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Product Manual

TSS-470E

3.5 in. Desk Scheduling 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: M202138001

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Overview

The Crestron® TSS-470E Desk Touch is a touch screen designed specifically for desk scheduling applications. The TSS-470E can be installed within a hoteling space to provide a clear indication of its availability and schedule. Room mode provides room scheduling functionality for ancillary spaces where shorter bookings are more common. The TSS-470E also integrates seamlessly with a variety of popular third-party scheduling applications.

This section provides the following information:

- [Features](#)

Features

This section provides the following information:

- [TSS-470E-B-T Features](#)
- [TSS-470E-MSMK-B-T Features](#)
- [TSS-470E-RMB-2G Features](#)
- [TSS-470E-TTK-B-T Features](#)
- [TSS-470E-WMK Features](#)

TSS-470E-B-T Features

The Crestron® [TSS-470E-B-T](#) touch screen is designed to enhance and simplify desk scheduling across an enterprise. The TSS-470E can be installed within a hoteling space to provide a clear indication of its availability and schedule. Room mode provides room scheduling functionality for ancillary spaces where shorter bookings are more common. The TSS-470E also integrates seamlessly with a variety of popular third-party scheduling applications.

The TSS-470E is an enterprise-grade device engineered to meet all the demands of a corporate office, conference center, or higher education environment. Its 3.5 in. (89 mm) capacitive display provides an intuitive user interface dedicated for scheduling hoteling spaces and viewing essential reservation details.



Key features include:

- Touch screen designed specifically for desk scheduling applications
- Room mode provides room scheduling functionality for ancillary spaces
- Integrates directly with various third-party scheduling apps
- 3.5 in. (89 mm) capacitive touch screen display
- Setup and scheduling via XiO Cloud® provisioning and management service
- Integrated light bar illuminates green, amber, or red to indicate desk availability with support for custom colors

- Powered via PoE or power pack (sold separately)
- Ethernet and Wi-Fi® network connectivity
- Enterprise-grade security and authentication
- Wall and surface, retrofit mounting bracket, tabletop, or multisurface mounting options available separately
- Black textured finish

Crestron Scheduling App

The native Crestron Scheduling App helps organizations to maximize productivity and manage usage for every hoteling space. Desk usage can be scheduled in advance using a computer that is connected to the scheduling calendar resource, or available desks can be booked on the spot for ad hoc usage. The desk schedule is displayed on the touch screen UI to prevent booking conflicts and to indicate when the desk is available. The Crestron Scheduling App can also be configured with custom settings for no shows, early reservation check-ins, and more.¹

Running the Crestron Scheduling App, the TSS-470E integrates directly with the XiO Cloud® service and Microsoft 365® software.

Room Scheduling Mode

The Crestron Scheduling App provides a room scheduling mode that is optimized for use in ancillary spaces, such as huddle rooms or phone booths, where shorter bookings are more common. Room mode provides similar functionality to desk scheduling mode, including integration with the XiO Cloud service and Microsoft 365 software. A timeline view is provided on the touch screen UI to easily view the room availability for the day. Ad hoc bookings are scheduled to the next top or bottom of the hour, with the ability to extend the reservation in half hour increments.

Third-Party Scheduling Apps

The TSS-470E includes support for various third-party scheduling applications. New providers are made available via firmware updates. Whatever provider you choose, setup is as simple as connecting the touch screen to the network and choosing an app from XiO Cloud or the device's web configuration interface. The selected app downloads from the cloud and installs on the touch screen without any programming or control system required.^{1,2,3}

XiO Cloud Service

The TSS-470E 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.

Integrated Light Bar

The TSS-470E provides an integrated light bar that gives visual indication of a space's availability as part of a complete enterprise scheduling solution. The light bar illuminates bright green, amber, or red to indicate the space availability. The illumination color is controlled by the scheduling application, which runs on the TSS-470E and syncs with the scheduling calendar. For custom applications, the light bar can be configured to illuminate in almost any desired color. The light bar features tricolor RGB LEDs that allow for a full spectrum of colors by blending the red, green, and blue elements.

Power over Ethernet

Using PoE technology, the TSS-470E gets its operating power directly through a network cable. PoE (Power over Ethernet) eliminates the need for a local power supply or any dedicated power wiring. [Crestron PoE switches](#) offer a total networking solution with built-in PoE for multiple touch screens.⁴

For applications where PoE is not possible or desired, the TSS-470E can also be powered via a local 24VDC power supply ([PW-2407WU](#)).⁴

Wired and Wi-Fi Connectivity

An Ethernet LAN connection is all that is required to wire the TSS-470E, containing all control and power signals within a single cable.

For deployments without access to Ethernet, the touch screen can also be connected to the network over Wi-Fi® communications via a local wireless access point (WAP).

- Support for 802.11a/b/g/n/ac protocols at 2.4 and 5 GHz bands affords high-speed wireless performance in many environments.⁵
- Wi-Fi connectivity supports up to 45 ft (13.7 m) (typical) of omnidirectional coverage indoors. For Wi-Fi networks with multiple WAPs, the TSS-470E can hand off communication from one access point to another if the active connection is lost.⁶

Enterprise-Grade Security

The TSS-470E is an enterprise-grade touch screen that can be deployed across hundreds of spaces and set up easily using a web browser or XiO Cloud. It employs standard network security protocols, including 802.1X network access control, 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 TSS-470E is configured to meet Crestron's enhanced security standards right out of the box. The TSS-470E ships with authentication enabled and requires that an administrator account be created before access is granted to most device configuration and control interfaces.

Mounting Accessories

The TSS-470E supports numerous mounting accessories that allow the touch screen to be installed in various scheduling spaces. Security screws are provided with each mounting accessory to prevent unauthorized removal of the touch screen.

NOTE: The TSS-470E does not ship with any mounting accessories included. One of the following mounting accessories must be purchased per touch screen.

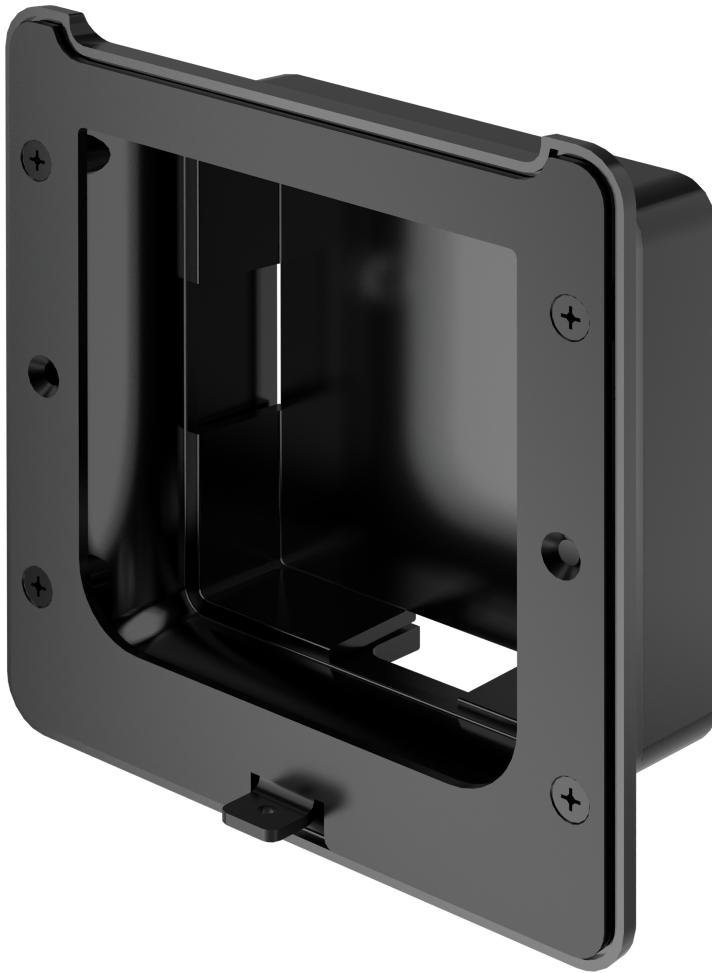
- The [TSS-470E-MSMK-B-T](#) multisurface mount kit allows the touch screen to be mounted directly to virtually any flat surface, making it ideal for mounting at the entrance of a hoteling space for scheduling applications.⁴
- The [TSS-470E-RMB-2G](#) retrofit mounting bracket is used to mount the touch screen over a flush wall-mounted 2-gang U.S. electrical box for applications requiring low voltage termination.⁴
- The [TSS-470E-TTK-B-T](#) tabletop kit provides a stylish tabletop enclosure for the touch screen that can be placed within a hoteling space or on a shared desk.⁴
- The [TSS-470E-WMK](#) wall mount kit allows the touch screen to be installed easily into existing drywall, paneling, tabletop surfaces for postconstruction applications.⁴

Notes:

1. Actual functionality and on-screen appearance varies based on which scheduling app is in use and how the app is set up. The functionality described in this spec sheet generally refers to the Crestron Scheduling app. Each third-party provider determines the functionality and appearance of their respective app. Refer to each provider's website for more information.
2. Refer to the firmware release notes for a list of all scheduling apps that are supported by that firmware release.
3. 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. Third-party apps typically run on the TSS-470E as they do on a tablet device. The TSS-470E runs only one app at a time, which is selected using the XiO Cloud® service or the web configuration interface. Only the apps approved and delivered by Crestron can run on the TSS-470E. The TSS-470E cannot be interfaced with a control system and cannot be custom programmed for any other functionality. An internet connection is required.
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.

TSS-470E-MSMK-B-T Features

The [TSS-470E-MSMK-B-T](#) multisurface mount kit provides a versatile surface mounting solution for a [TSS-470E-B-T](#) desk scheduling touch screen. Using the multisurface mount kit, the touch screen can be mounted directly to glass, granite, marble, wood paneling, plaster, smooth masonry, or virtually any other flat surface. The TSS-470E-MSMK-B-T is ideal for mounting at the entrance to a hoteling space for desk scheduling applications.



Key features include:

- Permits flush mounting a TSS-470E touch screen to virtually any flat, smooth surface
- Ideal for mounting at the entrance to a hoteling space for desk scheduling applications
- Supports glass surface and partition mounting
- Secure, screwless installation using the peel-and-stick adhesive rear housing

- Security screw provided to prevent unauthorized removal of the touch screen
- Available in black textured finish

The TSS-470E-MSMK attaches securely to a flat, smooth surface without screws using the included peel-and-stick adhesive rear housing. For a finished appearance when mounted to a transparent glass wall, an adhesive rear label is provided, which simply affixes to the opposite side of the glass behind the unit. A template is provided for the MSMK to help ensure that it is level and properly aligned with the surface. A security screw is also provided to prevent unauthorized removal of the touch screen from the MSMK.

The TSS-470E-MSMK rear housing provides four cutout holes (on the top, bottom, and sides of the housing) for running concealed cables to the touch screen using adhesive-backed raceway (not included). A trim ring with an opening for the raceway is attached to the rear housing to conceal any unused cutouts.

TSS-470E-RMB-2G Features

The [TSS-470E-RMB-2G](#) retrofit mounting bracket is used to mount a [TSS-470E-B-T](#) desk scheduling touch screen over a flush wall-mounted 2-gang U.S. electrical box. The TSS-470E-RMB-2G is ideal for applications that require low voltage termination in an in-wall electrical box near a reservable space. A security screw is also provided to prevent unauthorized removal of the touch screen from the mounting bracket.

The included adapter plate covers the mounting hardware and may be painted to match the wall surface or surrounding decor.



TSS-470E-TTK-B-T Features

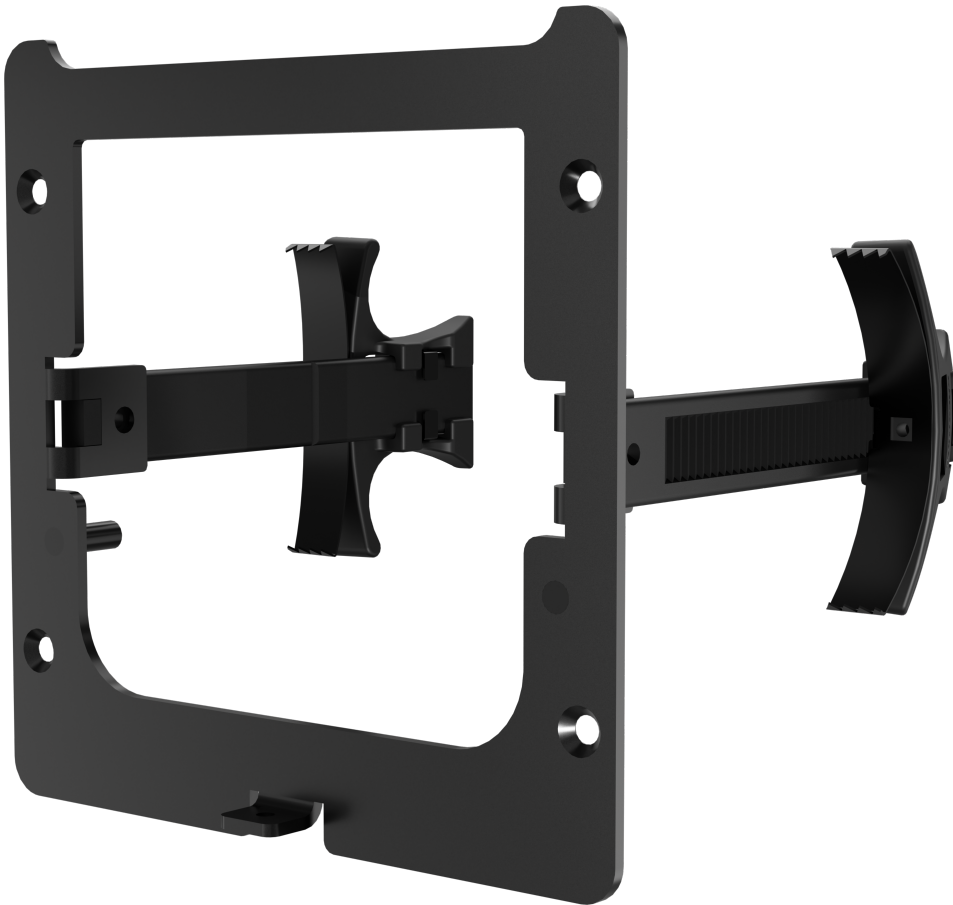
The [TSS-470E-TTK-B-T](#) tabletop kit provides a stylish tabletop enclosure for a [TSS-470E-B-T](#) desk scheduling touch screen. The TSS-470E-TTK-B-T is ideal for placement within a hoteling space or on a shared desk.



When installed in the enclosure, the TSS-470E sits flush with the enclosure housing and is tilted at a 45° angle. Any cables are routed through the rear of the enclosure through a strain-relieving grommet. The complete assembly may be placed on any flat, level surface for use. A security screw is also provided to prevent unauthorized removal of the touch screen from the enclosure.

TSS-470E-WMK Features

The [TSS-470E-WMK](#) wall and surface mount kit provides a convenient postconstruction mounting solution for installing a [TSS-470E-B-T](#) desk scheduling touch screen into an existing framed wall, desk, table, or similar flat surface. It is specifically intended for postconstruction applications, providing a complete mounting assembly designed to allow quick and easy installation into drywall, paneling, or a tabletop surface. A security screw is also provided to prevent unauthorized removal of the touch screen from the WMK.



