



**Product Manual** 

TST-1080

10.1 in. Wireless Touch Screen

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

Regulatory Model: M202215001

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# **Overview**

The Crestron® 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 makes it easy to hold and allows it to move effortlessly between portable and stationary use. Its large-capacity, rechargeable battery affords several hours of operation between charges. Support for Wi-Fi® 5 communications and WPA/WPA2 Enterprise encryption assures dependable and secure connectivity throughout a commercial facility or home.

This section provides the following information:

Features

# **Features**

This section provides the following information:

- TST-1080 Features
- TST-1080-DS Features
- TST-1080-DSW Features
- TST-902-DSW-BB Features
- TST-902-DSW-BBI Features
- TST-902-DSW-PMK Features
- TST-902-DSW-WMKM Features
- TST-902-DSW-WMKT Features

### TST-1080 Features

The Crestron® 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 makes it easy to hold and allows it to move effortlessly between portable and stationary use. Its large-capacity, rechargeable battery affords several hours of operation between charges. Support for Wi-Fi® 5 communications and WPA/WPA2 Enterprise encryption assures dependable and secure connectivity throughout a commercial facility or home.

Featuring a high-contrast 10.1 in. capacitive touch screen with Crestron HTML5 User Interface technology, the TST-1080 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.<sup>2,3</sup>



#### Key features include:

- · Advanced wireless touch screen with thin tablet design
- 10.1 in. LED backlit color LCD display
- · Capacitive touch screen display
- Custom-programmable virtual control buttons

- Supports Crestron HTML5 User Interface and Crestron Construct<sup>™</sup> software custom user projects
- Support for XiO Cloud® provisioning and management service
- Native apps for Crestron Home® OS and Zoom Rooms® conferencing control
- Built-in Rava® SIP intercom
- · Built-in speakers and microphone
- · Voice recognition capability
- H.265, H.264, or MJPEG streaming video display
- · Built-in web browsing
- Multitouch support
- Instant-Waking® technology
- Wi-Fi® 5 network support at 2.4 and 5 GHz bands
- Enterprise-grade security and authentication
- Web, cloud, or device-based configuration
- Large-capacity Lithium Ion battery pack
- Included table dock charges battery while allowing for stationary use
- Wall dock option sold separately

### Custom-Programmable Virtual Buttons

The TST-1080-DSW provides a universal status bar that is populated with virtual buttons for quick access to common touch screen functions. The touch screen comes preconfigured with virtual buttons for Power, Home, Lights, Up, Down, and Microphone. Each button can be programmed via a Crestron control system to provide custom functionality, and unused buttons can be hidden individually. The universal status bar is expanded or hidden using simple swipe gestures on touch screen display.

## Dynamic User Interfaces

The TST-1080 supports custom user interfaces created with <u>Crestron HTML5 User Interface</u> and <u>Crestron Construct™</u> technologies, allowing greater flexibility for UI developers and programmers.

- Crestron HTML5 User Interface enables UI designers to develop rich, front-end user interfaces with increased reusability and efficiency using modern web methodologies. Crestron HTML5 User Interface development tools are provided to simplify creating user interfaces built on standard web technologies.
- Crestron Construct is a cross-platform developer application that enables programmers to create HMTL5-based user interfaces within a WYSIWYG (What You See Is What You Get) environment to further simplify UI development.

#### XiO Cloud Service

The TST-1080 is compatible with the XiO Cloud® service, which is an IoT (Internet of Things) based platform for remotely provisioning, monitoring, and managing Crestron devices across an enterprise or an entire client base. XiO Cloud is built on the Microsoft® Azure® software platform and utilizes Microsoft's industry leading Azure IoT Hub technology. XiO Cloud enables installers and IT managers to deploy and manage thousands of devices simultaneously. Unlike other virtual machine based cloud solutions, Azure services provide unlimited scalability to suit the ever growing needs of an enterprise. For more information, visit www.crestron.com/xiocloud.

#### Crestron Home OS Control

The TST-1080 may be used to control a <u>Crestron Home® OS</u> whole home solution. Select the Crestron Home app from the touch screen to control lighting, shades, climate, media, security, and cameras, including the ability to create and recall scenes that create a desired ambiance throughout a home. A TST-1080 can be installed in each room to provide easy access to various Crestron Home functions for both the room and the home.

### **Zoom Rooms App**

The Zoom Rooms® conferencing control application enables the TST-1080 to be used as a touch screen control panel for a Zoom Rooms software-based conferencing and collaboration solution. The TST-1080 offers a superior alternative to a consumer tablet device, providing a more reliable and secure platform with versatile, streamlined mounting options. The TST-1080 may be configured to run the Zoom Rooms app exclusively, or to allow toggling between the Zoom Rooms app and touch screen control mode. The latter option is used to integrate Zoom Rooms conferencing into a larger AV system while providing touch screen control for both.

#### 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.<sup>2</sup>

### Voice Recognition

With built-in voice recognition, spoken commands can be issued to the TST-1080 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.<sup>2,3</sup>

## Streaming Video

Native support for H.264 and MJPEG formats allows the TST-1080 to display live streaming video from an IP camera, a streaming encoder (<u>DM-TXRX-100-STR</u> or similar), or a <u>DigitalMedia™ switcher</u>.<sup>4</sup>

#### Web Browser

Using its built-in web browser, the TST-1080 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.<sup>3</sup>

### 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.

### Instant-Waking Technology

The TST-1080 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.

### Wi-Fi Connectivity

The TST-1080 connects to the network over Wi-Fi communications via a local wireless access point (WAP) and delivers high-performing wireless connectivity.

- Support for 802.11ac/b/g/n/ax protocols at 2.4 and 5 Ghz bands affords high-speed wireless performance in almost any environment.
- Advanced wireless capabilities such as streaming video, voice recognition, web browsing, and dynamic graphics are supported. Wi-Fi connectivity supports up to 50 ft (15 m) of omnidirectional coverage indoors.<sup>5</sup> For Wi-Fi networks with multiple WAPs, the TST-1080 can hand off communication from one access point to another if the active connection is lost.<sup>6</sup>

### **Enterprise-Grade Security**

The TST-1080 is an enterprise-grade touch screen that can be deployed across hundreds of spaces and set up easily using a web browser, Crestron Toolbox™ software, or XiO Cloud. It employs standard network security protocols, including 802.1X network access control, Active Directory® service authentication, SSH, TLS, and HTTPS to ensure reliability and compliance with your organization's IT policies. Additional support for SNMP allows the touch screen to be monitored by your IT administrator.

The TST-1080 is configured to meet Crestron's enhanced security standards right out of the box. The TST-1080 ships with authentication enabled and requires that an administrator account be created before access is granted to device configuration and control interfaces.

## **Extended Battery Life**

The TST-1080 features a large-capacity 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-1080 includes a table dock for charging the touch screen's internal battery. The table dock also allows the TST-1080 to be used as a stationary tabletop touch screen. The table dock holds the TST-1080 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.<sup>1</sup>

### Wall Dock Accessory

The optional <u>TST-1080-DSW</u> provides a flush mount, in-wall docking solution for the TST-1080. The TST-1080-DSW allows the TST-1080 to be used as a stationary wall mount touch screen that can be converted into a wireless touch screen at any time.<sup>4</sup>

#### Notes:

- 1. The TST-1080 ships with one <u>TST-1080-DS</u> table dock included. Additional table docks, or the <u>TST-1080-DSW</u> 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 Wi-Fi communications to be functional.
- 4. Item(s) sold separately.
- 5. Wireless range subject to site-specific conditions.
- 6. 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.
- 7. A complete Zoom Rooms® solution requires a mini PC or Mac computer running Zoom® software, a Zoom Rooms subscription, plus additional peripherals and cables. Visit zoom.us/zoomrooms for more information about Zoom Rooms capabilities, hardware requirements, and subscription plans. For design assistance, contact the Crestron True Blue support team at www.crestron.com/support.

## TST-1080-DS Features

The <u>TST-1080-DS</u> is a stylish table dock designed for charging a single <u>TST-1080</u> wireless touch screen. The table dock also allows the TST-1080 to be used as a stationary tabletop touch screen. The table dock holds the TST-1080 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-1080. Additional table docks can be purchased separately to accommodate multiple docking locations.



### TST-1080-DSW Features

The <u>TST-1080-DSW</u> is an optional wall dock for the <u>TST-1080</u> wireless touch screen. Placing the TST-1080 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-1080-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-1080-DSW is designed for flush-mount installation in a flat, vertical wall structure. Installation of the wall dock requires additional hardware (not included):

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

**NOTE:** The TST-1080-DSW uses the same mounting accessories as the TST-902-DSW, making it easy to upgrade from a TST-902 touch screen without requiring any remediation for the substrate or wall materials.



#### Note:

1. The TST-1080-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 <u>TST-902-DSW-BB</u> provides a recess wall-mounted metal back box for the <u>TST-902-DSW</u> and <u>TST-1080-DSW</u> wall docks. 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 <u>TST-902-DSW-BBI</u> provides a recess wall-mounted metal back box for the <u>TST-902-DSW</u> and <u>TST-1080-DSW</u> wall docks. 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 <u>TST-902-DSW-PMK</u> provides a preconstruction mounting solution for the <u>TST-902-DSW</u> and <u>TST-1080-DSW</u> wall docks. 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 <u>TST-902-DSW-WMKM</u> provides a simple solution for installing the <u>TST-902-DSW</u> and <u>TST-1080-DSW</u> wall docks 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 <u>TST-902-DSW-WMKT</u> provides a simple solution for installing the <u>TST-902-DSW</u> and <u>TST-1080-DSW</u> wall docks 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**

This section provides the following information:

- TST-1080 Specifications
- TST-1080-DS Specifications
- TST-1080-DSW Specifications
- TST-902-DSW-BB Specifications
- TST-902-DSW-BBI Specifications
- TST-902-DSW-PMK Specifications
- TST-902-DSW-WMKM Specifications
- TST-902-DSW-WMKT Specifications

# **TST-1080 Specifications**

Refer to the following product specifications for the TST-1080.

## **Product Specifications**

#### **Touch Screen Display**

**Display Type** TFT active matrix color LCD

**Size** 10.1 in. (257 m) diagonal

Aspect Ratio16:10 WUXGAResolution1920 x 1200 pixelsBrightness350 nits (cd/m²)

Contrast 800:1

Color Depth 24 bit, 16.7M colors

**Illumination** LED backlit

Viewing Angle +80° horizontal, +80° vertical

**Touch Screen** Projected capacitive, 5-point multitouch capable

#### **Controls and Indicators**

**Reset** (1) Pinhole recessed button on bottom panel for hardware reset and setup initiation

Virtual Buttons (6) Virtual buttons in collapsible universal tool bar, per-button show/hide, preconfigured with icons for Power, Home, Lights, Up, Down, and Microphone,

optional custom programming via control system for additional functions to existing

buttons

#### **Graphics Engine**

Crestron HTML5 User Interface technology, multilanguage web browser<sup>2,3</sup>, multilanguage on-screen keyboard, screensaver, native Crestron Home<sup>®</sup> OS app, native Zoom Rooms<sup>®</sup> app<sup>7</sup>, setup and diagnostics via web browser, cloud, or on-screen UI

#### Languages

Crestron HTML5 User Arabic, Chinese (Simplified), Chinese (Traditional), Czech, Danish, Dutch, English (UK), Interface 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 Recognition2,3 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<sup>2,3</sup> 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

NOTE: Only a subset of these languages are available while running the Zoom Rooms application.

#### Memory

RAM 4 GB LPDDR2 SDRAM
Storage 30 GB (user space)

Maximum Project Size 512 MB

#### Wireless Communications6

Transceiver IEEE 802.11ac/b/g/n/ax Wi-Fi® communications (2.4 and 5 GHz 2-way RF), static IP or

dynamic IP via DHCP

Security 64 and 128-bit WEP, WPA, WPA2, WPA Enterprise, and WPA2 Enterprise

Range Up to 50 ft (15 m) typical;

Subject to site-specific conditions

Handoff Supports handoff between a maximum of 4 Wi-Fi access points<sup>5</sup>

Bluetooth® Hardware For future integration

Video

Streaming Formats H.265/H.264 up to 4K at 20 Mpbs (MPEG-4 part 10 AVC) or MJPEG, up to

1280x720@30 fps3

Audio

**Features** Built-in microphone and speakers, Rava® SIP intercom, multilanguage voice

recognition2,3

**Audio Feedback Formats** MP3

Connectors

**Docking Connector** (3) Contacts;

Mates with docking port on included TST-1080-DS docking station<sup>1</sup>

USB (1) Type-C USB port;

For charging touch screen battery

#### **Power**

**Rechargeable Battery** Li-lon, 3.8V, 10400 mAh

Usage per Charge 120 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: 0.8A (maximum) @ 100-240VAC, 50/60 Hz;

Output: 1.25A @ 24VDC;

DC power connection can be made via charging dock;

Includes 6 ft (1.83 m) attached cable with 2.1 x 5.5 mm DC power barrel connector and

universal blade kit to accommodate most AC outlet types

USB Input: 9VDC, 3A (maximum)

Power Consumption 6 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, integral docking port

#### **Dimensions**

 Height
 6.42 in. (163 mm)

 Width
 10.32 in. (262 mm)

 Depth
 0.53 in. (14 mm)

#### Weight

1.7 lb (780 g)

#### Compliance

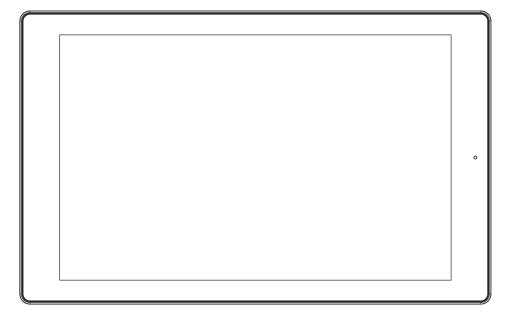
#### Regulatory Model: M202215001;

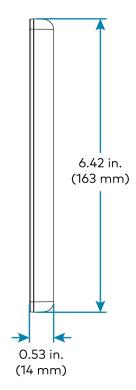
IC, CE, FCC Part 15 Class B digital device

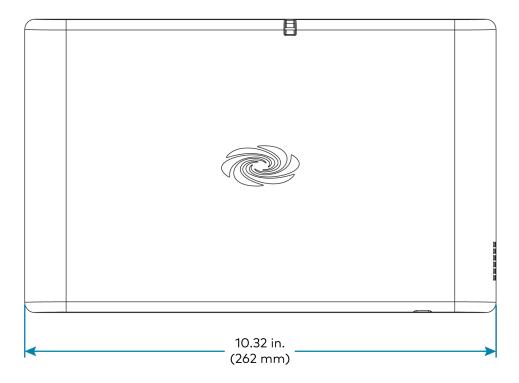
Notes:

- 1. The TST-1080 ships with one <u>TST-1080-DS</u> table dock included. Additional table docks, or the <u>TST-1080-DSW</u> 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 Wi-Fi communications to be functional.
- 4. Item(s) sold separately.
- 5. Wireless range subject to site-specific conditions.

- 6. 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.
- 7. A complete Zoom Rooms® solution requires a mini PC or Mac computer running Zoom® software, a Zoom Rooms subscription, plus additional peripherals and cables. Visit <a href="mailto:zoom.us/zoomrooms">zoom.us/zoomrooms</a> for more information about Zoom Rooms capabilities, hardware requirements, and subscription plans. For design assistance, contact the Crestron True Blue support team at <a href="https://www.crestron.com/support">www.crestron.com/support</a>.







# **TST-1080-DS Specifications**

Refer to the following product specifications for the TST-1080-DS.

## **Product Specifications**

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Power (1) Attached 6 ft (1.83 m) cable with inline 2.1 x 5.5 mm DC power connector; 24VDC power input (for included power pack)

#### Power

Power Pack (Included) Input: 0.8A (maximum) @ 100-240VAC, 50/60 Hz;

Output: 1.25A @ 24VDC;

DC power connection can be made via charging dock or onboard DC power connector; Includes 6 ft (1.83 m) attached cable with  $2.1 \times 5.5$  mm DC power barrel connector and

universal blade kit to accommodate most AC outlet types

Power Consumption 6 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** 3.64 in. (93 mm);

6.17 in. (157 mm) with touch screen docked

Width 4.87 in. (125 mm);

10.31 in. (262 mm) with touch screen docked

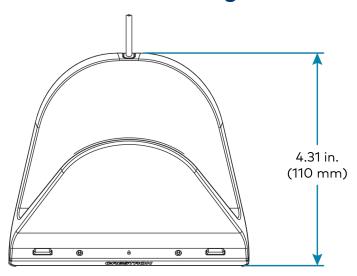
**Depth** 4.31 in. (110 mm)

#### Weight

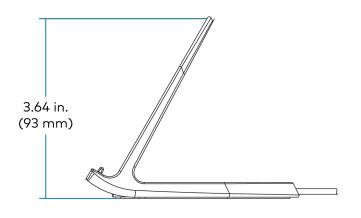
1.2 lb (545 g)

#### Compliance

WEEE







# **TST-1080-DSW Specifications**

Refer to the following product specifications for the TST-1080-DSW.

## **Product Specifications**

#### Connectors

**24VDC** (1) 2-pin 3.5 mm detachable terminal block;

24VDC power input;

Wire size: 18 AWG (0.75 mm²) maximum

#### Controls

**OPEN** (1) Push button, accessible when touch screen is not docked;

Releases the docking mechanism that allows the TST-1080 to be docked

#### **Power Requirements**

Cresnet® Power Usage 30 W (1.25A @ 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);

 $50^{\circ}$  to  $104^{\circ}$ F ( $10^{\circ}$  to  $40^{\circ}$ C) while charging

**Humidity** 10% to 90% RH (noncondensing)

#### **Enclosure**

Chassis Metal, flush-mountable in a vertical wall structure (with optional mounting

accessories, sold separately)1

Faceplate Plastic, black

#### **Dimensions**

**Height** 8.01 in. (204 mm)

Width 11.86 in. (301 mm)

**Depth** 4.37 in. (111 mm) in undocked state;

3.16 in. (80 mm) in docked state

#### Weight

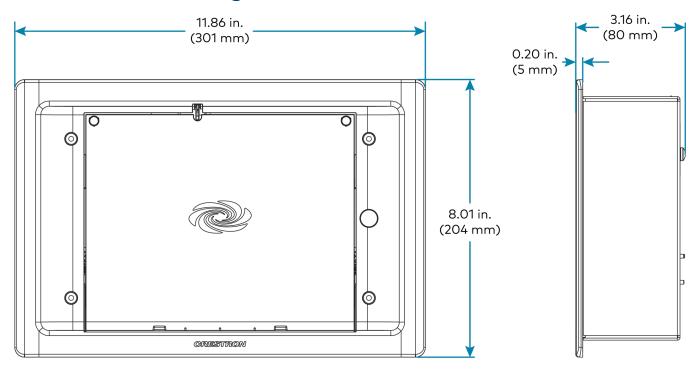
4.7 lb (2.1 kg)

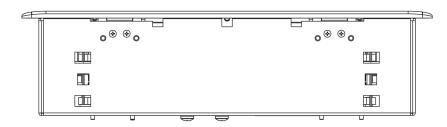
#### Compliance

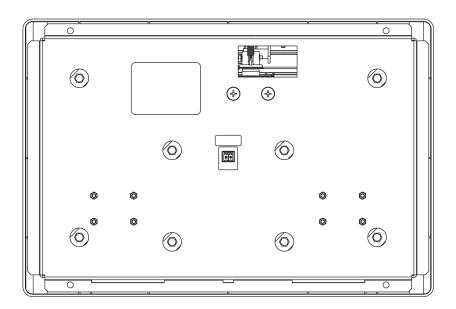
WEEE

N I	- 4	

1. The TST-1080-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**

Refer to the following product specifications for the TST-902-DSW-BB

# **Product Specifications**

#### Construction

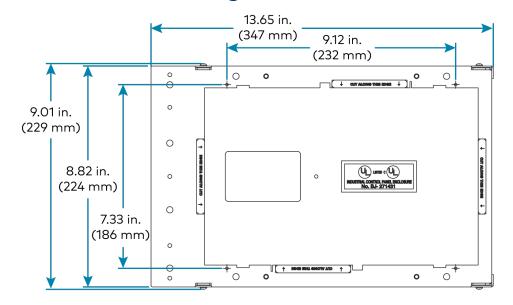
Metal box, front mounting plate with integral stud mounting flange, metal cover plate

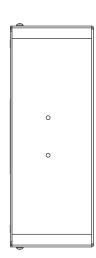
#### **Dimensions**

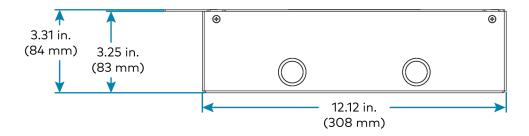
 Height
 9.01 in. (229 mm)

 Width
 13.65 in. (347 mm)

 Depth
 3.32 in. (85 mm)







# **TST-902-DSW-BBI Specifications**

Refer to the following product specifications for the TST-902-DSW-BBI.

