Phillips (2007254)
1	Cover Plate, Metal (2042716)

Install the Mounting Kit

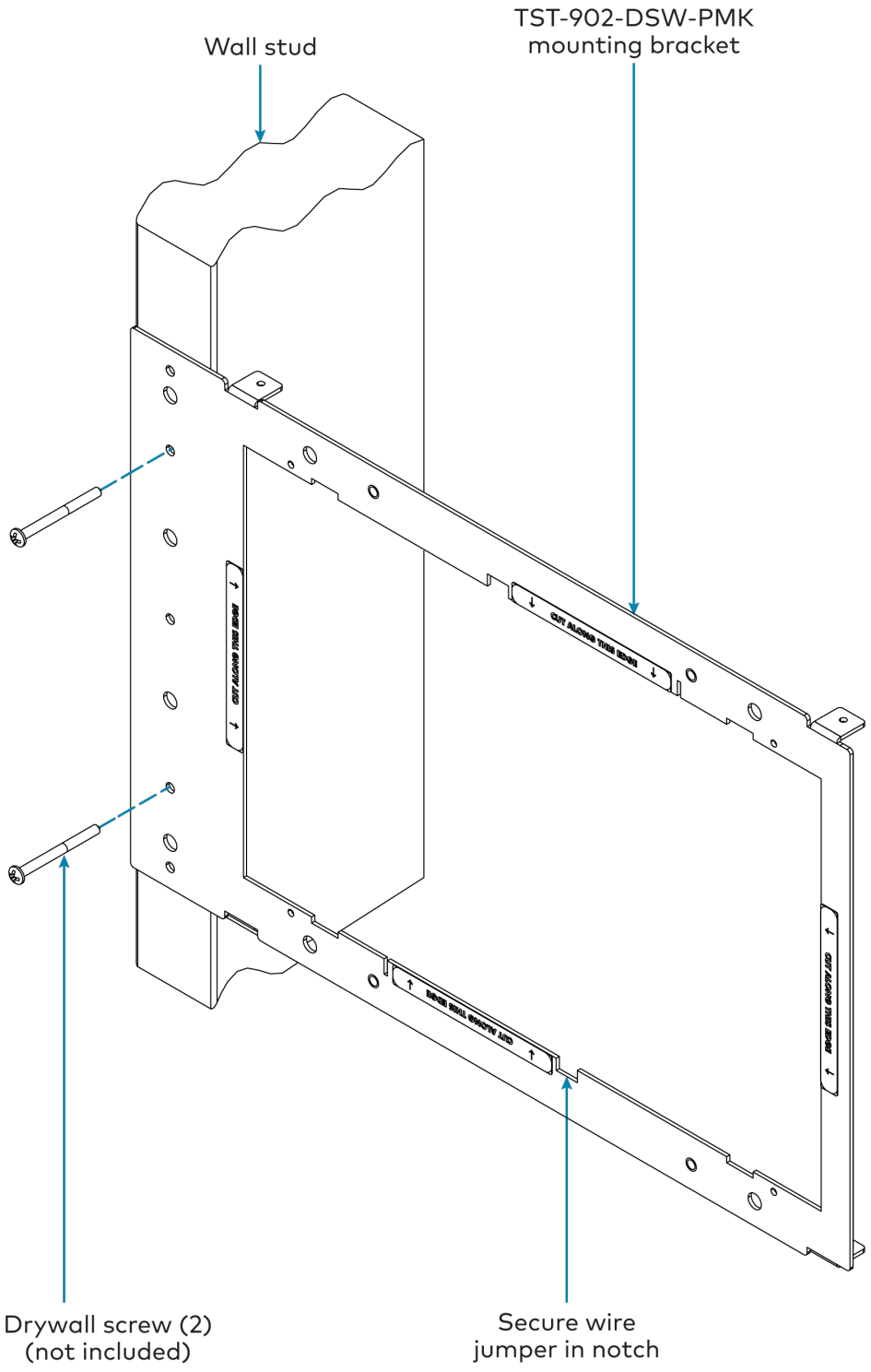
To install the TST-902-DSW-PMK preconstruction mounting kit:

> **NOTES:**
>
> - Ensure the chosen mounting location allows for an air gap of at least 12 in. (305 mm) in the wall cavity above and below the TST-902-DSW for heat dissipation.
> - The wire jumper is intended to hang wires during installation to keep them away from any cutting tools and should be secured in the mounting bracket as described in the following procedure.
> - If the mounting bracket will not be installed onto a wooden stud, consider the specific requirements for the installation. For example, installation onto steel studs will require a different type of screw than installation onto wooden studs.

1. Position the TST-902-DSW-PMK mounting bracket against the front edge of the stud. Ensure the extended edge of the mounting bracket is aligned with the front edge of the stud.

> **NOTE:** If mounting the back box to the left side of a stud, the mounting bracket must be rotated so that the extended edge of the attached mounting plate is on the right side.

2. Verify that the mounting bracket is level prior to proceeding with the rest of the installation.
3. Attach the mounting bracket to the left or right side of the stud with two standard drywall screws or nails (not included).
4. Secure the wire jumper to the bottom of the mounting bracket as shown in the following illustration.

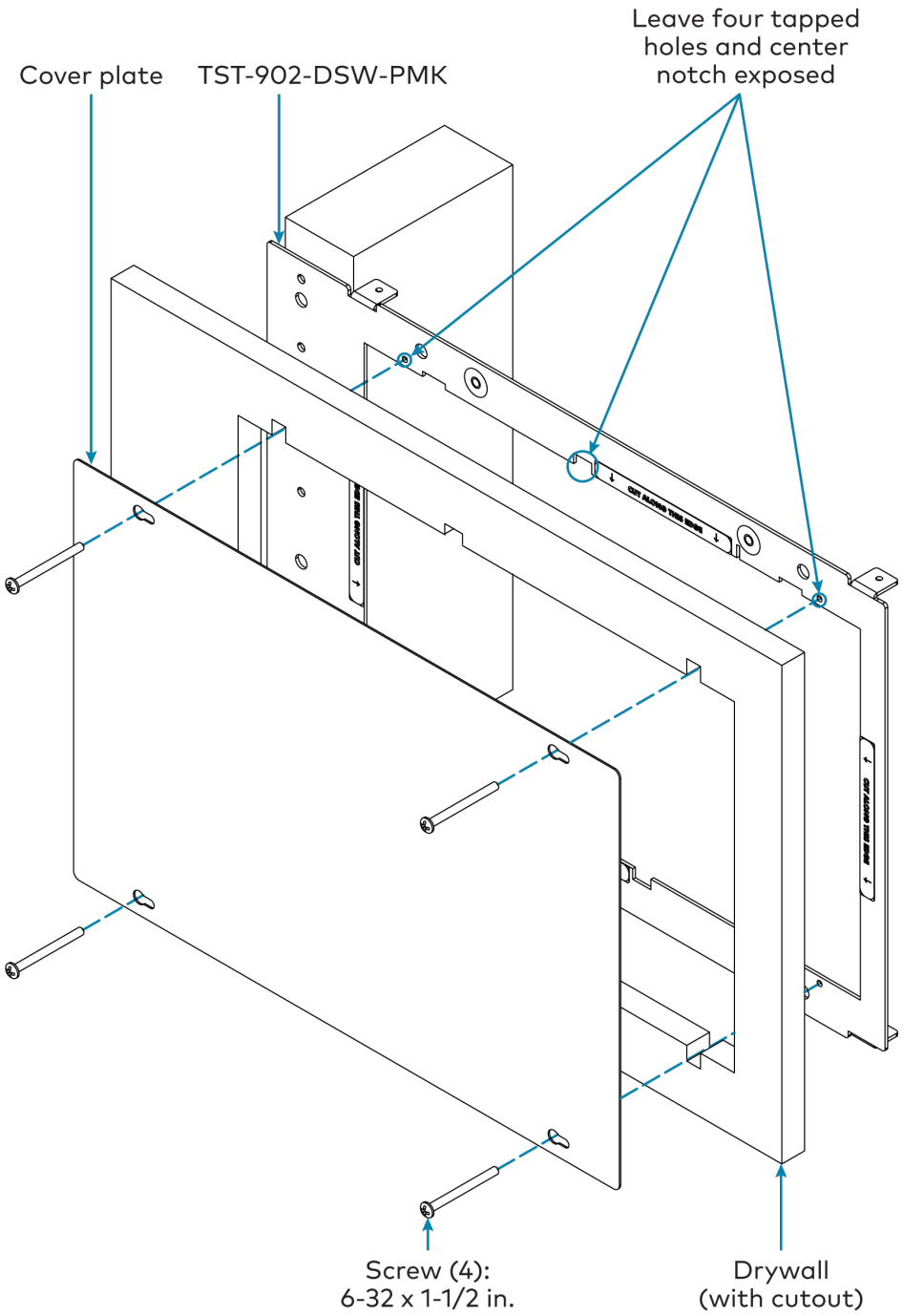


5. Route any wiring for the TST-902-DSW through the opening in the mounting bracket and secure them into the wire jumper.

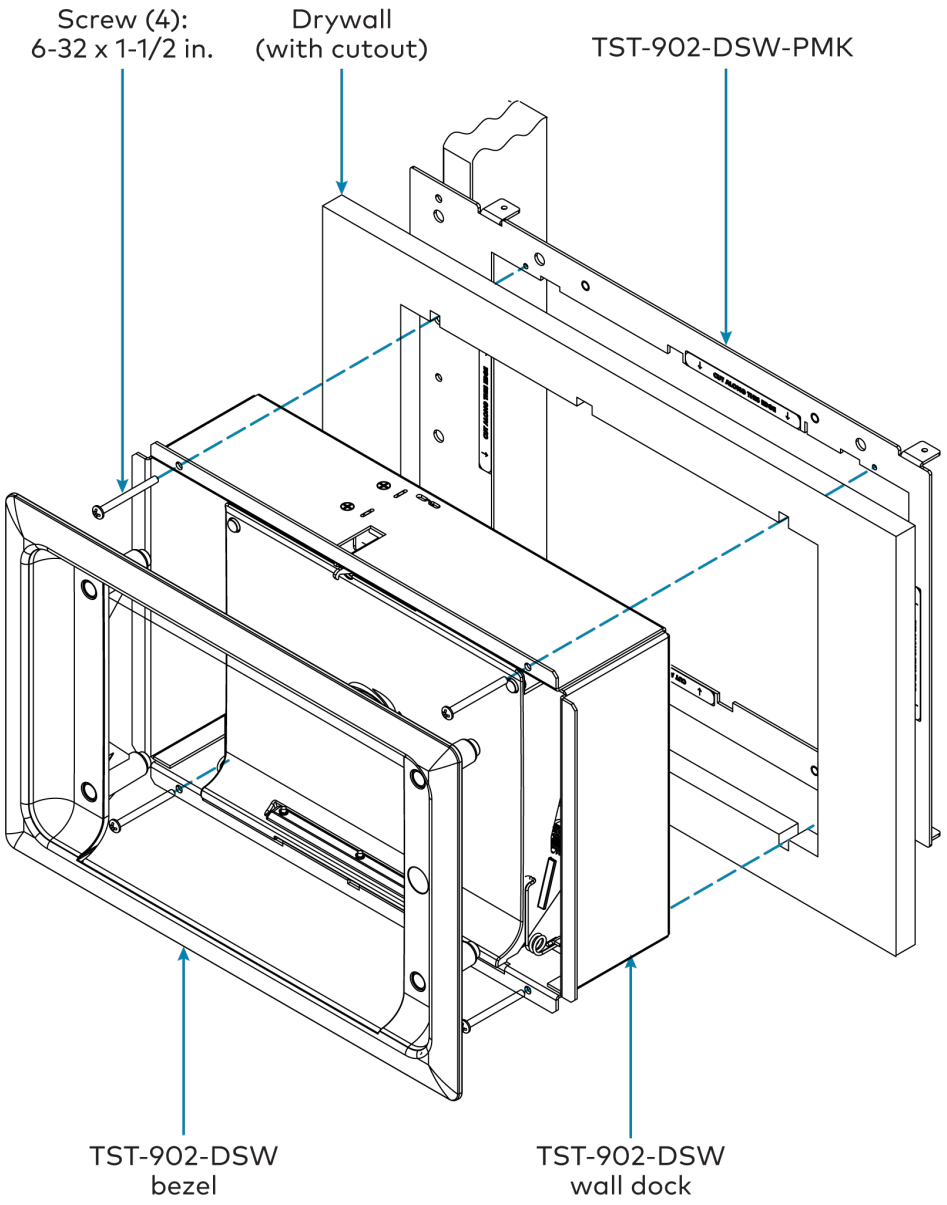
6. Once drywall is installed over the mounting bracket, use a standard drywall saw to cut the drywall along the inside edge of the front of the mounting bracket. The labels on the front of the mounting bracket indicate the perimeter of the drywall cutout. Refer to TST-902-DSW-PMK Specifications on page 30 for cutout dimensions.

   > **NOTE:** The four tapped holes on the front of the mounting bracket must be exposed in order to accept the TST-902-DSW mounting screws. These holes are located along the top and bottom of the drywall opening. The notch at the top center of the mounting bracket must also be exposed to accommodate the TST-902-DSW locking latch.

7. (Optional) If required by local building codes, use the 6-32 x 1-1/2 in. screws to install the included cover plate over the mounting bracket. The cover plate should remain attached until the TST-902-DSW is installed.



8. Remove the cover plate and 6-32 x 1-1/2 in. screws (if used), and then install the TST-902-DSW wall dock into the mounting bracket as described in Install the TST-902-DSW on page 47 with the 6-32 x 1-1/2 in. screws.


Screw (4):
6-32 x 1-1/2 in.
Drywall
(with cutout)
TST-902-DSW-PMK
TST-902-DSW
bezel
TST-902-DSW
wall dock

TST-902-DSW-WMKM Installation

Use the following procedures to install the TST-902-DSW-WMKM.

> **NOTE:** The TST-902-DSW-WMKM postconstruction wall mount kit is a TST-902-DSW mounting accessory that is designed for postconstruction applications where mounting hardware will be installed in an existing framed wall or similar flat surface using a mud ring.

In the Box

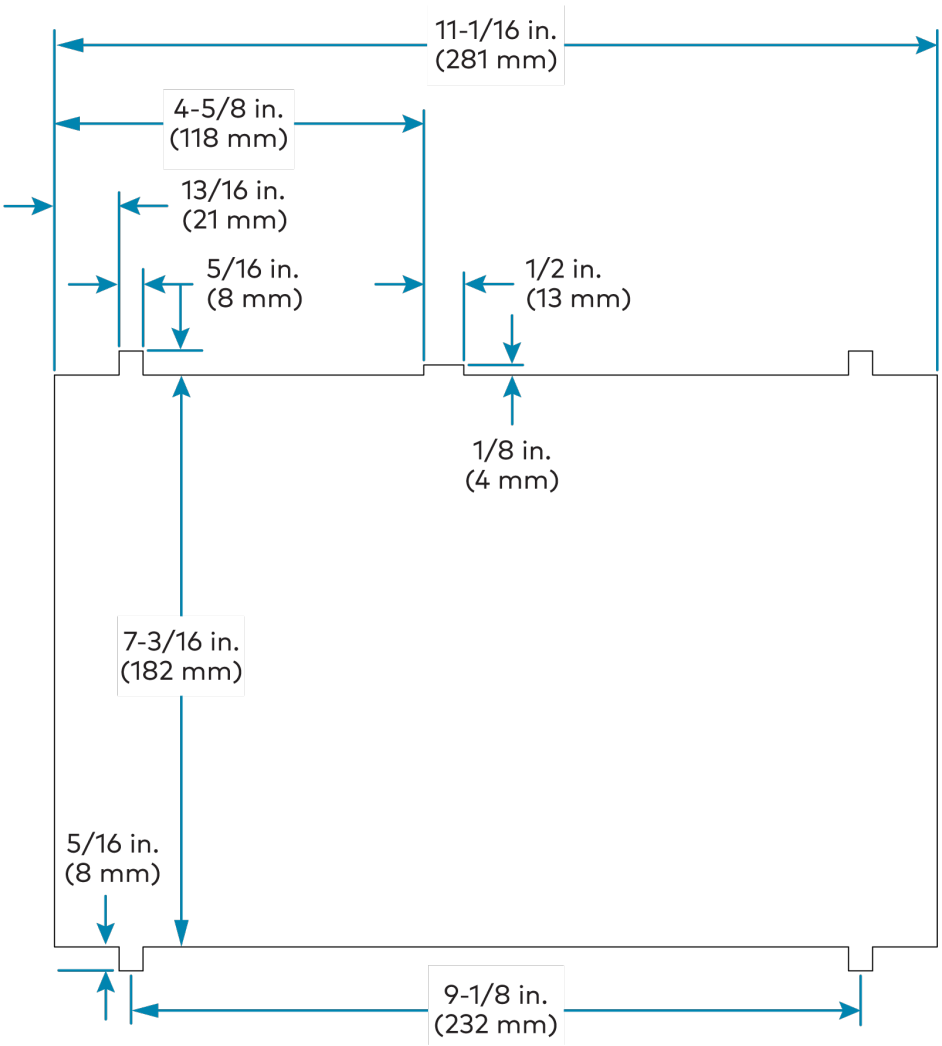
Qty.	Description
1	TST-902-DSW-WMKM, Postconstruction Wall Mount Kit for TST-902-DSW
	Additional Items
1	Mounting Plate, Metal, 12.00 x 8.80 in. (2045235)
2	Adjustment Plate, Metal (2028255)
4	Fastener, U-Type (2004121)
1	Template, Cutout (4523568)
1	Mud Ring, Metal, 12.56 x 8.61 in. (2045233)
4	Screw, 6-32 x 1-1/2 in., Flat Head, Phillips (2031703)

Prepare for Installation

The following materials (not included) are required to install the TST-902-DSW-WMKM postconstruction mounting kit.