The TSS-470E-WMK wall and surface mount kit provides a convenient solution for installing the TSS-470E touch screen into an existing wall or similar flat surface. It is specifically intended for postconstruction applications, providing a complete mounting assembly designed to allow quick and easy installation into drywall, paneling, or a tabletop surface.

Specifications

This section provides the following information:

- [TSS-470E-B-T Specifications](#)
- [TSS-470E-MSMK-B-T Specifications](#)
- [TSS-470E-RMB-2G Specifications](#)
- [TSS-470E-TTK-B-T Specifications](#)
- [TSS-470E-WMK Specifications](#)

TSS-470E-B-T Specifications

Product specifications for the TSS-470E-B-T are provided below.

Product Specifications

Touch Screen Display

Display Type	Transflective LCD, backlit
Size	3.5 in. (89 mm) diagonal
Resolution	480 x 320 pixels

Controls and Indicators

Reset	(1) Recessed push button on rear panel for hardware reset
Light Bar	(1) LED light bar; Supports alternating green/amber/red indication of desk or room availability; Supports custom color selection for availability states

Graphics Engine

On-screen keyboard, native desk scheduling application, setup and diagnostics via XiO Cloud, web browser, or on-screen UI

Scheduling Support

Crestron Scheduling App	Microsoft 365® software
Third-Party Apps	Includes support for various third-party scheduling applications ^{1,2,3}

Languages

User Interface (Desk Mode)	Arabic, Chinese (Simplified), Chinese (Traditional), Czech, Croatian, Danish, Dutch, English (UK), English (US), Finnish, French, German, Greek, Hebrew, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese (Brazil), Portuguese (Portugal), Romanian, Russian, Spanish, Slovak, Swedish, Thai, Turkish, Ukrainian
User Interface (Room Mode)	Chinese (Simplified), Chinese (Traditional), English (US), German, French, Italian, Hebrew, Japanese, Norwegian, Spanish, Swedish

Memory

RAM	1 GB
Storage	8 GB SD Card

Wired Communications

Ethernet	100/1000 Mbps, autoswitching, autonegotiating, autodiscovery, full/half duplex, TCP/IP, UDP/IP, CIP, DHCP, SSL, TLS, SSH, SFTP, IEEE 802.1X, SNMP, NTP, IPv4, HTTPS web browser setup, XiO Cloud® client, IEEE 802.3at compliant
USB	USB 2.0 host

Wireless Communications

Transceiver	IEEE 802.11a/b/g/n/ac Wi-Fi® communications (2.4 or 5 GHz 2-way RF), static IP or dynamic IP via DHCP
Security	64 and 128-bit WEP, WPA, WPA2-PSK with TKIP and AES, and WPA2 Enterprise
Range	Up to 45 ft (13.7 m) typical ⁵

Connectors

LAN PoE	(1) 8-pin RJ-45 connector, female, with 2 LED indicators; 100BASE-TX/1000BASE-T Ethernet port; Power over Ethernet (PoE) compliant; Green and yellow LEDs indicate Ethernet port status
24V 0.75A	(1) 2.1 x 5.5 mm DC power connector; 24VDC power input; PW-2407WU model power pack ⁴
USB C	(1) USB Type-C® connector, female; USB 2.0 host port; For future use with supported Crestron accessories

Power

PoE (Power over Ethernet)	IEEE 802.3at Type 1 Class 2 (6.49 W) compliant, Compatible with IEEE 802.3at compliant Ethernet switch or third-party PoE-compliant PSE
Power Pack	Input: 100–240VAC, 50/60 Hz; Output: 0.75A @ 24VDC; Model: PW-2407WU ⁴
Power Consumption	3 W (typical)

Environmental

Temperature	32 to 104°F (0 to 40°C)
Humidity	10% to 90% RH (noncondensing)

Construction

Housing	Plastic, textured black finish, edge-to-edge glass with black surround
Mounting	Wall and surface mount, retrofit mounting bracket, table top mount, and multisurface mount options available ⁴

Dimensions

Height	3.95 in. (100 mm)
Width	3.95 in. (100 mm)
Depth	1.33 in. (34 mm)

Dimensions do not include any mounting accessories

Weight

5.4 oz (155 g)

Compliance

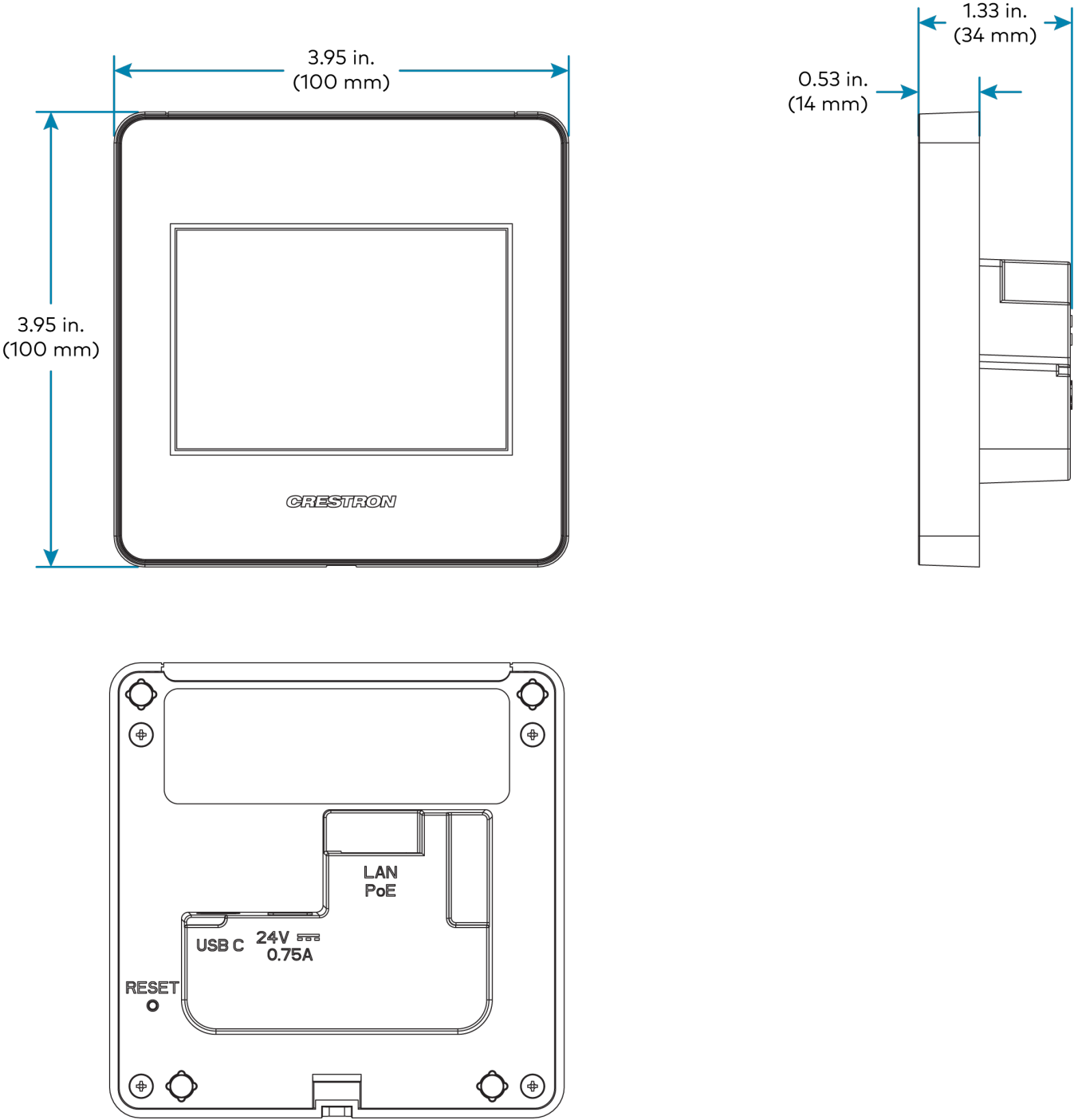
Regulatory Model: M202138001

FCC Part 15 Class B digital device, IC, CE, Intertek® Listed for US & Canada

Notes:

1. Actual functionality and on-screen appearance varies based on which scheduling app is in use and how the app is set up. The functionality described in this spec sheet generally refers to the Crestron Scheduling app. Each third-party provider determines the functionality and appearance of their respective app. Refer to each provider's website for more information.
2. Refer to the firmware release notes for a list of all scheduling apps that are supported by that firmware release.
3. 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. Third-party apps typically run on the TSS-470E as they do on a tablet device. The TSS-470E runs only one app at a time, which is selected using the XiO Cloud® service or the web configuration interface. Only the apps approved and delivered by Crestron can run on the TSS-470E. The TSS-470E cannot be interfaced with a control system and cannot be custom programmed for any other functionality. An internet connection is required.
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.

Dimension Drawings



TSS-470E-MSMK-B-T Specifications

Product specifications for the TSS-470E-MSMK are provided below.

Product Specifications

Construction

Housing	Plastic, textured black finish
Surface Mounting	Peel-and-stick adhesive mounting to glass or other flat, smooth surface

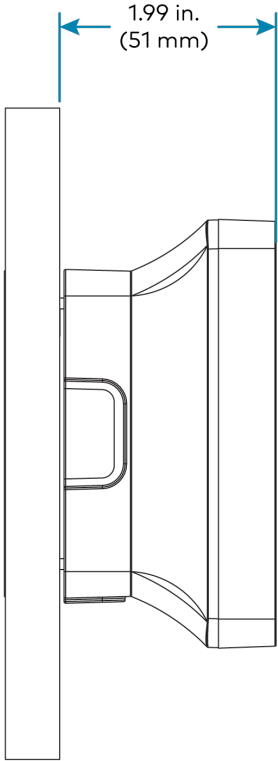
Dimensions

Height	3.95 in. (100 mm)
Width	3.95 in. (100 mm)
Depth	1.80 in. (46 mm); 1.99 in. (51 mm) with touch screen installed

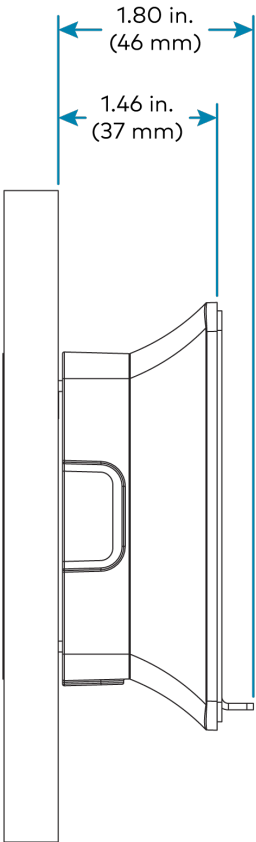
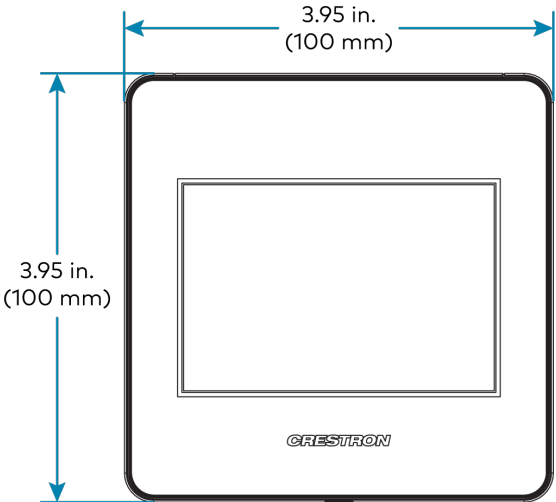
Weight

2.2 oz (64 g)

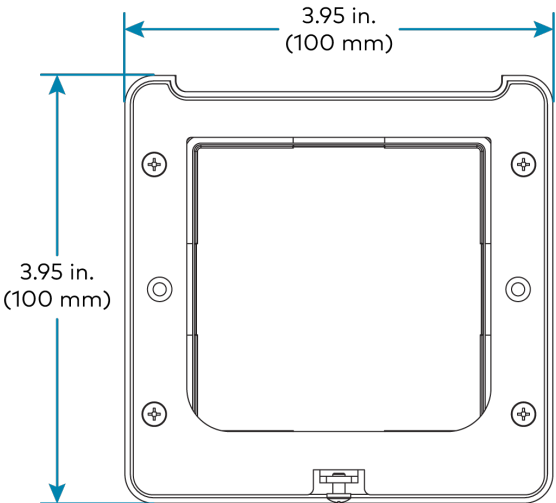
Dimension Drawings



TSS-470E-MSMK-B-T (with touch screen)



TSS-470E-MSMK-B-T (without touch screen)



TSS-470E-RMB-2G Specifications

Product specifications for the TSS-470E-RMB-2G are provided below.

Product Specifications

Construction

Metal adapter and mounting plates for installation over a 2-gang U.S. electrical box