# **Product Specifications**

#### Construction

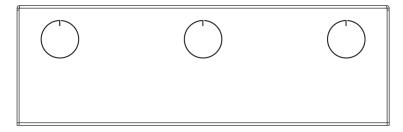
Metal box

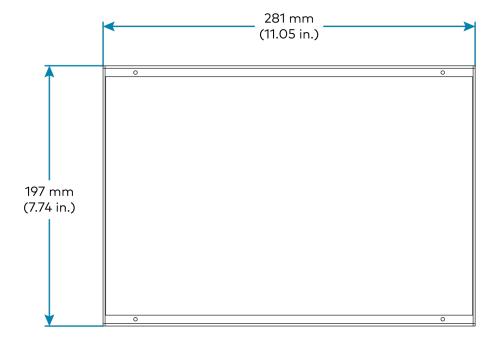
#### **Dimensions**

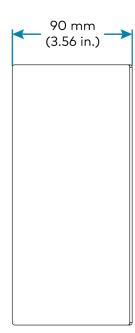
 Height
 197 mm (7.74 in.)

 Width
 281 mm (11.05 in.)

 Depth
 91 mm (3.56 in.)







# **TST-902-DSW-PMK Specifications**

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

# **Product Specifications**

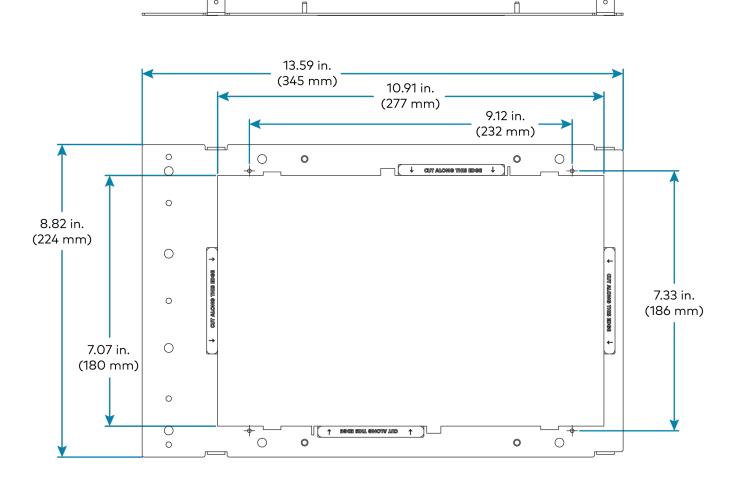
#### Construction

Metal mounting plate and cover plate

#### **Dimensions**

 Height
 8.82 in. (224 mm)

 Width
 13.59 in. (346 mm)



# TST-902-DSW-WMKM Specifications

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

# **Product Specifications**

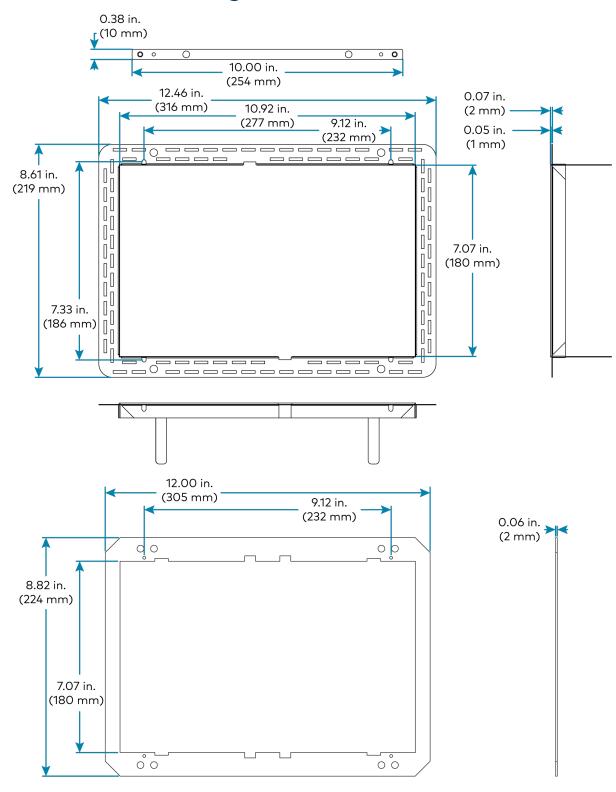
#### Construction

Metal mounting plate and mud ring

#### **Dimensions**

 Height
 8.82 in. (224 mm)

 Width
 12.46 in. (316 mm)



# **TST-902-DSW-WMKT Specifications**

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

# **Product Specifications**

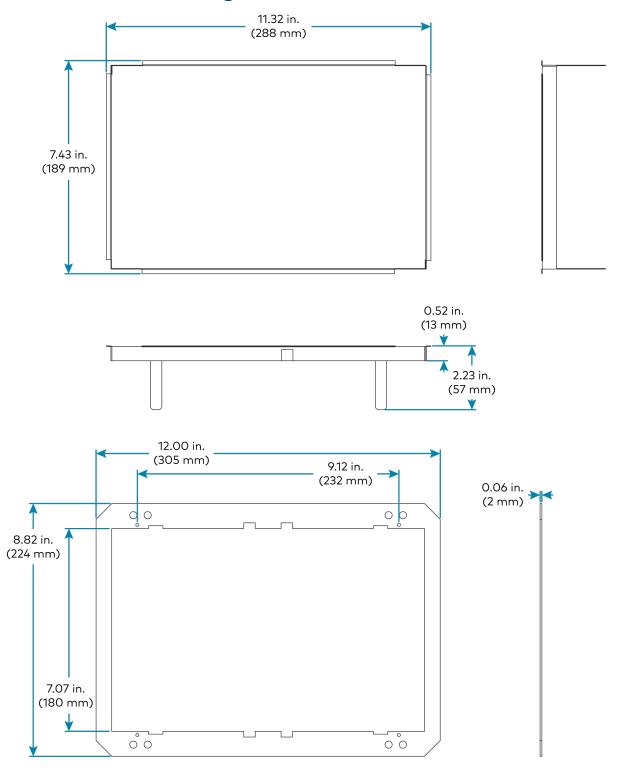
#### Construction

Metal mounting plate and trim ring

#### **Dimensions**

 Height
 8.82 in. (224 mm)

 Width
 12.00 in. (305 mm)



# Installation

This section provides the following information:

- TST-1080 Installation
- TST-1080-DS Installation
- TST-1080-DSW Installation
- TST-902-DSW-BB Installation
- TST-902-DSW-BBI Installation
- TST-902-DSW-PMK Installation
- TST-902-DSW-WMKM Installation
- TST-902-DSW-WMKT Installation

# TST-1080 Installation

Use the following procedures to install the TST-1080.

## Compliance and Safety

Review the following compliance and safety statements before installing the TST-1080.

### Lithium-Ion Battery Pack Statement

The device ships with an internal Lithium-Ion battery installed. The battery is specific to this device and is not user replaceable. Return the device to its manufacturer if the battery must be replaced.

**WARNING:** The battery can burst or explode, releasing hazardous chemicals. To reduce the risk of fire or burns, do not disassemble, crush, or puncture the device, and do not dispose of the device in fire or water.

L'appareil est livré avec une batterie lithium-ion interne installée. La batterie est spécifique à cet appareil et ne peut pas être remplacée par l'utilisateur. Renvoyez l'appareil à son fabricant si la batterie doit être remplacée.

**AVERTISSEMENT:** La batterie peut éclater ou exploser, libérant des produits chimiques dangereux. Pour réduire le risque d'incendie ou de brûlures, ne démontez pas, n'écrasez pas ou ne percez pas l'appareil et ne le jetez pas dans le feu ou dans l'eau.

### **General Safety Precautions**

Ensure the following safety precautions are followed when operating, installing, servicing, transporting, or storing the device:

- Ensure that the device is powered off and disconnected from its power source if it is being installed, moved, or modified.
- Do not apply voltage levels that exceed the specified voltage range for the device. Doing so may cause fire or electrical shock.
- Do not attempt to open the device. Electrical shocks can occur if the device is opened when running.
- Do not drop or insert any objects into the device ventilation openings.
- If considerable levels of dust, water, or fluids enter the device, power it down immediately, remove it from its power source, and contact the manufacturer for support.
- Do not drop the device against a hard surface.
- Do not strike or exert excessive force against the LCD display.
- Do not touch the LCD display with a sharp object.
- Do not use the device in a location where the ambient temperature exceeds the operating temperature range.

Assurez-vous que les précautions de sécurité suivantes sont suivies lors de l'utilisation, de l'installation, de l'entretien, du transport ou du stockage de l'appareil :

- Assurez-vous que l'appareil est éteint et déconnecté de sa source d'alimentation s'il est installé, déplacé ou modifié.
- N'appliquez pas de niveaux de tension qui dépassent la plage de tension spécifiée pour l'appareil. Cela pourrait provoquer un incendie ou un choc électrique.
- N'essayez pas d'ouvrir l'appareil. Des décharges électriques peuvent se produire si l'appareil est ouvert pendant le fonctionnement.
- Ne laissez pas tomber ou n'insérez aucun objet dans les ouvertures de ventilation de l'appareil.
- Si des niveaux considérables de poussière, d'eau ou de liquides pénètrent dans l'appareil, éteignez-le immédiatement, débranchez-le de sa source d'alimentation et contactez le fabricant pour obtenir de l'aide.
- Ne faites pas tomber l'appareil contre une surface dure.
- Ne frappez pas et n'exercez pas de force excessive sur l'écran LCD.
- Ne touchez pas l'écran LCD avec un objet pointu.
- N'utilisez pas l'appareil dans un endroit où la température ambiante dépasse la plage de température de fonctionnement.

### In the Box

Qty.	Description
1	TST-1080, 10.1 in. Wireless Touch Screen
	Additional Items
1	Docking Station, TST-1080-DS (4535106)
1	Power Pack, 24VDC @ 1.25A, 100–240VAC (2045870)

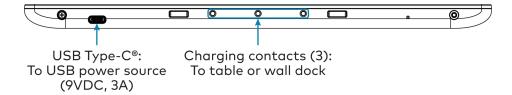
## Charge the Battery

The TST-1080 ships in low power mode to conserve the battery charge. The TST-1080 battery must be charged fully before configuring and operating the touch screen for the first time.

**NOTE:** The touch screen powers off when the battery level reaches 0%. The touch screen can take up to 15 minutes to power back on once the battery starts recharging.

The TST-1080 battery can be charged using one of the following methods:

- Place the TST-1080 into its included table dock (TST-1080-DS) or the optional wall dock (TST-1080-DSW, not included) after installing and applying power to the dock. For more information, refer to Place the Touch Screen on page 32.
- Connect a USB Type-C® cable (not included) to the bottom of the touch screen from a USB power source.



Allow the touch screen battery to charge for up to three hours until it is fully charged. After the TST-1080 wakes from low power mode, a battery charging indicator is shown in the top-right corner of the touch screen display.



### Place the Touch Screen

The TST-1080 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-1080 within the included table dock, refer to TST-1080-DS Installation on page 33.
- To place the TST-1080 within the optional wall dock, refer to TST-1080-DSW Installation on page 35.

# **TST-1080-DS Installation**

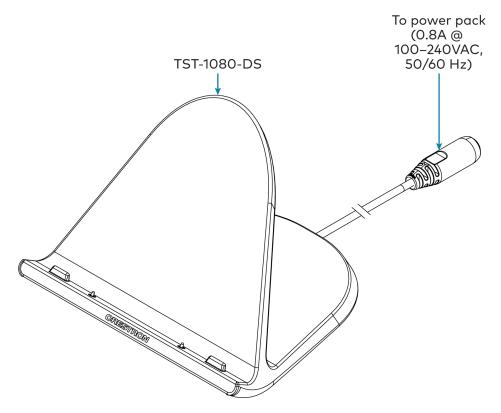
Use the following procedures to install the TST-1080-DS.

### In the Box

Qty.	Description
1	TST-1080-DS, Table Dock for TST-1080
	Additional Items
1	Power Pack, 24VDC @ 1.25A, 100–240VAC (2045870)

### Install the TST-1080-DS

Place the TST-1080-DS on a flat, level surface. The only required connection is from the fixed 6 ft (1.83 m) power cord on the TST-1080-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-1080-DS, place the TST-1080 touch screen on the TST-1080-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-1080-DSW Installation

Use the following procedures to install the TST-1080-DSW.

**NOTE:** The TST-1080-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 <u>TST-902-DSW-BB</u> and <u>TST-902-DSW-BBI</u> back boxes are available for both framed and masonry construction.
- The <u>TST-902-DSW-PMK</u>, <u>TST-902-DSW-WMKM</u>, and <u>TST-902-DSW-WMKT</u> mounting kits are available for preconstruction and postconstruction applications that do not require a back box.

#### In the Box

Qty.	Description
1	TST-1080-DSW, Wall Dock for TST-1080
	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 1 in., Flat Head, Phillips, Black (2060660)
1	Key, Release Lock (4522222)

### Install the Mounting Hardware

One of the available TST-1080-DSW mounting accessories (not included) must be installed prior to installing the TST-1080-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-1080-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 43.
- 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 49.
- For postconstruction applications where a back box will be installed into masonry or concrete, refer to TST-902-DSW-BBI Installation on page 47.

- For postconstruction applications where mounting hardware will be installed in an existing framed wall or similar flat surface using a mud ring, refer to TST-902-DSW-WMKM Installation on page 54.
- 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 63.

#### Install the TST-1080-DSW

The following procedure assumes that the a TST-1080-DSW mounting accessory has been installed completely as described in Install the Mounting Hardware on page 35. For preconstruction mounting hardware, it is also assumed that drywall is in place and a cutout for the TST-1080-DSW has been made.

**NOTE:** The TST-1080-DSW uses the same mounting accessories as the TST-902-DSW. The TST-1080-DSW is designed to replace an existing TST-902-DSW without requiring any remediation for the substrate or wall materials.

To install the TST-1080-DSW wall dock:

1. Route the wiring for the TST-1080-DSW power connection through the rear of the mounting hardware.

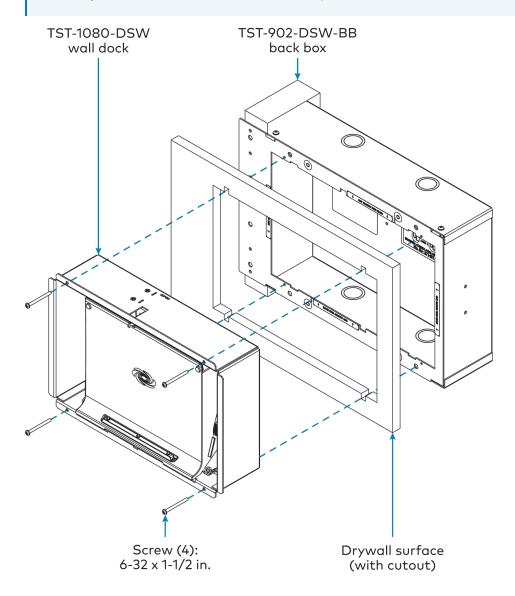
**NOTE:** The maximum wire size for the power connection is 18 AWG.

2. While holding the TST-1080-DSW, connect the flying leads from the wiring to the 2-pin power connector (**24 G**) on the rear of the TST-1080-DSW.

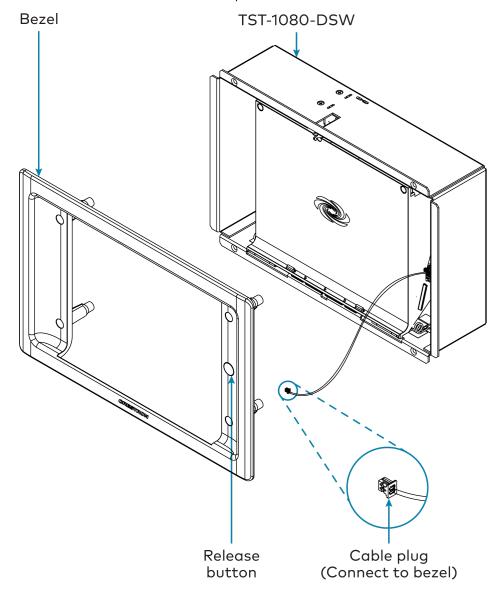
3. Attach the TST-1080-DSW to the mounting hardware using the four  $6-32 \times 1-1/2$  in. screws. The following illustration shows the TST-1080-DSW being attached to the TST-902-DSW-BB back box as an example.

#### **NOTES:**

- The cradle for the touch screen on the TST-1080-DSW should be in the closed position during installation.
- Do not overtighten the screws. The screws should be hand tightened or machine tightened to no more than 5 in-lb torque.



4. While holding the included bezel, connect the small plug attached to the thin cable on the TST-1080-DSW to the connector located behind the release button on the right of the bezel. Refer to the illustration below step 7.