- Drywall saw (or equivalent)
- Level
- Drywall screws (4)
- #2 Phillips screwdriver
- Tools and materials for applying a drywall joint compound

Additionally, a cutout template is provided with the TST-902-DSW-WMKM that can be used when making the drywall cutout for the mounting hardware. The dimensions for the cutout template are provided below as a reference (not to scale).



Install the Mounting Kit

To install the TST-902-DSW-WMKM postconstruction mounting kit:

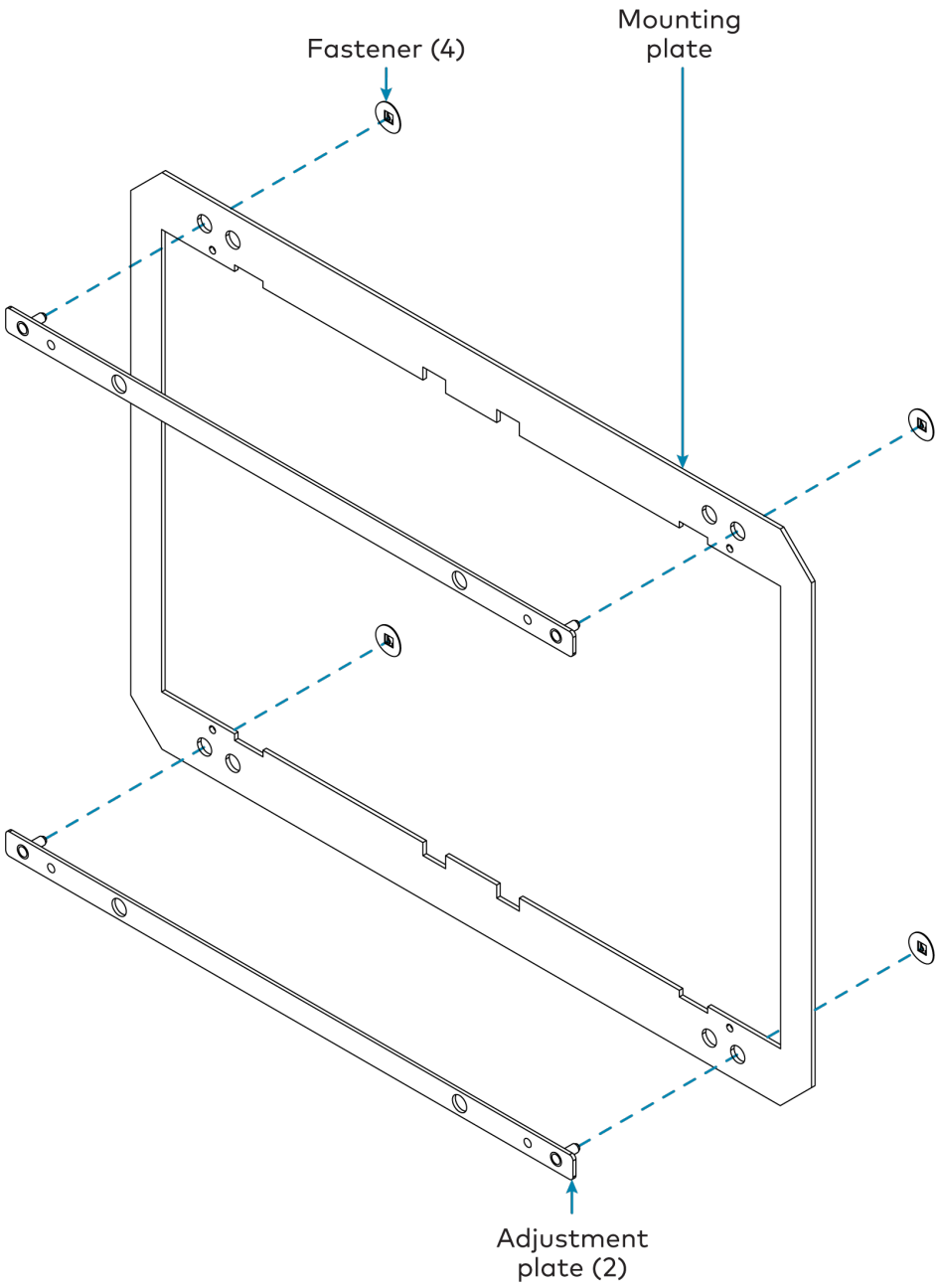
NOTES:

- Ensure the chosen mounting location allows for an air gap of at least 12 in. (305 mm) in the wall cavity above and below the TST-902-DSW for heat dissipation.
- The TST-902-DSW-WMKM has been optimized for mounting into drywall that is 5/8 in. (15 mm) thick, though it can also be mounted into drywall that is between 1/2 in. (13 mm) to 1 in. (25 mm) thick. Attempting to mount into thinner or thicker drywall can cause installation issues.
- Since the TST-902-DSW contains moving parts, Crestron recommends mounting it to a wall stud for more support. While Crestron offers this postconstruction wall mount kit, a preconstruction mounting option that is secured to a stud, such as the TST-902-DSW-BB or TST-902-DSW-PMK, is recommended instead when feasible.

1. Insert the two pins of one of the adjustment plates into the two outer holes on the top of the mounting plate as shown in the following illustration.
2. Slide a push-on fastener over each pin on the adjustment plate to loosely secure it to the mounting plate.

   > **NOTE:** Do not push the fasteners all the way down onto the pins. The fasteners should be secured just enough to keep the adjustment plate and mounting plate together as a combined assembly.

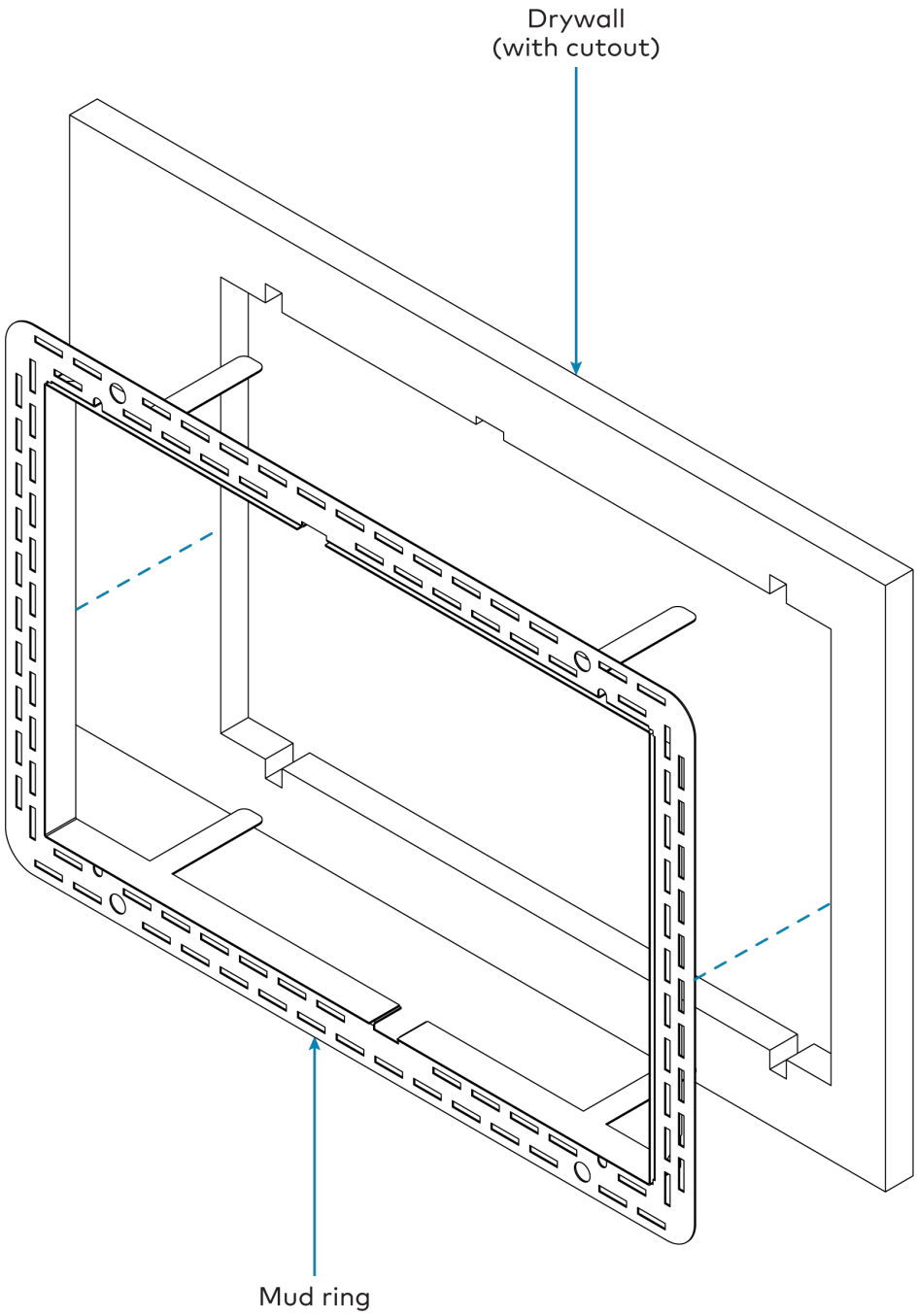
3. Repeat steps 1–2 to attach the second adjustment plate to the bottom of the mounting plate.



4. Choose a mounting location that is free of any wiring, studs, or other obstructions. Make a small hole in the drywall near the center of the chosen location to verify that it is suitable for mounting.
5. Using a drywall saw (or equivalent), a level, and the provided cutout template, create a cutout in the drywall for the mounting hardware. Refer to the illustration in Prepare for Installation on page 66 for cutout dimensions.

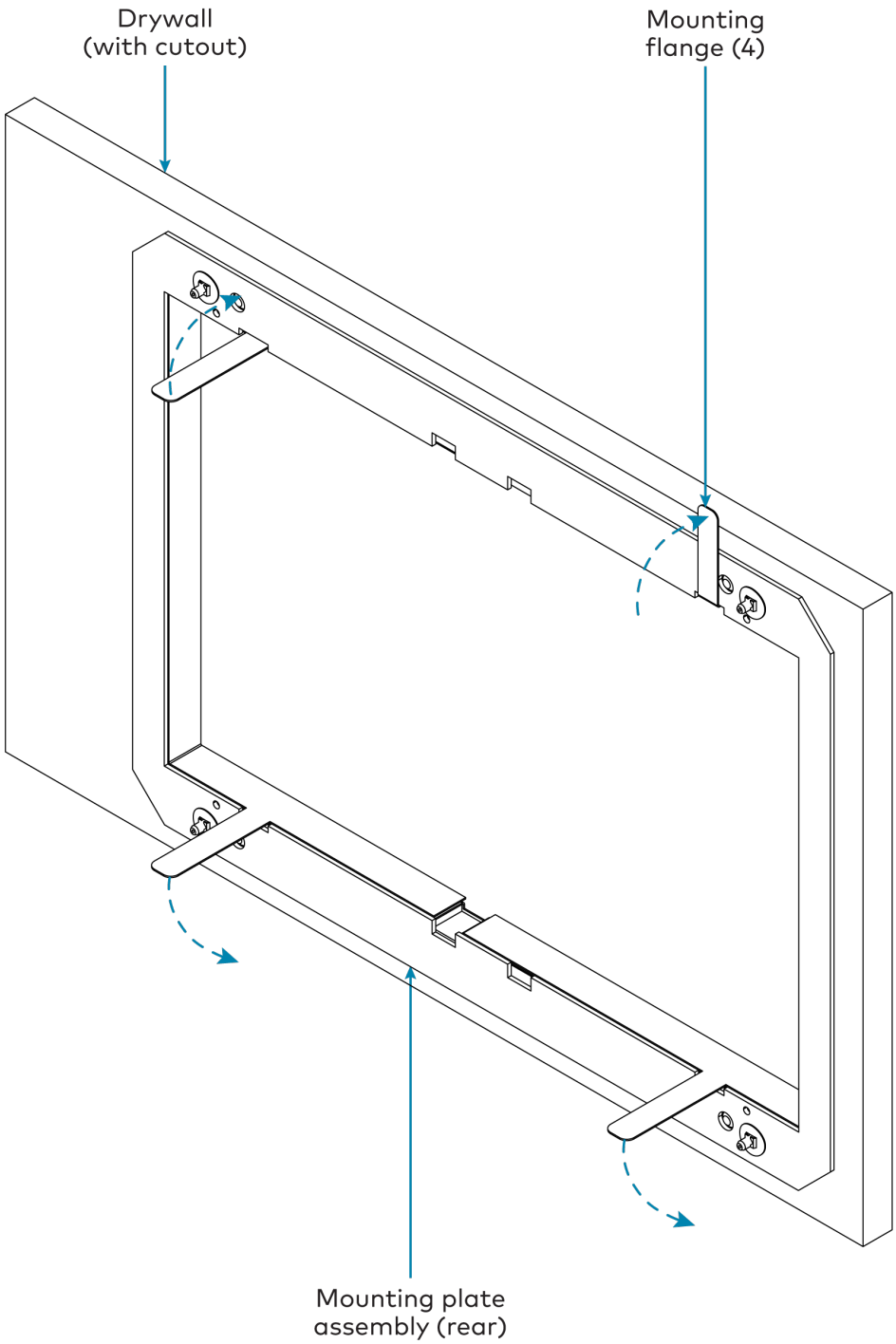
NOTE: Ensure that the cutout is as level and smooth as possible before proceeding. The mounting plate allows only for minor adjustments once installed.

6. Insert the mud ring into the drywall cutout.



7. Route the combined mounting plate and adjustment plate assembly though the mud ring and drywall cutout carefully, and then rest the assembly against the interior surface of the drywall. Verify that the adjustment plates are positioned in between the mounting plate and the drywall.
8. Once the mounting plate and adjustment plate assembly is in the correct position, bend the top two flanges of the mud ring upward (approximately 90 degrees) and the bottom two flanges downward (approximately 90 degrees) to secure them to the rear of the drywall. Refer to the following illustration.

> **NOTE:** The mounting plate and adjustment plate assembly has a slight amount of play. This is normal, as it allows for minor adjustments to be made to the TST-902-DSW during installation.