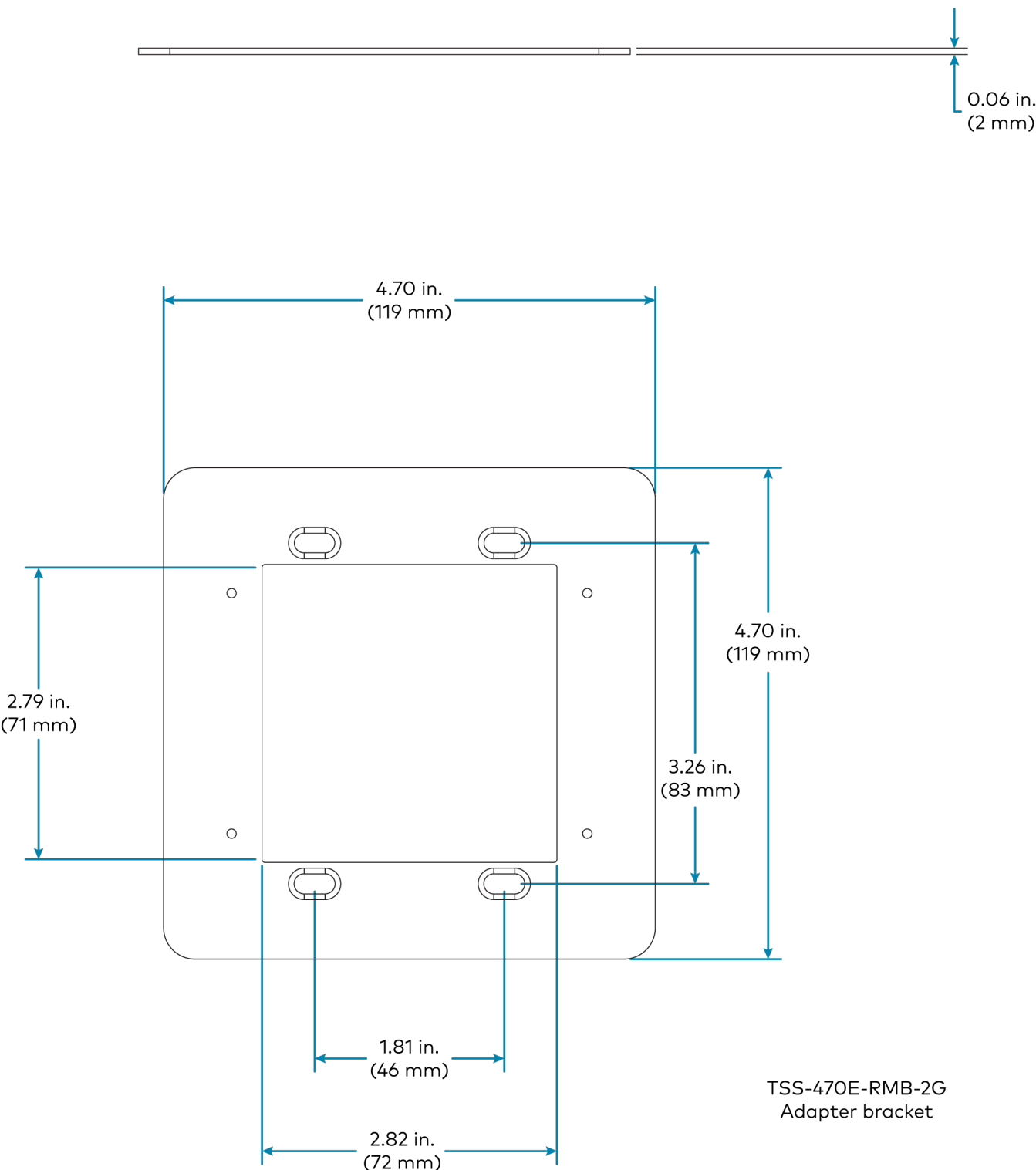
Dimensions

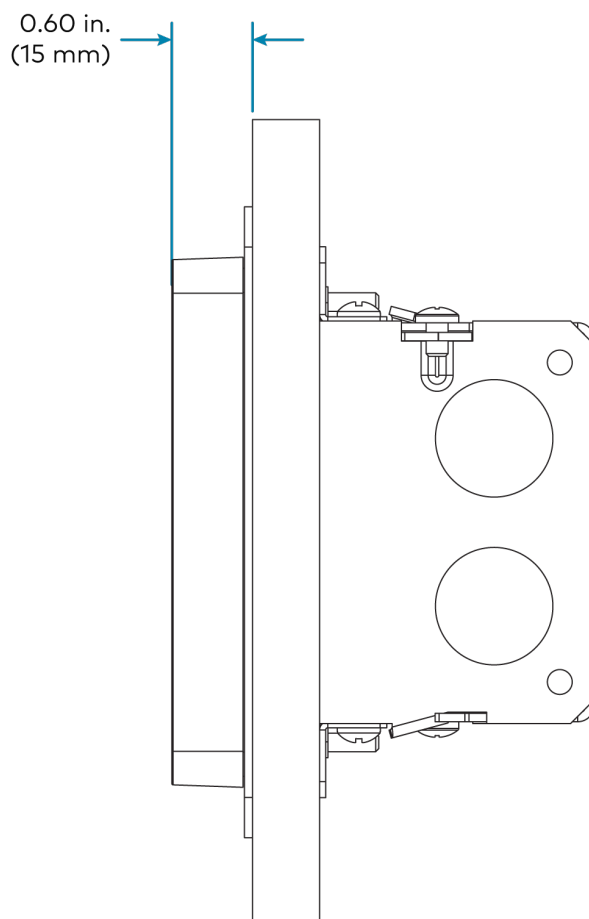
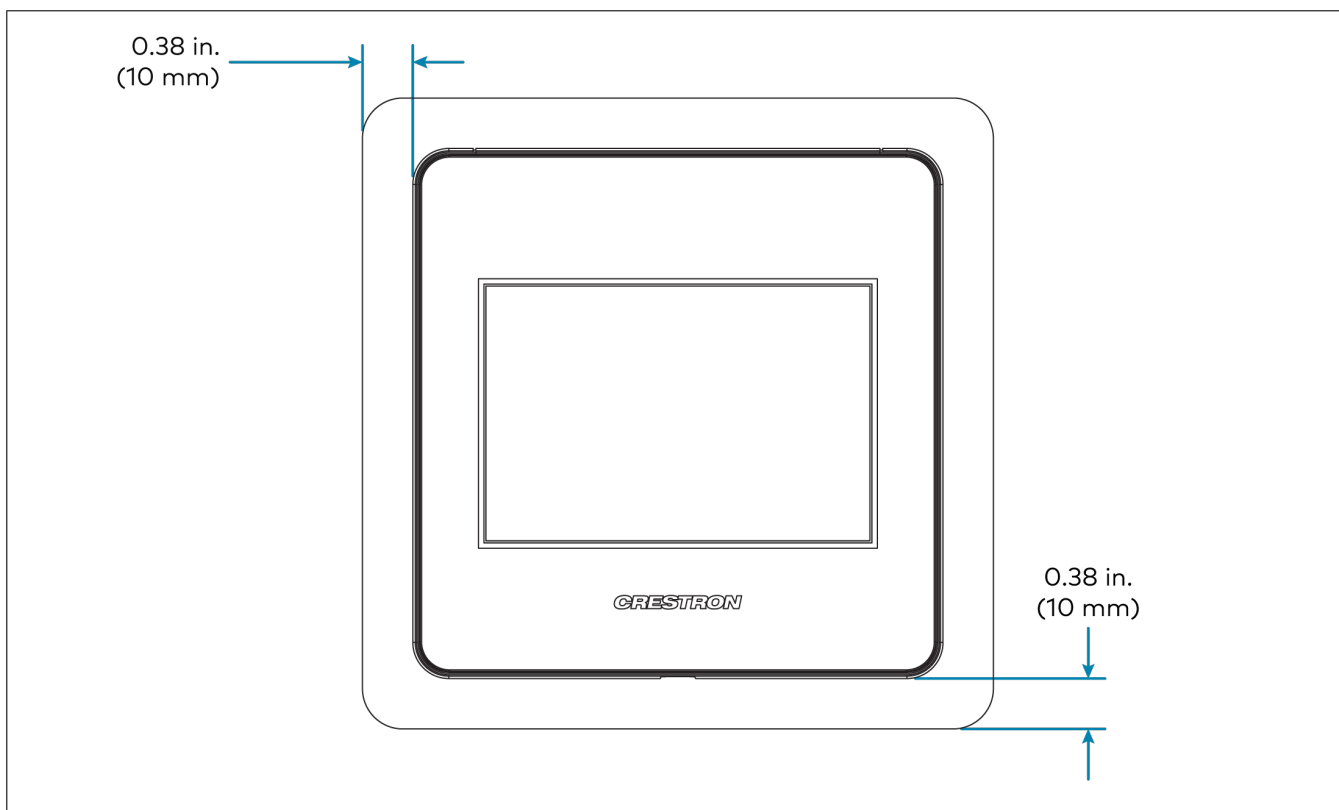
Height	4.70 in. (119 mm)
Width	4.70 in. (119 mm)
Depth	0.06 in. (2 mm)

Weight

5.3 oz (150 g)

Dimension Drawings





TSS-470E-RMB-2G
with TSS-470E-B-T

TSS-470E-TTK-B-T Specifications

Product specifications for the TSS-470E-TTK are provided below.

Product Specifications

Construction

Plastic, enclosure, textured black, 45° fixed operating angle, for freestanding tabletop use

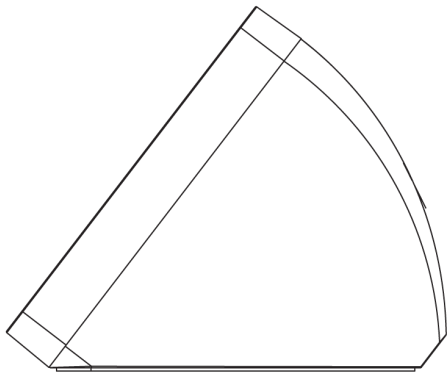
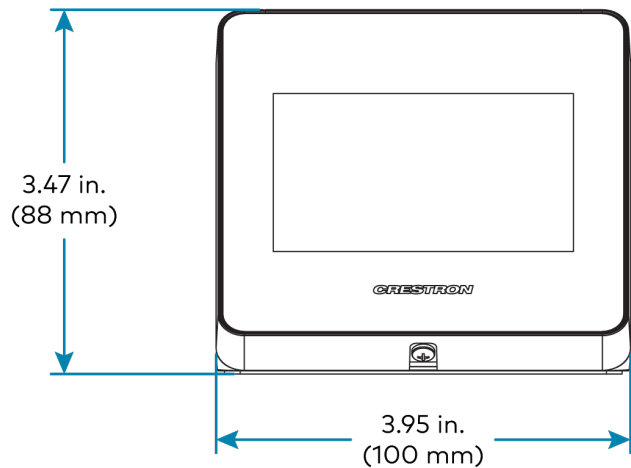
Dimensions

Height	3.47 in. (88 mm)
Width	3.95 in. (100 mm)
Depth	4.19 in. (107 mm)

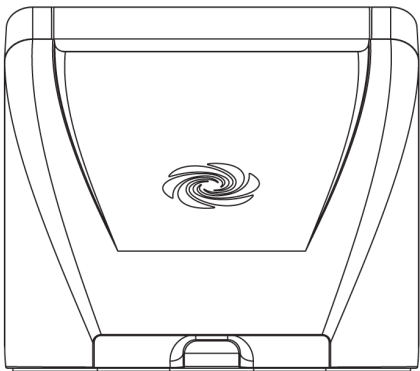
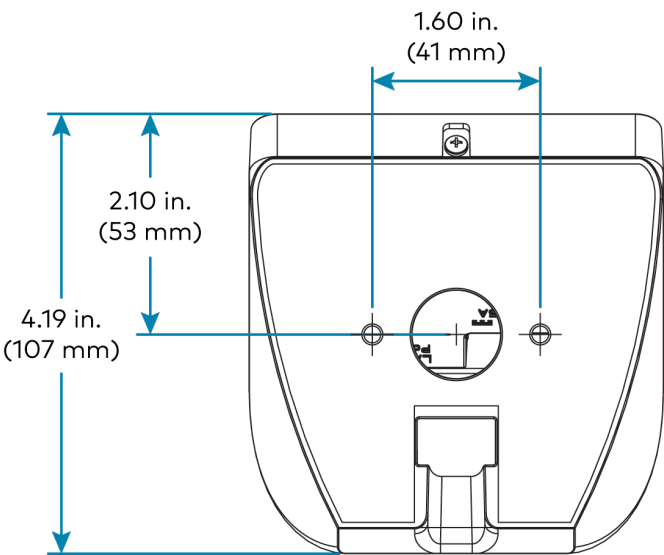
Weight

1.1 lb (500 g)

Dimension Drawings



TSS-470E-TTK-B-T (with touch screen)



TSS-470E-WMK Specifications

Product specifications for the TSS-470E-WMK are provided below.

Product Specifications

Construction

Metal mounting plate with zip rail mounting system

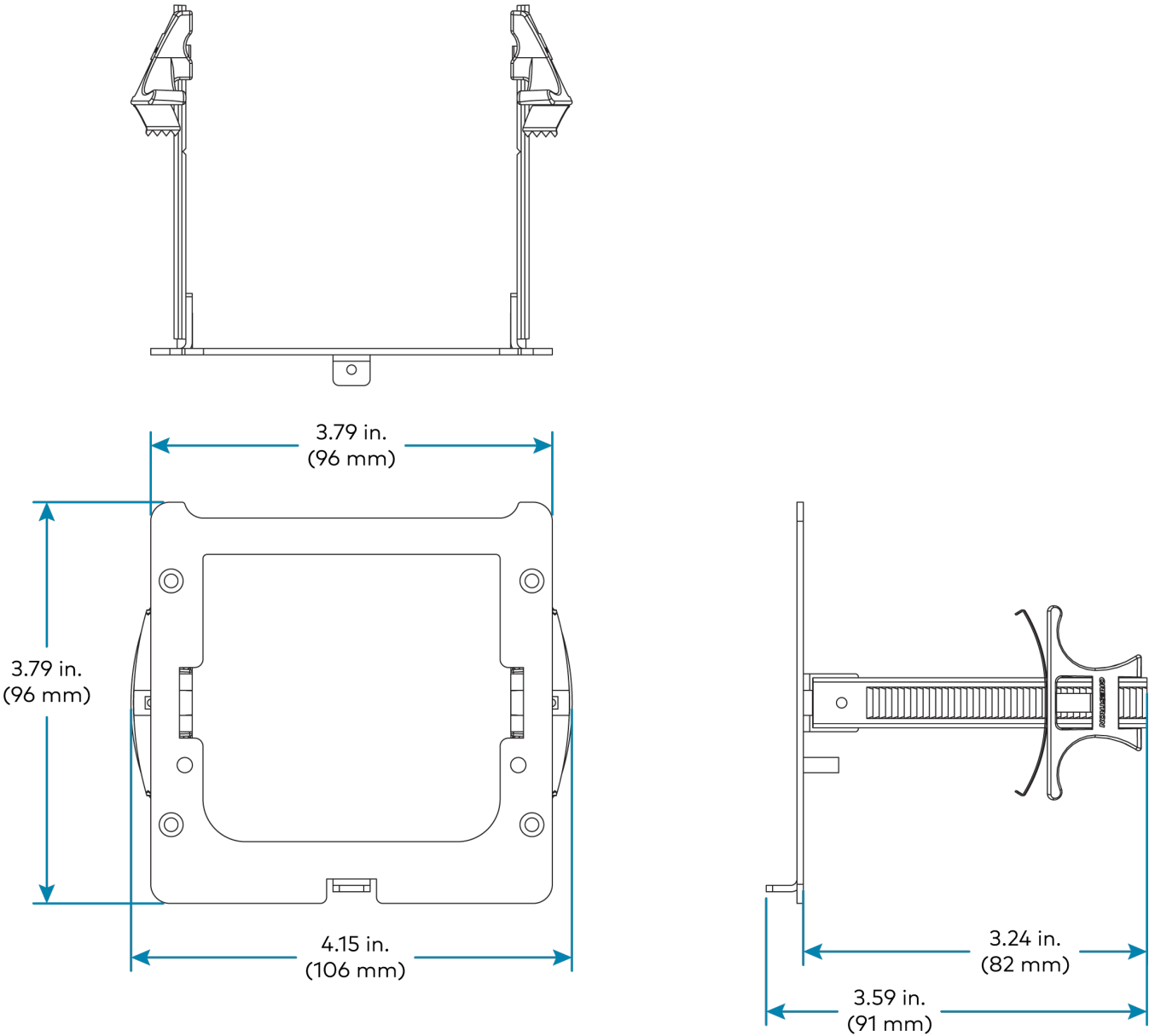
Dimensions

Height	3.79 in. (96 mm)
Width	4.15 in. (106 mm)
Depth	3.59 in. (91 mm)

Weight

3.8 oz (108 g)

Dimension Drawings



Installation

This section provides the following information:

- [TSS-470E Installation](#)
- [TSS-470E-MSMK Installation](#)
- [TSS-470E-RMB-2G Installation](#)
- [TSS-470E-TTK Installation](#)
- [TSS-470E-WMK Installation](#)

TSS-470E Installation

Use the following procedures to install the TSS-470E.

NOTE: The TSS-470E touch screen supports various mounting applications. Installation of the touch screen requires additional mounting hardware (not included):

- The [TSS-470E-MSMK-B-T](#) multisurface mount kit allows the touch screen to be mounted directly to glass, granite, marble, wood paneling, plaster, smooth masonry, or virtually any other flat surface.
- The [TSS-470E-RMB-2G](#) retrofit mounting bracket is used to mount the touch screen over a flush wall-mounted 2-gang U.S. electrical box.
- The [TSS-470E-TTK-B-T](#) tabletop kit provides a tabletop enclosure for the touch screen with a 45° angle tilt.
- The [TSS-470E-WMK](#) wall mount kit allows the touch screen to be installed into existing drywall or paneling for postconstruction applications.