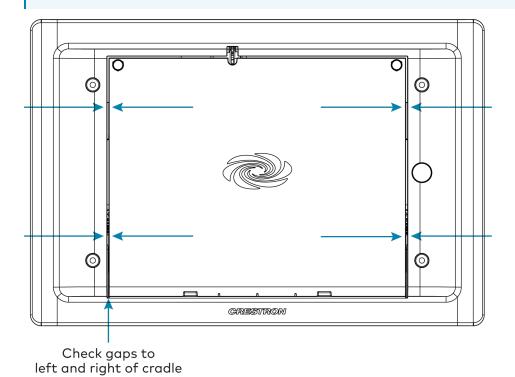


**NOTE:** If the bezel must be removed for any reason, disconnect this cable carefully prior to removal.

5. Attach the bezel to the TST-1080-DSW using the four  $6-32 \times 1$  in. screws, but do not tighten the screws. Refer to the illustration below step 7.

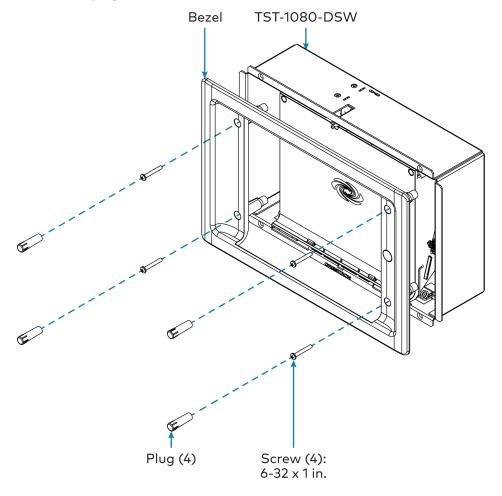
6. While viewing the assembly from the front, ensure that the gaps to the left and right of the cradle are about equal. Then, tighten the screws fully to secure the bezel.

**NOTE:** Do not overtighten the screws. The screws should be hand tightened or machine tightened to no more than 5 in-lb torque.



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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-1080 touch screen once the TST-1080-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-1080-DSW magnetically.
- 3. Push the cradle with the touch screen back into place to close it.

**NOTE:** The TST-1080-DSW cradle can also be opened programmatically using SIMPL reserve joins. For more information, refer to the SIMPL help file.

### Undock the Touch Screen

To undock the TST-1080 touch screen from the TST-1080-DSW:

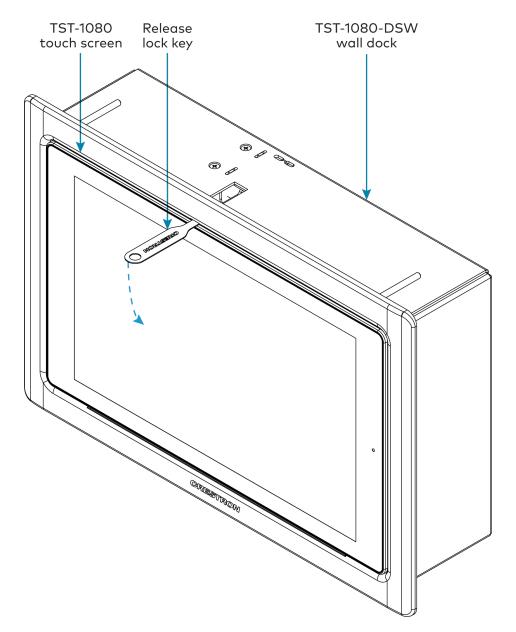
- 1. Access the touch screen local configuration interface as described in Access the Local Configuration Interface on page 76.
- 2. Navigate to **Setup** > **Dock Test**.



3. Select **Release Device 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-1080-DSW manually.

- 1. Insert the provided release lock key into the gap between the top of the touch screen and the TST-1080-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 <u>TST-902-DSW</u> and <u>TST-1080-DSW</u> 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 and TST-1080-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

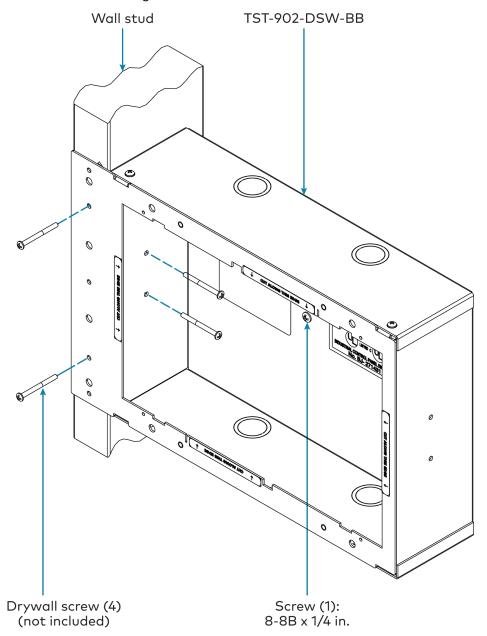
To install the TST-902-DSW-BB wall mount back box:

#### **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-1080-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-1080-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  $8-8B \times 1/4$  in. self-tapping screw in the rear of the back box mounting enclosure as shown in the following illustration.

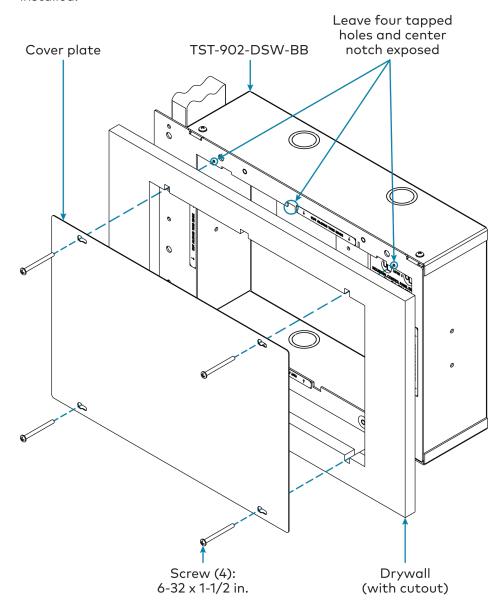


6. Route any wiring for the TST-1080-DSW through the appropriate knockout(s) on the back box.

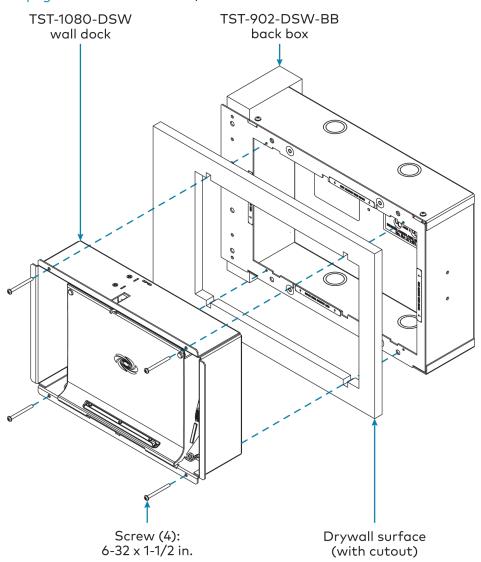
7. Once drywall is installed over the back box, use a standard drywall saw to cut the drywall along the inside edge of the front of the back box. The labels on the front of the back box indicate the perimeter of the drywall cutout. Refer to TST-902-DSW-BB Specifications on page 22 for cutout dimensions.

**NOTE:** The four tapped holes on the front of the back box must be exposed in order to accept the TST-1080-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-1080-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-1080-DSW is installed.



9. Remove the cover plate and  $6-32 \times 1-1/2$  in. screws (if used), and then install the TST-1080-DSW wall dock into the TST-902-DSW-BB as described in Install the TST-1080-DSW on page 36 with the  $6-32 \times 1-1/2$  in. screws.



## 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 <u>TST-902-DSW</u> and <u>TST-1080-DSW</u> 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 and TST-1080-DSW
	Additional Items
4	Screw, 6-32 x 1-1/2 in., Pan Head, Phillips (2007254)

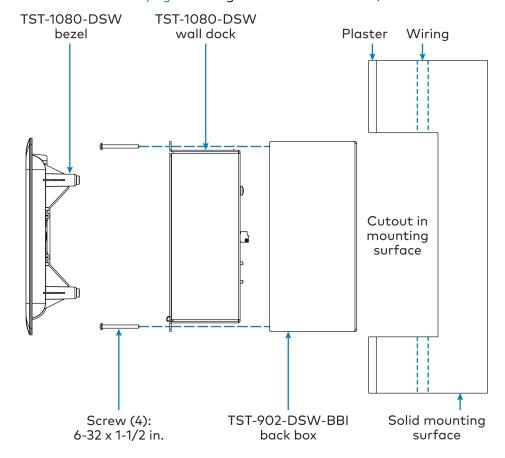
#### Install the Back Box

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-1080-DSW wall dock.
- 2. Route any wiring for the TST-1080-DSW through the appropriate knockout(s) on the back box.
- 3. Use the dimensions listed within TST-902-DSW-BBI Specifications on page 23 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-1080-DSW wall dock into the TST-902-DSW-BBI as described in Install the TST-1080-DSW on page 36 using the included  $6-32 \times 1-1/2$  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 <u>TST-902-DSW</u> and <u>TST-1080-DSW</u> 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 and TST-1080-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:

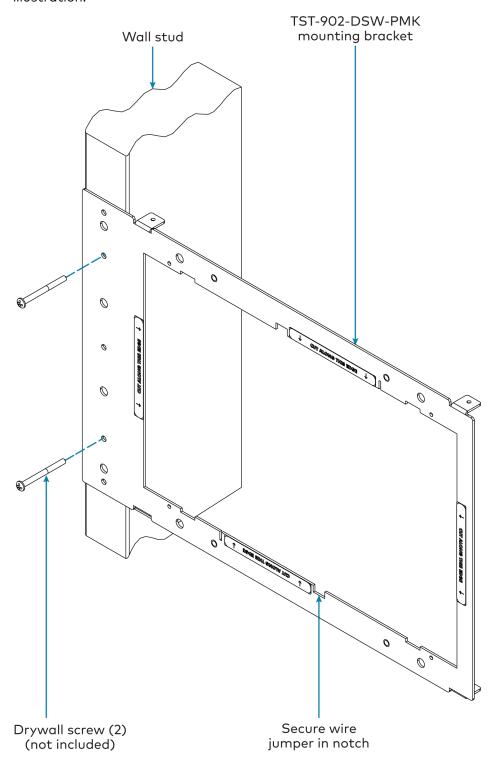
#### **NOTES:**

- 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-1080-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.
- 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.

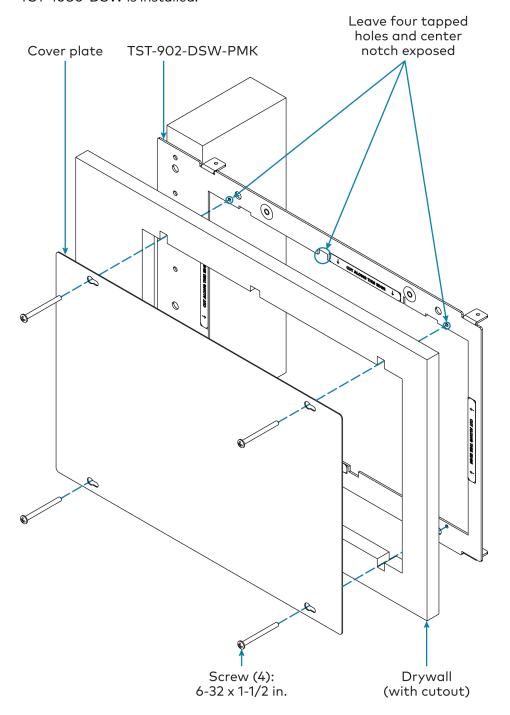
- 3. Attach the mounting bracket to the left or right side of the stud with two standard drywall screws or nails (not included).
- 4. Secure the wire jumper to the bottom of the mounting bracket as shown in the following illustration.



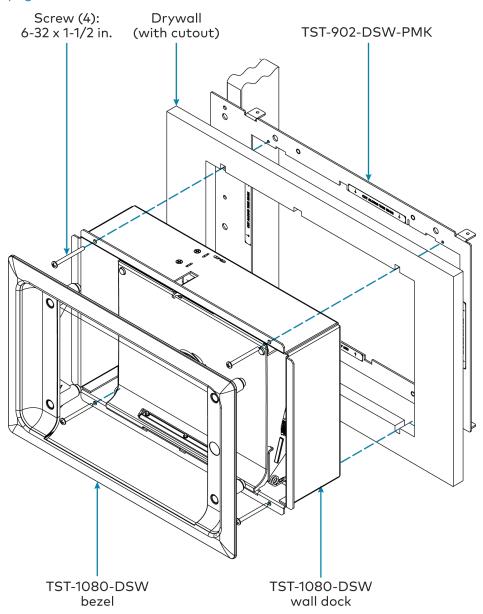
- 5. Route any wiring for the TST-1080-DSW through the opening in the mounting bracket and secure them into the wire jumper.
- 6. Once drywall is installed over the mounting bracket, use a standard drywall saw to cut the drywall along the inside edge of the front of the mounting bracket. The labels on the front of the mounting bracket indicate the perimeter of the drywall cutout. Refer to TST-902-DSW-PMK Specifications on page 24 for cutout dimensions.

**NOTE:** The four tapped holes on the front of the mounting bracket must be exposed in order to accept the TST-1080-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-1080-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-1080-DSW is installed.



8. Remove the cover plate and  $6-32 \times 1-1/2$  in. screws (if used), and then install the TST-1080-DSW wall dock into the mounting bracket as described in Install the TST-1080-DSW on page 36 with the  $6-32 \times 1-1/2$  in. screws.



## 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 <u>TST-902-DSW</u> and <u>TST-1080-DSW</u> 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

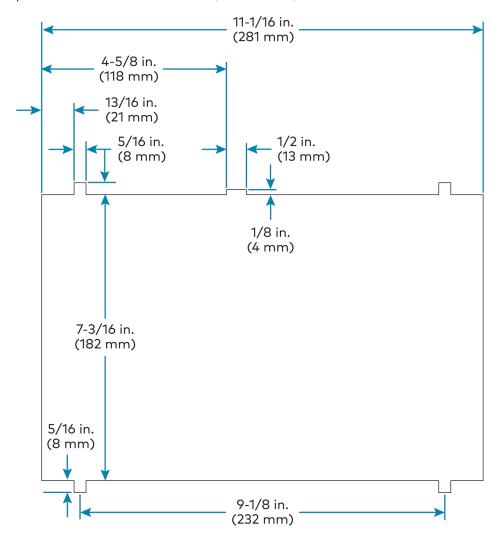
Qty.	Description
1	TST-902-DSW-WMKM, Postconstruction Wall Mount Kit for TST-902-DSW and TST-1080-DSW
	Additional Items
1	Mounting Plate, Metal, 12.00 x 8.80 in. (2045235)
2	Adjustment Plate, Metal (2028255)
4	Fastener, U-Type (2004121)
1	Template, Cutout (4523568)
1	Mud Ring, Metal, 12.56 x 8.61 in. (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

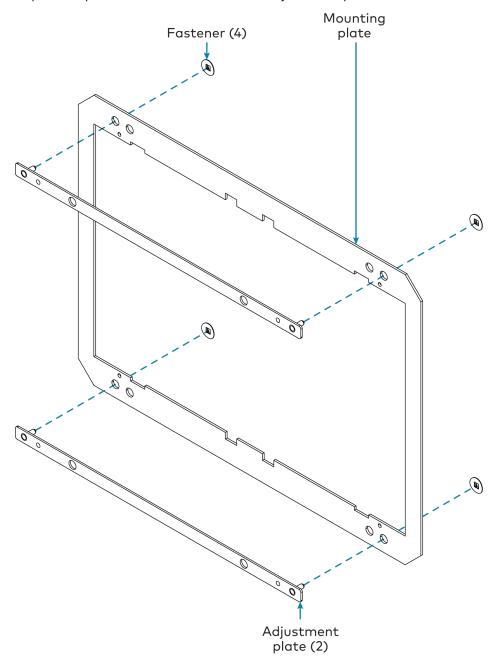
To install the TST-902-DSW-WMKM postconstruction mounting kit:

#### **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-1080-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-1080-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 <a href="TST-902-DSW-BB">TST-902-DSW-PMK</a>, 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.

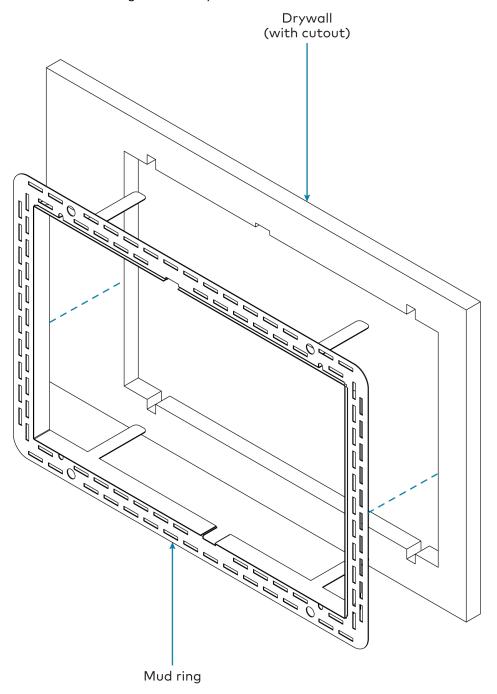
3. Repeat steps 1–2 to attach the second adjustment plate to the bottom of the mounting plate.



- 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 54 for cutout dimensions.

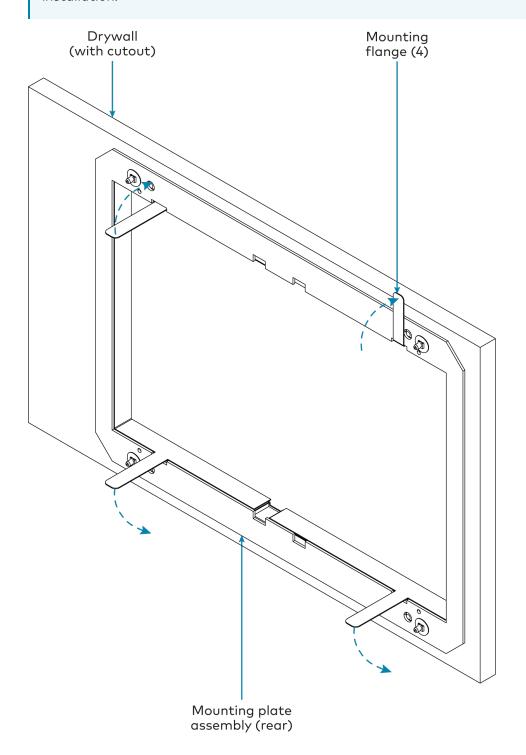
**NOTE:** Ensure that the cutout is as level and smooth as possible before proceeding. The mounting plate allows only for minor adjustments once installed.

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-1080-DSW during installation.