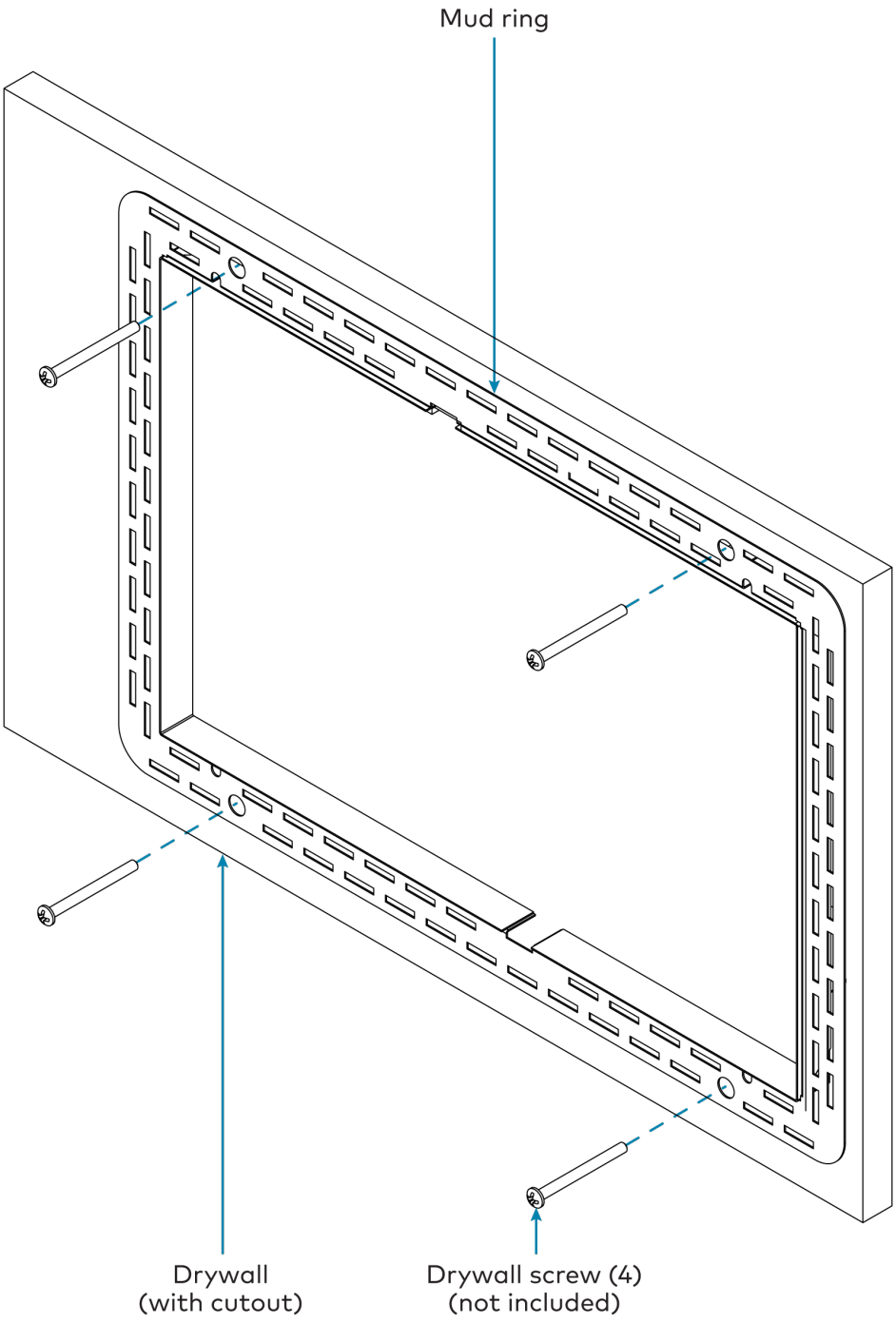


9. Use four standard drywall screws to loosely secure the mud ring to the mounting plate and adjustment plate assembly. The screws must pass through the clearance holes in the mounting plate to be secured in the extruded holes of the adjustment plate.

> **NOTE:** The drywall screw length must not exceed the drywall thickness by more than 1/2 in. (13 mm).

10. Verify that the mounting hardware is level, and then hand tighten the drywall screws using a #2 Phillips screwdriver so that they dimple slightly into the holes in the mud ring.

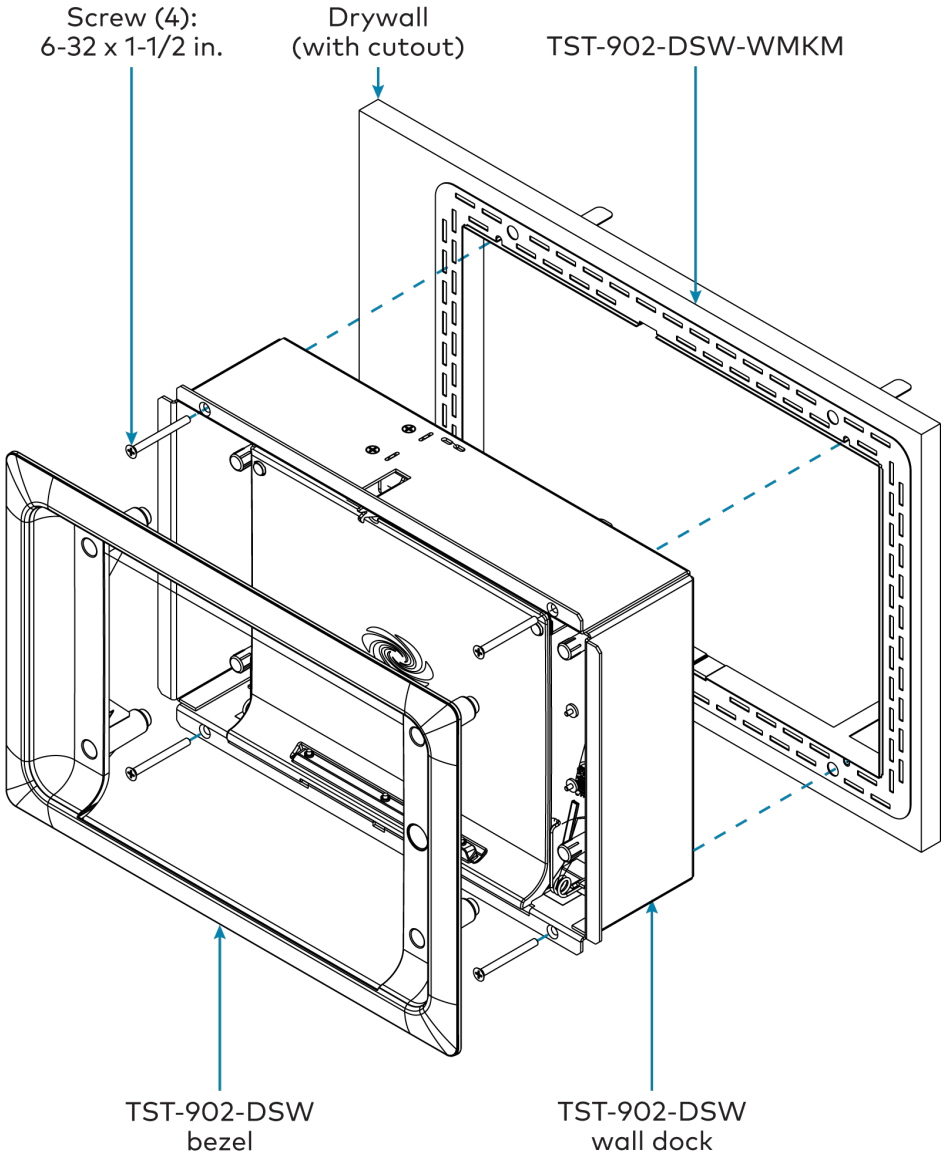
> **CAUTION:** Do not overtighten the screws, as this may damage the mounting hardware.



11. Route any wiring for the TST-902-DSW through the opening in the mounting hardware.
12. Apply joint compound as needed to finish the cutout.

NOTE: The four tapped holes on the front of the mud ring must be exposed in order to accept the TST-902-DSW mounting screws. These holes are located along the top and bottom of the drywall opening. The notch at the top center of the mud ring must also be exposed to accommodate the TST-902-DSW locking latch.

13. After the joint compound has dried, install the TST-902-DSW wall dock into the mud ring as described in Install the TST-902-DSW on page 47 with the 6-32 x 1-1/2 in. screws.



TST-902-DSW-WMKT Installation

Use the following procedures to install the TST-902-DSW-WMKT.

> **NOTE:** The TST-902-DSW-WMKT postconstruction wall mount kit is a TST-902-DSW mounting accessory that is designed for postconstruction applications where mounting hardware will be installed in an existing framed wall or similar flat surface using a mud ring.

In the Box

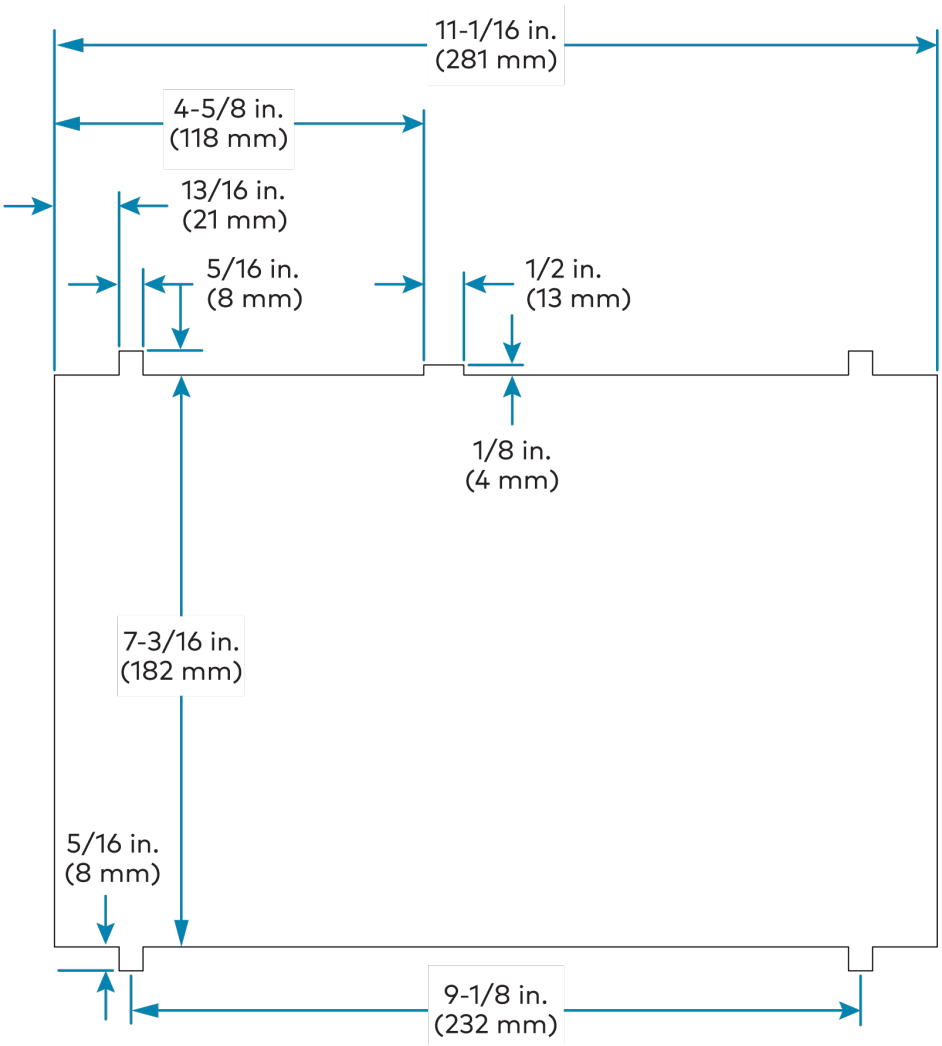
Qty.	Description
1	TST-902-DSW-WMKT, Postconstruction Wall Mount Kit for TST-902-DSW
	Additional Items
1	Mounting Plate, Metal, 12.00 x 8.80 in. (2045235)
1	Template, Cutout (4523568)
1	Trim Ring, Metal, 11.30 x 7.40 in. (2045234)
4	Screw, 6-32 x 1-1/2 in., Flat Head, Phillips (2031703)

Prepare for Installation

The following materials (not included) are required to install the TST-902-DSW-WMKT postconstruction mounting kit.

- Drywall saw (or equivalent)
- Level

Additionally, a cutout template is provided with the TST-902-DSW-WMKT that can be used when making the drywall cutout for the mounting hardware. The dimensions for the cutout template are provided below as a reference (not to scale).



Install the Mounting Kit

To install the TST-902-DSW-WMKT postconstruction mounting kit:

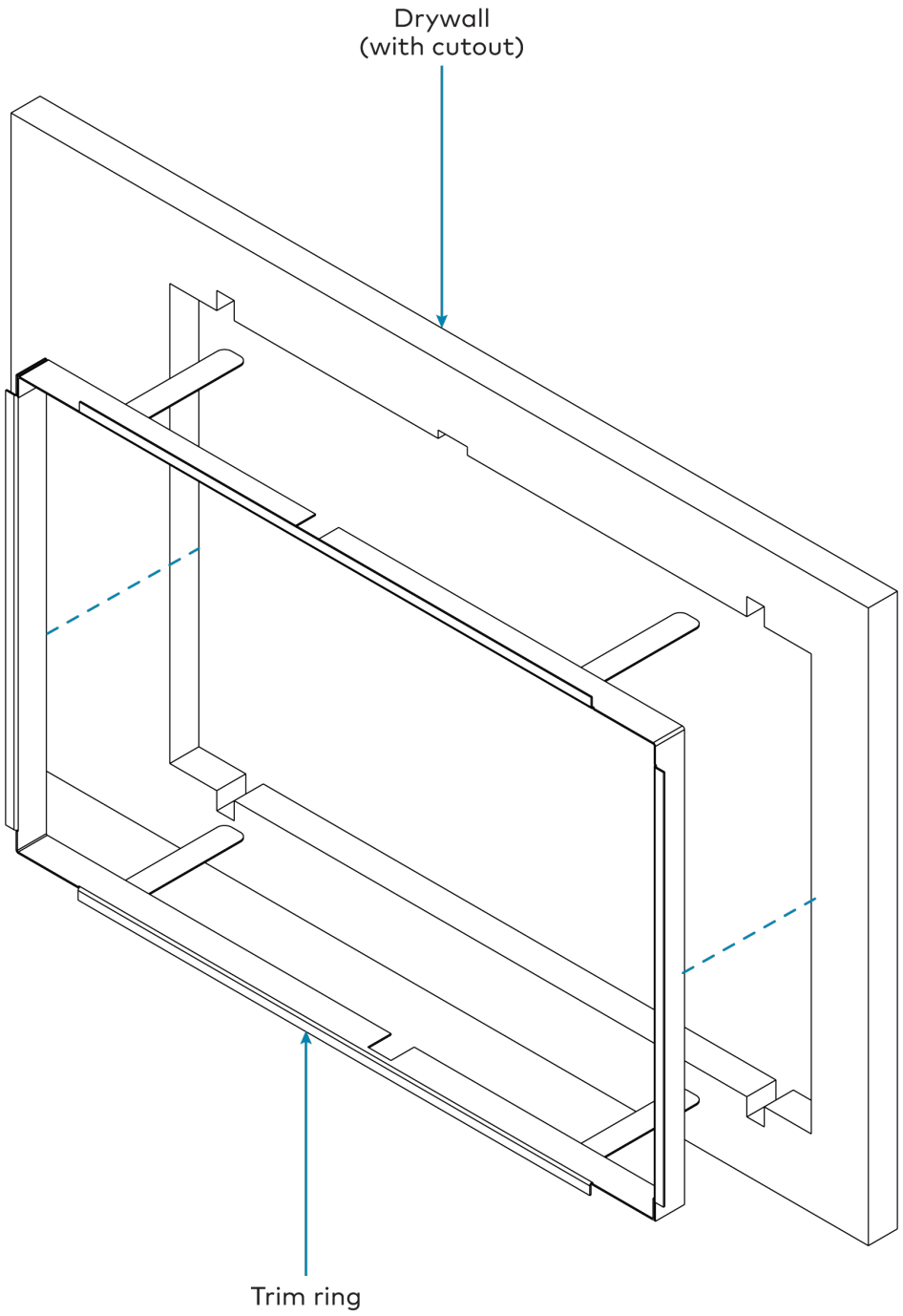
NOTES:

- Ensure the chosen mounting location allows for an air gap of at least 12 in. (305 mm) in the wall cavity above and below the TST-902-DSW for heat dissipation.
- The TST-902-DSW-WMKT has been optimized for mounting into drywall that is 5/8 in. (15 mm) thick, though it can also be mounted into drywall that is between 1/2 in. (13 mm) to 1 in. (25 mm) thick. Attempting to mount into thinner or thicker drywall can cause installation issues.
- Since the TST-902-DSW contains moving parts, Crestron recommends mounting it to a wall stud for more support. While Crestron offers this postconstruction wall mount kit, a preconstruction mounting option that is secured to a stud, such as the TST-902-DSW-BB or TST-902-DSW-PMK, is recommended instead when feasible.