In the Box

Qty.	Description
1	TSS-470E-B-T, 3.5 in. Desk Scheduling Touch Screen

Install the Mounting Hardware

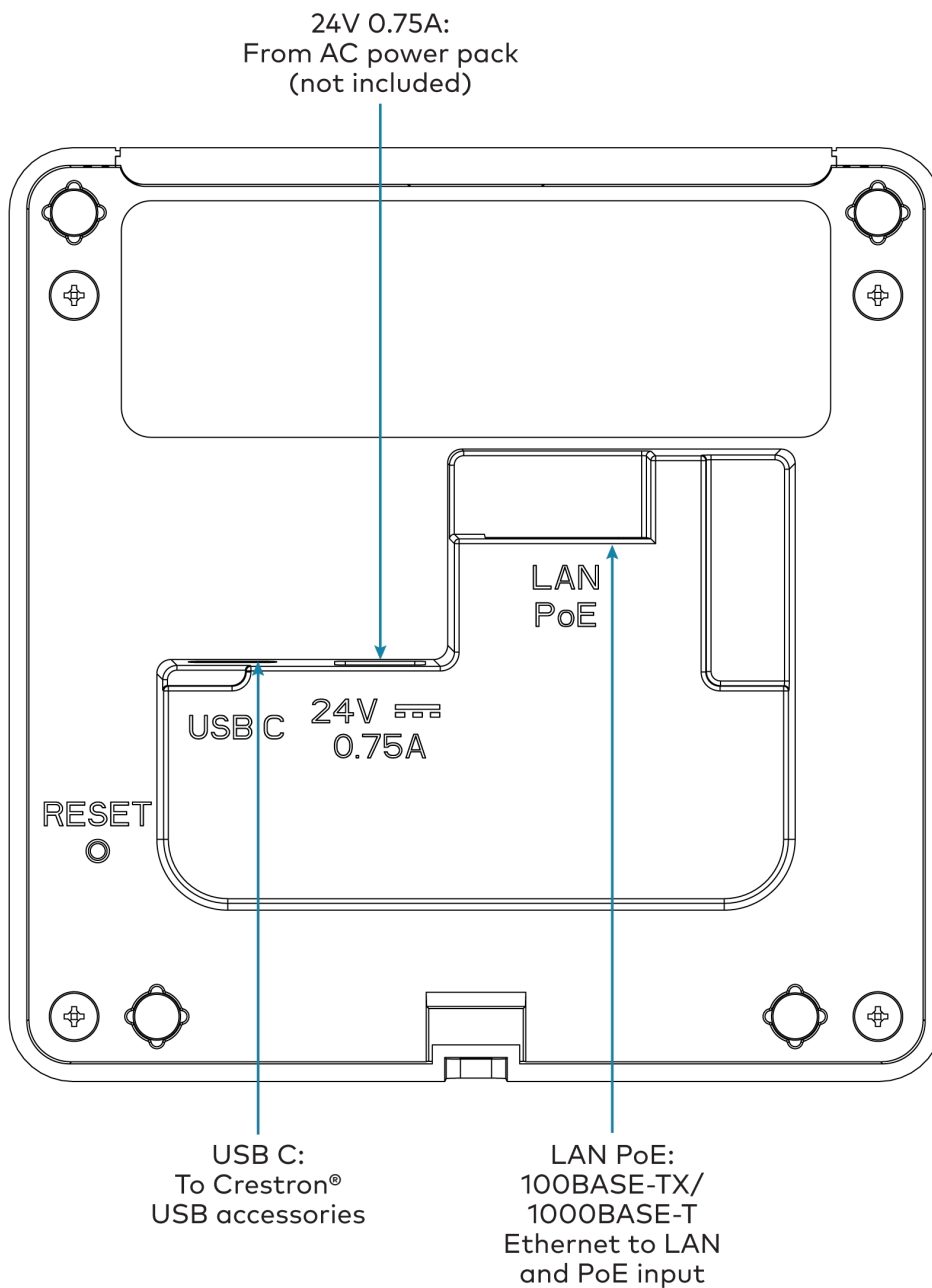
One of the available TSS-470E mounting accessories (not included) must be installed along with the TSS-470E. Refer to the following installation procedures depending on the chosen mounting hardware:

- For applications where the touch screen will be mounted directly to glass, granite, marble, wood paneling, plaster, smooth masonry, or a similar flat surface, refer to [TSS-470E-MSMK Installation on page 30](#).
- For applications where the touch screen will be mounted over a 2-gang U.S. electrical box, refer to [TSS-470E-RMB-2G Installation on page 40](#).
- For applications where the touch screen will be mounted onto a tabletop or similar surface, refer to [TSS-470E-TTK Installation on page 45](#).
- For postconstruction applications where a back box will be installed into drywall, paneling, or a tabletop, refer to [TSS-470E-WMK Installation on page 50](#).

Connect the Touch Screen

Route all necessary cables to the touch screen as described in the installation instructions for the chosen mounting accessory (refer to [Install the Mounting Hardware on page 27](#)). Then, make all connections to the rear of the touch screen as shown in the following image.

NOTE: Do not use an Ethernet cable with a strain relief boot when connecting to the touch screen **LAN PoE** port, as the cable end does not provide sufficient bend radius to support installation with compatible mounting accessories.



Observe the following when connecting the touch screen:

- Use Crestron power supplies for Crestron equipment.
- The touch screen may be powered with a single Ethernet cable or via a 24VDC power supply ([PW-2407WU](#), not included).
- If using PoE (Power over Ethernet), power and data connection is provided to the touch screen by the Ethernet cable. A PoE-capable network switch is recommended (not included).

NOTE: If using a PoE network switch, ensure that the switch is grounded properly. Otherwise, electromagnetic interference may cause the touch screen to experience false touches.

- Apply power after all connections have been made.

TSS-470E-MSMK Installation

Use the following procedures to install the TSS-470E-MSMK.

In the Box

Qty.	Description
1	TSS-470E-MSMK-B-T, Multisurface Mount Kit for TSS-470E
Additional Items	
1	Template, Rear Housing (4535585)
1	Grommet, Rubber (2061467)
1	Screw, 4-40 x 3/16 in., Torx®, Black (2061048)
1	Screw, 4-40 x 3/16 in., Phillips, Black (2007148)
1	Label, Black (4535584)

Install the MSMK

Use the following procedures to install the MSMK onto a flat pane of glass or similar smooth surface (such as granite, marble, plaster, or smooth stone and masonry). The adhesive on the MSMK mounting bracket attaches permanently to the surface.

The following materials (not included) are required for this installation:

- Level
- Masking tape
- Phillips screwdriver
- Isopropyl alcohol (minimum 70%)

CAUTION: Observe the following points to ensure the MSMK properly bonds to the mounting surface. Failure to properly bond the MSMK to the mounting surface could cause the MSMK to detach after installation.

- Use isopropyl alcohol (minimum 70%) to clean the mounting surface. Other surface cleaning products can leave a film that will prevent the adhesive from properly bonding to the mounting surface.
- Use a new, clean nonlinting cloth to apply the isopropyl alcohol. The cloth should not have been used with any other cleaning product to ensure that it does not leave a film on the mounting surface.
- Allow the isopropyl alcohol to air dry on the mounting surface for at least one minute before applying adhesive. Do not dry the surface with a cloth prior to applying adhesive.
- Do not apply adhesive to the mounting surface in temperatures below 65°F (19°C).

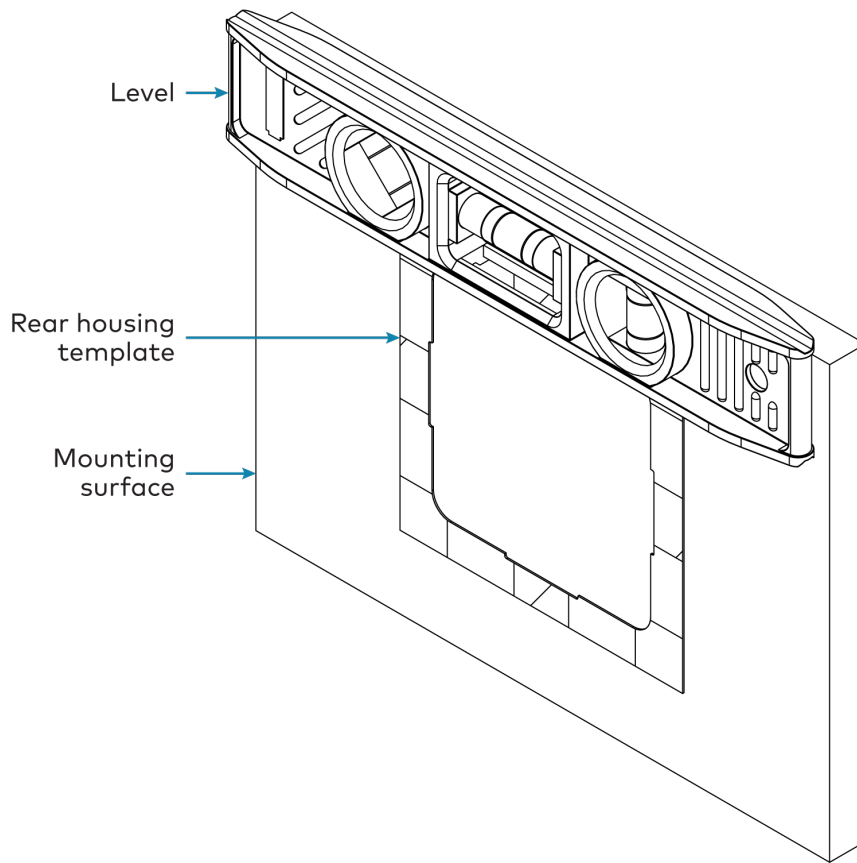
Position the Rear Housing Template

An overlay template for the rear housing is provided with the MSMK to help ensure that it remains level during installation.

To position the rear housing template:

1. Clean and dry the mounting surface thoroughly. Refer to the caution statements at the beginning of [Install the MSMK on page 30](#) for important cleaning and drying notes.
2. Select a mounting location for the MSMK, and determine whether raceway (not included) will enter the MSMK from the top, bottom, left, or right cutout.

3. Use a level and masking tape to attach the included rear housing template to the surface at the chosen location. Ensure the template is level before proceeding.



Install Raceway

Raceway (not included) can be installed on a nearby smooth surface to conceal cables running to the touch screen from the floor, ceiling, or an adjacent wall, pillar, or mullion.

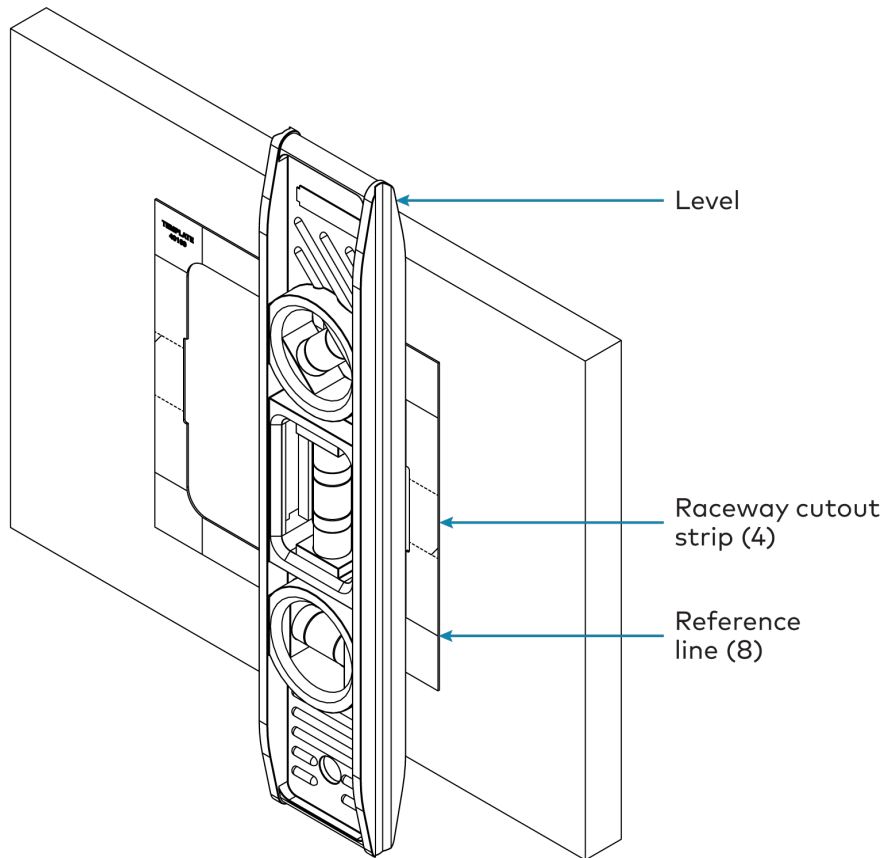
CAUTION: Raceway must be installed prior to installing the MSMK, and the location of the raceway cannot be changed once the MSMK is installed.

To install raceway for use with the touch screen:

1. Determine whether the raceway will enter the MSMK from the top, bottom, left, or right side.
2. Create a raceway cutout by removing the appropriate perforated strip from the rear housing template.

For example, if the raceway will enter the MSMK from the left side, remove the left perforated strip from the template.

3. Cut the raceway to the required length using the corresponding raceway cutout and reference lines in the template. The end of the raceway that will enter the MSMK can also be cut to a specific shape for a finished appearance.

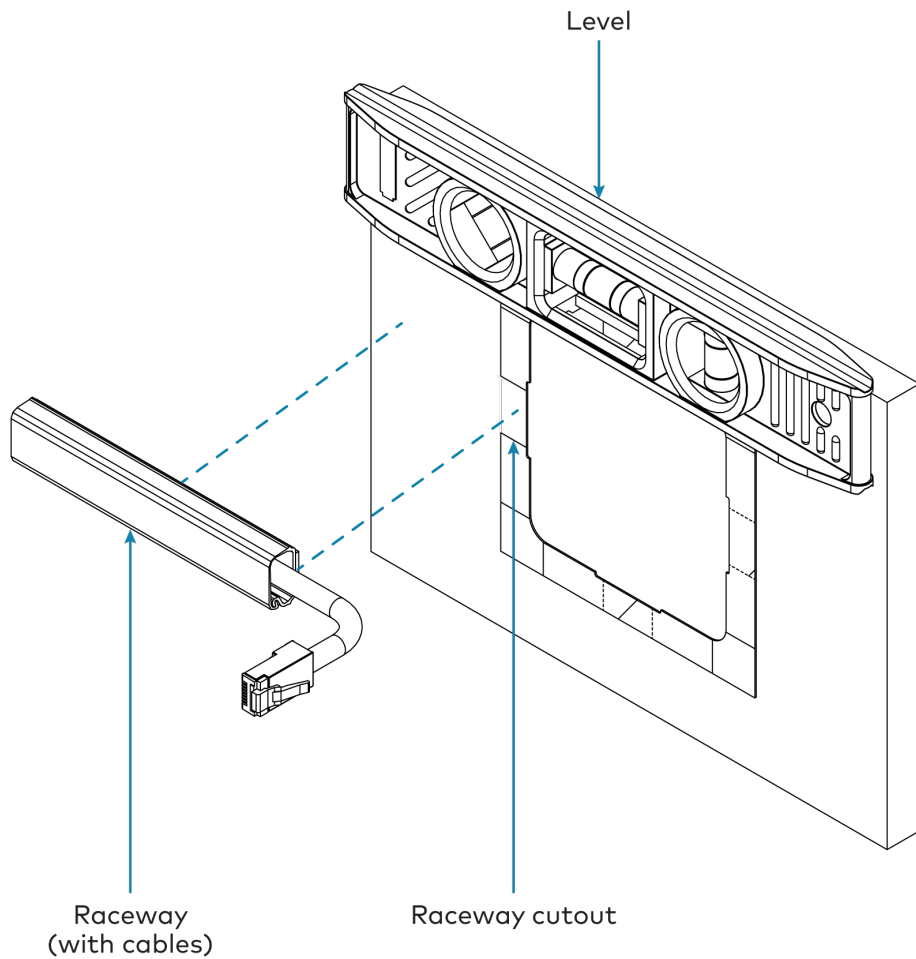


4. Insert all necessary cables into the raceway.

NOTE: Do not use an Ethernet cable with a strain relief boot when connecting to the touch screen, as the cable end does not provide sufficient bend radius to support installation with the MSMK.