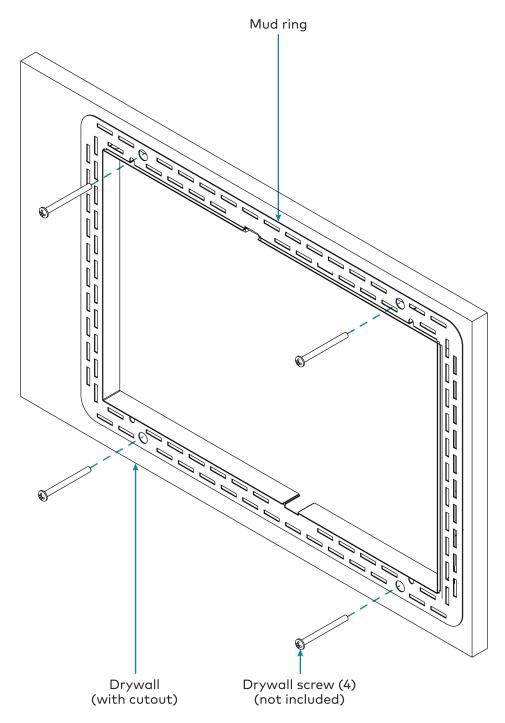


9. Use four standard drywall screws to loosely secure the mud ring to the mounting plate and adjustment plate assembly. The screws must pass through the clearance holes in the mounting plate to be secured in the extruded holes of the adjustment plate.

**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.

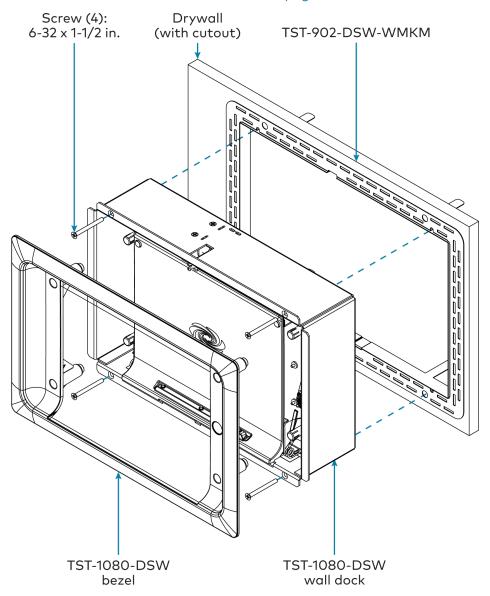
**CAUTION:** Do not overtighten the screws, as this may damage the mounting hardware.



- 11. Route any wiring for the TST-1080-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-1080-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-1080-DSW locking latch.

13. After the joint compound has dried, install the TST-1080-DSW wall dock into the mud ring as described in Install the TST-1080-DSW on page 36 with the  $6-32 \times 1-1/2$  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 <u>TST-902-DSW</u> and <u>TST-1080-DSW</u> 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

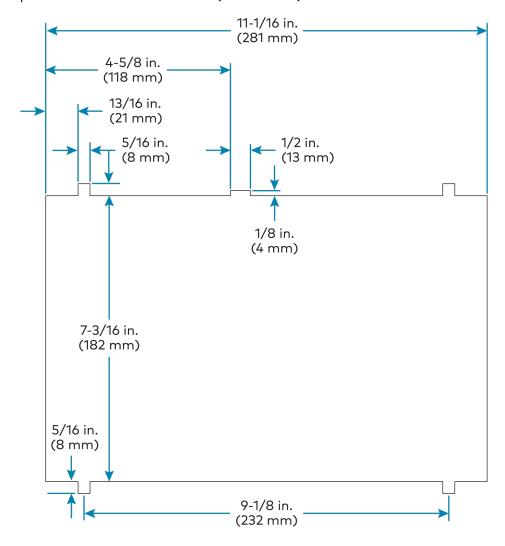
Qty.	Description
1	TST-902-DSW-WMKT, Postconstruction Wall Mount Kit for TST-902-DSW and TST-1080-DSW
	Additional Items
1	Mounting Plate, Metal, 12.00 x 8.80 in. (2045235)
1	Template, Cutout (4523568)
1	Trim Ring, Metal, 11.30 x 7.40 in. (2045234)
4	Screw, 6-32 x 1-1/2 in., Flat Head, Phillips (2031703)

## 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

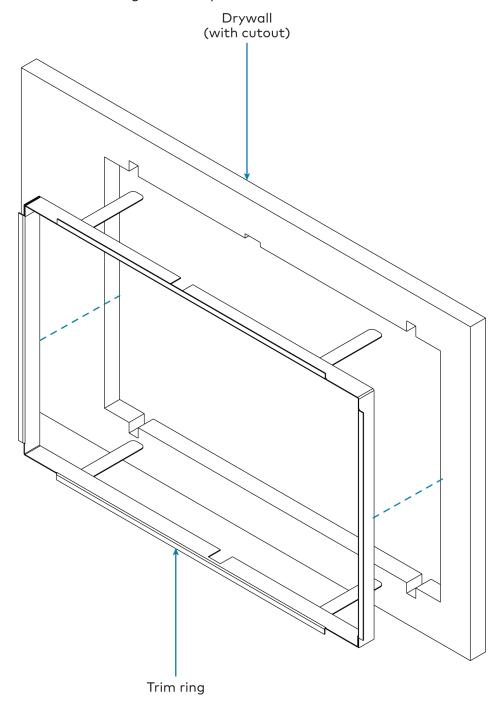
To install the TST-902-DSW-WMKT postconstruction mounting kit:

#### **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-1080-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-1080-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 <a href="TST-902-DSW-BB">TST-902-DSW-PMK</a>, 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 63 for cutout dimensions.

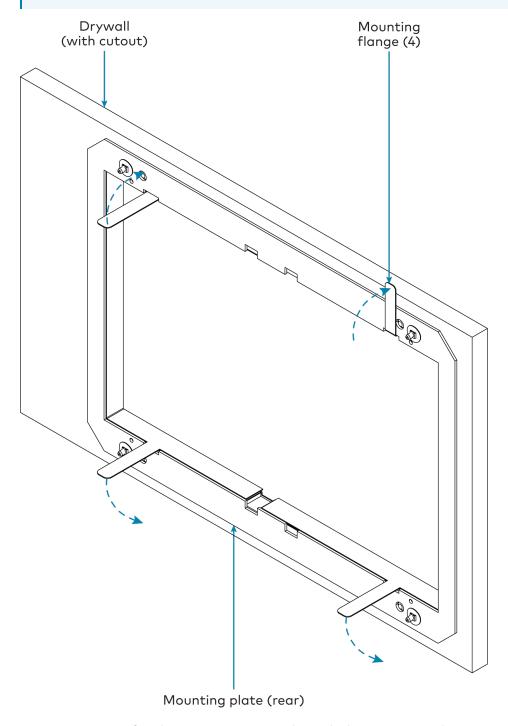
**NOTE:** Ensure that the cutout is as level and smooth as possible before proceeding. The mounting plate allows only for minor adjustments once installed.

3. Insert the trim ring into the drywall cutout.



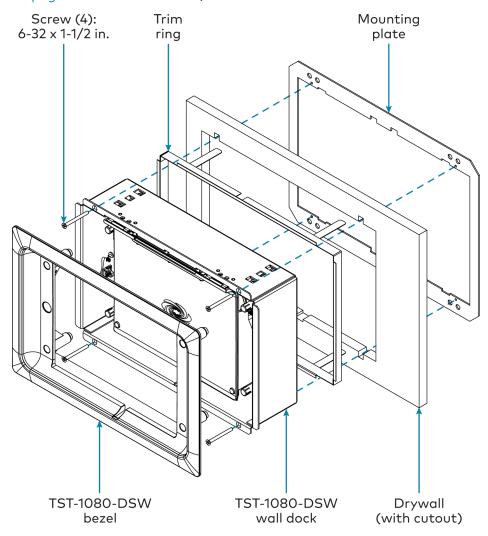
- 4. Route the mounting plate though the trim ring and drywall cutout carefully, and then rest the mounting plate against the interior surface of the drywall.
- 5. Once the mounting plate is in the correct position, bend the top two flanges of the mud ring upward (approximately 90 degrees) and the bottom 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-1080-DSW during installation.



6. Route any wiring for the TST-1080-DSW through the opening in the mounting hardware.

7. Install the TST-1080-DSW wall dock into the trim ring as described in Install the TST-1080-DSW on page 36 with the  $6-32 \times 1-1/2$  in. screws.



# Configuration

Prior to configuration, ensure the device is running the latest firmware. To update the firmware, refer to Update Firmware on page 81.

This section provides the following information:

- Initial Setup
- Device Configuration
- Application Selection
- Perform a Factory Restore
- Configure a WPA2 Enterprise Wireless Access Point Connection

## Initial Setup

Use the following procedures to set up the TST-1080 after installation.

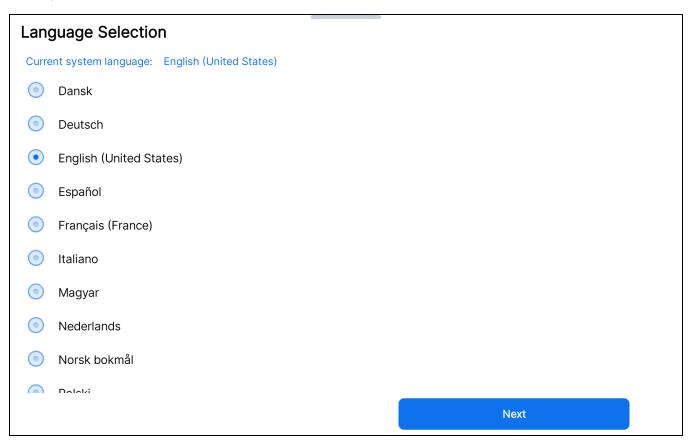
### Complete the Setup Wizard

The TST-1080 provides a built-in setup wizard that is displayed after first applying power to the touch screen or after a restore. The setup wizard is used to configure various touch screen settings required for operation. Each screen of the setup wizard is described in the sections that follow.

**NOTE:** The settings configured using the setup wizard can be changed at any time following initial setup using the device configuration interface. For more information, refer to Device Configuration on page 82.

#### Select a Language

The **Language Selection** screen (the first screen of the setup wizard) is displayed to set the language used by the touch screen.

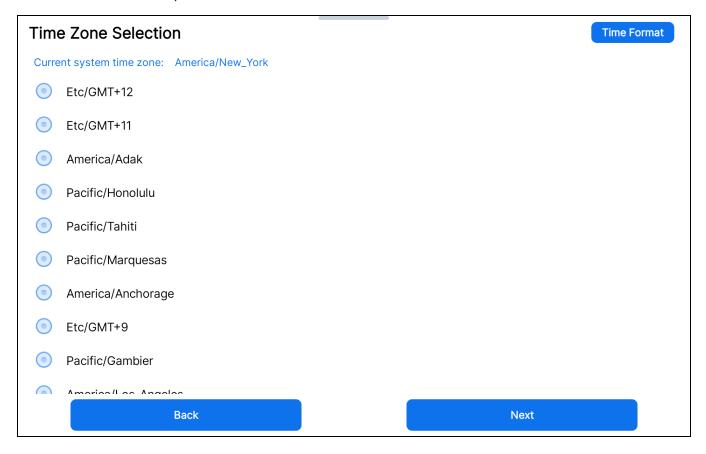


Tap the desired language to select it. A filled radio button is shown next to the selected language.

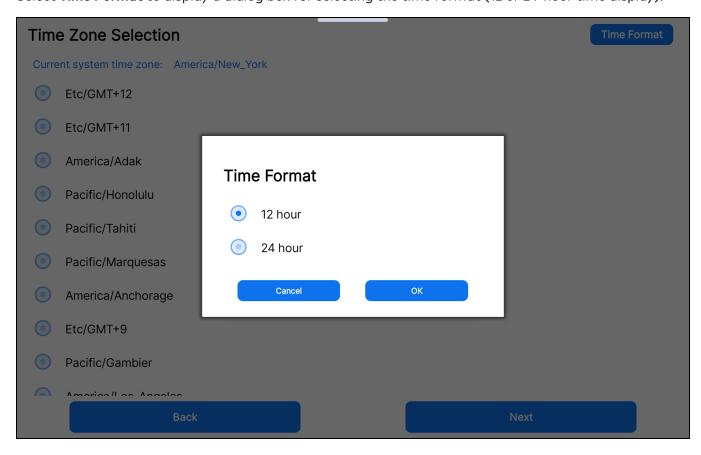
Tap **Next** to proceed to the next screen.

#### Select a Time Zone

After a touch screen language is selected and confirmed, the **Time Zone Selection** screen is displayed to set the time zone used by the touch screen.



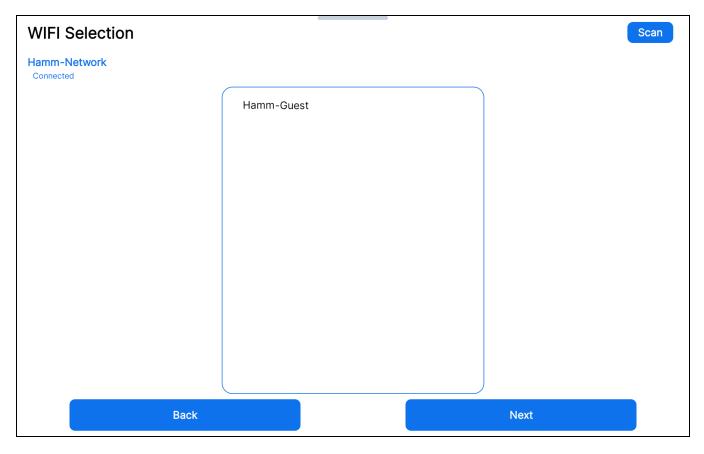
Tap the desired time zone to select it. A filled radio button is shown next to the selected time zone. Select **Time Format** to display a dialog box for selecting the time format (12 or 24-hour time display).



Tap **Next** to proceed to the next screen.

#### Connect to a Wi-Fi Network

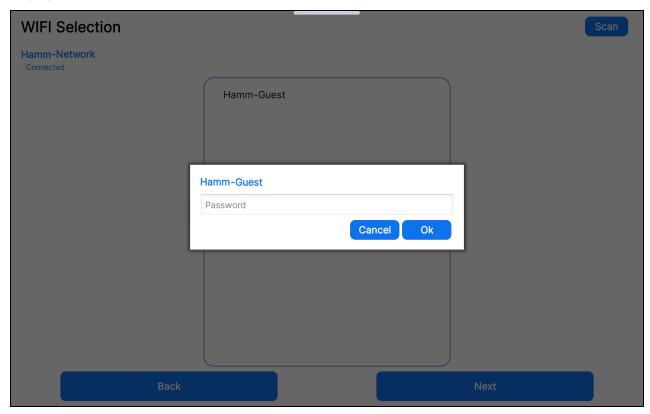
After a touch screen time zone is selected and confirmed, the **Wi-Fi Selection** screen is displayed to select and connect the touch screen to a Wi-Fi® network.



A list of all discovered Wi-Fi networks are displayed. To perform a manual scan for Wi-Fi networks, tap **Scan**.

To connect to a Wi-Fi network:

1. Tap the desired Wi-Fi network in the list. A text box for entering the Wi-Fi network password is displayed.



2. Enter the password using the on-screen keyboard, and then tap OK.

If the touch screen successfully connects to the Wi-Fi network, it is saved to the touch screen as the default network.

**NOTE:** Additional Wi-Fi network settings can be configured after completing the setup wizard, including the configuration of additional Wi-Fi network access points. For more information, refer to Network on page 101.

Tap **Next** to proceed to the next screen.

### Select an Application

After the touch screen is connected to a Wi-Fi network, the **Application Selection** screen is displayed to select the application that will run on the touch screen.



Tap the desired application to select it. A filled radio button is shown next to the application name once it is selected.

Tap **OK** to complete the initial setup process.

### Access a Configuration Interface

Device settings can be configured using the touch screen's web or local configuration interfaces.

### Access the Web Configuration Interface

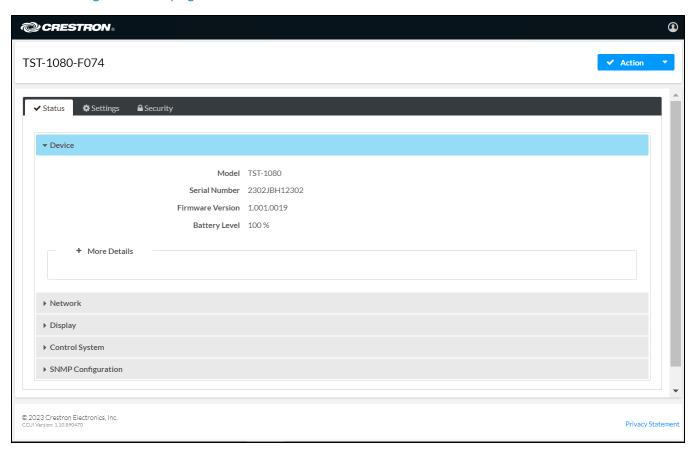
To access the web configuration interface using the touch screen IP address:

**NOTE:** The touch screen ships with DHCP turned on. A DHCP server is required to access the web configuration interface via the touch screen IP address. A static IP address can be configured for the touch screen as described in Set a Static IP Address on page 79.

Locate the touch screen IP address. The IP address is shown on the splash screen that is displayed
after completing the initial setup process on the touch screen. Additionally, the **Device Discovery**tool in Crestron Toolbox™ software can be used to discover the touch screen IP address.

- 2. Enter the touch screen IP address into a web browser.
- 3. If connecting to the touch screen for the first time, create an admin account as described in Create an Admin Account on page 78.
- 4. Enter the admin account login credentials when prompted, then select Sign In.

The touch screen configuration interface is displayed with the **Status** tab shown and the **Device** accordion open by default. For more information on using the web configuration interface, refer to Device Configuration on page 82.



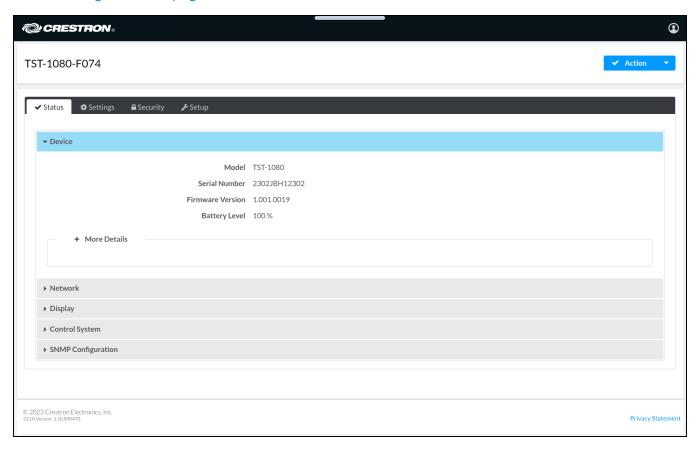
**NOTE:** A similar version of the web configuration interface is provided within the XiO Cloud service. Navigate to the touch screen in a licensed room to view its status and settings. For more information on connecting the touch screen to the XiO Cloud service, refer to Connect to the XiO Cloud Service on page 80.