1. Choose a mounting location that is free of any wiring, studs, or other obstructions. Make a small hole in the drywall near the center of the chosen location to verify that it is suitable for mounting.
2. Using a drywall saw (or equivalent), a level, and the provided cutout template, create a cutout in the drywall for the mounting hardware. Refer to the illustration in Prepare for Installation on page 76 for cutout dimensions.

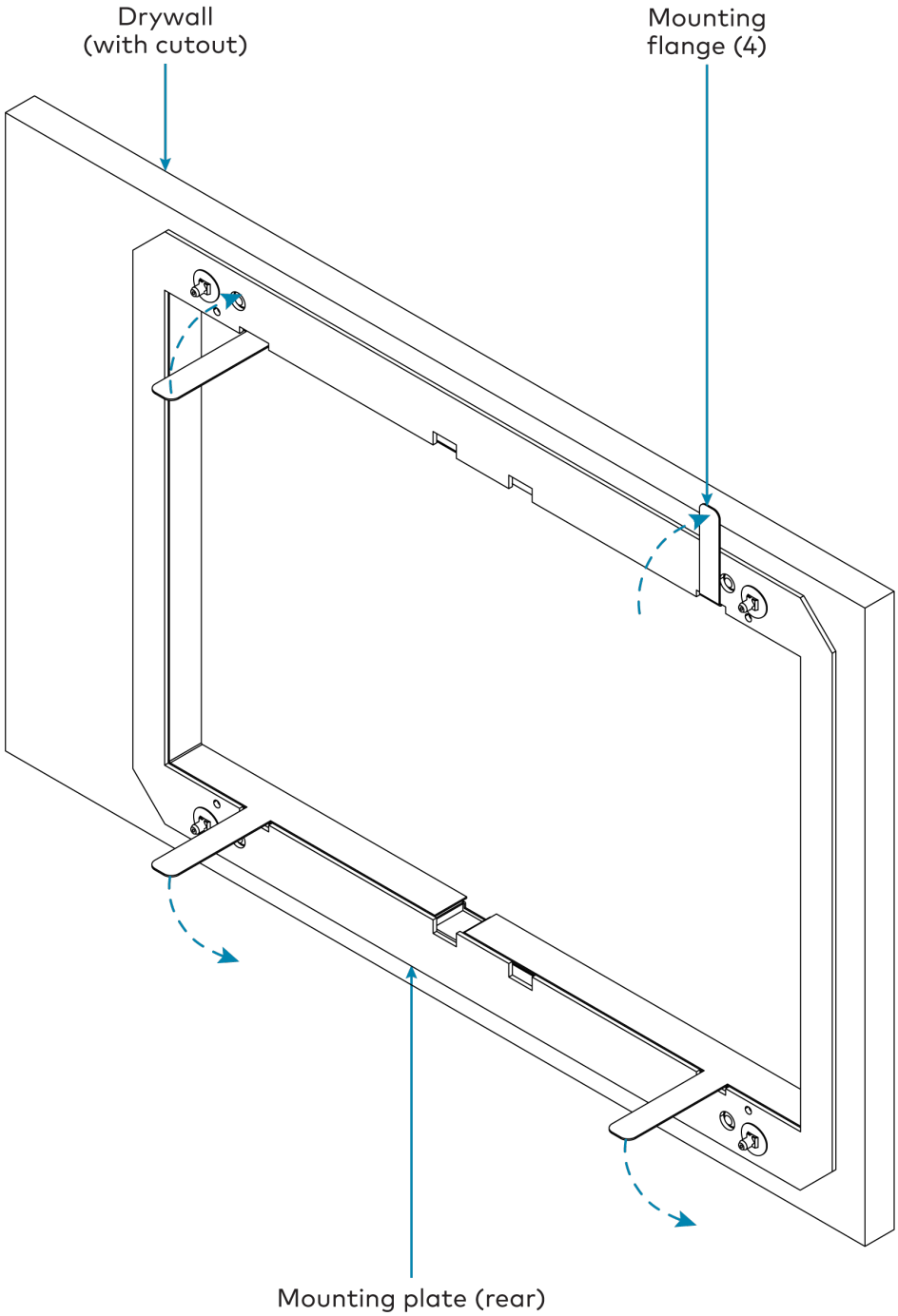
   > **NOTE:** Ensure that the cutout is as level and smooth as possible before proceeding. The mounting plate allows only for minor adjustments once installed.

3. Insert the trim ring into the drywall cutout.

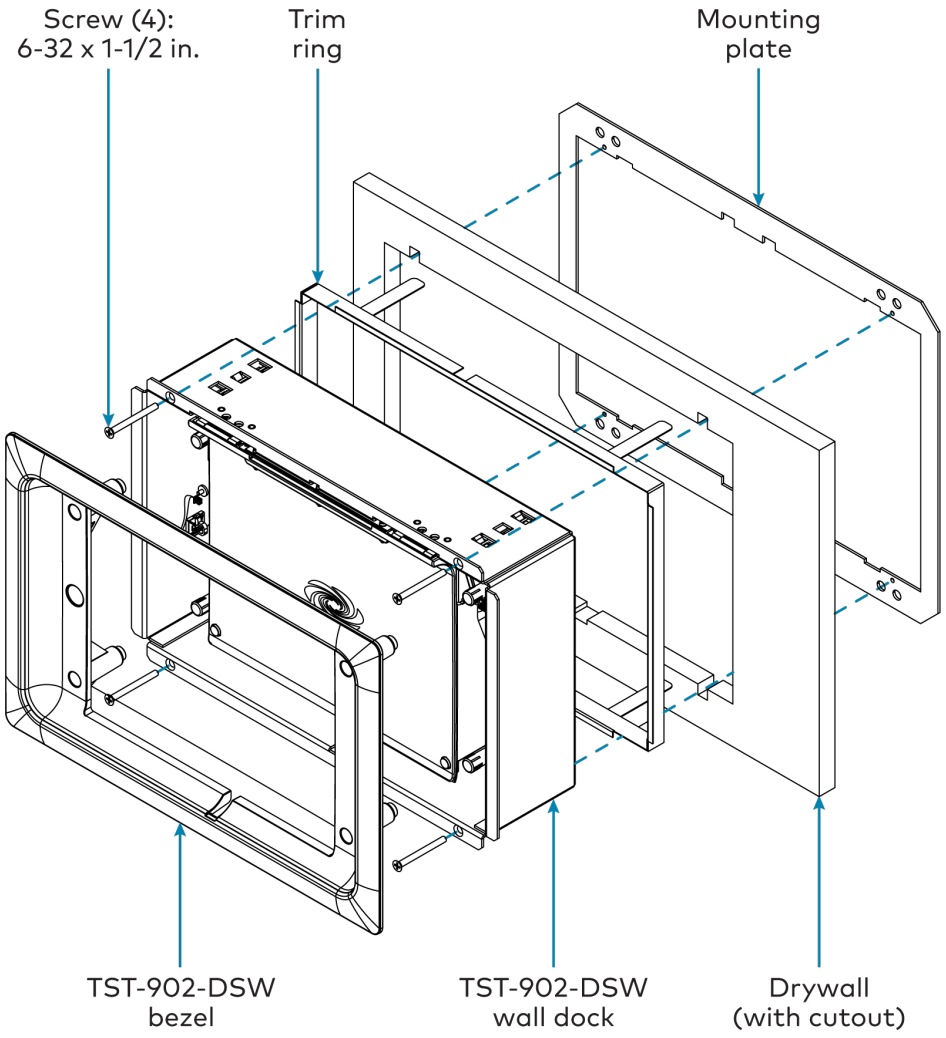


4. Route the mounting plate though the trim ring and drywall cutout carefully, and then rest the mounting plate against the interior surface of the drywall.
5. Once the mounting plate is in the correct position, bend the top two flanges of the mud ring upward (approximately 90 degrees) and the bottom two flanges downward (approximately 90 degrees) to secure them to the rear of the drywall. Refer to the following illustration.

NOTE: The mounting plate has a slight amount of play. This is normal, as it allows for minor adjustments to be made to the TST-902-DSW during installation.



6. Route any wiring for the TST-902-DSW through the opening in the mounting hardware.
7. Install the TST-902-DSW wall dock into the trim ring as described in Install the TST-902-DSW on page 47 with the 6-32 x 1-1/2 in. screws.


Screw (4):
6-32 x 1-1/2 in.
Trim
ring
Mounting
plate
TST-902-DSW
bezel
TST-902-DSW
wall dock
Drywall
(with cutout)

Configuration

Prior to configuration, ensure the device is running the latest firmware. To update the firmware, refer to Upgrade Firmware on page 89**.**

This section provides the following information:

- Initial Setup on page 83
- Local Configuration on page 90
- Perform a Factory Restore on page 112

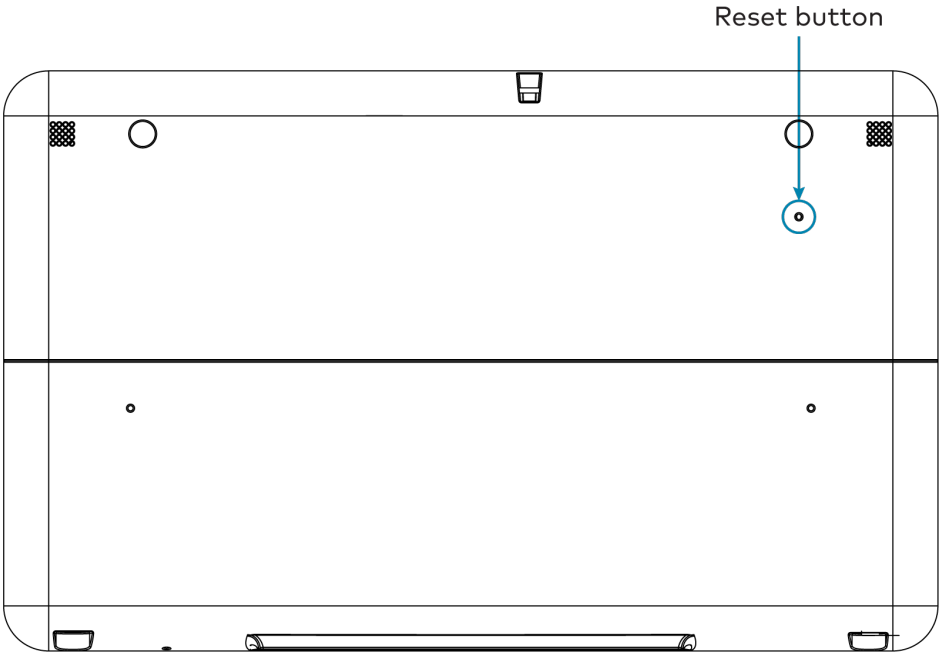
Initial Setup

Use the following procedures to set up the TST-902 following installation.

Access the Setup Screens

The TST-902 may be monitored and configured using its local setup screens.

- To access the setup screens after power is applied to TST-902 for the first time (or if no user project has been loaded), tap the splash screen that is displayed.
- After a user project has been loaded, access the setup screens by using the included t-pin tool to press the reset button on the rear of the TST-902 four times within a five-second period.



Set Up an Extended Range RF Connection

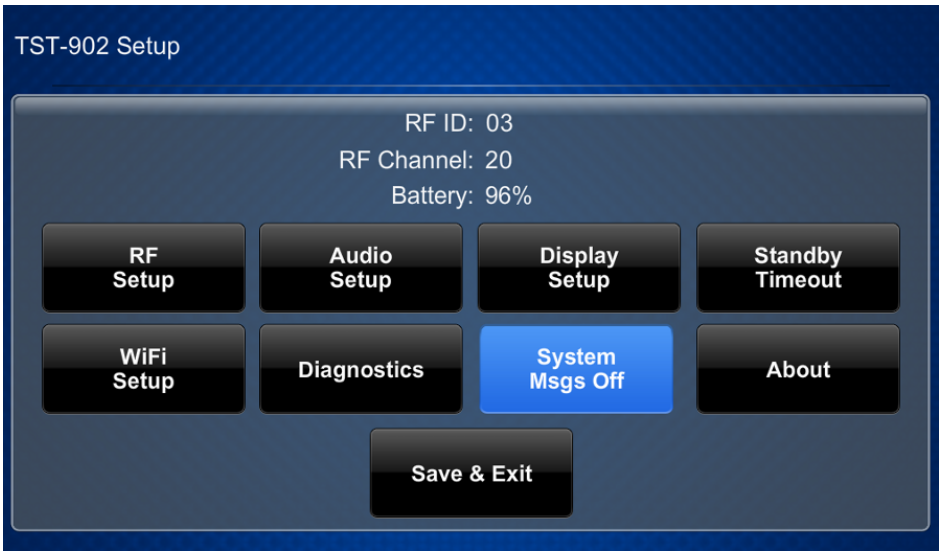
The TST-902 must be acquired to a Crestron Extended Range (ER) gateway, such as the CEN-GWEXER (not included), before it can be used with a Crestron control system.

For more information on creating an optimal wireless environment for the TST-902, including where to position the ER gateway for minimal interference, refer to Installation and Setup of Crestron RF Products Best Practices.

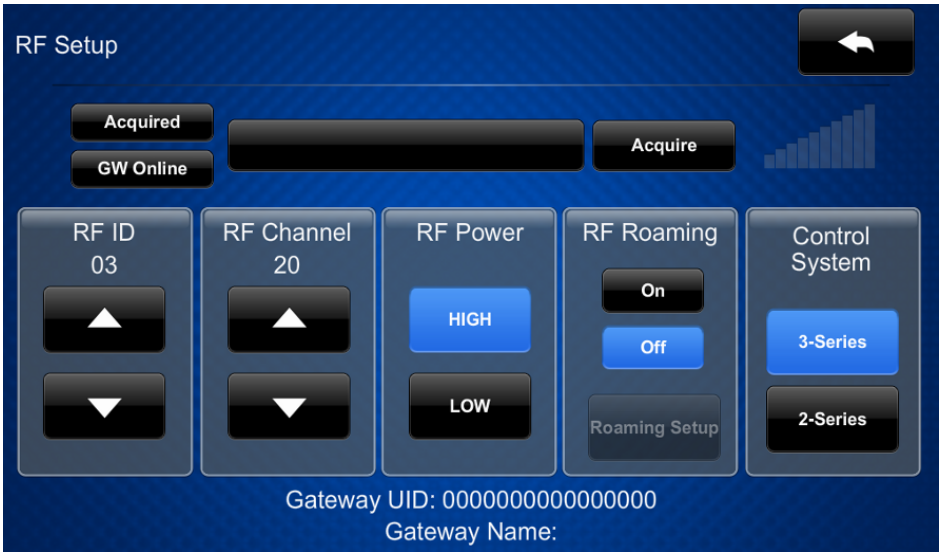
> **NOTE:** Every TST-902 installation requires a Crestron ER wireless gateway to provide essential wireless capability to the touch screen. The TST-902 will not work over Wi-Fi® communications alone.

To acquire the TST-902 to a Crestron ER gateway:

1. Place the ER gateway into Acquire mode as described in its documentation.
2. Access the TST-902 setup screens as described in Access the Setup Screens on page 83. The **TST-902 Setup** screen is displayed.