5. Remove the protective liner from the rear of the raceway.

6. Position the raceway on the mounting surface using the corresponding raceway cutout and reference lines in the template. Ensure the raceway is level prior to adhesion.



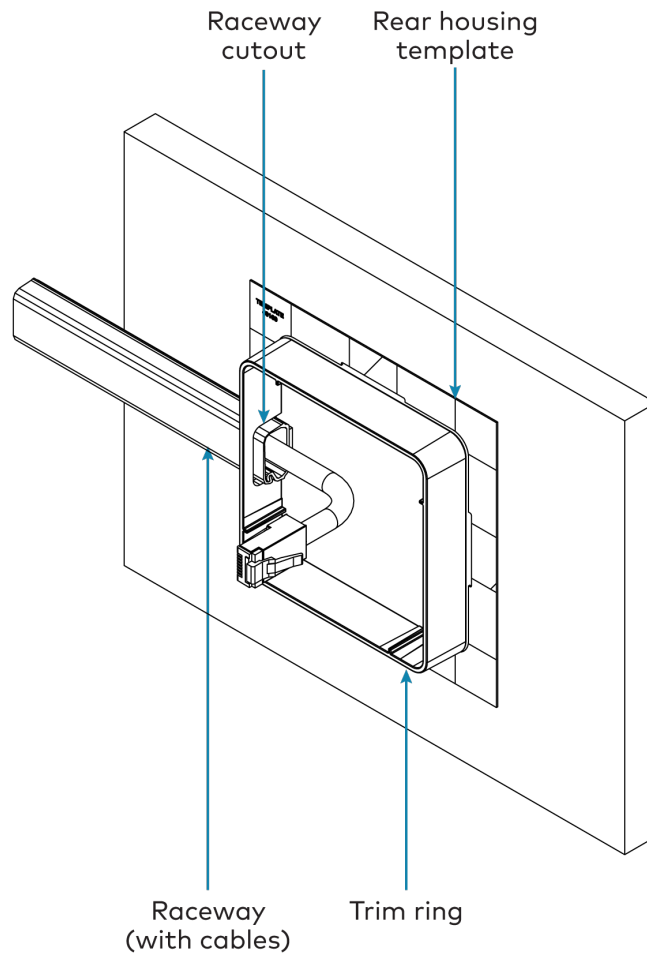
7. Press the raceway against the mounting surface for at least 30 seconds to ensure the adhesive bonds to the surface.
8. Attach any elbows, couplings, and additional cable channels to the mounting surface as necessary.

Attach the Rear Housing

To attach the MSMK rear housing to the mounting surface:

1. Remove the plastic trim ring from the MSMK rear housing. The MSMK ships with the trim ring loosely attached to the rear housing.

2. Orient the trim ring within the center cutout of the rear housing template so that the raceway is aligned with the cutout in the trim ring. Ensure that the trim ring opening is facing toward the mounting surface.



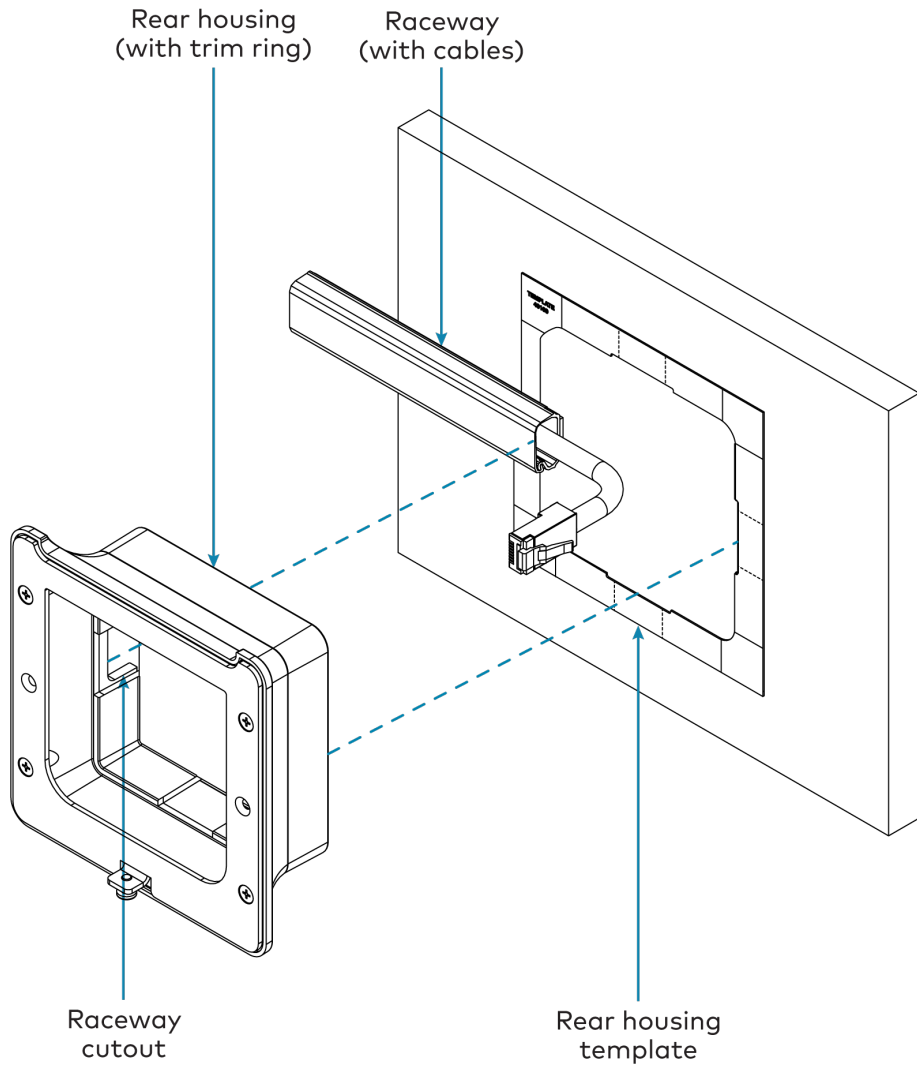
3. Reattach the trim ring to the MSMK rear housing in the orientation determined in step 2.
4. Route all necessary cables out of the raceway and into the center cutout of the rear housing template.
5. Remove the protective liner from the back of the rear housing.

CAUTION: The adhesive on the back of the rear housing is high-strength bond. Once the adhesive comes in contact with a surface, it cannot be removed easily.

6. Hold the rear housing at an angle so that the short, straight edge of the rear housing with the trim ring cutout mates with the end of the raceway. Do not allow the adhesive to come in contact with the surface.
7. Place a level on top of the rear housing.

8. After confirming that the rear housing is level, press it to the mounting surface firmly for at least 30 seconds to ensure the adhesive bonds to the surface.

NOTE: All air bubbles must be smoothed out and eliminated to ensure a complete bond to the surface.



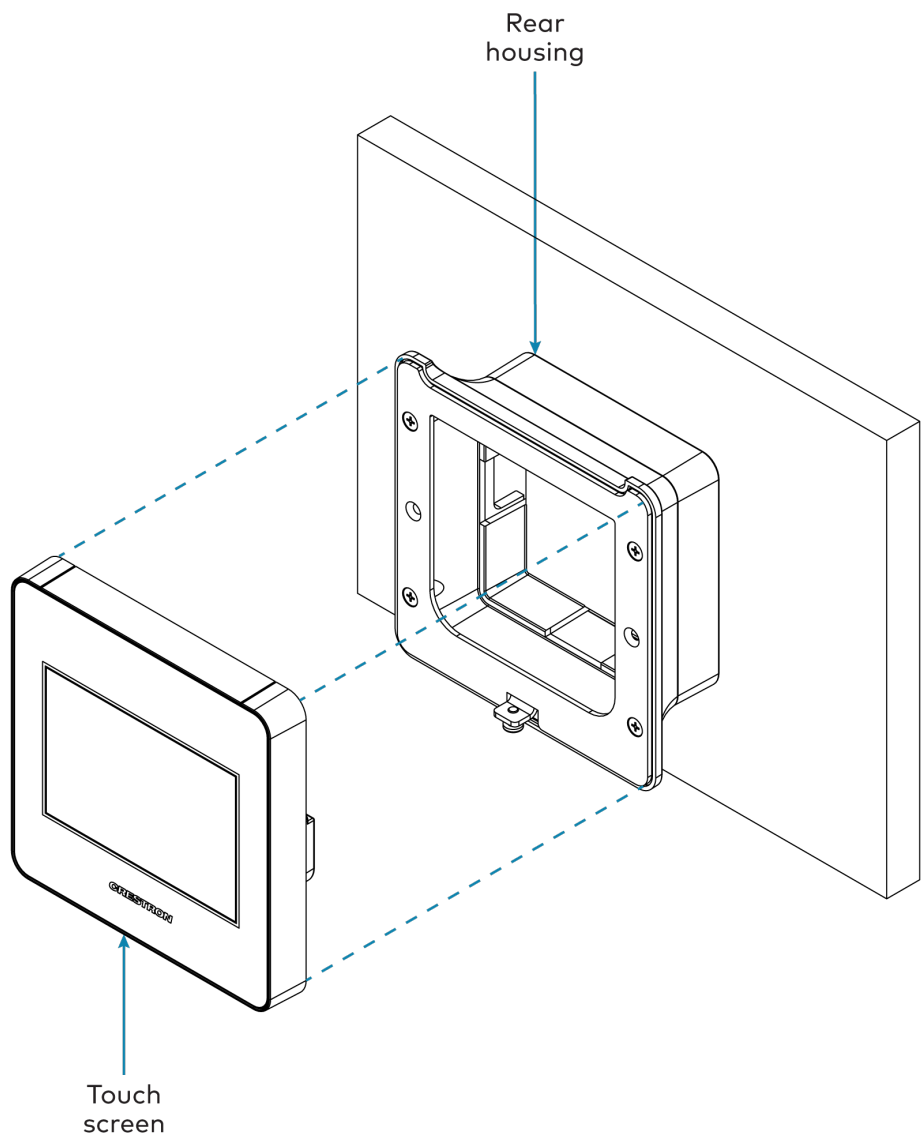
CAUTION: Allow a minimum of one hour (or up to 24 hours for maximum hold) for the adhesive to cure to the bracket and surface before installing the touch screen. Failure to properly cure the bracket to the mounting surface could cause the MSMK to detach after installation.

Attach the Touch Screen

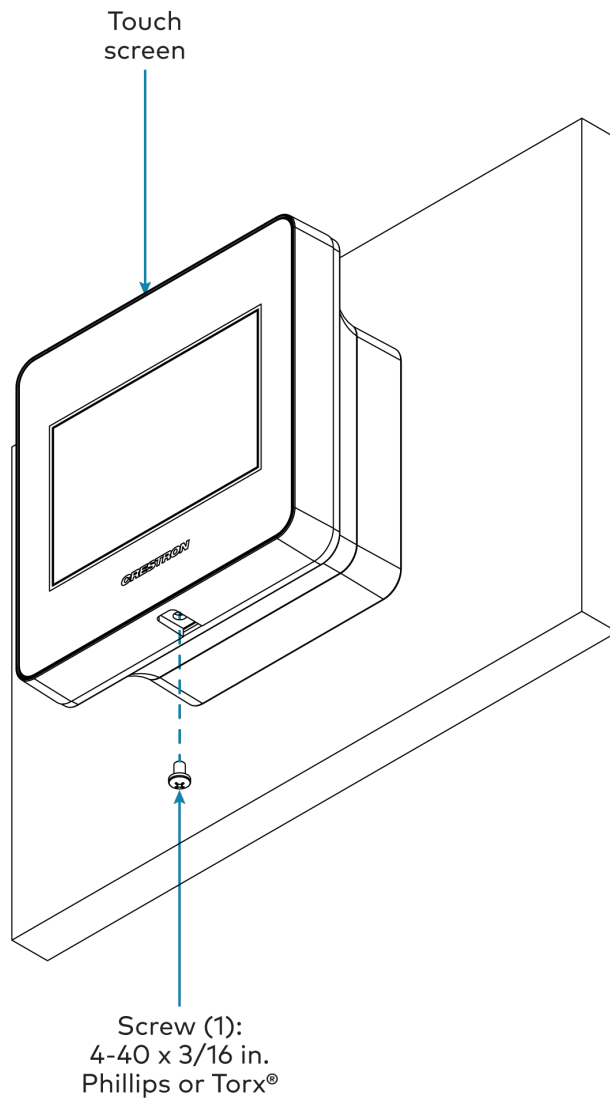
To attach the touch screen to the MSMK:

1. Cut the rear housing template off of the surface and remove any existing tape guides.
2. Connect all cables to the rear of the touch screen.

3. Attach the touch screen to the rear housing, top side first, until the touch screen magnetically snaps into place against the rear housing.



4. (Optional) Screw either the included 4-40 x 3/16 in. Phillips screw or the Torx® security screw into the bottom of the touch screen to secure it to the MSMK.



Attach the Rear Label (Optional)

To provide a finished appearance for installations on glass or other transparent surfaces, install the included rear label on the opposite side of the surface behind the MSMK.