### Access the Local Configuration Interface

To access the local setup screens:

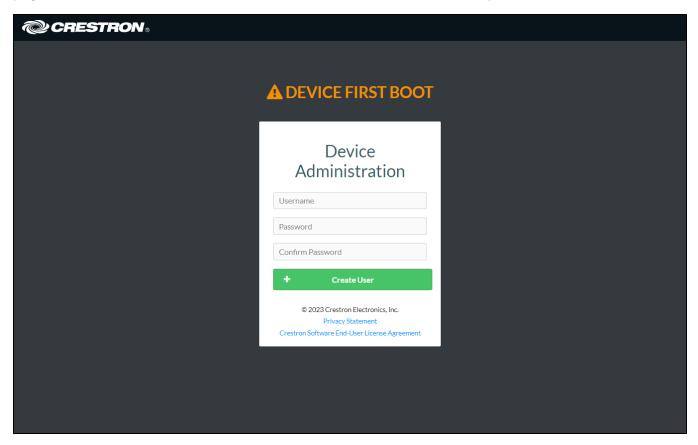
- 1. Place five fingers on the touch screen display and hold for 15 seconds.
- 2. If connecting to the touch screen for the first time, create an admin account as described in Create an Admin Account on page 78.
- 3. Enter the admin account login credentials when prompted, then select Login.

The touch screen configuration interface is displayed with the **Status** tab shown and the **Device** accordion open by default. For more information on using the local configuration interface, refer to Device Configuration on page 82.



### Create an Admin Account

The first time the web configuration interface is accessed, a page is displayed asking the user to create an admin account. A similar prompt is displayed when connecting to the touch screen via the local setup pages or in Crestron Toolbox software if an admin account has not already been created.

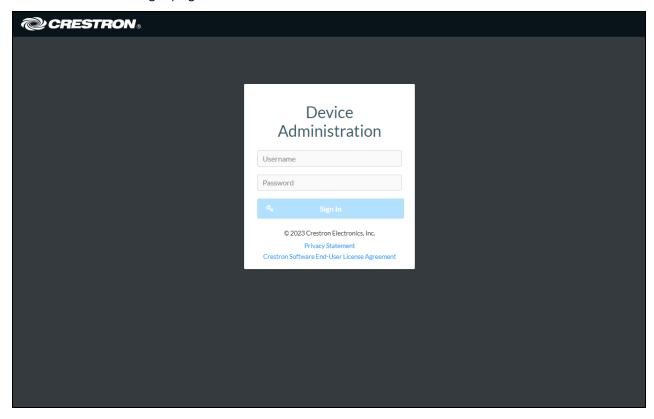


To create an admin account:

1. Enter a username and password for the admin account in the appropriate text fields.

**CAUTION:** Do not lose the username and password for the admin account, as the touch screen must be reset to factory settings to regain access.

2. Select **Create User** to create the admin account. The web configuration interface refreshes to show the standard login page.



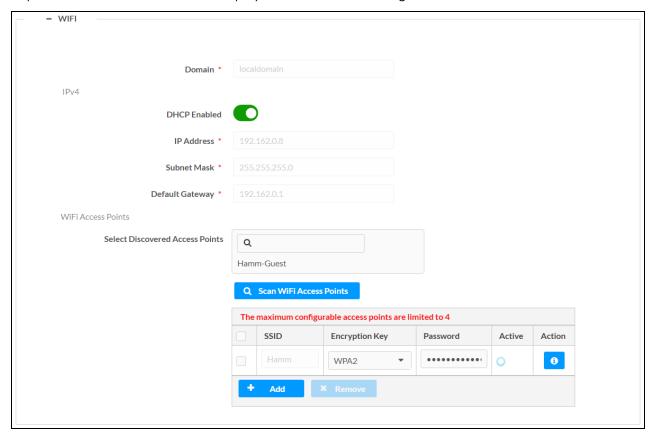
3. Reenter the credentials created in step 1 and select **Sign In** to access the web configuration interface.

### Set a Static IP Address

The touch screen ships with DHCP turned on by default. To configure a static IP address for the touch screen:

- 1. Access the device configuration interface as described in Access a Configuration Interface on page 75.
- 2. Navigate to **Settings** > **Network**.

3. Expand the Wi-Fi subsection to display Wi-Fi network settings for the touch screen.



- 4. Turn off the **DHCP Enabled** toggle.
- 5. Enter the appropriate network information in the **Domain**, **IP Address**, **Subnet Mask**, and **Default Gateway** text fields. For more information, refer to Network on page 101.
- 6. Select Save Changes from the Action menu.
- 7. When prompted, select **Yes** to restart the touch screen. The touch screen attempts to connect to the static IP address after it restarts.

### Connect to the XiO Cloud Service

The XiO Cloud® service allows supported devices across an enterprise to be managed and configured from one central, secure location in the cloud. The touch screen is configured to connect to the service by default.

**NOTE:** An XiO Cloud account is required to use the service. To register for an XiO Cloud account, refer to <a href="https://www.crestron.com/Support/Tools/Licensing-Registration/XiO-Account-Registration">www.crestron.com/Support/Tools/Licensing-Registration/XiO-Account-Registration</a>.

To connect the touch screen to the XiO Cloud service:

1. Record the MAC address and serial number that are labeled on the shipping box or the touch screen. The MAC address and serial number are required to add the touch screen to the XiO Cloud service.

- 2. Log in to your XiO Cloud account at portal.crestron.io.
- 3. Claim the touch screen to the XiO Cloud service as described in the XiO Cloud User Guide.

Once the touch screen is claimed, select it from the cloud interface to view its status and settings. The touch screen may now also be managed and assigned to a group or room. For more information, refer to the XiO Cloud User Guide.

**NOTE:** For XiO Cloud accounts with room-based licenses, the touch screen must be added to a licensed room before its status and settings can be viewed.

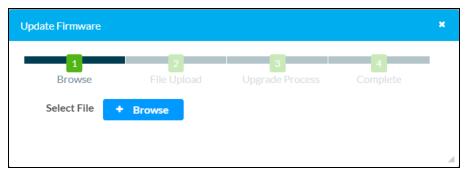
### **Update Firmware**

The touch screen firmware should always be updated to the latest version. Firmware can be loaded to the touch screen via the web configuration interface.

**NOTE:** Automatic firmware updates can also be configured for the touch screen. For more information, refer to Auto Update on page 104.

To update the touch screen firmware:

- 1. Download the latest firmware PUF (package update file) from the <u>TST-1080 product page</u> or www.crestron.com/Support/Resource-Library.
- 2. Access the web configuration interface as described in Access the Web Configuration Interface on page 75.
- Select Update Firmware from the Action drop-down menu on the top right of the page. The Update Firmware dialog box is displayed.



- 4. Select Browse, and then navigate to the firmware PUF on the local computer.
- 5. Select the firmware PUF, and then select **Open**.
- 6. Select Load to load the PUF to the touch screen. The upload progress is shown in the dialog box.
- 7. Once the touch screen has completed the firmware update, select **OK** to close the dialog box.

Select the  $\mathbf{x}$  button to close the **Firmware Update** dialog box at any time during the update. Selecting the  $\mathbf{x}$  button before the PUF is loaded to the touch screen cancels the update.

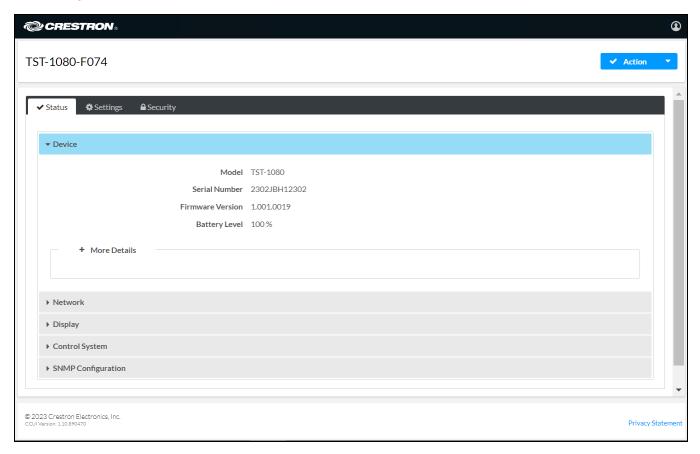
## **Device Configuration**

The touch screen may be monitored and configured using its configuration interface. The interface can be accessed via the touch screen IP address (web configuration) or display (local configuration) as described in Access a Configuration Interface on page 75.

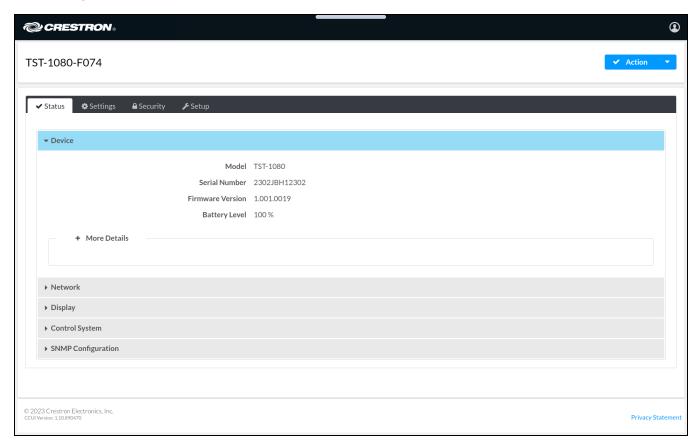
**NOTE:** The web and local configuration interfaces are largely similar. Any differences will be noted throughout this section. Images show the web configuration interface unless noted otherwise.

The **Status** tab is shown with the **Device** accordion open by default.

Web Configuration Interface



#### **Local Configuration Interface**



The configuration interface provides the following tabs for navigating the interface:

- **Status**: Select this tab to monitor the status of the touch screen. For more information, refer to Status on page 89.
- **Settings**: Select this tab to configure settings for the touch screen. For more information, refer to Settings on page 93.
- **Security**: Select this tab to create touch screen users and groups. For more information, refer to Security on page 108.
- **Setup (Local Only)**: Select this tab to view perform various diagnostic tests for the touch screen. For more information, refer to Setup (Local Only) on page 115.

**NOTE:** Some device settings may be displayed or hidden depending on the selected application mode.

The following controls are also provided on the top right of the configuration interface:

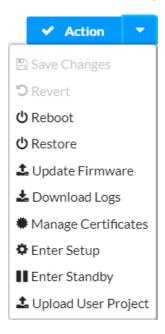
- Use the **Action** drop-down menu to perform various configuration actions. For more information, refer to Action Menu on page 84.
- Select the profile button 1 to see the active touch screen user and to sign out of the web configuration utility.

Each section of the configuration interface is described in the sections that follow.

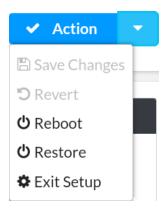
### **Action Menu**

The configuration interface provides an **Action** drop-down menu on the top right of the page. The **Action** menu may be accessed at any time.

Action Menu (Web Configuration Interface)



Action Menu (Local Configuration Interface)



After any changes have been made that require a setting to be saved, the **Action** button changes to a **Save Changes** button. Select **Save Changes** to save the setting. Saving certain changes will require the touch screen to be restarted.



The **Action** menu provides the following selections.

### Save Changes

Select **Save Changes** to save any changes made to the configuration settings.

#### Revert

Select **Revert** to revert the touch screen back to the last saved configuration settings.

#### Reboot

Select **Reboot** to restart the touch screen.

After **Reboot** is selected, a dialog box is displayed asking whether the touch screen should be restarted. Select **Yes** to restart the touch screen or **No** to cancel the restart.

#### Restore

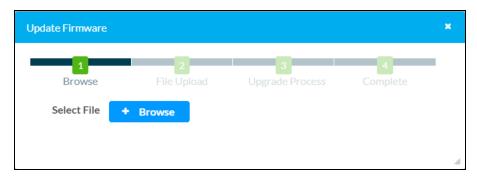
Select **Restore** to restore the touch screen settings to their default values.

After **Restore** is selected, a dialog box is displayed asking whether the touch screen should be restored. Select **Yes** to restore the touch screen or **No** to cancel the restore.

**CAUTION:** Performing a restore returns all touch screen settings to their default values but retains any Wi-Fi access points (WAPs) that were previously added. To perform a factory restore that also removes any previously-added WAPs, refer to Perform a Factory Restore on page 120.

#### Update Firmware (Web Only)

Select **Update Firmware** to update the touch screen firmware manually with a downloaded PUF (package update file). The **Update Firmware** dialog box is displayed.



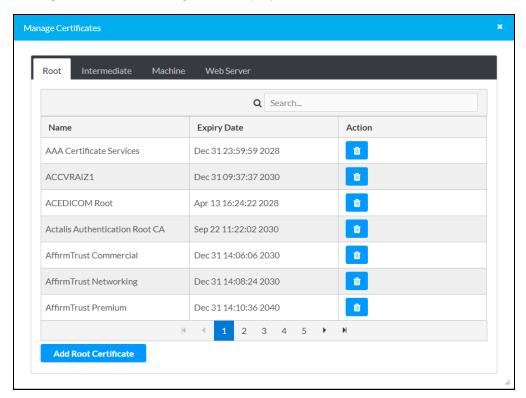
For more information on updating the touch screen firmware, refer to Update Firmware on page 81.

### Download Logs (Web Only)

Select **Download Logs** to download the touch screen message logs for diagnostic purposes. The message files download as a compressed .tgz file. Once the compressed file is downloaded, extract the message log files to view them.

### Manage Certificates (Web Only)

Select **Manage Certificates** to manage any certificates that are installed on the touch screen. The **Manage Certificates** dialog box is displayed.



Select the tabs near the top of the page to switch between the different types of CAs (**Root**, **Intermediate**, **Machine**, or **Web Server**). The same settings are provided for each type of CA.

The following information is provided for each type of CA:

- Name: The CA name
- Expiry Date: The date and time that the CA is set to expire

Type a search term into the **Search** text field to search for and display CAs that match the search term. If the CAs span multiple pages, use the navigation arrows on the bottom of the page to move forward or backward through the pages, or select a page number to navigate to that page.

The Manage Certificates provides the following certificate functions.

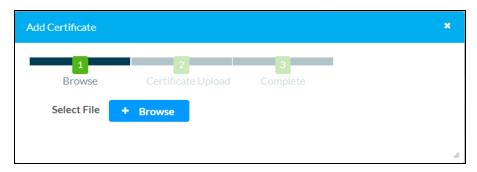
#### **Delete Certificate**

Select the trashcan icon in the **Action** column to delete the certificate.

A dialog box is displayed asking whether the certificate should be deleted. Select **Yes** to delete the group or **No** to cancel deleting the group.

#### **Add Certificate**

Select **Add [Type] Certificate** at the bottom of the **Manage Certificates** dialog box to add a CA of one of the four available types (**Root**, **Intermediate**, **Machine**, or **Web Server**). The **Add Certificate** dialog box is displayed.



To add a new certificate:

- 1. Select Browse.
- 2. Navigate to the CA file on the local computer.
- 3. Select the CA file, and then select Open.
- 4. Select Load to load the CA file to the touch screen. The upload progress is shown in the dialog box.
- 5. Once the touch screen has completed the upload, select **OK**.

Select the  $\mathbf{x}$  button to close the **Add Certificate** dialog box at any time during the upload. Selecting the  $\mathbf{x}$  button before the CA file is uploaded to the touch screen cancels the upload.

Select the **x** button to close the **Manage Certificates** dialog box.

For instructions on using certificates for 802.1X IEEE authentication of a WPA2 Enterprise wireless access point (WAP), refer to Configure a WPA2 Enterprise Wireless Access Point Connection on page 121.

### Enter Setup (Web Only)

Select Enter Setup to open the local configuration interface on the touch screen display.

### Exit Setup (Local Only)

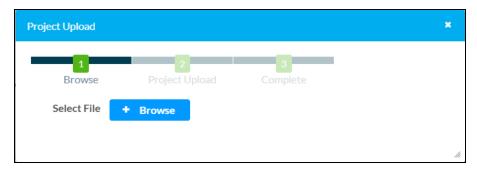
Select **Local Setup** to close the local configuration interface on the touch screen display and return to the selected application or user project.

### Enter Standby (Web Only)

Select **Enter Standby** to force the touch screen to enter standby timeout mode.

### Upload User Project (Web Only)

Select **Upload User Project** to upload a custom user project to the touch screen. The **Project Upload** dialog box is displayed.



NOTE: This selection is available only if the touch screen is running in user project mode.

To upload a custom user project:

- 1. Select Browse.
- 2. Navigate to the project .ch5z file on the local computer.
- 3. Select the project .ch5z file, and then select **Open**.
- 4. Select **Load** to load the project .ch5z file to the touch screen. The upload progress is shown in the dialog box.
- 5. Once the touch screen has completed the upload, select **OK**.

### App Upgrade (Web Only)

Select **App Upgrade** to update the currently selected application. The update progress is shown in a popup window.

**NOTE:** This selection is not available if the touch screen is running in user project mode.

Once the update is complete, select **OK** to close the pop-up window.

### **Status**

Select the **Status** tab on the top left of the interface to display accordions for viewing the status of the touch screen

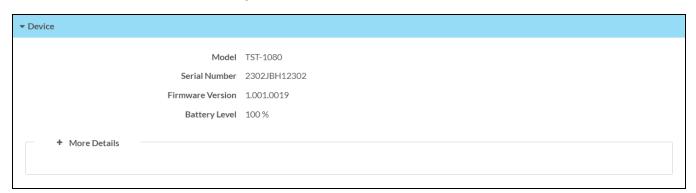
Select an accordion name to expand that accordion. If the accordion is expanded, select the accordion name again to collapse the accordion.



The following **Status** selections are provided.

#### Device

Select the **Device** accordion to view general device information.



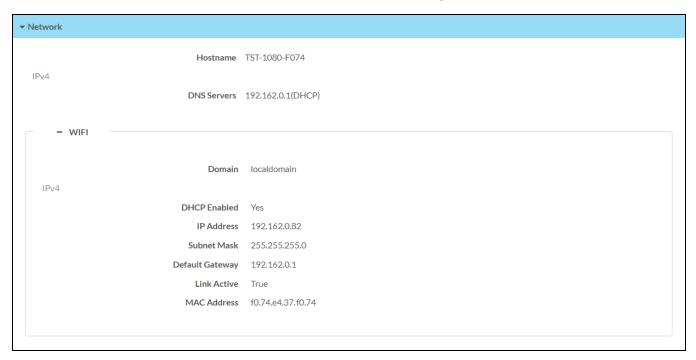
The following **Device** information is displayed:

- Model: The touch screen model name
- Serial Number: The touch screen serial number
- Firmware Version: The firmware version loaded onto the touch screen
- Battery Level: The current touch screen battery level (0–100%)

Select + More details at the bottom of the Device tab to display an expanded section that shows additional touch screen information. If + More Details is selected, select - Less details to collapse the section.

#### Network

Select the Network accordion to view the status of network settings for the touch screen.



The following **Network** information is displayed:

- Hostname: The touch screen host name
- **DNS Servers**: The DNS (domain name server) addresses used to resolve the touch screen domain to an IP address

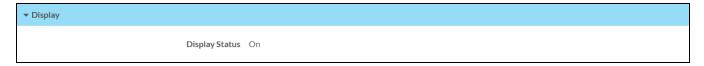
Select the + (plus) icon next to WI-FI to display the following Wi-Fi network settings:

- Domain: The Wi-Fi network domain name
- **DHCP Enabled**: Reports whether DHCP is turned on or off for Wi-Fi IP addressing, shown only if a Wi-Fi network connection is active
- IP Address: The touch screen IP address, shown only if a Wi-Fi network connection is active
- **Subnet Mask**: The touch screen subnet mask address, shown only if a Wi-Fi network connection is active
- Default Gateway: The gateway router address, shown only if a Wi-Fi network connection is active
- **Link Active**: Reports the status of the Wi-Fi network connection (A **True** message indicates that the Wi-Fi network connection is active, while a **False** message indicates that the Wi-Fi network connection is inactive.)
- MAC Address: The unique MAC (media access control) address for the Wi-Fi network adapter.