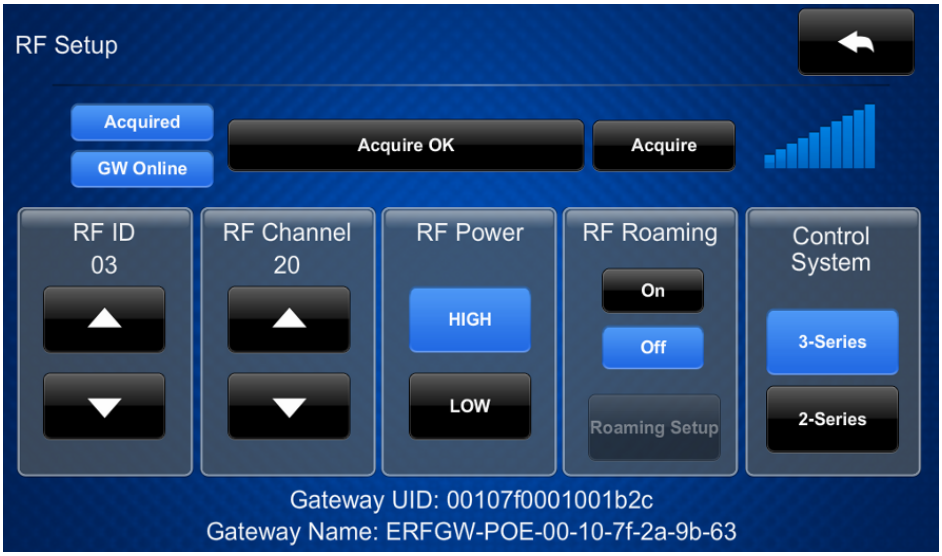


3. Tap **RF Setup**. The **RF Setup** screen is displayed.



4. Tap **Acquire** to place the TST-902 into Acquire mode. An "Acquire in progress" message is displayed on the RF Setup screen, and the TST-902 will be acquired by the ER gateway within two minutes.
5. Once an "Acquire OK" message is displayed on the **RF Setup** screen, exit Acquire mode on

the ER gateway as described in its documentation.



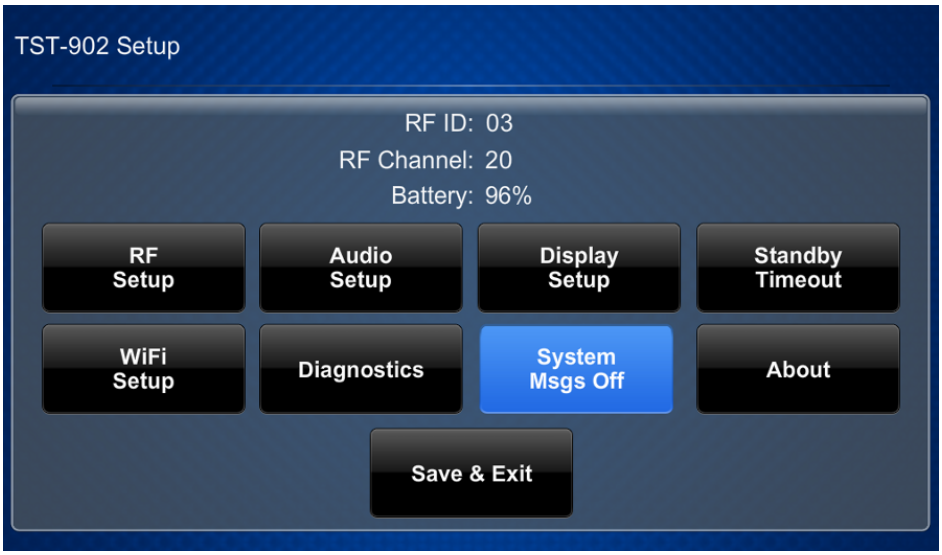
Set Up a Wi-Fi Network Connection

The TST-902 supports an optional connection to a Wi-Fi network. 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).

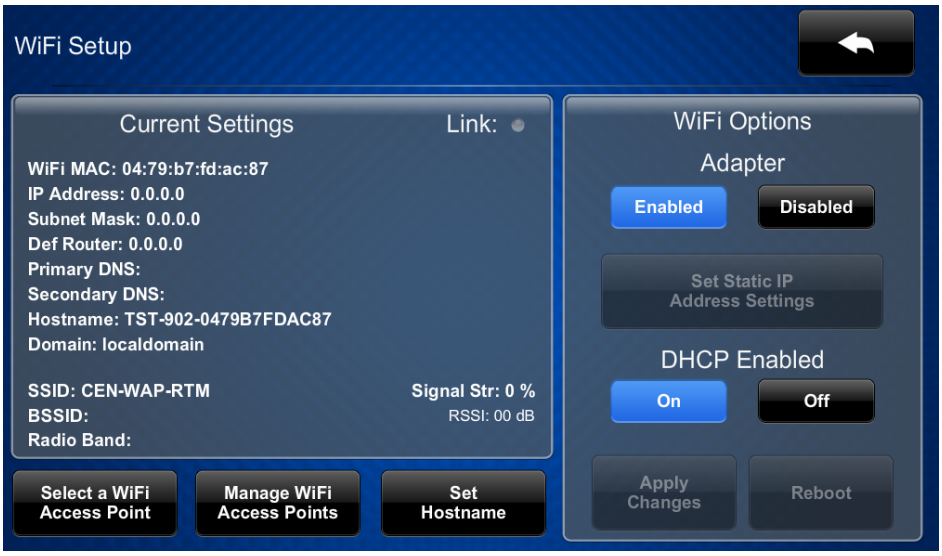
> **NOTE:** If a Wi-Fi connection is not configured, the USB port on the TST-902 must be used to load user projects, perform certain configuration tasks, and update firmware. The USB port is located under the battery cover and to the left of the battery.

To connect the TST-902 to a Wi-Fi network:

1. Access the TST-902 setup screens as described in Access the Setup Screens on page 83. The **TST-902 Setup** screen is displayed.



2. Tap **Wi-Fi Setup**. The **Wi-Fi Setup** screen is displayed.



3. If a static IP address will be assigned to the TST-902, select **Set Static IP Address Settings** to display the **Wi-Fi Setup - Static IPs** screen. If using DHCP, skip ahead to step 7.

4. Tap the following fields to display on-screen keypads for inputting static IP addresses:
   - **Static IP address**: Enter a static IP address for the TST-902.
   - **Static Subnet Mask**: Enter a static subnet mask address.
   - **Static Default Router**: Enter a static address for the default gateway router.
   - **Preferred DNS**: Enter a static address for the preferred DNS (Domain Name Server).
   - **Alternate Preferred DNS**: Enter a static address for the secondary DNS.
5. Tap the back button to return to the **Wi-Fi Setup** screen.
6. Tap **Apply Changes**, and then tap **Reboot** to restart the touch screen with the new static IP address settings.
7. Return to the **Wi-Fi Setup** screen, and then tap **Select a Wi-Fi Access Point**. The **Connect to a Wi-Fi Access Point: 1-2-3** screen is displayed.

8. Select a wireless access point (WAP) from the **Step 1 - Select a WAP** list. The name and security type for the selected WAP are displayed in the settings on the right of the screen.

9. Tap the **Password** text field to display an on-screen keyboard for entering the password for the WAP. After entering the password, tap **Save**.
10. Tap **Step 3 - Make this my Access Point** to confirm the selection. The touch screen attempts to connect to the WAP using the provided credentials.

If the connection is successful, details for the Wi-Fi connection are shown in the **Wi-Fi Setup** screen. If the connection fails, a failure message is displayed. Tap **Connect to a different access point** to return to the **Connect to a Wi-Fi Access Point: 1-2-3** screen.

Upgrade Firmware

The TST-902 firmware should always be updated to the latest version. Firmware can be loaded to the TST-902 via Crestron Toolbox™ software if the touch screen has been connected to a Wi-Fi network.

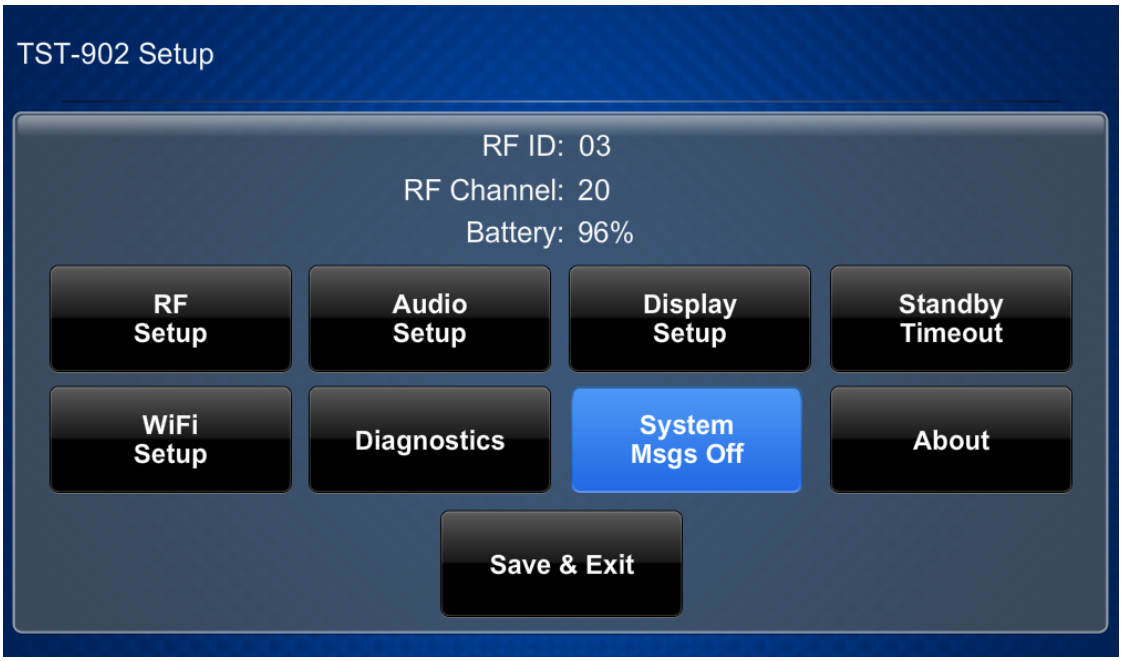
> **NOTE:** Visit www.crestron.com/Support/Resource-Library to download the latest firmware PUF.

For more information on performing a firmware update using Crestron Toolbox software, refer to the Crestron Toolbox help file.

Local Configuration

The TST-902 may be monitored and configured using its local setup screens. The setup screens can be accessed as described in Access the Setup Screens on page 83.

The **TST-902 Setup** screen is displayed.



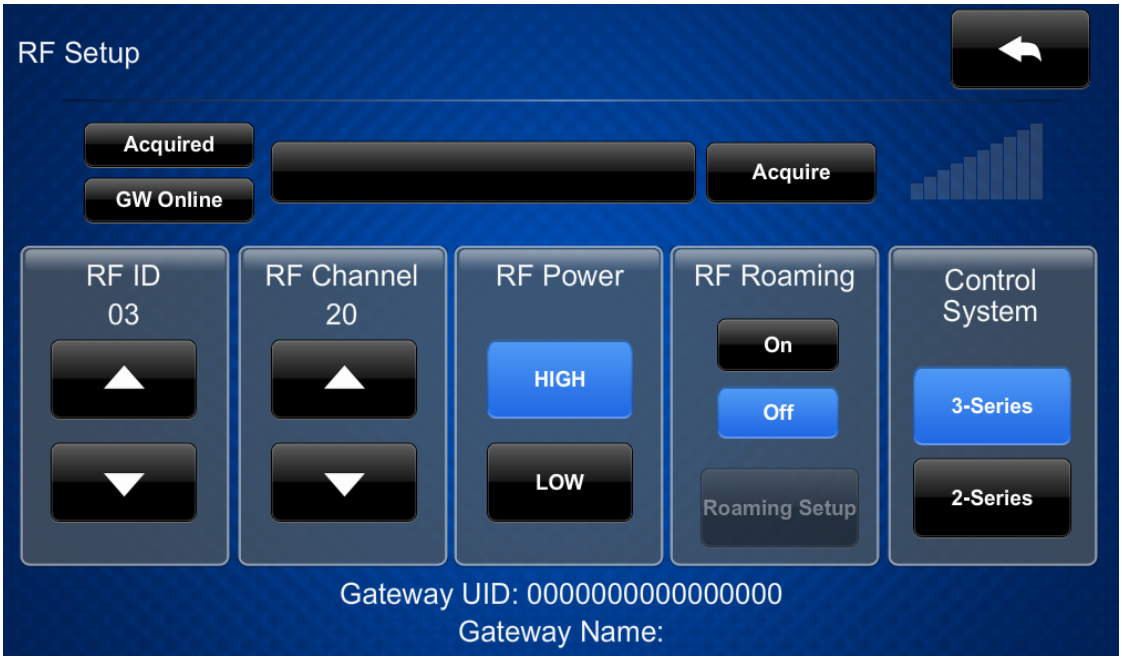
The **TST-902 Setup** screen shows the RF ID, RF channel, and remaining battery life for the TST-902 and provides the following configuration selections:

- Buttons for Extended Range (ER) RF setup, audio setup, display setup, standby timeouts, Wi-Fi® network setup, and diagnostics.
- A button to toggle system messages on or off.
- An **About** button that provides information about the TST-902.
- A **Save & Exit** button that is used to save any changes made to settings, exit the setup screens, and return to the user project.

The functions of each button are detailed in the following sections.

RF Setup

Tap **RF Setup** on the **TST-902 Setup** screen to display the **RF Setup** screen.



The **RF Setup** screen provides controls that can be used to acquire the TST-902 to a Crestron Extended Range (ER) wireless gateway (not included). Once the TST-902 has been acquired to a gateway, the gateway UID, name, and RF signal strength are displayed.

> **NOTE:** For instructions on acquiring the TST-902 to a Crestron ER wireless gateway, refer to Set Up an Extended Range RF Connection on page 83.

The following buttons and controls are provided for configuring RF settings:

- Tap **Acquire** to acquire the touch screen to a Crestron ER wireless gateway that has been placed in Acquire mode. Refer to Set Up an Extended Range RF Connection on page 83 for more information.
- Tap the up and down arrow buttons under **RF ID** to set the RF ID for the gateway connection.
- Tap the up and down arrow buttons under **RF Channel** to set the RF channel used for the gateway connection.
- Tap **HIGH** or **LOW** under **RF Power** to use high or low power for the touch screen RF signal.
- Tap **On** or **Off** under **RF Roaming** to turn RF roaming on or off.

> **NOTE:** For installations with multiple gateways, the TST-902 can be configured to use RF roaming. For instructions, refer to the Touch Screen RF Roaming Quick Start.

- Tap **3-Series** or **2-Series** under **Control System** to indicate whether the connected control system is a 3-Series® control system or a 2-Series control system.

Tap the back button to return to the **TST-902 Setup** screen.

Audio Setup

Tap **Audio Setup** on the **TST-902 Setup** screen to display the **Audio Setup** screen.

Use the **Audio Setup** screen to control the main volume, media volume, and beep volume settings for the touch screen.

> **NOTE:** The **Media Volume** controls adjust the H.264 streaming media level in relation to the **Volume** controls.

- **Master Volume**
  - Tap the up and down arrow buttons to raise or lower the main touch screen volume incrementally from 0 to 100%.
  - Tap **Mute On** or **Mute Off** to mute or unmute the main volume.
  - Tap **Test** to play a test recording at the current volume level.
- **Media Volume**
  - Tap the up and down arrow buttons to raise or lower the touch screen media volume incrementally from 0 to 100%.
  - Tap **Mute On** or **Mute Off** to mute or unmute the media volume.

- **Beep Volume**
    - Tap the up and down arrow buttons to raise or lower the touch screen beep volume incrementally from 0 to 100%.
    - Tap **Beep On** or **Beep Off** to turn the beep volume on or off.

Tap the back button to return to the **TST-902 Setup** screen.

Display Setup

Tap **Display Setup** on the **TST-902 Setup** screen to display the **Display Setup** screen.