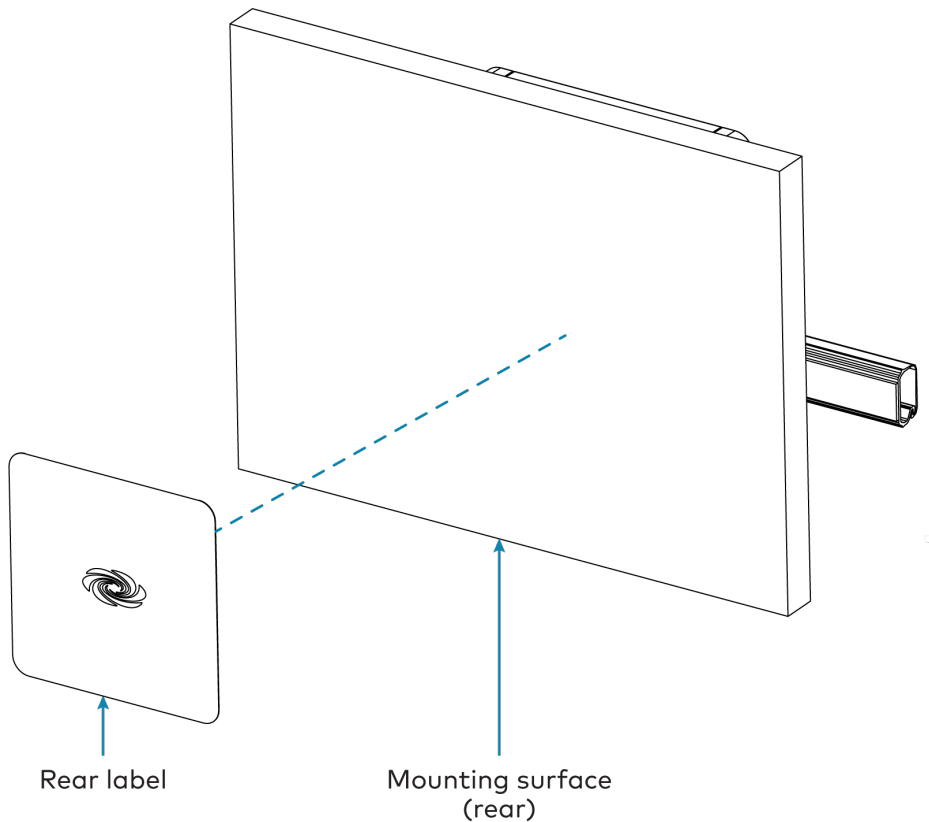
To attach the rear label:

1. Clean and dry the rear of the mounting surface thoroughly. Refer to the caution statements at the beginning of [Install the MSMK on page 30](#) for important cleaning and drying notes.
2. Using a level, tape a horizontal reference line on the glass surface that aligns with the lower edge of the rear housing on the opposite side. Ensure the reference line is level before proceeding.
3. Remove the protective liner from the back of the label.

CAUTION: The adhesive on the back of the rear label is high-strength bond. Once the adhesive comes in contact with a surface, it cannot be removed easily.

4. Hold the rear label at a 45-degree angle to the rear housing, and then align the lower edge of the label with the lower edge of the housing. Do not allow the label adhesive to come in contact with the surface.
5. Once the label is level and aligned with the rear housing, press the label to the mounting surface firmly for at least 30 seconds to ensure the adhesive bonds to the surface.

NOTE: All air bubbles must be smoothed out and eliminated to ensure a complete bond to the surface.



TSS-470E-RMB-2G Installation

Use the following procedures to install the TSS-470E-RMB-2G.

In the Box

Qty.	Description
1	TSS-470E-RMB-2G, Retrofit Mounting Bracket for TSS-470E
Additional Items	
1	Plate, Metal, Adapter (2062352)
1	Plate, Metal, Mounting (2060514)
4	Screw, 4-40 x 3/8 in., Phillips, Black (2007173)
4	Screw, 6-32 x 1 in., Phillips (2051398)
1	Screw, 4-40 x 3/16 in., Torx®, Black (2061048)
1	Screw, 4-40 x 3/16 in., Phillips, Black (2007148)

Install the RMB

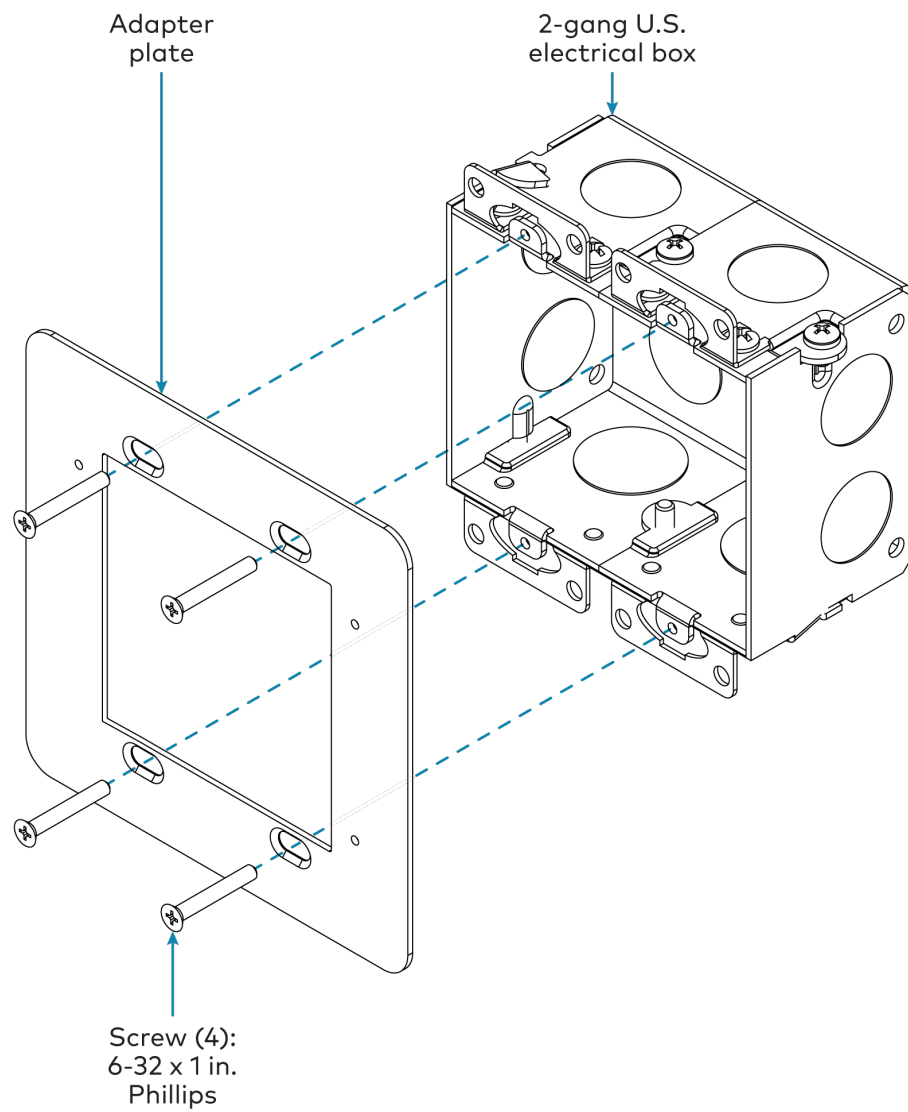
To install the RMB onto a 2-gang U.S. electrical box:

1. Route all necessary cables through the rear of the electrical box.

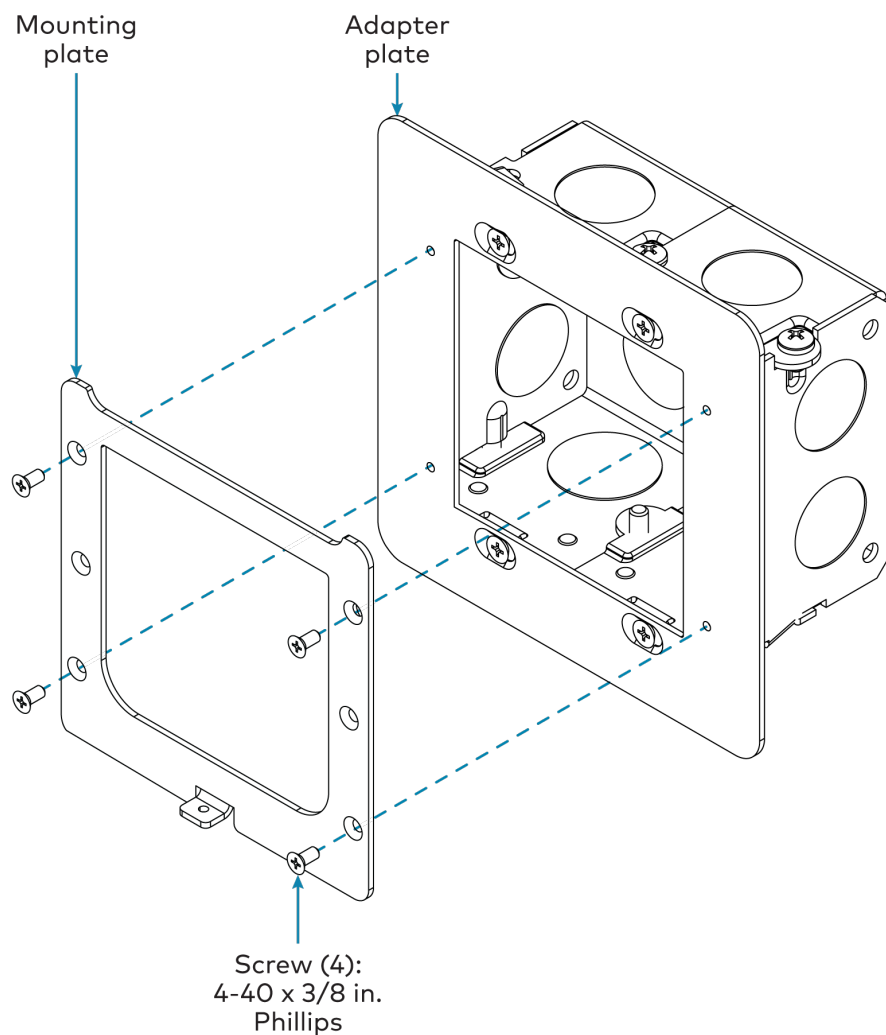
NOTE: Do not use an Ethernet cable with a strain relief boot when connecting to the touch screen, as the cable end does not provide sufficient bend radius to support installation with the RMB.

2. Attach the RMB adapter plate to the electrical box using the four included 6-32 x 1 in. screws.

NOTE: The RMB adapter plate can be painted prior to installation to match the wall surface or surrounding decor.

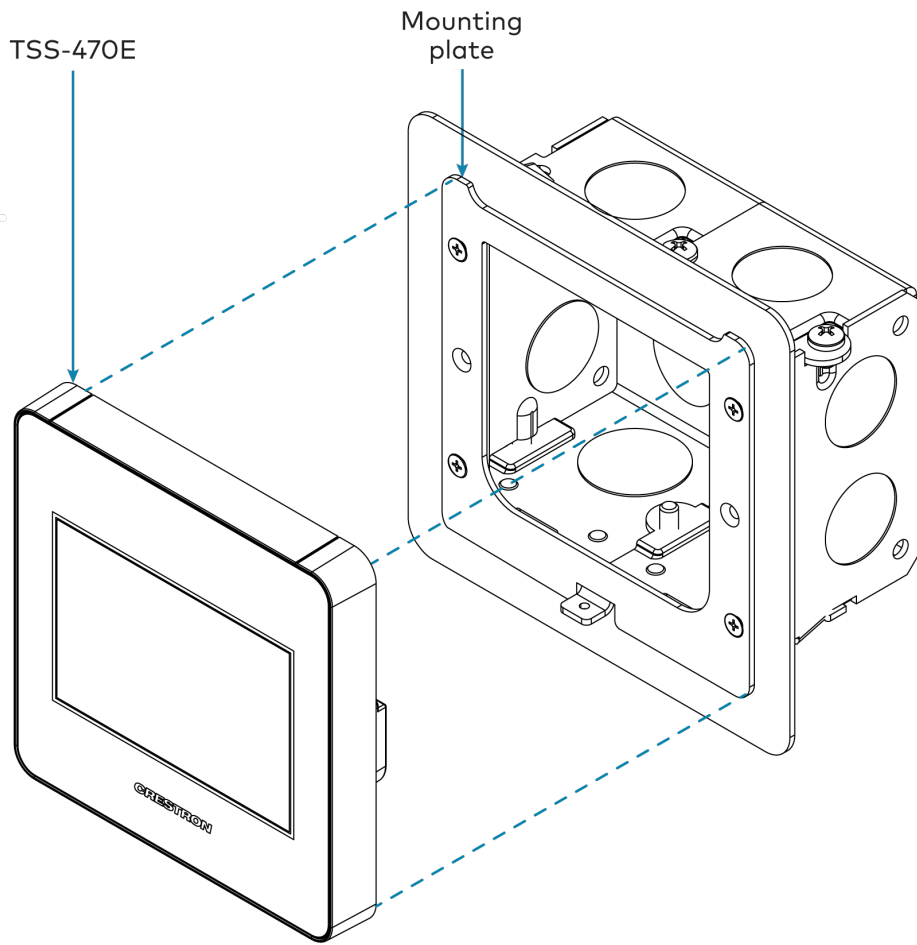


3. Attach the RMB mounting plate to the adapter plate using the four included 4-40 x 3/8 in. screws.

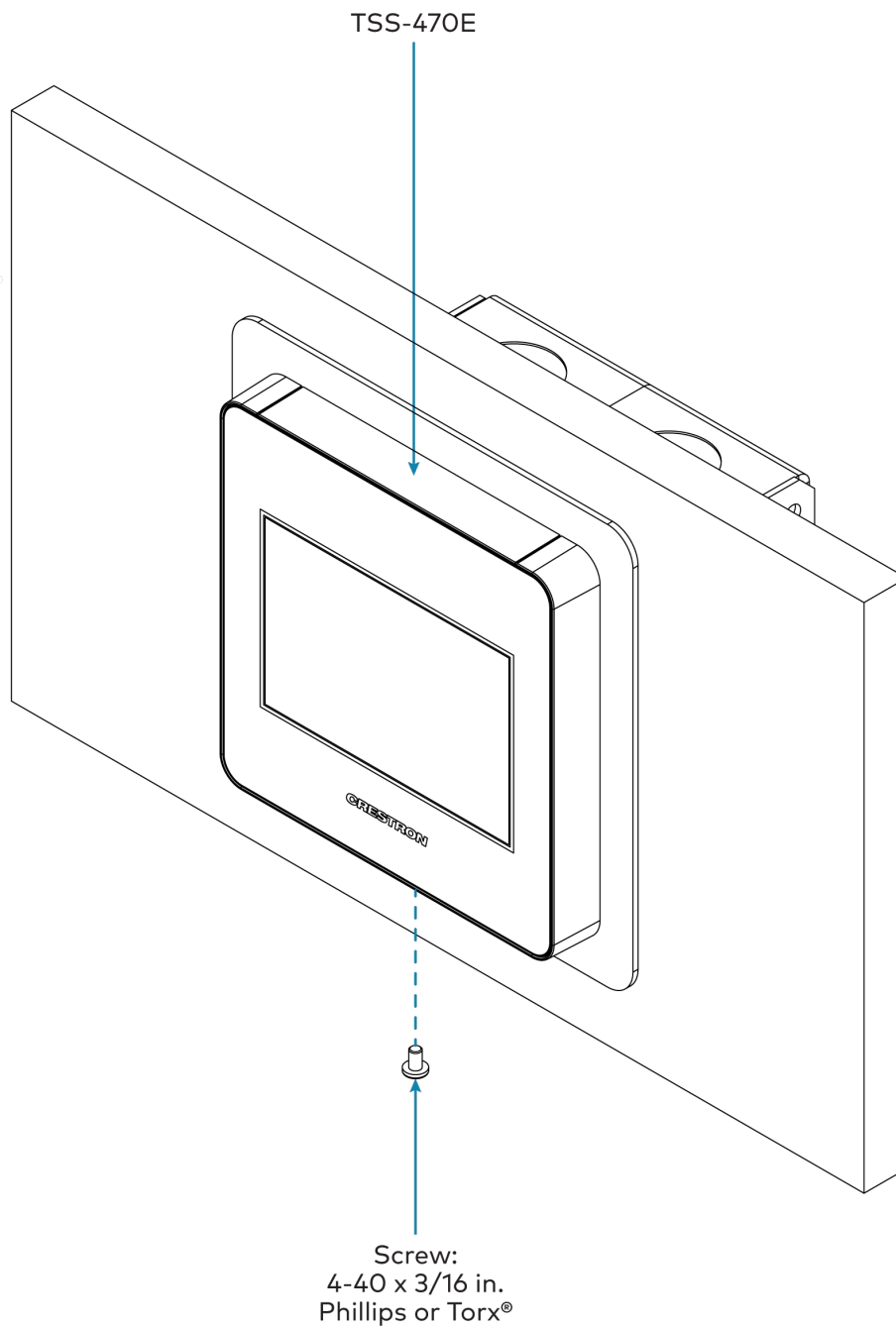


4. Connect all cables to the rear of the touch screen.

5. Attach the touch screen to the RMB mounting plate, top side first, until the touch screen magnetically snaps into place against the mounting plate.