For more information on configuring network settings, refer to System Setup on page 94.

### Display

Select the **Display** accordion to view the status of the touch screen display.

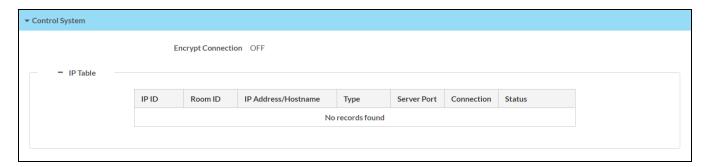


The **Display Status** field indicates the display status (on, standby, or screensaver).

#### Control System

Select Control System to view the status of a connected control system.

**NOTE:** The **Control System** accordion is shown in user project mode only.

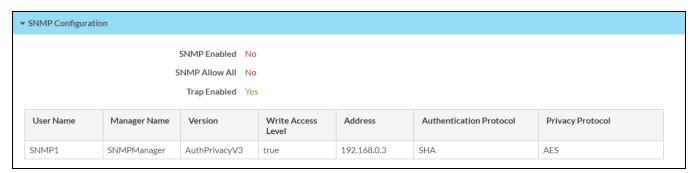


The following **Control System** information is displayed:

- **Encrypt Connection**: Indicates whether the connection between the control system and touch screen is encrypted
- IP Table: Displays the IP table information for the control system connection:
  - IP ID: The IP ID used to connect the touch screen to the control system
  - Room ID: The control system room ID that the touch screen is associated with (for connections to the Crestron Virtual Control server-based control system)
  - IP Address/Hostname: The control system IP address or host name
  - Type: The control system connection type
  - Server Port: The server port used for the connection
  - Connection: The control system connection method
  - Status: The control system connection status

### **SNMP** Configuration

Select **SNMP Configuration** to view the status of the SNMP (Simple Network Management Protocol) configuration for the touch screen.



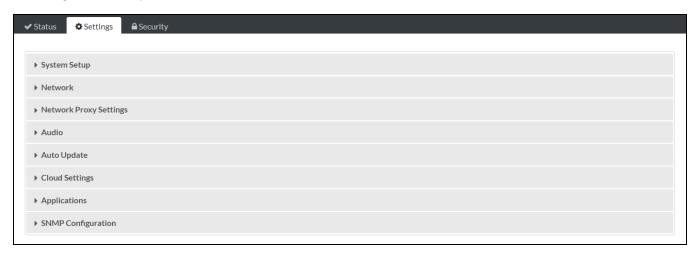
The following **SNMP Configuration** information is displayed:

- SNMP Enabled: Reports whether SNMP has been turned on for the touch screen (Yes) or not (No)
- **SNMP Allow All**: Reports whether the touch screen allows SNMP requests from all managers (**Yes**) or not (**No**)
- Trap Enabled: Reports whether SNMP trap notifications have been turned on (Yes) or not (No)
- Each SNMP user configured for the touch screen is displayed in a table with the following information:
  - User Name: The name of the SNMP user
  - o Manager Name: The SNMP manager for the user
  - Version: The SNMP version set for the user
  - Write Access Level: Indicates whether the user has write level permissions (true) or readonly permissions (false)
  - Address: The IP address of the SNMP manager
  - o Authentication Protocol: The authentication protocol used by the SNMP manager
  - Privacy Protocol: The privacy protocol used by the SNMP manager

### **Settings**

Select the **Settings** tab on the top left of the interface to display accordions for configuring settings for the touch screen.

Select an accordion name to expand that accordion. If the accordion is expanded, select the accordion name again to collapse the accordion.

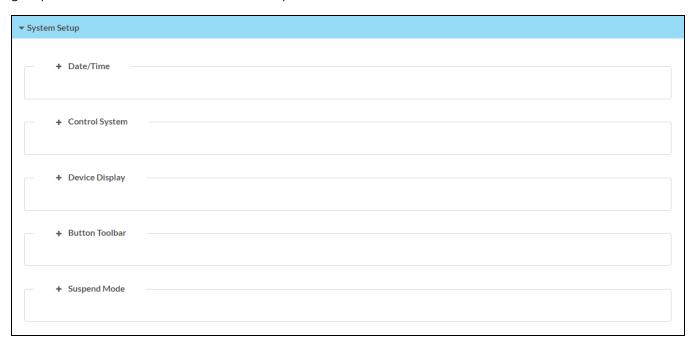


The following **Settings** selections are provided.

**NOTE:** If an invalid value is entered for a setting, the configuration interface will not allow changes to be saved until a valid value is entered. Red text is displayed next a setting to indicate an invalid value.

### System Setup

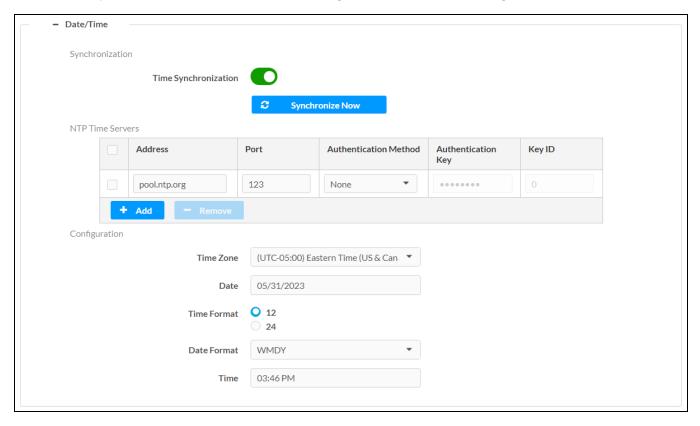
Select **System Settings** to configure general network and touch screen settings. System settings are grouped within subsections that can be expanded.



The following **System Settings** configuration settings are provided.

#### Date/Time

Select the + (plus) icon next to Date/Time to configure date and time settings for the touch screen.



The following **Date/Time** settings are provided:

- Synchronization
  - **Time Synchronization**: Turn on the toggle to use time synchronization via NTP (Network Time Protocol).
  - Synchronize Now: With Time Synchronization turned on, select Synchronize Now to synchronize the touch screen with the NTP server(s) entered in the NTP Time Servers table. Time synchronization could take up to two minutes to complete.
- NTP Time Servers: With Time Synchronization turned on, use the provided table to enter information regarding the NTP server(s) used to synchronize the date and time for the touch screen.
  - Select Add to add a new NTP server entry into the table.
  - ° Enter the following information for each entry:
    - Enter the NTP server address into the **Address** text field.
    - Enter the NTP server port into the **Port** text field.
    - Use the Authentication Method drop-down menu to select the authentication method used to access the NTP server (if one exists).
    - If an authentication method is selected, enter the key used to authenticate against the NTP server into the Authentication Key text field.

- If an authentication method is selected, enter the ID for the key used to authenticate against the NTP server into the **Key ID** text field.
- To remove an entry, fill the checkbox to the left of the table entry, and then select **Remove**.

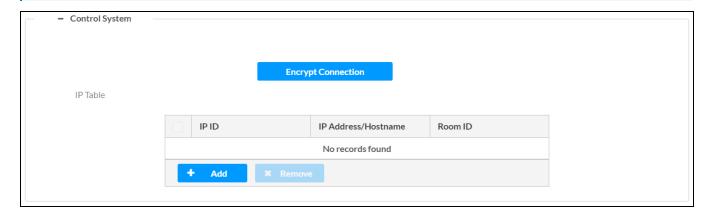
#### Configuration

- Time Zone: Select a time zone for the touch screen using the drop-down menu.
- Date: Select the date for the touch screen using the pop-up calendar that is displayed.
- Time Format: Select the format that the time will display on the touch screen (12 hour or 24 hour).
- **Date Format**: Select the format that the date will display on the touch screen using the drop-down menu.
- **Time**: Select the time for the touch screen (in 24-hour format) using the pop-up menu that is displayed.

#### Control System

Select the + (plus) icon next to **Control System** to configure a connection to a Crestron control system.

**NOTE:** The **Control System** settings are shown in user project mode only.



The following **Control System** settings are provided:

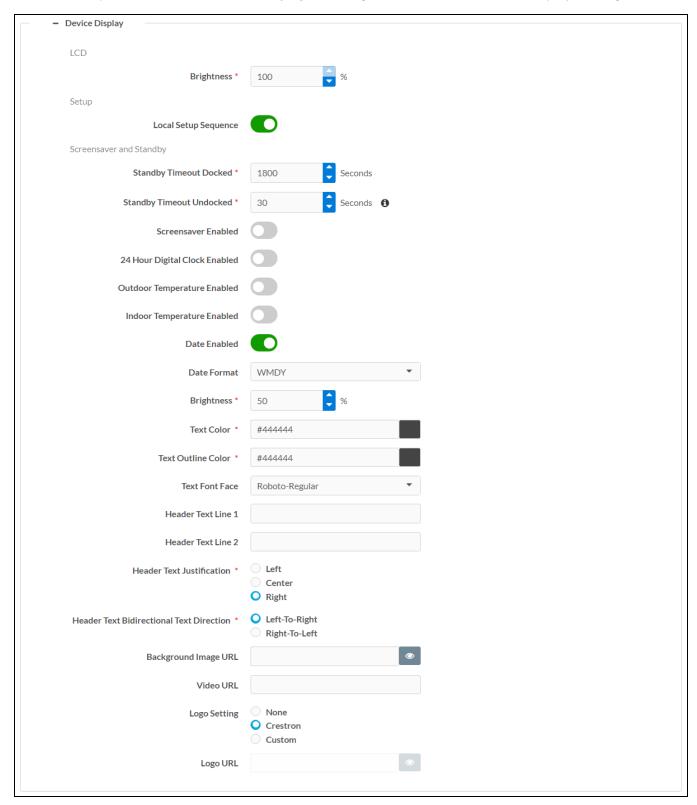
Select **Encrypt Connection** to create an encrypted connection to the control system. If the control system has authentication turned on, its username and password must be entered in the **Security** tab. For more information, refer to Security on page 108.

- IP Table: Set an IP table connection between the touch screen and control system:
  - IP ID: Enter an IP ID for connecting the touch screen to the control system.
  - IP Address/Hostname: Enter the control system IP address or host name.
  - Room ID: Enter a room ID to associate with the touch screen (for connections with the Crestron Virtual Control server-based control system)

**NOTE:** For more information on connecting the touch screen to Crestron Virtual Control, refer to the Crestron Virtual Control Server Software Product Manual.

#### **Device Display**

Select the + (plus) icon next to **Device Display** to configure various touch screen display settings.



The following **Device Display** settings are provided:

#### • LCD

• Brightness: Enter a value (1–100%) for the LCD display brightness.

#### Setup

 Local Setup Sequence: Turn on the toggle to allow local access to the setup screens using a five-finger press.

#### Screensaver and Standby

- Standby Timeout Docked: Enter a standby timeout duration (0-7200 seconds) for the touch screen when it is docked. Enter "O" to turn off standby timeout when the touch screen is docked.
- Standby Timeout Undocked: Enter a standby timeout duration (0–120 seconds) for the touch screen when it is undocked. Enter "0" to turn off standby timeout when the touch screen is undocked.

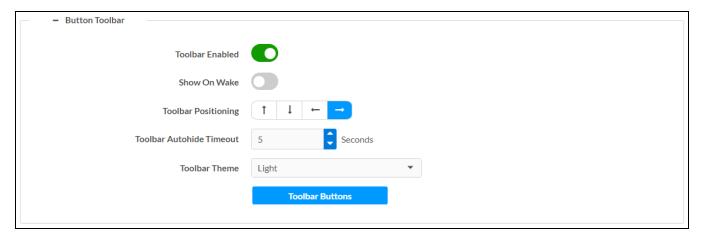
**NOTE:** The **Standby Timeout Undocked** value should be set to at least 5 seconds less than the **Suspend Mode Timeout** value. For more information, refer to Suspend Mode on page 100.

- **Screensaver Enabled**: Turn on the toggle to display a screensaver on the touch screen during standby timeout.
- 24 Hour Digital Clock Enabled: Turn on the toggle to display a 24-hour digital clock on the touch screen during standby timeout.
- **Outdoor Temperature Enabled**: Turn on the toggle to display the outdoor temperature on the touch screen during standby timeout via a join from a connected control system.
- Indoor Temperature Enabled: Turn on the toggle to display the indoor temperature on the touch screen during standby timeout via a join from a connected control system.
- Date Enabled: Turn on the toggle to display the date on the touch screen during standby timeout.
- **Date Format**: Use the drop-down menu to select a format for displaying the date on the touch screen.
- **Brightness**: Enter a brightness value (0–100%) for the screensaver.
- **Text Color**: Select the color icon to the right of this field to display a pop-up window for selecting the text color of the screensaver, or enter a hex value for a specific color.
- Text Outline Color: Select the color icon to the right of this field to display a pop-up window for selecting the text outline color of the screensaver, or enter a hex value for a specific color.
- Text Font Face: Use the drop-down menu to select a font for the screensaver text.
- **Header Text Line 1**: Enter text to be displayed on the first header text line of touch screen screensaver.
- **Header Text Line 2**: Enter text to be displayed on the second header text line of touch screen screensaver.
- Header Text Justification: Select one of the radio buttons (Left, Center, or Right) to select how the header text is justified on the touch screen screensaver.

- Header Text Bidirectional Text Direction: Select one of the radio buttons (Left-To-Right or Right-To-Left) to determine the language text direction on the touch screen screensaver.
- **Background Image URL**: Enter a URL of a background image to be used by the touch screen screensaver. Select the eye button next to the text field to test the URL.
- Video URL: Enter a URL of video to be used by the touch screen screensaver.
- Logo Setting: Select one of the radio buttons (None, Crestron, and Custom) to select a logo type to use on the touch screen screensaver.
- **Logo URL**: If **Logo Setting** is set to **Custom**, enter a URL of a custom logo to be used by the touch screen screensaver. Select the eye button next to the text field to test the URL.

#### **Button Toolbar**

Select the + (plus) icon next to **Button Toolbar** to configure virtual button toolbar settings for the touch screen.



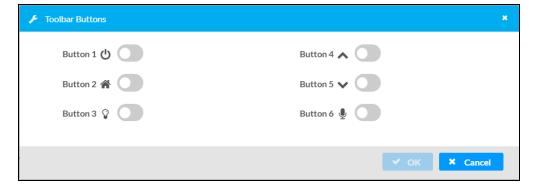
By default, the virtual button toolbar can be accessed by swiping down on the tab located at the top of the screen and provides virtual buttons for power, home, lighting, up, down, and microphone. The toolbar is hidden automatically after a set timeout duration.

**NOTE:** Virtual button functionality can be custom programmed using a Crestron control system.

The following **Button Toolbar** settings are provided:

- Toolbar Enabled: Turn on the toggle to turn on the virtual button toolbar.
- **Show On Wake**: Turn on the toggle to show the virtual button toolbar automatically when the touch screen wakes from standby timeout.
- **Toolbar Positioning**: Select one of the orientation buttons (top, button, left, or right) to place the toolbar on the respective side of the screen.
- **Toolbar Autohide Timeout**: Enter a duration (0–600 seconds) after which the toolbar is hidden automatically. Enter "0" to turn off autohide timeout, which requires a user to manually close the toolbar.
- Toolbar Theme: Use the drop-down menu to select a toolbar theme (Light or Dark).

Select Toolbar Buttons to display a dialog box for showing or hiding individual toolbar buttons.



Turn on the toggle next to a button to show that button in the toolbar, then select **OK**.

#### Suspend Mode

Select the + (plus) icon next to **Suspend Mode** to configure suspend mode timeout behavior for the touch screen.

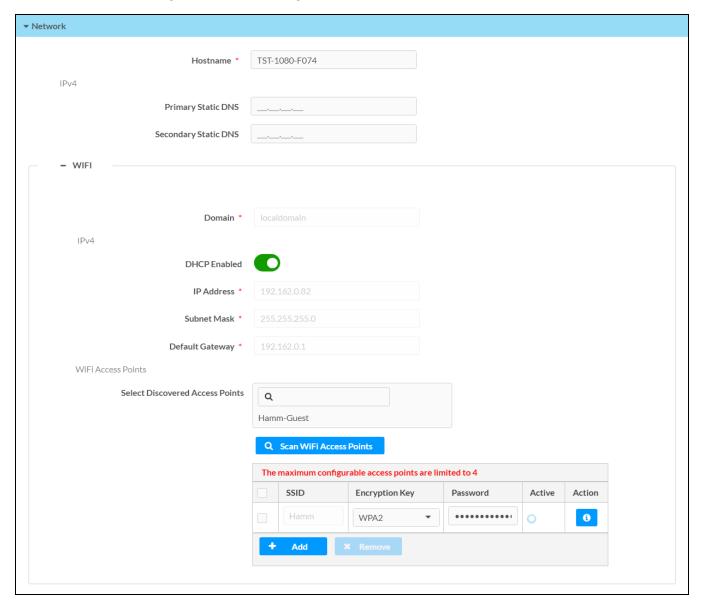


Enter a suspend mode timeout duration (0-240 seconds) for the touch screen when it is undocked. Enter "0" to turn off suspend mode timeout when the touch screen is undocked.

**NOTE:** The **Suspend Mode Timeout** value should be set to at least 5 seconds greater than the **Standby Timeout Undocked** value. For more information, refer to Device Display on page 97.

#### Network

Select **Network** to configure network settings for the touch screen.



The following **Network** settings are provided:

**NOTE:** The **IP Address**, **Subnet Mask**, and **Default Gateway** fields are required only if DHCP is turned off for the Wi-Fi network connection.

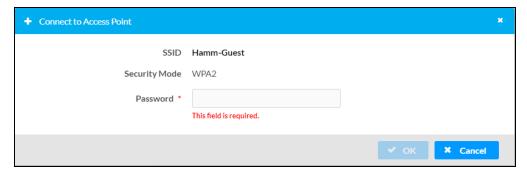
- Hostname: Enter the touch screen host name.
- **Primary Static DNS**: Enter the primary DNS address used to resolve the touch screen domain to an IP address.
- **Secondary Static DNS**: Enter the secondary DNS address used to resolve the touch screen domain to an IP address.

Select the + (plus) icon next to Wi-Fi to display the following Wi-Fi network settings:

• DHCP: Turn on the toggle to use DHCP for the Wi-Fi network connection.

**NOTE:** If DHCP is turned on, IP does not function until a reply has been received from the server. The touch screen broadcasts requests for an IP address periodically.

- IP Address: Enter the touch screen Wi-Fi network address on the network.
- Subnet Mask: Enter the touch screen subnet mask address on the network.
- **Default Gateway**: Enter the gateway router address on the network.
- Wi-Fi Access Points
  - Scan Wi-Fi Access Points: Scans the network for any open Wi-Fi access points. All discovered access points are displayed in the Select Discovered Access Points menu.
  - Select Discovered Access Points: Select an access point after completing a scan. Enter text
    in the search field to search for a specific Wi-Fi access point name. After selecting an access
    point, the Connect to Access Point dialog box is displayed.