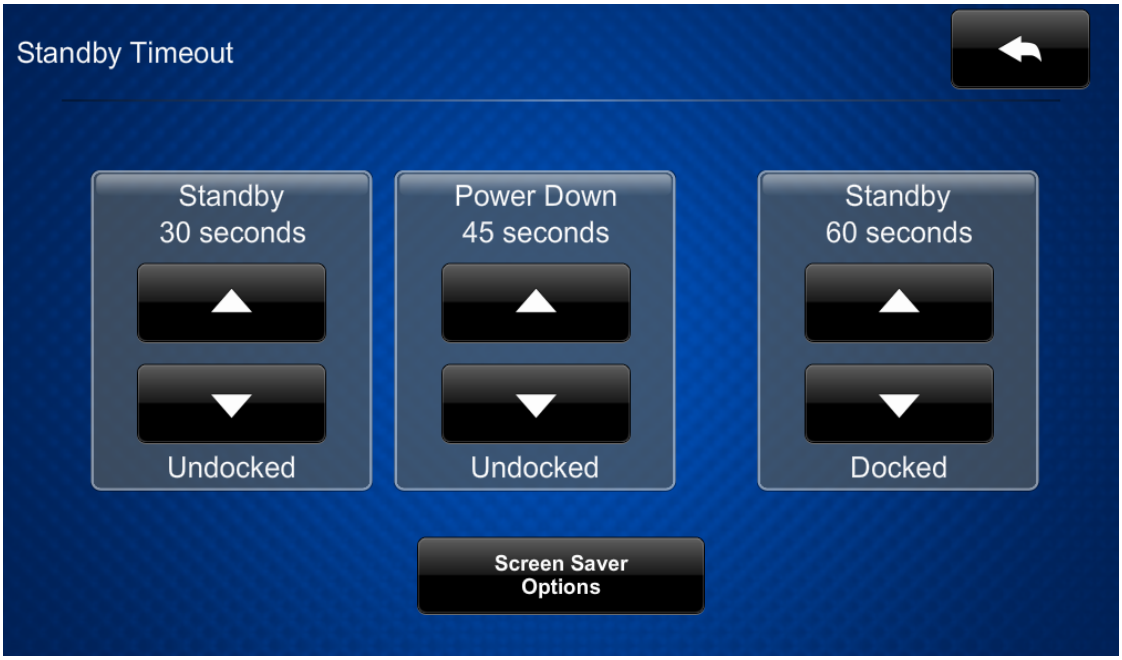
Use the **Display Setup** screen to control settings for the touch screen display.

Tap the up or down arrow buttons under **LCD (Screen) Brightness** to raise or lower the LCD display brightness level incrementally from 0 to 100%.

Tap the back button to return to the **TST-902 Setup** screen.

Standby Timeout

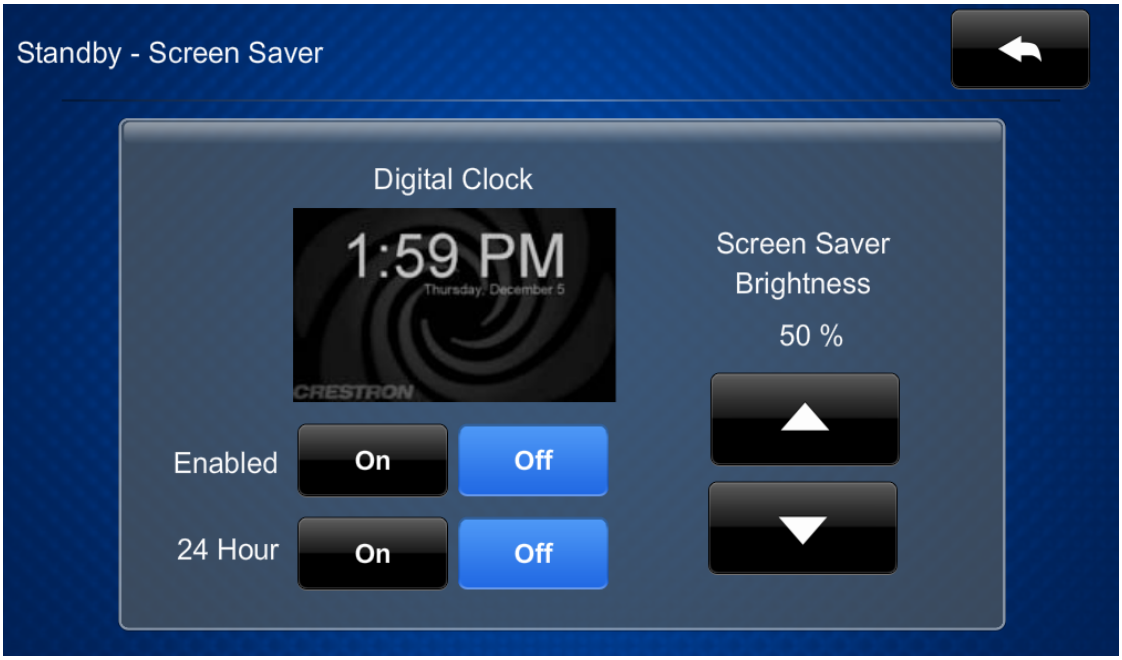
Tap **Standby Timeout** on the **TST-902 Setup** screen to display the **Standby Timeout** screen.



Use the **Standby Timeout** screen to set the standby timeout settings for the touch screen.

- Tap the up and down arrow buttons under **Standby** (on the left of the screen) to set the touch screen standby timeout duration from 0 to 120 seconds when it is undocked. Select "0" to turn off standby timeout.
- Tap the up and down arrow buttons under **Power Down** to set the power down duration from 0 to 240 seconds when it is undocked. Select "0" to turn off the power down behavior.
- Tap the up and down arrow buttons under **Standby** (on the right of the screen) to set the touch screen standby timeout duration from 0 to 120 seconds when it is docked. Select "0" to turn off standby timeout.

Tap **Screen Saver Options** to display the **Standby Screensaver** screen.



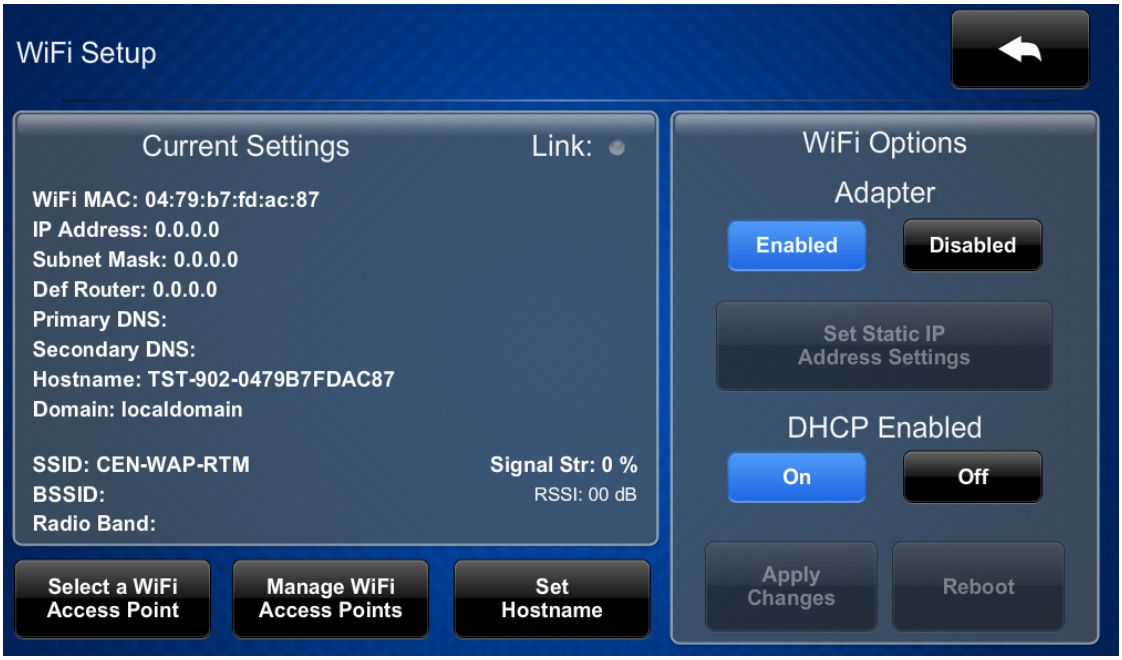
- Tap **On** or **Off** next to **Enabled** to turn the digital clock screensaver on or off during standby timeout.
- Tap **On** or **Off** next to **24 Hour** to turn 24-hour time format on or off for the digital clock.
- Tap the up and down arrow buttons under **Screen Saver Brightness** to set the screensaver brightness from 0 to 100%.

Tap the back button to return to the **Standby Timeout** screen.

Tap the back button again to return to the **TST-902 Setup** screen.

Wi-Fi Setup

Tap **Wi-Fi Setup** on the **TST-902 Setup** screen to display the **Wi-Fi Setup** screen.



Use the **Wi-Fi Setup** screen to view the Wi-Fi network MAC and IP addresses, subnet mask address, default router address, primary and secondary DNS addresses, host name, domain, and various details about the Wi-Fi connection. A **Link** indicator is provided to indicate the status of the Wi-Fi connection. (Green indicates that the Wi-Fi connection is active.)

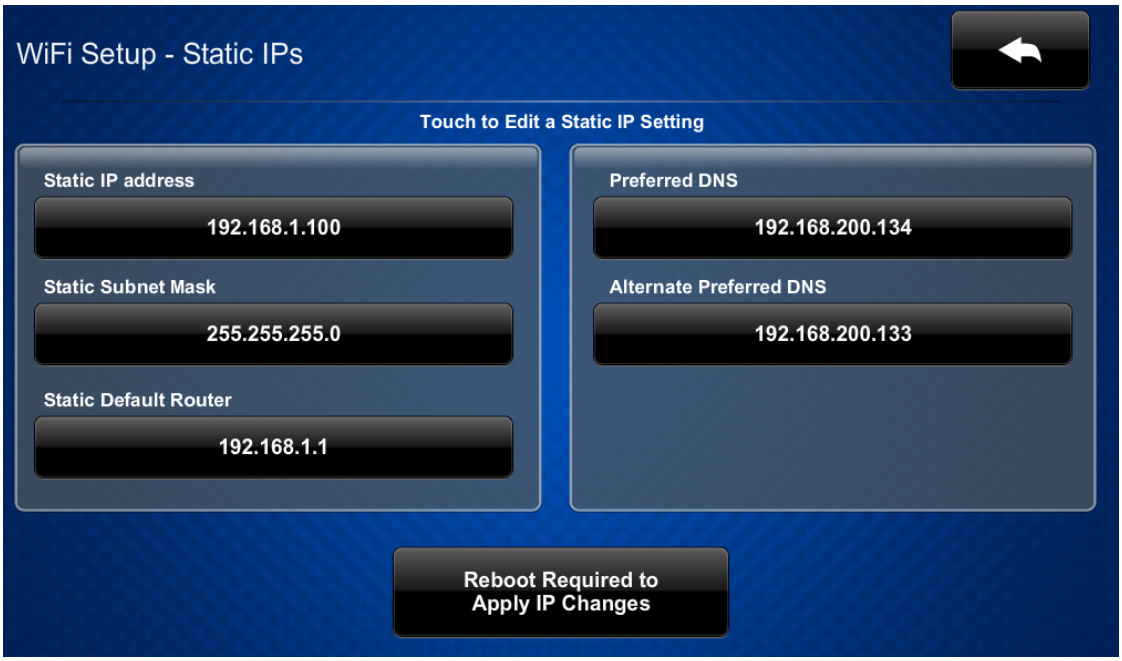
The following buttons are provided for configuring Wi-Fi settings:

- Tap **Enabled** or **Disabled** under **Adapter** to turn the Wi-Fi adapter on or off. If **Adapter** is set to **Disabled**, Wi-Fi will not function and the TST-902 will only function over Extended Range (ER) RF.
- Tap **On** or **Off** under **DHCP Enabled** to turn DHCP (Dynamic Host Configuration Protocol) on or off.

  > **NOTE:** DHCP is enabled on the touch screen by default.

- If DHCP is turned off, tap **Set Static IP Address Settings** to enter static IP addresses manually.
- Tap **Set Hostname** to enter a new touch screen host name using an on-screen keyboard.
- Tap **Apply Changes** to apply any new Wi-Fi settings to the touch screen and to stay in setup mode.
- Tap **Reboot** to exit setup mode and restart the touch screen.

To change a static IP address, tap **Off** under **DHCP Enabled**. Then, tap **Set Static IP Address Settings** to display the **Wi-Fi Setup - Static IPs** screen.



To edit the static IP address, the static subnet mask, the static default router, the preferred DNS, or the alternate preferred DNS, tap the text field underneath the setting name.

The on-screen numeric keypad opens for the chosen setting.

After new settings have been saved, tap the back button to return to the **Wi-Fi Setup** screen. Tap **Apply Changes** to apply the new settings and stay in setup mode. Tap **Reboot** to exit setup mode and restart the touch screen.

Select a Wi-Fi Access Point

On the **Wi-Fi Setup** screen, tap **Select a Wi-Fi Access Point**. The **Connect to a Wi-Fi Access Point: 1-2-3** screen is displayed.

Use the **Connect to a Wi-Fi Access Point: 1-2-3** screen to connect the touch screen to an existing wireless access point (WAP) that is in range or to configure a new WAP. Any WAPs that are in range and discoverable are displayed under **Step 1 - Select a WAP** upon successful discovery.

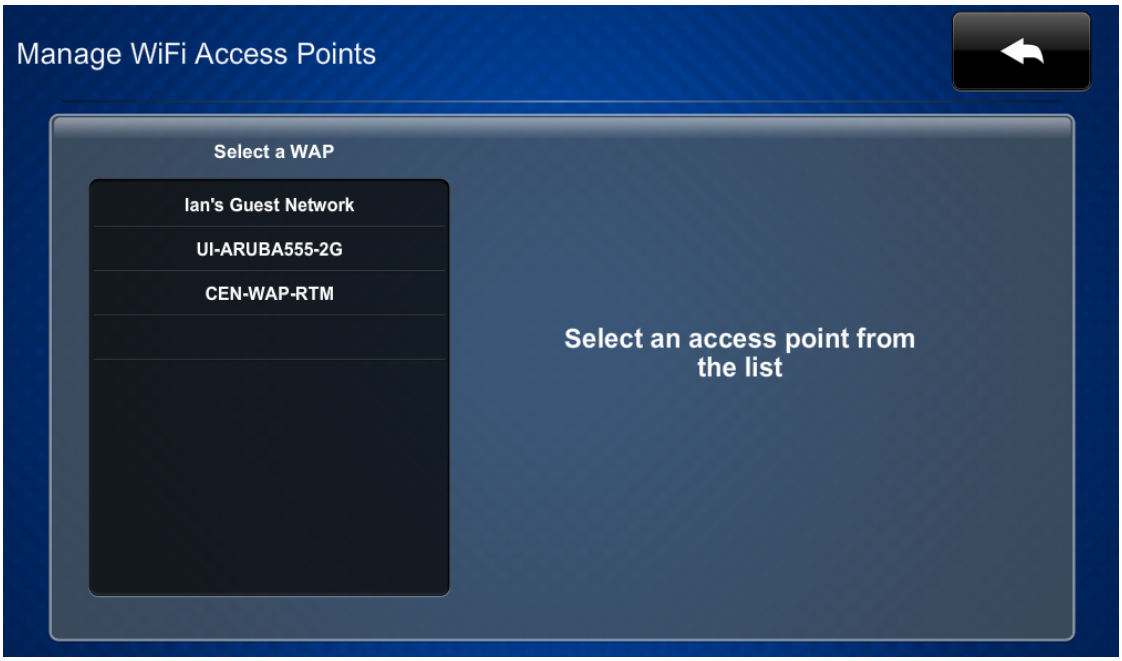
For instructions on connecting the TST-902 to a Wi-Fi network, refer to Set Up a Wi-Fi Network Connection on page 85.

> **NOTE:** If four WAPs have already been assigned, the TST-902 will indicate that the WAP list is full when attempting to add a new WAP. Tap **Delete an access point?** to display the **Manage Wi-Fi Access Points** screen, where an existing WAP may be deleted, or tap the back button to cancel adding the new WAP. For more information, refer to Manage Wi-Fi Access Points on page 99.

Tap the back button to return to the **Wi-Fi Setup** screen.

Manage Wi-Fi Access Points

On the **Wi-Fi Setup** screen, tap **Manage Wi-Fi Access Points**. The **Manage Wi-Fi Access Points** screen is displayed.



Use the **Manage Wi-Fi Access Points** screen to manage settings for up to four saved WAPs. Tap one of the listed WAPs to display controls to manage the WAP. Tap **Delete this Access Point** to delete the selected WAP. If a WAP is deleted, it must be added back to the list using the procedures described in Set Up a Wi-Fi Network Connection on page 85.

Tap the back button to return to the **Wi-Fi Setup** screen.

Tap the back button again to return to the **TST-902 Setup** screen.