6. (Optional) Screw either the included 4-40 x 3/16 in. Phillips screw or the Torx® security screw into the bottom of the touch screen to secure it to the RMB.



TSS-470E-TTK Installation

Use the following procedures to install the TSS-470E-TTK.

In the Box

Qty.	Description
1	TSS-470E-TTK-B-T, Tabletop Kit for TSS-470E
Additional Items	
1	Grommet, Rubber (2061467)
1	Screw, 4-40 x 3/16 in., Torx®, Black (2061048)
1	Screw, 4-40 x 3/16 in., Phillips, Black (2007148)

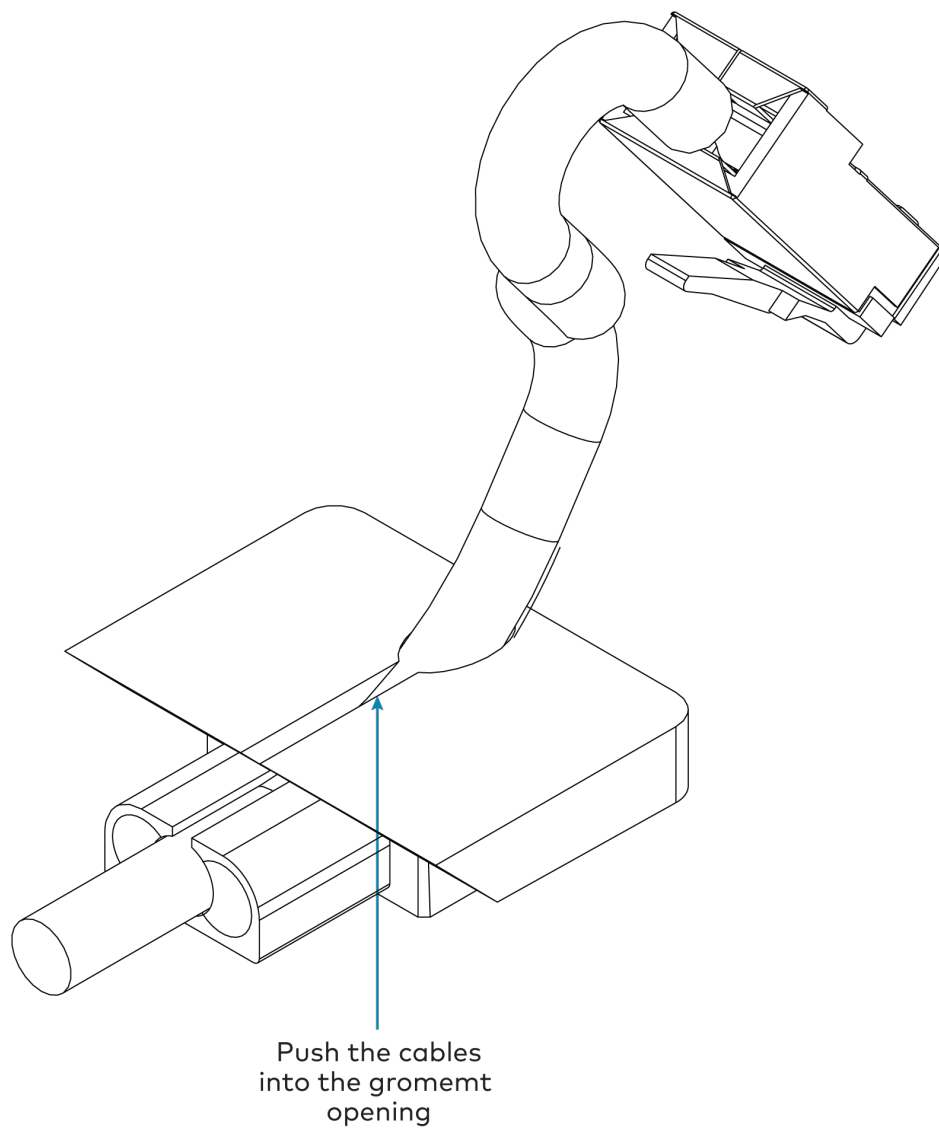
Install the TTK

To install the TTK onto a table or a similar flat surface:

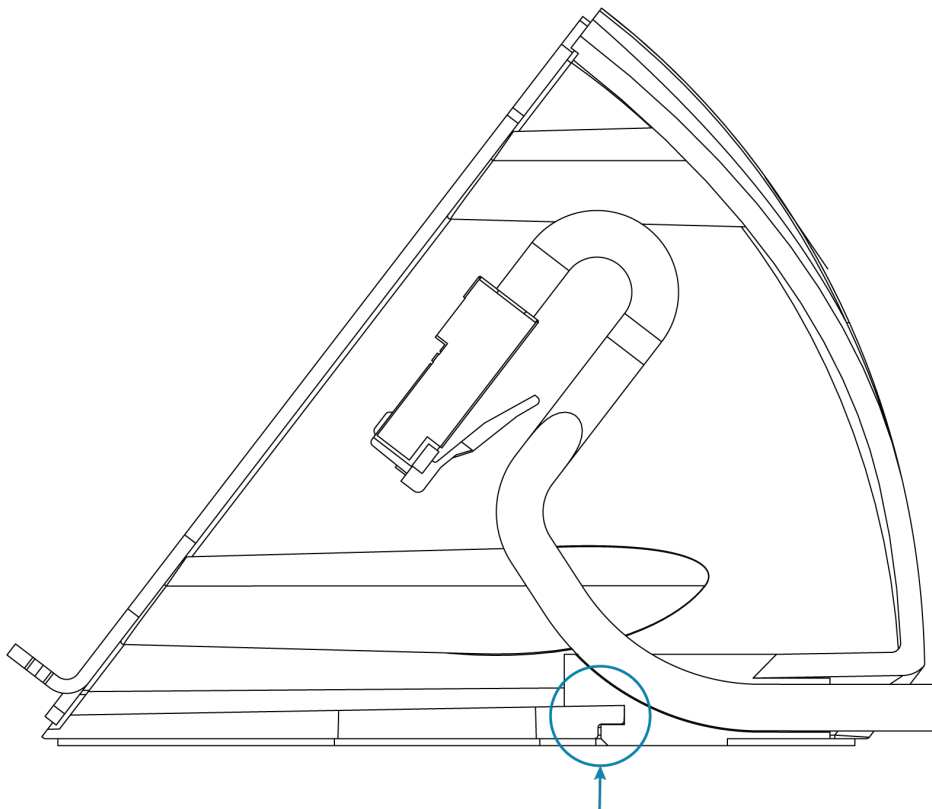
1. Route all necessary cables through the rear opening of the TTK enclosure.

NOTE: Do not use an Ethernet cable with a strain relief boot when connecting to the touch screen, as the cable end does not provide sufficient bend radius to support installation with the TTK.

2. Push the cables into the opening of the included cable grommet as shown in the following image.



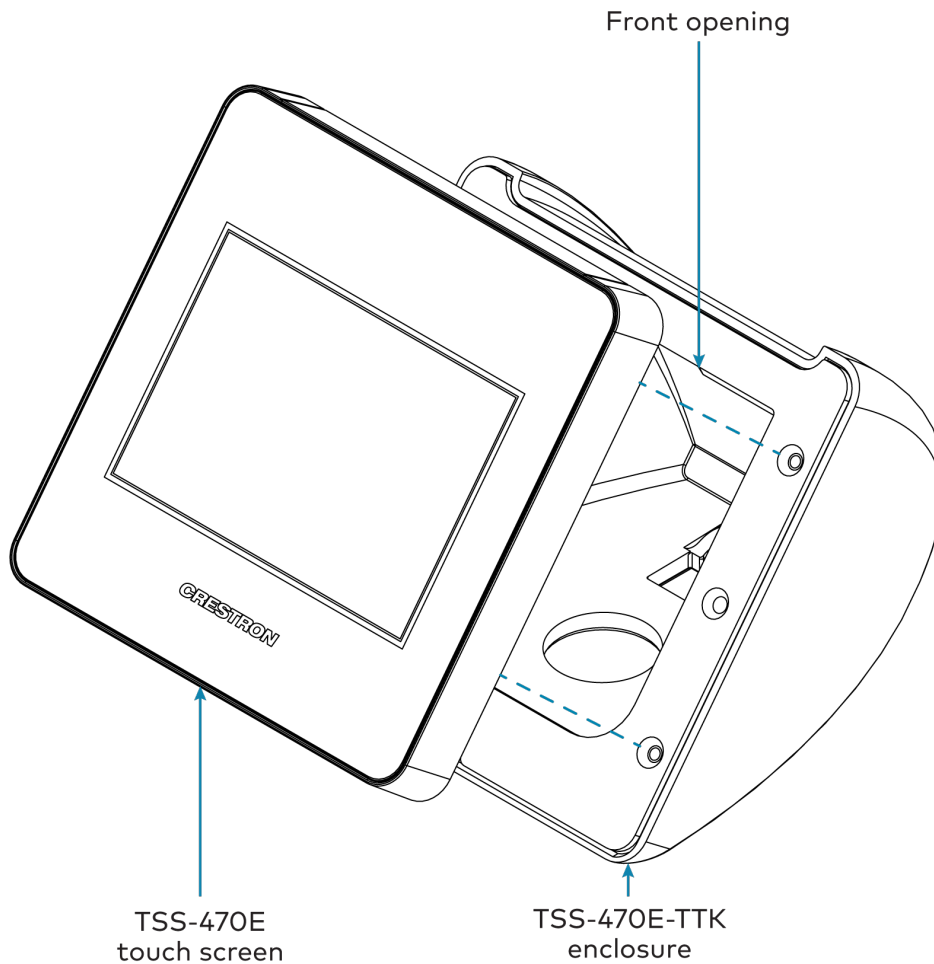
3. Attach the cable grommet to the rear opening of the TTK enclosure so that front slot of the grommet is seated firmly against the bottom rear lip of the TTK enclosure.



Attach the grommet
to the rear lip
of the TTK enclosure

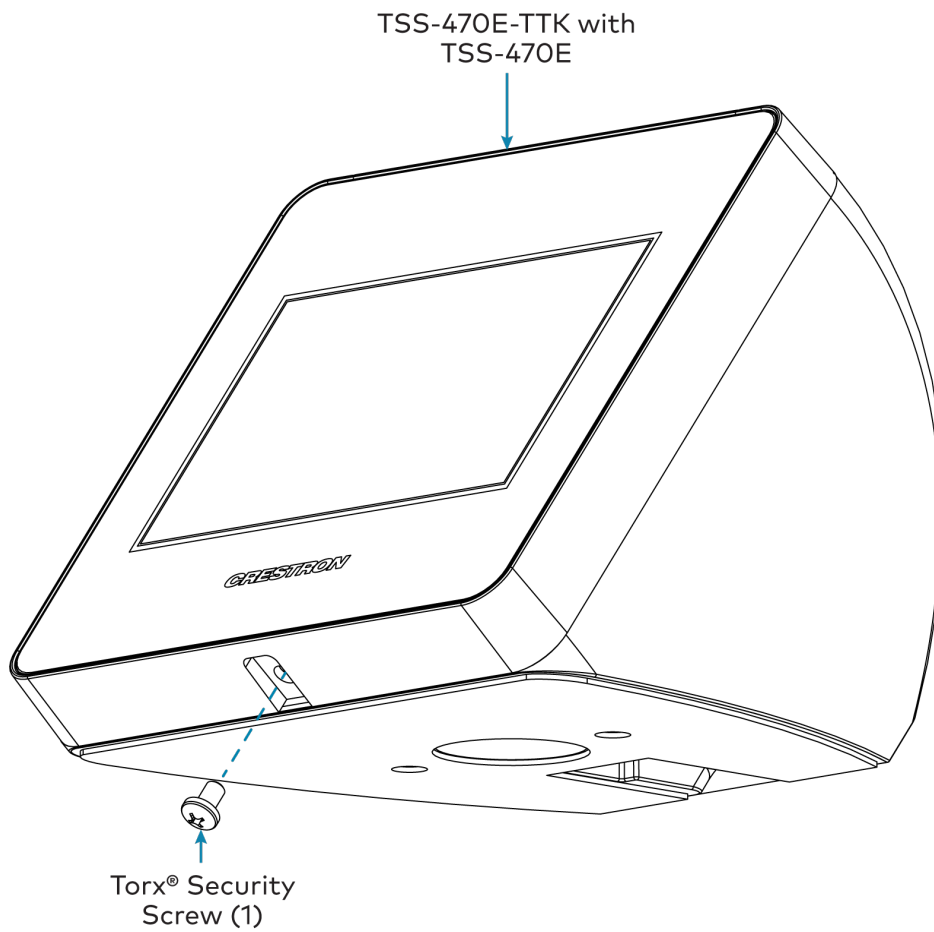
4. Connect all cables to the rear of the touch screen.

5. Attach the touch screen to the front opening of the TTK, top side first, until the touch screen magnetically snaps into place against the rear housing.



6. Route any excess cable length out of the rear of the attached grommet to achieve the desired strain relief.

7. (Optional) Screw either the included 4-40 x 3/16 in. Phillips screw or the Torx® security screw into the bottom of the touch screen to secure it to the TTK.



TSS-470E-WMK Installation

Use the following procedures to install the TSS-470E-WMK.

In the Box

Qty.	Description
1	TSS-470E-WMK, Wall Mount Kit for TSS-470E
Additional Items	
1	Screw, 4-40 x 3/16 in., Torx®, Black (2061048)
1	Screw, 4-40 x 3/16 in., Phillips, Black (2007148)

Install the WMK

Use the following procedures to install the WMK into drywall, paneling, or a tabletop surface.