Enter the password for the Wi-Fi access point in the **Password** text field, and then select **OK**. If the connection is successful, the Wi-Fi access point is added to the table below this setting.

**NOTE:** WPA2 Enterprise wireless access points require entering additional authentication credentials, including selecting 802.1X IEEE certificates that must be loaded to the touch screen. For more information, refer to Configure a WPA2 Enterprise Wireless Access Point Connection on page 121.

Each added Wi-Fi access point is displayed in a table that contains the following information.

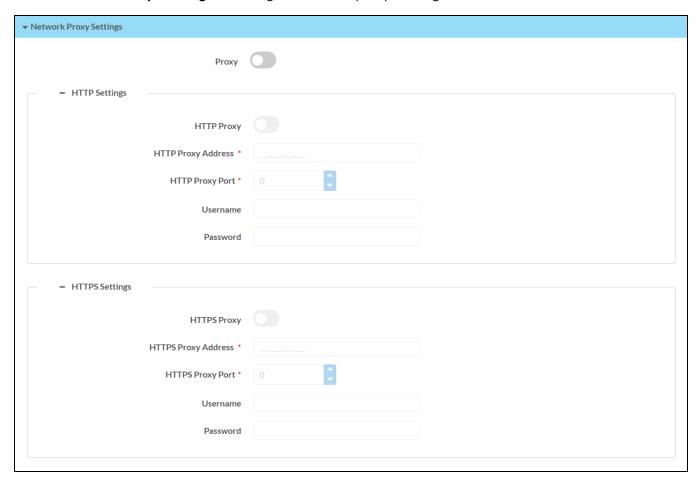
- SSID: Enter or modify the SSID (name) of the Wi-Fi access point.
- Encryption Key: Select the security/encryption type used by the Wi-Fi access point.
- Password: Enter the password used to connect to the Wi-Fi access point.
- Active: Indicates whether a connection to the Wi-Fi access point is active
- Action: Select the information button 0 to view details about the Wi-Fi access point.

Select **Add** to add a new entry to the Wi-Fi access point table.

After selecting one more entries in the Wi-Fi access point table, select **Remove** to delete the selected entries.

### **Network Proxy Settings**

Select Network Proxy Settings to configure network proxy settings for the touch screen.

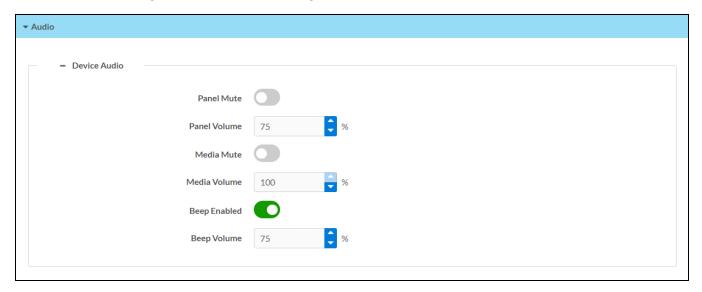


The following **Network Proxy Settings** settings are provided:

- Proxy: Turn on the toggle to configure the touch screen for use with a proxy server.
- HTTP Settings
  - HTTP Proxy: Turn on the toggle to use an HTTP proxy server.
  - HTTP Proxy Address: Enter the IP address of the HTTP proxy server.
  - HTTP Proxy Port: Enter the port number of the HTTP proxy server.
  - **Username**: Enter the username required for the HTTP proxy server.
  - **Password**: Enter the password required for the HTTP proxy server.
- HTTPS Settings
  - **HTTPS Proxy**: Turn on the toggle to use an HTTPS proxy server.
  - HTTPS Proxy Address: Enter the IP address of the HTTPS proxy server.
  - HTTPS Proxy Port: Enter the port number of the HTTPS proxy server.
  - **Username**: Enter the username required for the HTTPS proxy server.
  - **Password**: Enter the password required for the HTTPS proxy server.

## **Audio**

Select **Audio** to configure various audio settings for the touch screen.



The following **Audio** settings are provided:

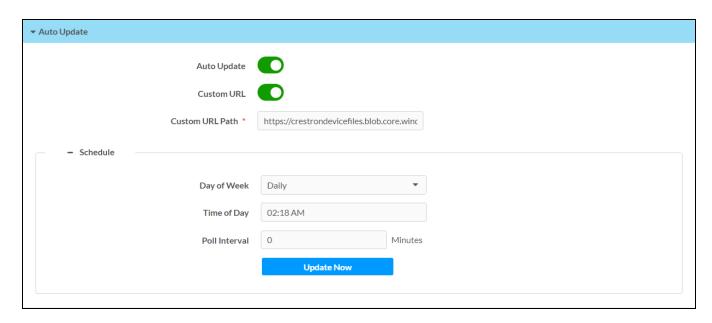
**NOTE:** The **Media Volume** setting adjusts the video streaming media level in relation to the **Panel Volume** setting.

- Panel Mute: Turn on the toggle to mute the main touch screen volume.
- Panel Volume: Enter a value (1–100) for the main touch screen volume level.
- Media Mute: Turn on the toggle to mute the touch screen media volume.
- Media Volume: Enter a value (1-100) for the touch screen media volume level.
- Beep Enabled: Turn on the toggle to mute the touch screen beep volume.
- Beep Volume: Enter a value (1–100) for the touch screen beep volume.

## **Auto Update**

Select Auto Update to configure automatic firmware updates for the touch screen.

**NOTE:** The **Auto Update** accordion can be used to configure auto update settings for firmware only. Automatic application updates are not affected by these settings.

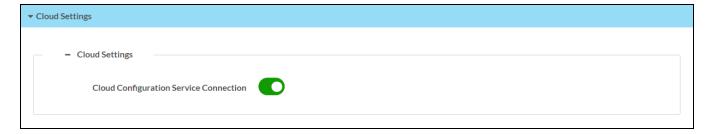


The following **Auto Update** settings are provided:

- Auto Update: Turn on the toggle to use automatic firmware updates.
- **Custom URL**: Turn on the toggle use a custom update server URL. If turned off, the server URL will default to the standard Crestron update sever.
- Custom URL Path: If Custom URL Path is turned on, enter the custom URL path for the update server.
- **Day of Week**: Select the day of week when the touch screen will check for updates. Select **Daily** to have the touch screen check for updates every day.
- **Time of Day**: Enter a time of day (in 24-hour format) when the touch screen will check updates on the scheduled day.
- **Poll Interval**: Enter the polling interval (in hours) for when the touch screen will poll the server for updates.
- Select **Update Now** to check the update server for new firmware and to update the touch screen immediately if new firmware is available.

## **Cloud Settings**

Select **Cloud Settings** to turn a connection on or off between the touch screen and an XiO Cloud® service account. A connection to the XiO Cloud service is turned on by default.

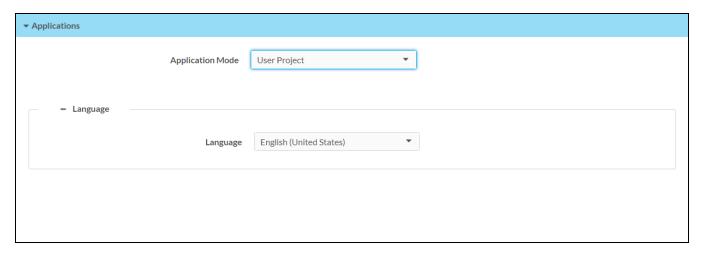


Turn on the **Cloud Configuration Service Connection** toggle to allow a connection between the touch screen and an XiO Cloud account. This setting is turned on by default.

For more information on connecting to the XiO Cloud service, refer to Connect to the XiO Cloud Service on page 80.

## **Applications**

Select **Applications** to select an application to run on the touch screen.



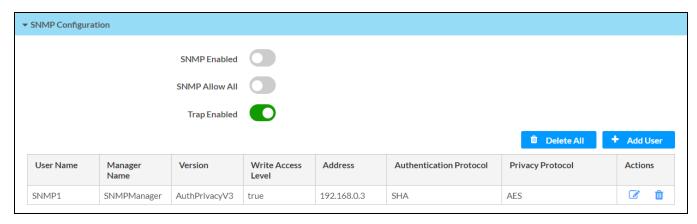
Use the **Application Mode** drop-down menu to select a touch screen application from the available selections.

Once a new application is selected, select **Save Changes** from the **Action** menu. A pop-up message is displayed stating that the touch screen must be restarted for the new application to take effect. Select **Yes** to restart the touch screen now or **No**to restart the touch screen later. The touch screen restarts with the new application running.

**NOTE:** Each application uses a unique setup procedure for registering and configuring the application. Additional **Application Mode** settings may be provided depending on the selected application. For more information on supported applications, refer to Application Selection on page 119.

## **SNMP** Configuration

Select **SNMP Configuration** to configure SNMP (Simple Network Management Protocol) settings on the touch screen.



The following SNMP Configuration settings are provided:

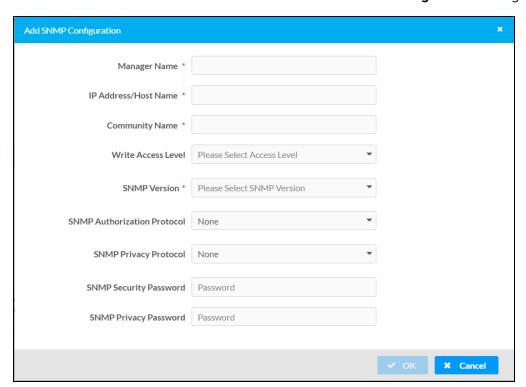
- SNMP Enabled: Turn on the toggle to turn on SNMP for the touch screen.
- **SNMP Allow All**: Turn on the toggle to all the touch screen to receive SNMP requests from all managers.
- Trap Enabled: Turn on the toggle to turn on SNMP trap notifications.

Each added SNMP user is displayed in a table that contains the following information.

- User Name: The name of the SNMP user
- Manager Name: The SNMP manager for the user
- Version: The SNMP version set for the user
- Write Access Level: Indicates whether the user has write level permissions (true) or read-only permissions (false)
- Address: The IP address of the SNMP manager
- · Authentication Protocol: The authentication protocol used by the SNMP manager
- Privacy Protocol: The privacy protocol used by the SNMP manager
- Actions: Controls for editing and deleting the SNMP user

Select **Delete All** to delete all existing SNMP users. When a dialog box is shown asking whether all SNMP users should be deleted, select **Yes**.

Select Add User to add a new SNMP user. The Add SNMP Configuration dialog box is displayed.



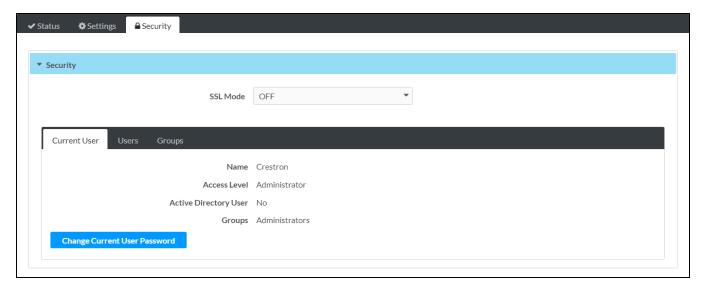
Enter the following information for the SNMP user:

- Manager Name: Enter the SNMP manager name for the user.
- IP Address/Host Name: Enter the IP address or host name of the SNMP manager.
- Community Name: Enter the SNMP community (user) name.
- Write Access Level: Use the drop-down menu to select whether the user has write level access (True) or read-only access (False).
- **SNMP Version**: Use the drop-down menu to select the SNMP version used by the manager.
- **SNMP Authorization Protocol**: If required, use the drop-down menu to select the authorization protocol used by the SNMP manager.
- **SNMP Privacy Protocol**: If required, use the drop-down menu to select the privacy protocol used by the SNMP manager.
- **SNMP Security Password**: If required, enter the security password for the SNMP manager.
- SNMP Privacy Password: If required, use the privacy password for the SNMP manager.

Select **OK** to create the new user. The user is added to the table within the **SNMP Configuration** accordion.

## Security

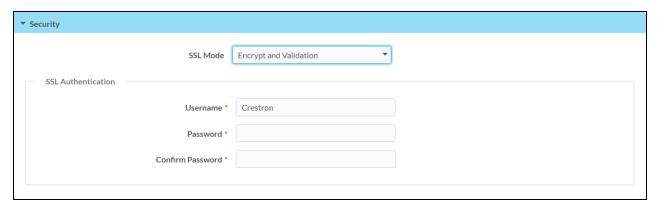
Select the **Security** tab on the top left of the interface to display selections for configuring authentication settings for the touch screen.



Use the **SSL Mode** drop-down menu to select one of the following SSL (Secure Sockets Layer) encryption modes for connecting to a Crestron control system:

- Off: The connection will not use SSL encryption and is unsecure.
- **Encrypt**: The connection will use standard SSL encryption. The username and password of the control system admin account must be entered to use this mode.

• **Encrypt and Validate**: The connection will use enhanced SSL encryption that requires an additional validation step to connect. The username and password of the control system admin account must be entered to use this mode.



For more information on connecting to a Crestron control system, refer to Control System on page 96.

Additional **Security** settings are provided to add, delete, and edit touch screen users and groups. These settings are described in the following sections.

## **Current User**

Select the Current User tab to view and edit information for the current touch screen user.



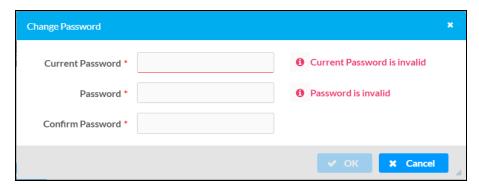
The following settings are displayed for the current user:

- Name: The chosen username
- Access Level: The access level granted to the user (Administrator, Programmer, Operator, User, or Connect)
- Active Directory User: Reports whether the current user is (Yes) or is not (No) authenticated through Active Directory® software

**NOTE:** A user must be added to an Active Directory group before the user may be selected as an active directory user. For more information, refer to Groups on page 113.

• Groups: Any groups of which the current user is a member

Select **Change Current User Password** to change the password for the current user. The **Change Password** dialog box is displayed.

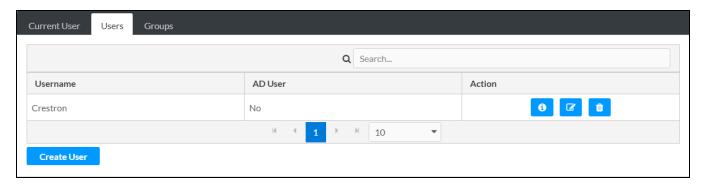


Enter the existing password in the **Current Password** field. Then, enter a new password in the **Password** field, and reenter the password in the **Confirm Password** field.

Select **OK** to save the new password, or select **Cancel** to cancel the change.

#### Users

Select the **Users** tab to view and edit information for the touch screen users.



Enter text into the **Search** field to find and display users that match the search term(s).

Touch screen users are listed in table format. The following information is displayed for each touch screen user:

- Username: The chosen username
- AD User: Reports whether the user is (Yes) or is not (No) authenticated through Active Directory

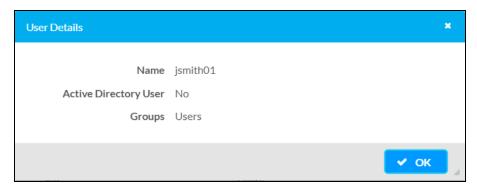
**NOTE:** A user must be added to an Active Directory group before the user may be selected as an active directory user. For more information, refer to Groups on page 113.

If the touch screen users span multiple pages, use the navigation arrows on the bottom of the page to move forward or backward through the pages, or select a page number to navigate to that page. Additionally, the number of users displayed on each page may be set to 5, 10, or 20 users.

An **Action** column is also provided for each user that allows various actions to be performed. The following selections may be selected from the **Action** column.

#### **User Details**

Select the information button on the **Action** column to view information for the selected user. The **User Details** dialog box is displayed.



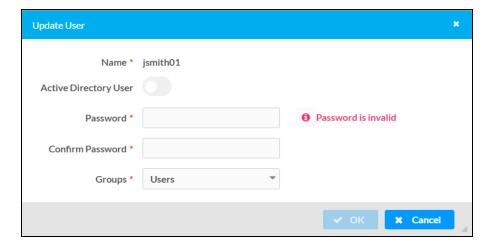
The following settings are displayed for the current user:

- Name: The chosen username
- Active Directory User: Reports whether the user is (Yes) or is not (No) authenticated through Active Directory
- Groups: Lists any groups that contain the user

Select **OK** to close the dialog box.

## **Update User**

Select the pencil button in the **Action** column to edit settings for the selected user. The **Update User** dialog box is displayed.



The following **Update User** settings may be viewed or configured:

- Name: The chosen username.
- **Active Directory User**: Turn on the toggle to use authentication via Active Directory for the selected user.
- Password: Enter a new password for the selected user.
- Confirm Password: Reenter the password provided in the Password field.

• Groups: Add the user to one or more groups. For more information, refer to Groups on page 113.

**NOTE:** A user must be added to an Active Directory group to be selected as an Active Directory user.

Select **OK** to save any changes and close the dialog box. Select **Cancel** to cancel any changes.

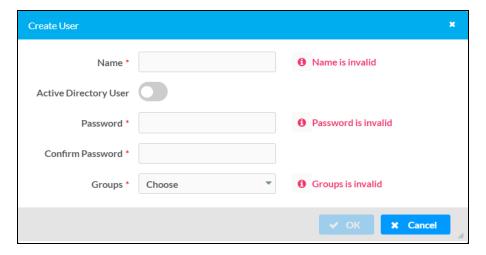
#### Delete User

Select the trashcan icon in the **Action** column to delete the user.

A dialog box is displayed asking whether the user should be deleted. Select **Yes** to delete the user or **No** to cancel deleting the user.

#### Create User

Select **Create User** at the bottom of the page to create a new touch screen user. The **Create User** dialog box is displayed.



Use the following settings to create a new user:

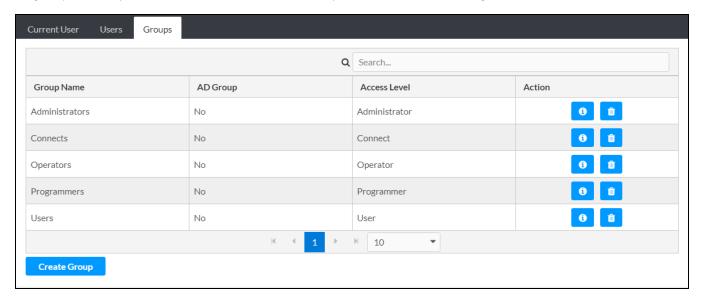
- Name: Enter a username.
- Active Directory User: Turn on the toggle to use authentication via Active Directory for the user.
- Password: Enter a password for the user.
- Confirm Password: Reenter the password provided in the Password field.
- Groups: Add the user to one or more groups. For more information, refer to Groups on page 113.

**NOTE:** A user must be added to an Active Directory group to be selected as an Active Directory user.

Select **OK** to save any changes and close the dialog box. Select **Cancel** to cancel creating a new user.