Diagnostics

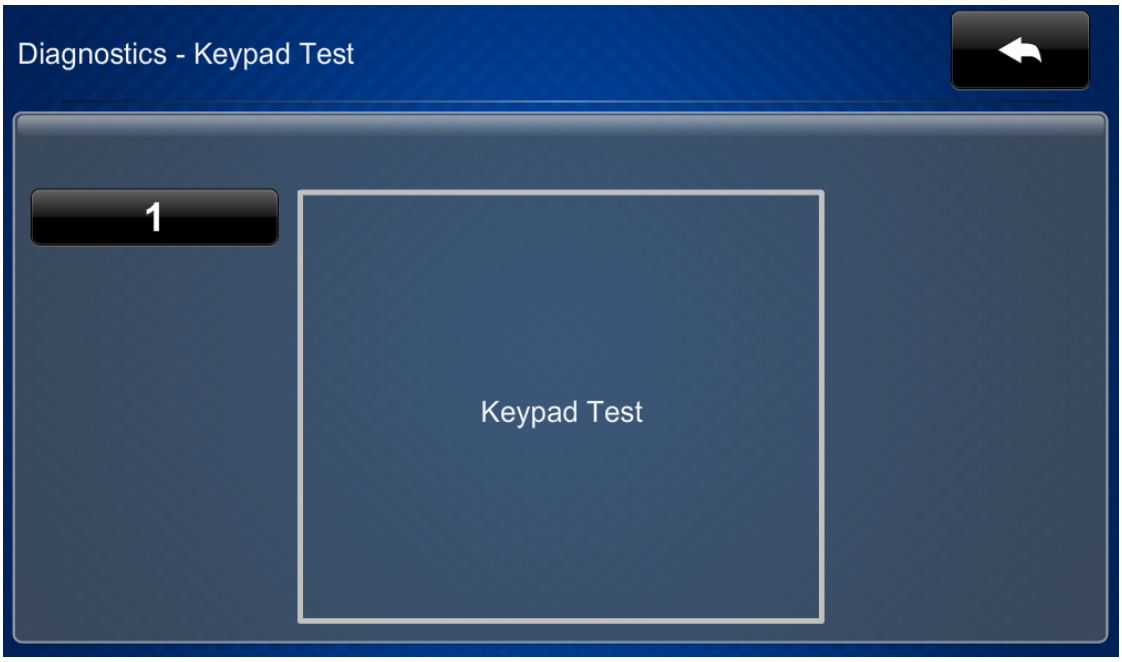
Tap **Diagnostics** on the **TST-902 Setup** screen to display the **Diagnostics** screen.

Use the **Diagnostics** screen to access various diagnostic test screens for the touch screen. The **Diagnostics** screen also provides the touch screen CPU temperature and available memory.

Each test screen is described in the sections that follow.

Keypad Test

Tap **Keypad Test** on the **Diagnostics** screen to display the **Diagnostics - Keypad Test** screen.

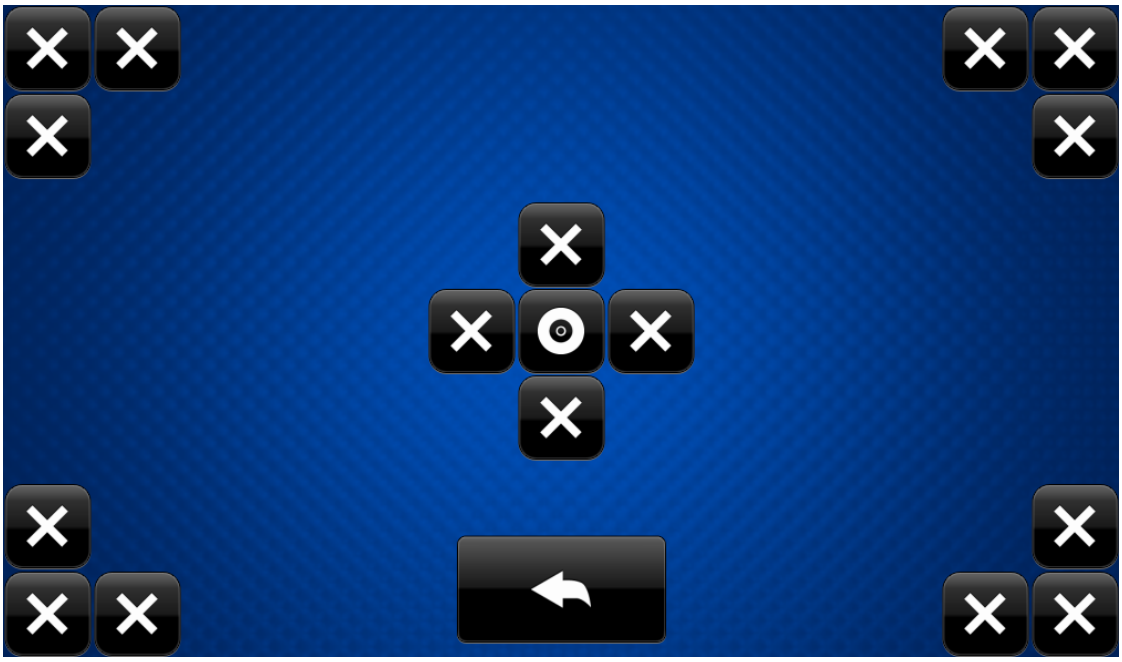


Use the **Diagnostics - Keypad Test** screen to test the functionality of the reset button on the rear of the touch screen. When the reset button is pressed, its respective indicator lights on the screen.

Tap the back button to return to the **Diagnostics** screen.

Touch Test

Tap **Touch Test** on the **Diagnostics** screen to display the touch test screen.

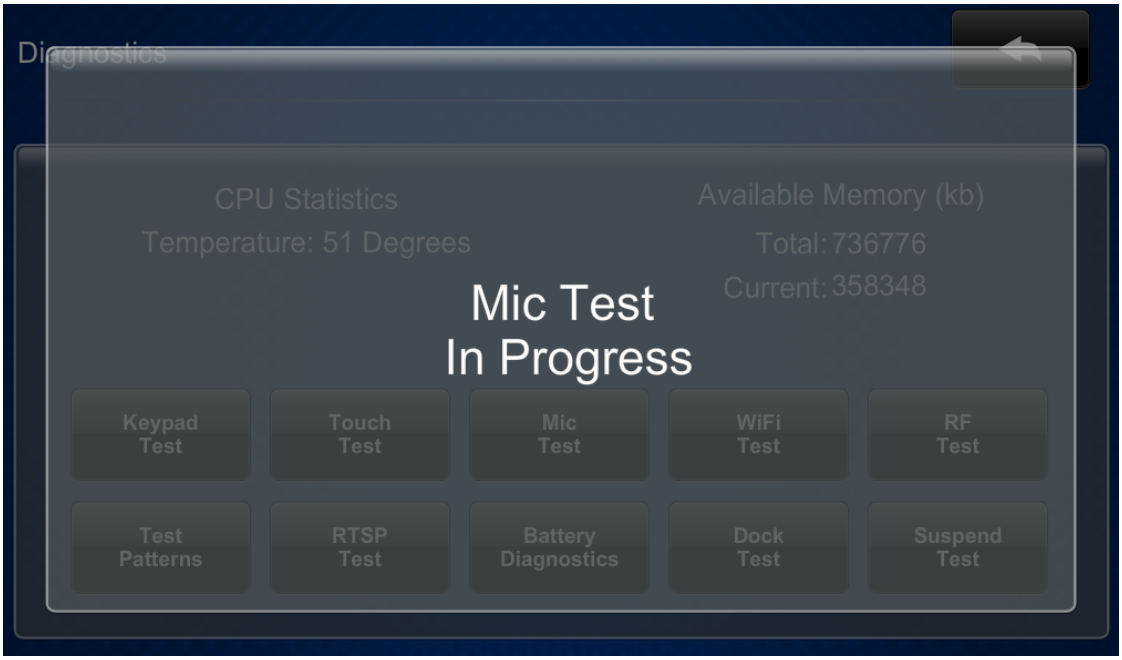


Use the touch test screen to test the touch functionality of the display. When a location button is tapped, its respective indicator lights on the screen.

Tap the back button to return to the **Diagnostics** screen.

Mic Test

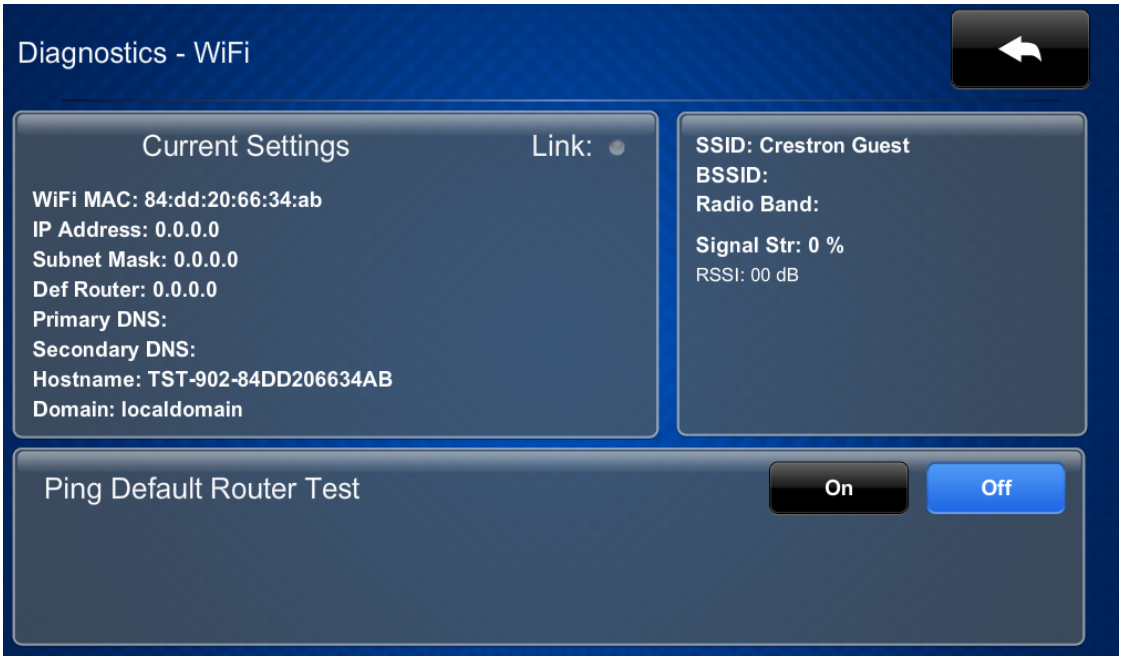
Tap **Mic Test** on the **Diagnostics** screen to begin a microphone test.



During a microphone test, the built-in microphone records sound for five seconds and then plays the sound back to confirm it is functioning. When the playback is finished, the display automatically returns to the **Diagnostics** screen.

Wi-Fi Test

Tap **Wi-Fi Test** on the **Diagnostics** screen to display the **Diagnostics - Wi-Fi** screen.



Use the **Diagnostics - Wi-Fi** screen to view and test the Wi-Fi network connection. The **Diagnostics - Wi-Fi** screen displays the Wi-Fi network MAC and IP addresses, subnet mask address, default router address, primary and secondary DNS addresses, host name, and domain name. A **Link** indicator is provided to indicate the status of the Wi-Fi network connection. (Green indicates that the Wi-Fi network connection is active.)

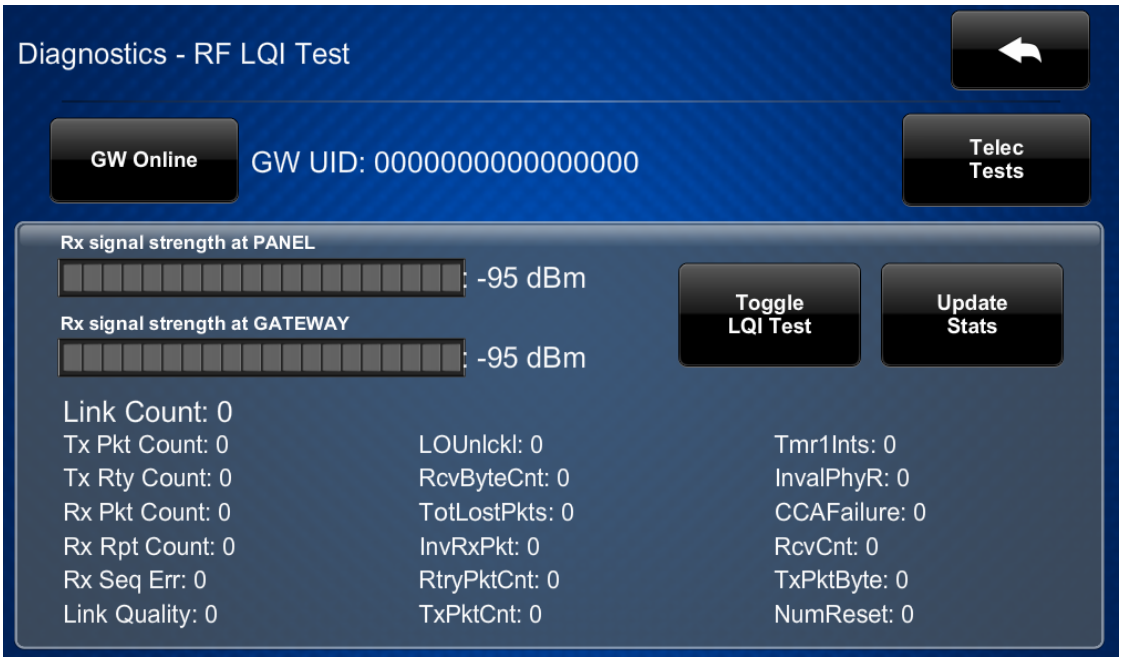
The **Diagnostics - Wi-Fi** screen also provides controls to test the connection to the default router. Tap **On** to begin the test and **Off** to end the test.

During the router test, the touch screen pings the default router. If the router is communicating with the touch screen, connection data is displayed below the ping test controls within five seconds. The connection data updates after every successive ping.

Tap the back button to return to the **Diagnostics** screen.

RF Test

Tap **RF Test** on the **Diagnostics** screen to display the **Diagnostics - RF LQI Test** screen.



Use the **Diagnostics - RF LQI Test** screen to view and test the RF connection to an Extended Range gateway. Statistics for the RF connection are displayed, as well as controls to toggle the RF LQI (link quality indicator) test and to update the connection statistics.

Tap **Telec Tests** to open the **Diagnostics - RF Telec Tests** screen.

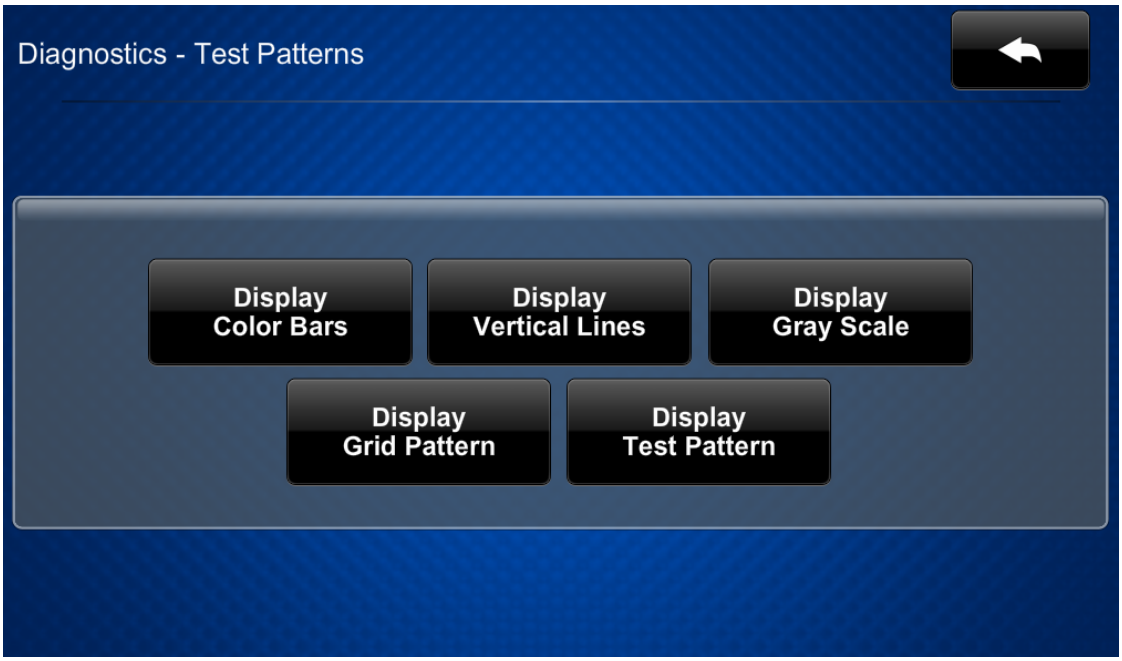
The **Diagnostics - RF Telec Tests** screen provides controls that can be used to perform various Telec tests, including changing the RF channel and power level.