## Groups

Select the **Groups** tab to view and edit settings for touch screen groups. Touch screen groups are used to group users by access level and Active Directory authentication settings.



Enter text in to the Search field to find and display groups that match the search term(s).

Touch screen groups are listed in table format. The following information is displayed for each touch screen group:

- Group Name: The chosen group name
- AD Group: Reports whether the group is (Yes) or is not (No) authenticated through Active Directory

**NOTE:** Active Directory provides an additional layer of authentication for touch screen groups and users. Active directory group and user names are stored in the touch screen console along with a unique SID (security identifier). When an Active Directory user attempts to authenticate against the console, the console first checks the user credentials. If the Active Directory authentication is successful, Active Directory queries the console for the user or group's SID. The user is granted access to the touch screen only if at least one SID match is found.

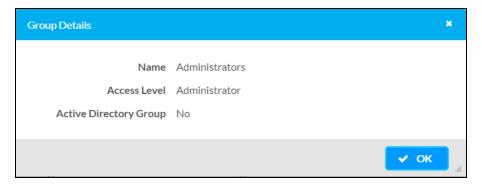
 Access Level: The access level for the selected group (Administrator, Programmer, Operator, User, or Connect)

If the touch screen groups span multiple pages, use the navigation arrows on the bottom of the page to move forward or backward through the pages, or select a page number to navigate to that page. Additionally, the number of groups displayed on each page may be set to 5, 10, or 20 users.

An **Action** column is also provided for each group that allows various actions to be performed. The following selections may be selected from the **Action** column.

## **Group Details**

Select the information button on the **Action** column to view information for the selected group. The **Group Details** dialog box is displayed.



The following settings are displayed for the current group:

- Name: The chosen group name
- Access Level: The access level of the group and its users
- Active Directory User: Reports whether the group is (Yes) or is not (No) authenticated through Active Directory

Select **OK** to close the dialog box.

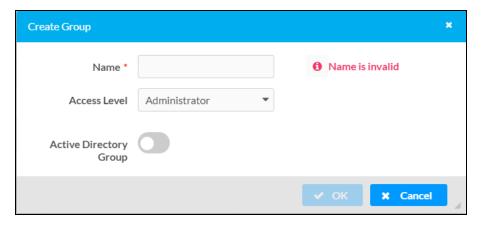
## Delete Group

Select the trashcan icon in the **Action** column to delete the group.

A dialog box is displayed asking whether the group should be deleted. Select **Yes** to delete the group or **No** to cancel deleting the group.

## Create Group

Select **Create Group** at the bottom of the page to create a new touch screen group. The **Create Group** dialog box is displayed.



Use the following settings to create a new group:

• Name: Enter a group name.

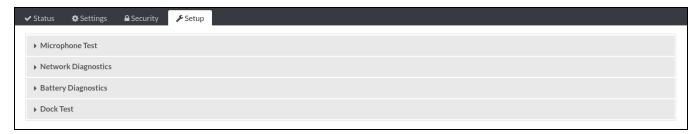
**NOTE:** If authenticating with Active Directory, do not enter the domain name for the Active Directory group in the **Name** field.

- Access Level: Select an access level for the group and its users from the drop-down menu.
- **Active Directory Group**: Turn on the toggle to use authentication via Active Directory for the group.

Select **OK** to save any changes and close the dialog box. Select **Cancel** to cancel creating a new group.

## Setup (Local Only)

Select the **Setup** tab on the top left of the interface to display selections for configuring and testing local settings for the touch screen.



The following **Setup** selections are provided.

**NOTE:** If an invalid value is entered for a setting, the configuration interface will not allow changes to be saved until a valid value is entered. Red text is displayed next a setting to indicate an invalid value.

## Microphone Test

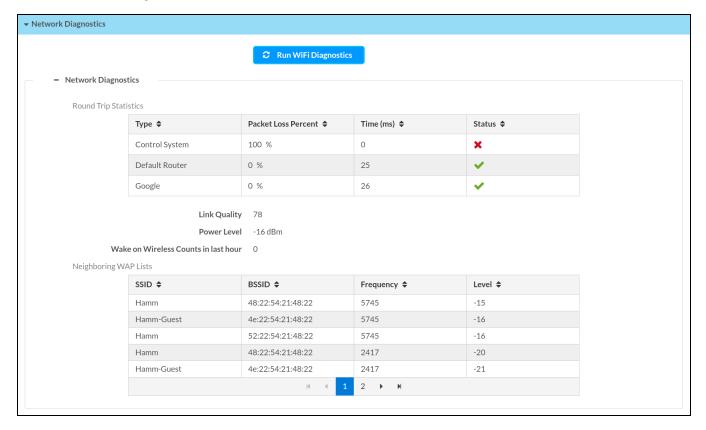
Select Microphone Test to test the built-in microphone.



Select the **Microphone Test** button to begin a microphone test. During a microphone test, the built-in microphone records sound for five seconds, and then the recording is played back to confirm that the microphone is functioning. The test ends after the playback has finished.

## **Network Diagnostics**

Select **Network Diagnostics** to test the Wi-Fi network connection.



Select **Run Wi-Fi Diagnostics** to run a diagnostic test for the Wi-Fi connection. Once the diagnostic test has completed, the configuration utility refreshes to display the current values for the connection data.

The following diagnostic information is displayed:

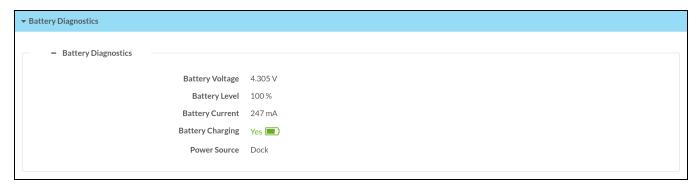
#### • Round Trip Statistics

- A table is provided that displays the following round trip connection statistics for each of the listed wireless connections:
  - **Type**: The wireless connection type
  - **Packet Loss Percent**: The percentage of data packets that are lost during the round trip data transmission (0 to 100%)
  - Time (ms): The duration it takes for the wireless signal to be sent and received in milliseconds
  - **Status**: The quality of the round trip connection (A green check icon ✓ indicates that the connection is optimal, while a red x icon 🗙 indicates that the connection is suboptimal or not active.)
- Link Quality: The qualitative value of the signal strength and signal interference (A green check icon 
   indicates that the link quality is optimal, while a red x icon 
   indicates that the link quality is suboptimal.)

- Power Level: The power level of the wireless connection (A green check icon ✓ indicates
  that the power level is optimal, while a red x icon x indicates that the power level is
  suboptimal.)
- Wake on Wireless Counts in last hour: The number of occurrences where the touch screen
  was woken by the wireless LAN over the last hour (A green check icon ✓ indicates that the
  number of occurrences is optimal, while a red x icon ✗ indicates that the number of
  occurrences is suboptimal.)
- **Neighboring WAP Lists**: Displays the following information is for each neighboring WAP. If the list spans more than one page, use the controls at the bottom of the list to move between pages.
  - SSID: The wireless access point host name
  - BSSID: The wireless access point MAC address
  - Frequency: The frequency of the wireless access point
  - Level: The power level of the wireless access point

## **Battery Diagnostics**

Select **Battery Diagnostics** to view diagnostic information for the touch screen battery.



The following diagnostic information is displayed:

- Battery Voltage: The battery voltage level
- Battery Level: The battery charge level (0-100%)
- Battery Current: The battery current level (in mA)
- Battery Charging: Indicates whether the battery is currently charging (Yes) or not (No)
- **Power Source**: Indicates whether the touch screen is receiving power from its battery or externally through a charging dock

**NOTE:** Alerts can be generated in the XiO Cloud service when the touch screen battery is running low or when the touch screen is taken off of its charging dock. For more information on configuring device alerts in XiO Cloud, refer to the XiO Cloud Service User Guide.

## **Dock Test**

Select **Dock Test** to view and configure information related to the touch screen dock.



The following diagnostic information and controls are displayed:

- **Docking Alert Messages**: Turn on the toggle to show alert messages on the touch screen whenever it is placed on or removed from its dock.
- **Release Device from Wall Dock**: Select to release the touch screen from the TST-1080-DSW wall dock (if connected). For more information, refer to TST-1080-DSW Installation on page 35.
- **Wall Dock Detected**: Indicates whether the touch screen is reporting as connected to the TST-1080-DSW wall dock **(Yes)** or not **(No)**.

# **Application Selection**

The touch screen supports a variety of applications that either ship with the device or are made available via a firmware update. Once an application has been selected, it downloads from the cloud and installs on the touch screen automatically.

The following applications are supported by the touch screen:

- Crestron Home® OS user control application
- Zoom Rooms® conferencing control application

NOTE: Support for additional applications will be provided by future firmware updates.

The touch screen runs only one app, which is selected at setup. Only the apps approved and delivered by Crestron may run on the touch screen.

**NOTE:** Additional subscriptions and/or licenses may be required. Refer to each provider's website for details about the capabilities and requirements of its scheduling application and services.

For more information on using and setting up each application, refer to the provider's website.

# Perform a Factory Restore

If the TST-1080 must be restored to its factory default settings, perform the following recovery procedure.

**CAUTION:** Performing a factory restore returns all settings to their default values and removes any static IP addresses, IP table connections, and wireless access points (WAPs) that were previously added.

- 1. Press and hold the reset button on the bottom of the touch screen for 10 seconds. The touch screen will begin to reset.
- 2. Once the Crestron swirl logo is shown on the touch screen display, the reset process has completed. Press and hold the reset button again.
- 3. Repeat steps 1–2 to perform the reset process 9 more times (for a total of 11 times).

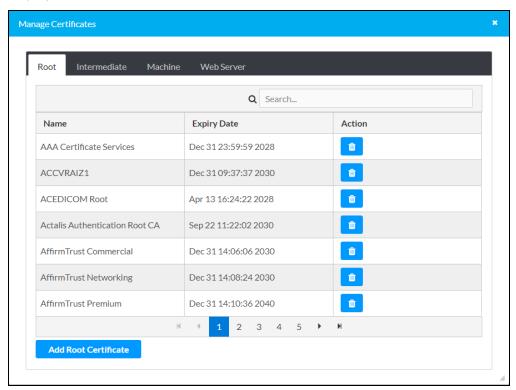
After the 11th reset, the touch screen enters recovery mode. After a few minutes, controls are displayed for performing a factory restore. Follow the prompts to restore the touch screen.

# Configure a WPA2 Enterprise Wireless Access Point Connection

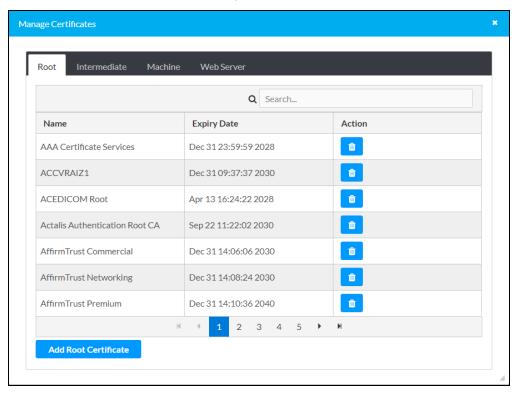
The TST-1080 supports Wi-Fi® network connections over a wireless access point (WAP) with WPA2 Enterprise encryption. Additional configuration steps are required to use the touch screen with the WPA2 Enterprise WAP, including loading 802.1X IEEE certificates to the touch screen.

To configure the touch screen to connect to a WPA2 Enterprise WAP:

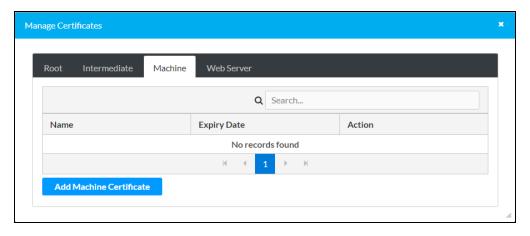
- 1. Access the touch screen web configuration interface as described in Access the Web Configuration Interface on page 75.
- 2. Load the required 802.1X IEEE certificates to the touch screen as directed by your IT administrator:
  - a. Select **Manage Certificates** from the **Action** menu. The **Manage Certificates** dialog box is displayed.



- b. Load the 802.1X IEEE root certificate for the WPA2 Enterprise WAP to the touch screen (required if using the **PEAP**, **TTLS**, and **TLS** Extensible Authentication Protocol (EAP) methods for authentication):
  - i. Select the **Root** tab (if is not already selected).

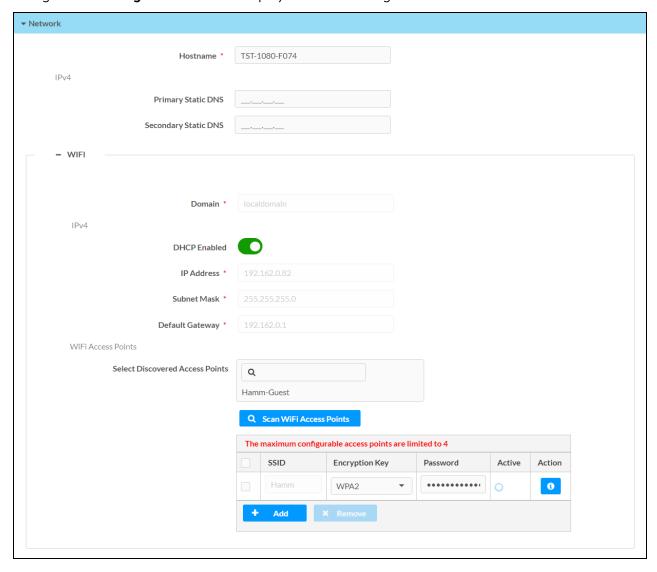


- ii. Select **Add Root Certificate**, and then add the root certificate as described in Add Certificate on page 87.
- c. Load the 802.1X IEEE machine certificate for the WPA2 Enterprise WAP to the touch screen (required only if using the **TLS** EAP method for authentication):
  - i. Select the **Machine** tab.

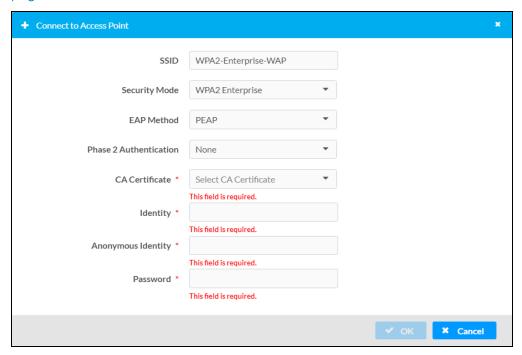


ii. Select **Add Machine Certificate**, and then add the machine certificate as described in Add Certificate on page 87.

3. Navigate to **Settings** > **Network** to display network settings for the touch screen.



4. In the Wi-Fi subsection, scan for and then select the WPA2 Enterprise WAP from the Select Discovered Access Points results to display the Connect to Access Point dialog box. The WAP can also be added manually in the table below this setting. For more information, refer to Network on page 101.



5. Enter the following information in the **Connect to Access Point** dialog box as directed by your IT administrator:

**NOTE:** The required information varies depending on the EAP method selected (**PEAP**, **TLS**, **TTLS**, or **PWD**).

- **EAP Method**: Select the EAP method used by the WPA2 Enterprise WAP from the drop-down menu (**PEAP**, **TLS**, **TTLS**, or **PWD**).
- Phase 2 Authentication: (PEAP and TTLS only) If applicable, enter the Phase 2 authentication type used by the WP2A Enterprise WAP (None or MSCHAPV2).
- **CA Certificate**: (*PEAP*, *TLS*, and *TTLS* only) Select the 802.1X IEEE root certificate that was loaded in step 2b above.
- **User Certificate**: *(TLS only)* Select the 802.1X IEEE machine certificate that was loaded in step 2c above.
- **Identity**: Enter the identity credentials used to authenticate against the WPA2 Enterprise WAP
- **Anonymous Identity**: (*PEAP and TTLS only*) Enter an anonymous identify that will be used to obscure the provided identity during external authentication.
- Password: Enter the password for the WPA2 Enterprise WAP identity.
- 6. Select **OK** to save the WAP connection. The touch screen attempts to connect to the configured WPA2 Enterprise WAP immediately.

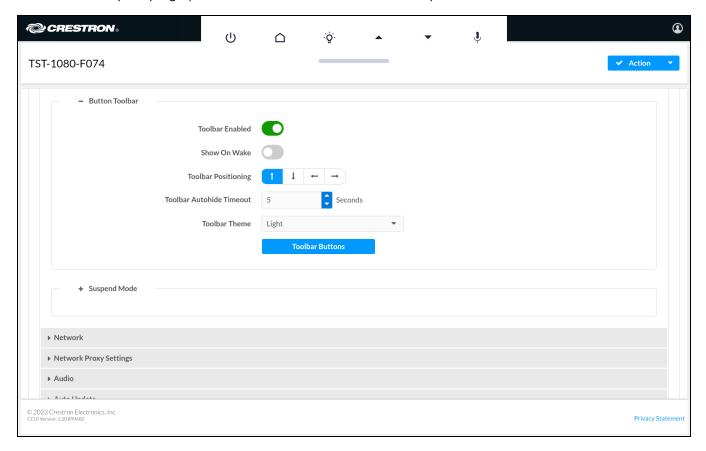
If the touch screen was connected to a different WAP prior to configuring the WPA2 Enterprise WAP connection, the touch screen will not connect to the WPA2 Enterprise WAP automatically. The previous WAP must be deleted first.

As a workaround (or during initial setup), the touch screen can also be connected to a computer via USB to expose its RDNS IP address. Use the **Device Discovery Tool** in Crestron Toolbox™ software to discover the touch screen and its local RDNS IP address, access the touch screen web configuration interface over that IP address, and then perform the procedure above. For more information, refer to the Crestron Toolbox help file.

# **Operation**

The touch screen is controlled by using its capacitive touch screen display. The touch screen supports gesturing and swiping controls to perform various functions. Supported touch controls vary by application or program.

The virtual toolbar is used to perform basic device functions if it has been turned on. By default, the virtual toolbar can be accessed by swiping down on the tab located at the top of the screen. The toolbar can be hidden by swiping up on the tab or is hidden automatically after a set timeout duration.



The following virtual buttons are provided by default and can be used to control the touch screen or the loaded application or program (if supported). Each button can be manually turned on or off in the configuration utility.

NOTE: Virtual button functionality can be custom programmed using a Crestron control system.

- **Power** (): Powers the touch screen off.
- **Home**  $\triangle$ : Returns to the home page of the application or program.
- **Lighting**  $\dot{Q}$ : Navigates to lighting controls in the application or program.

- **Up** ▲: Moves up a page in the application or program.
- **Down ▼** : Moves down a page in the application or program.
- **Microphone**  $\frac{1}{2}$ : Enables or disables the microphone functionality.

For more information on configuring the virtual toolbar, refer to Button Toolbar on page 99.

# Resources

The following resources are provided for the TST-1080.

**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**

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

## **Related Documentation**

- Crestron Home® OS User Guide
- Crestron Programming Design Guide
- XiO Cloud User Guide

Fax: 201.767.7656 www.crestron.com