Tap the back button to return to the **Diagnostics - RF LQI Test** screen.

Tap the back button again to return to the **Diagnostics** screen.

Test Patterns

Tap **Test Patterns** on the **Diagnostics** screen to display the **Diagnostics - Test Patterns** screen.



Use the **Diagnostics - Test Patterns** screen to display any of the available test patterns. Tap one of the buttons on the screen to display its respective test pattern.

Tap the back button to return to the **Diagnostics** screen.

Rava SIP Intercom

Tap **Rava Test** on the **Diagnostics** screen to display the **Diagnostics - Rava** screen.

Use the **Diagnostics - Rava** screen to test using the Rava® SIP Intercom with the touch screen. 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.

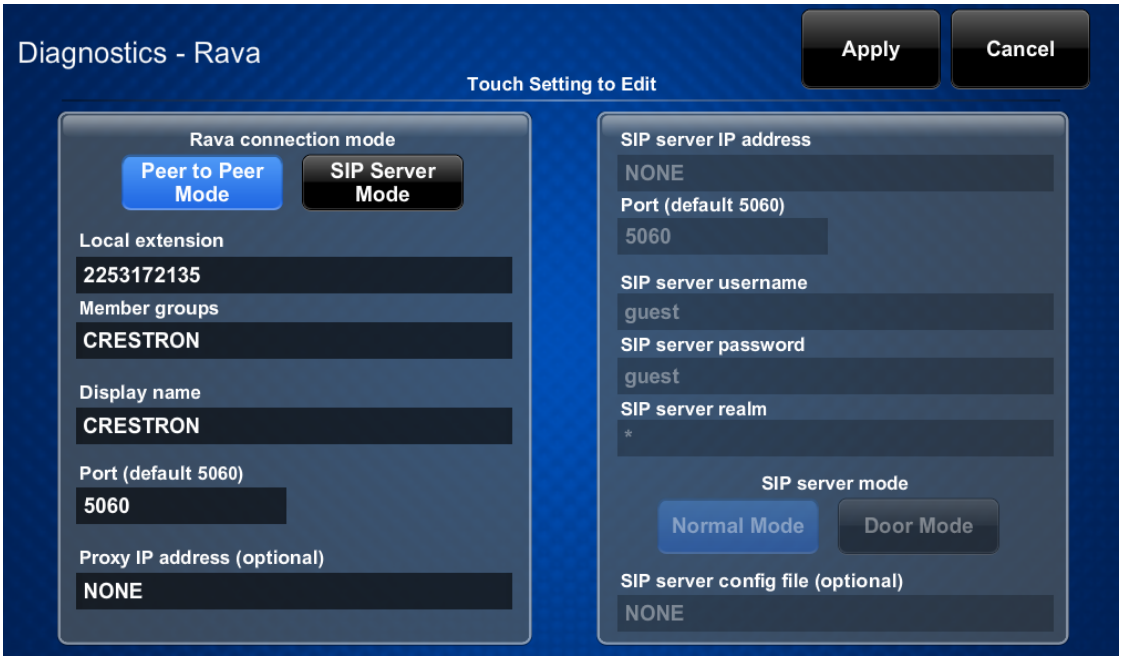
This screen may be used to call another touch screen that has a Rava SIP intercom, to test and configure projects, and to adjust various Rava settings.

- To place a call to another touch screen with a Rava SIP intercom, enter the extension of the touch screen using the numeric keypad, and then tap **Call**.

  > **NOTE:** If the intercom functions but the Rava project does not, there is an issue with the project. If the intercom does not function, there is an issue with the intercom settings.

- Use the buttons on the left and right of the screen to view or control various call settings.

Tap **Rava Setup** to display settings for the Rava SIP intercom.



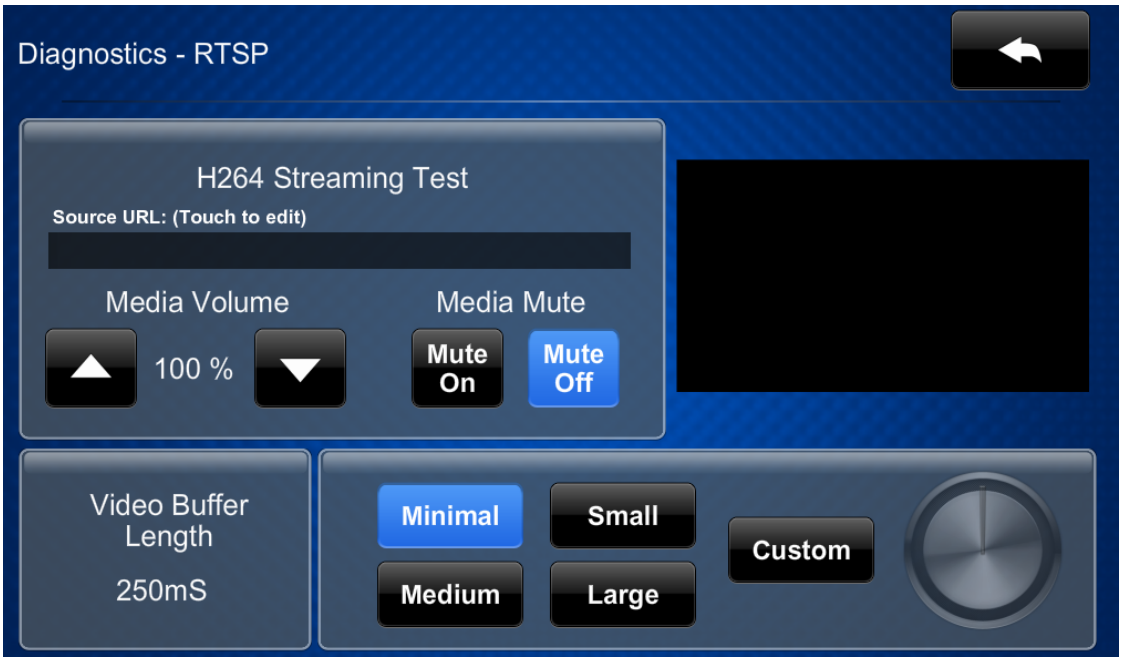
The Rava settings screen provides controls to switch between **Peer to Peer Mode** and **SIP Server Mode**. Tapping the text fields on the screen opens the on-screen keyboard or on-screen numeric keypad for entering the appropriate information.

Tap **Apply** to save any changes, or tap **Cancel** to cancel the changes.

Tap the back button to return to the **Diagnostics** screen.

RTSP Test

Tap **RTSP Test** on the **Diagnostics** screen to display the **Diagnostics - RTSP** screen.



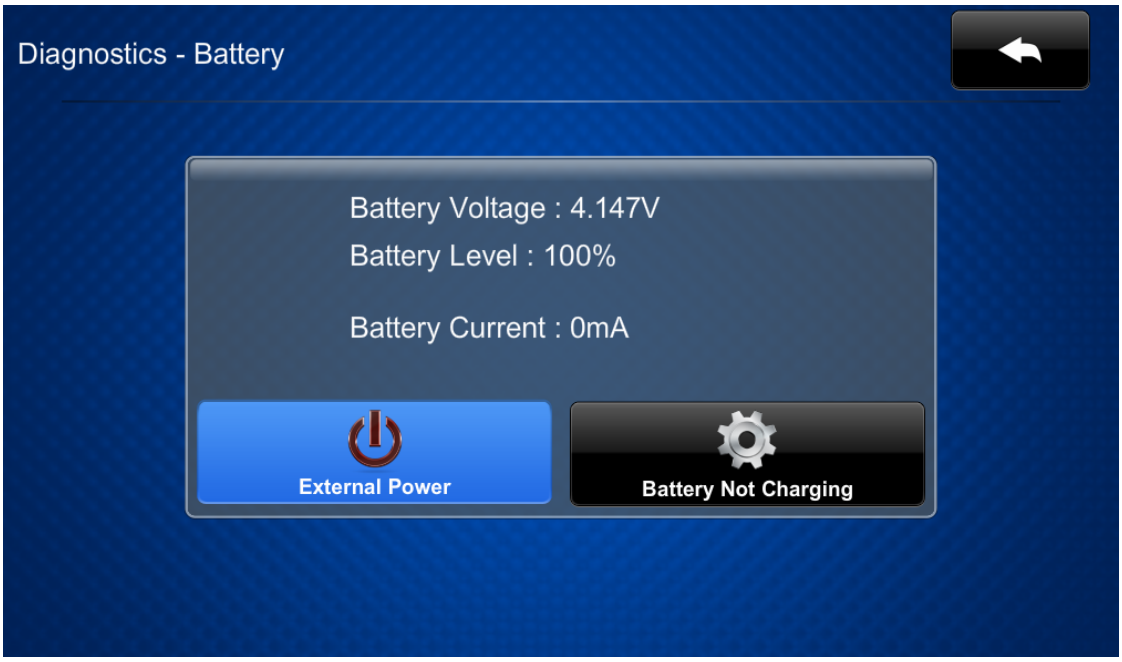
Use the **Diagnostics - RTSP** screen to view and test RTSP (real time streaming protocol) on the touch screen.

- Tap the text field under **H264 Streaming Test** to display an on-screen keyboard for entering an H.264 streaming video source URL. The chosen H.264 streaming video source is shown on the top right of the screen.
- Tap the up and down arrow buttons next to **Media Volume** to raise or lower the media volume incrementally from 0 to 100%.
- Tap **On** or **Off** under **Media Mute** to mute or unmute the media volume.
- Select one of the buttons to the right of **Video Buffer Length** to set the length of the streaming video buffer (in milliseconds). If **Custom** is selected, use the rotary knob to set a custom buffer length.

Tap the back button to return to the **Diagnostics** screen.

Battery Diagnostics

Tap **Battery Diagnostics** on the **Diagnostics** screen to display the **Diagnostics - Battery** screen.



Use the **Diagnostics - Battery** screen to view the TST-902 battery voltage, charge, and current levels.

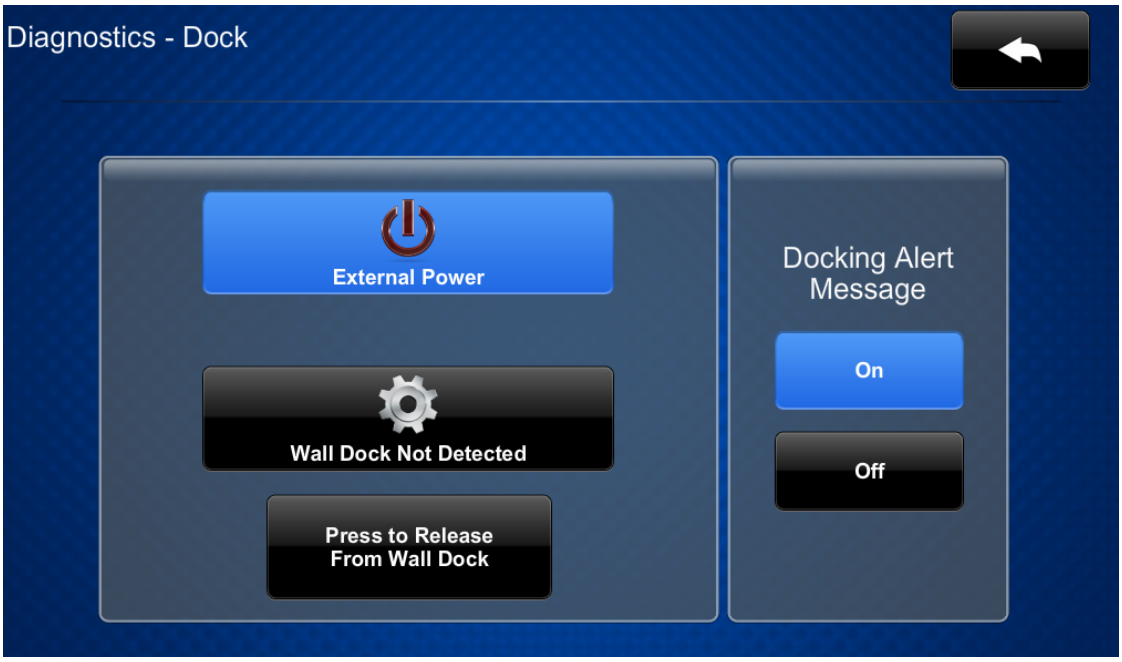
The **Diagnostics - Battery** screen also indicates the power source and battery charge behavior as follows:

- If the TST-902 is receiving external power through a table or wall dock, an **External Power** indicator is shown. If the TST-902 is receiving power from its battery, a **Battery Power** indicator is shown.
- If the TST-902 battery is currently charging, a **Battery Charging** indicator is shown. If the TST-902 is not currently charging, a **Battery Not Charging** indicator is shown.

Tap the back button to return to the **Diagnostics** screen.

Dock Test

Tap **Dock Test** on the **Diagnostics** screen to display the **Diagnostics - Dock** screen.



Use the **Diagnostics - Dock** screen to view the status of the TST-902 within a table or wall dock.

- If the TST-902 is receiving external power through a table or wall dock, an **External Power** indicator is shown. If the TST-902 is receiving power from its battery, a **Battery Power** indicator is shown.
- If the TST-902 is placed within the TST-902-DSW wall dock, a **Wall Dock Detected** indicator is shown. Otherwise, a **Wall Dock Not Detected** indicator is shown.
- If the TST-902 is placed within the TST-902-DSW wall dock, tap **Press to Release From Wall Dock** to release the TST-902 from the wall dock.

> **NOTE:** In the event of a power outage, the TST-902 can be removed from the wall dock manually as described in Undock the Touch Screen on page 50.

- Tap **On** or **Off** under **Docking Alert Message** to turn a docking alert message for the touch screen on or off.

Tap the back button to return to the **Diagnostics** screen.

Suspend Test

Tap **Suspend Test** on the **Diagnostics** screen to begin a suspend test and put the TST-902 into standby timeout mode. Tap the touch screen display to wake the TST-902 from standby timeout mode.

About

Tap **About** on the **TST-902 Setup** screen to display the **About** screen.

Use the **About** screen to view information about the touch screen, including the firmware version and the operating system versions.

Tap the back button to return to the **TST-902 Setup** screen.

Perform a Factory Restore

If the TST-902 needs to be restored to its factory default settings, perform the following recovery procedure.

CAUTION: Performing a factory restore returns all TST-902 settings to their default values and removes any Extended Range (ER) RF gateway connections and Wi-Fi® network access points that were previously added.

1. Use the included t-pin tool or a similar pointed object to press and hold the recessed **Reset** button on the rear of the TST-902. The TST-902 will begin to reset.
2. Release the **Reset** button after the reset process begins.
3. Once the Crestron swirl logo is shown on the touch screen display, the reset process has completed. Press and hold the **Reset** button again.
4. Repeat steps 1–3 to perform the reset process 10 more times (for a total of 11 times).

   After the 11th time, the TST-902 enters recovery mode. A screen is displayed with an option to restore the TST-902.
5. Tap the restore button to perform the factory restore.

The TST-902 will begin the factory restore process. Once the touch screen resets after this process it can be configured as described in Initial Setup on page 83.

Operation

The touch screen is controlled by using its touch screen display. The touch screen supports gesturing and swiping controls to perform various functions. Supported touch controls vary by the loaded user program.

Resources

The following resources are provided for the TST-902.

NOTE: You may need to provide your Crestron.com web account credentials when prompted to access some of the following resources.

Crestron Support and Training

- Crestron True Blue Support
- Crestron Resource Library
- Crestron Online Help (OLH)
- Crestron Training Institute (CTI) Portal

Programmer and Developer Resources

- help.crestron.com: Provides help files for Crestron programming tools such as SIMPL, SIMPL#, and Crestron Toolbox™ software
- developer.crestron.com: Provides developer documentation for Crestron APIs, SDKs, and other development tools

Product Certificates

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

Related Documentation

- Crestron Programming Design Guide
- Crestron Touch Screens Security Reference Guide
- Installation and Setup of Crestron RF Products Best Practices
- Touch Screen RF Roaming Quick Start

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Product Manual — Doc. 7750C
09/14/22
Specifications subject to
change without notice.