The following materials (not included) are required for this installation:

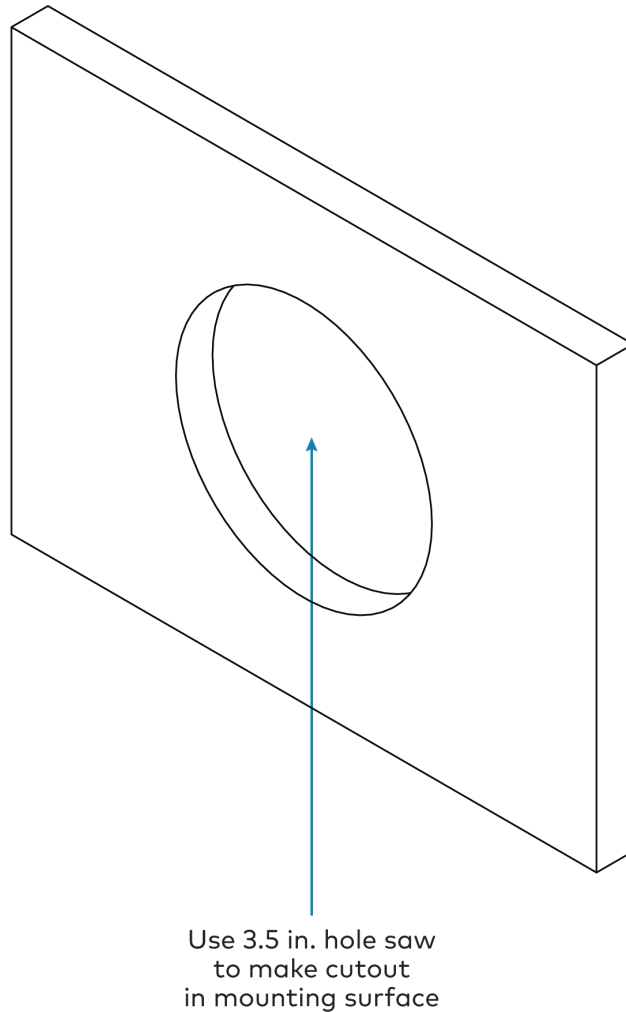
- Level
- 3.5 in. drywall hole saw
- Phillips screwdriver

Prepare the Mounting Surface

To prepare the mounting surface for installation of the WMK:

1. Choose a mounting location that is free of any wiring, studs, or other obstructions. Make a small hole in the surface near the center of the chosen location to verify that it is suitable for mounting.

2. Using a 3.5 in. drywall hole saw, create a cutout in the mounting surface for the WMK.

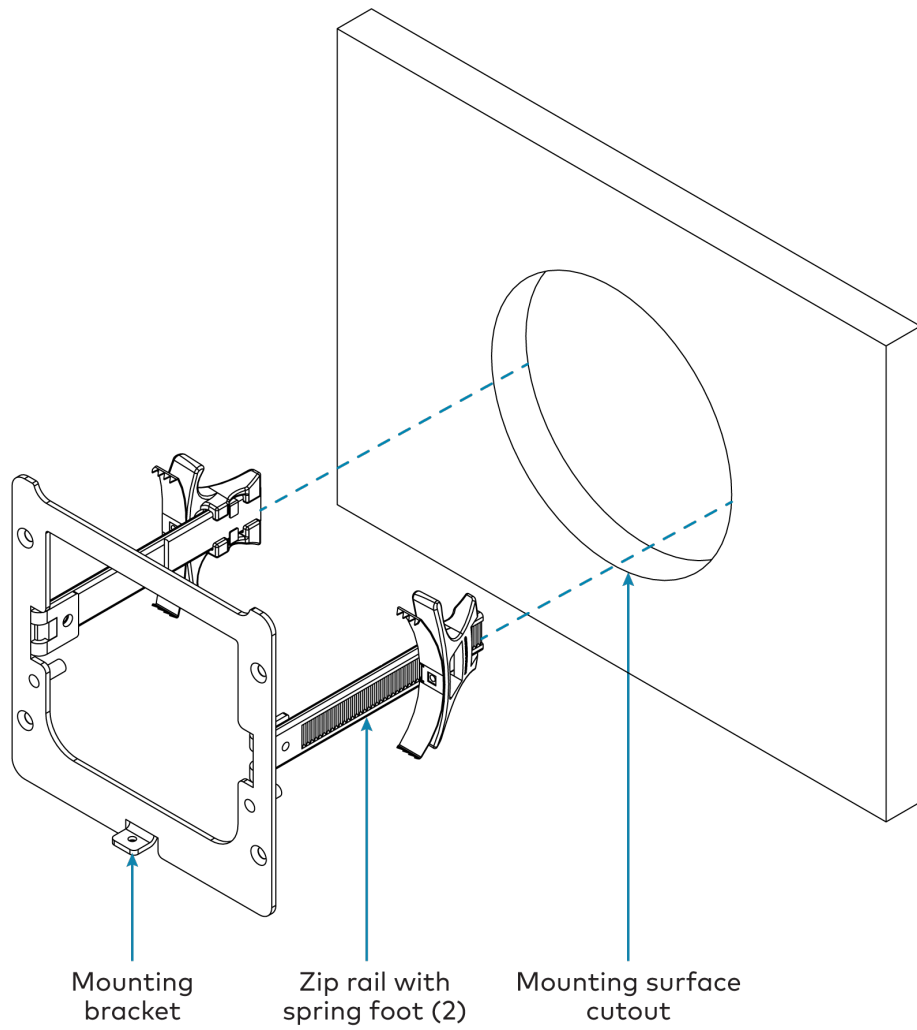


Install the Mounting Bracket

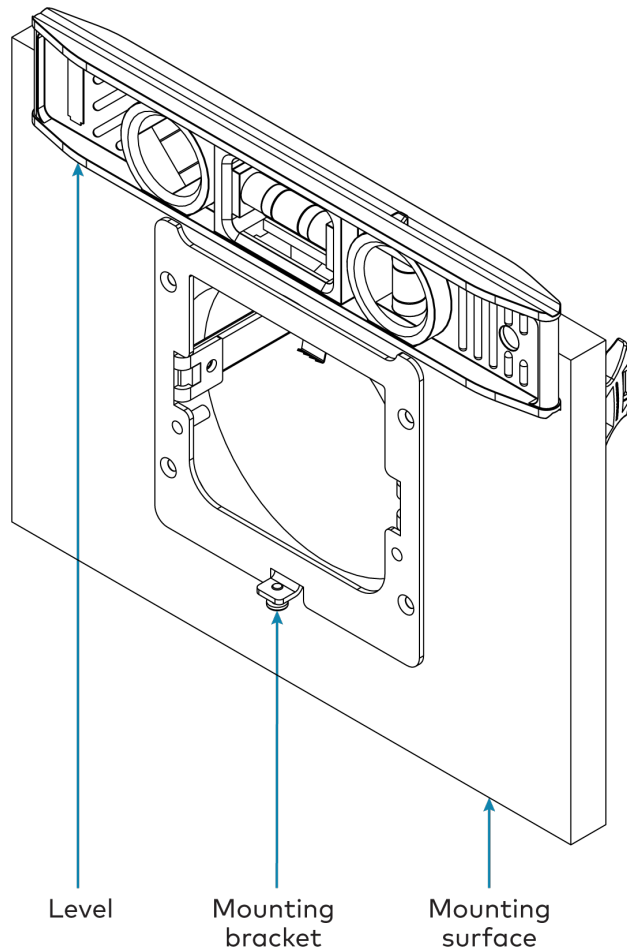
To install the WMK mounting bracket into the mounting surface:

1. Adjust the mounting bracket spring feet so that they are positioned at the rear of their respective zip rails (if they are not located there already). The spring foot position can be adjusted by pressing the release tabs on the inside of each zip rail while pulling the spring foot back. Refer to the following image for the correct spring foot locations.

2. Insert the mounting bracket into the cutout created in [Prepare the Mounting Surface on page 50](#) so that the front of the bracket is flush against the surface and the zip rails and spring feet are seated behind the surface completely. Gently bend the zip rails inward during installation to allow them to pass through the cutout.

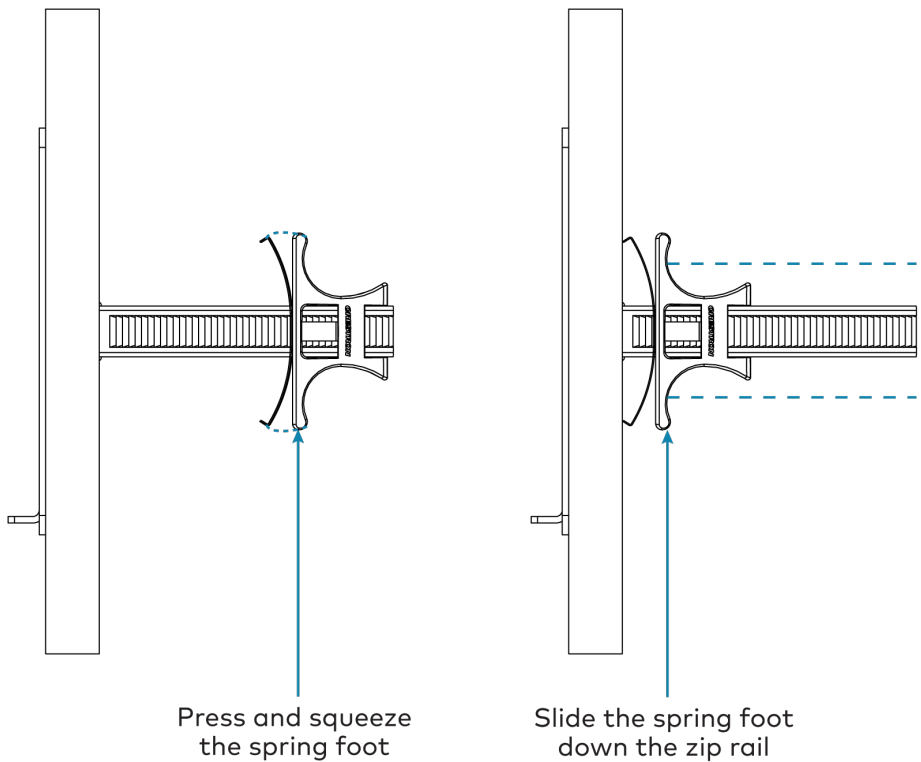


3. Ensure that the mounting bracket is level prior to tightening the spring feet.



4. Press and squeeze each spring foot, then slide it down its respective zip rail until it is firmly seated against the rear of the mounting surface.

CAUTION: Do not overtighten the spring feet to the mounting surface.



NOTES:

- If the mounting bracket needs to be removed or repositioned, press the release tabs on the inside of each zip rail while pulling its attached spring foot back.
- If the WMK will be installed into a table or similar surface with an exposed underside, the zip rails can be trimmed by cutting into the relief located on each rail. Trim the zip rails only after the spring feet have been tightened to the surface.

5. Confirm that the mounting bracket is level before proceeding to attach the touch screen.

Attach the Touch Screen

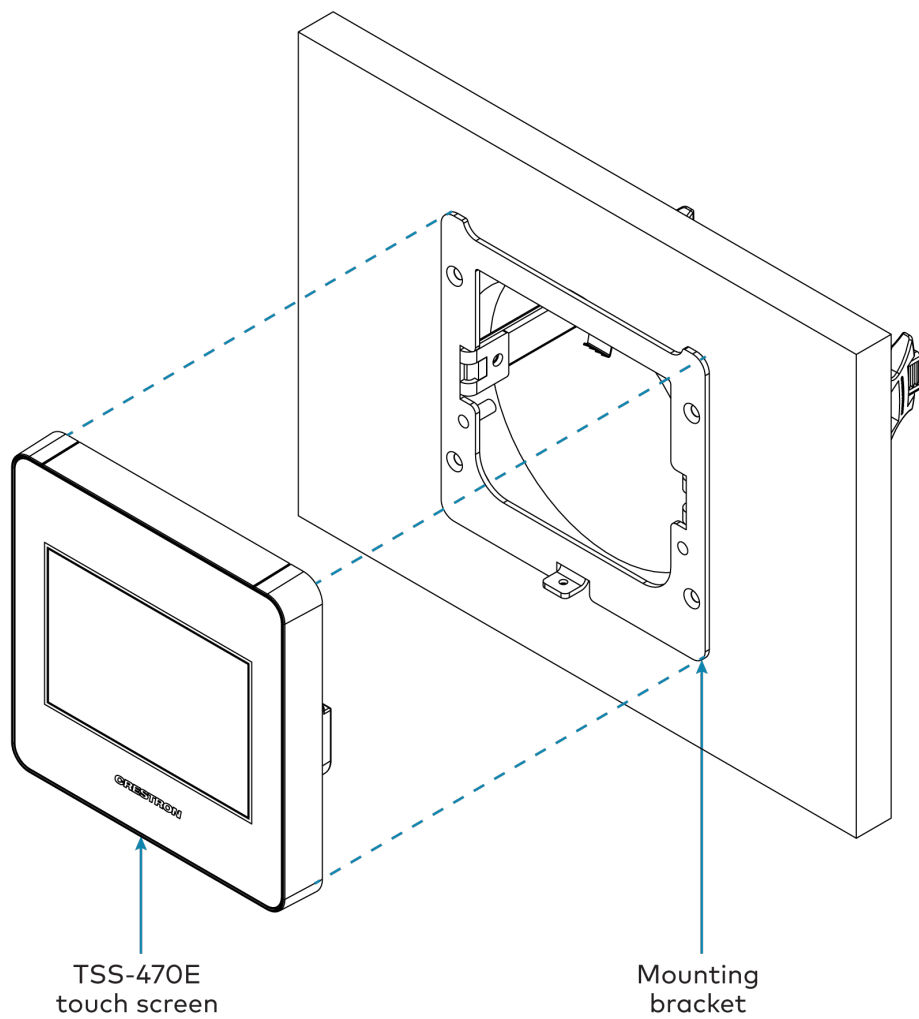
To attach the touch screen to the WMK:

1. Route all necessary cables through the opening in the mounting bracket.

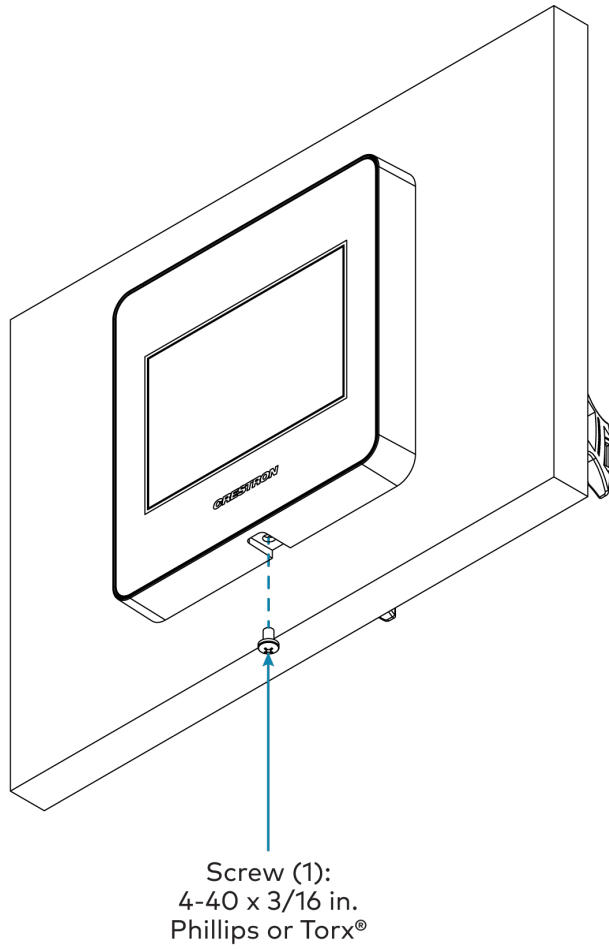
NOTE: Do not use an Ethernet cable with a strain relief boot when connecting to the touch screen, as the cable end does not provide sufficient bend radius to support installation with the WMK.

2. Connect all cables to the rear of the touch screen.

3. Attach the touch screen to the mounting bracket, top side first, until the touch screen magnetically snaps into place against the mounting bracket.



4. (Optional) Screw either the included 4-40 x 3/16 in. Phillips screw or the Torx® security screw into the bottom of the touch screen to secure it to the WMK.



Configuration

Prior to configuration, ensure the device is running the latest firmware. To update the firmware, refer to [Initial Setup on page 58](#).

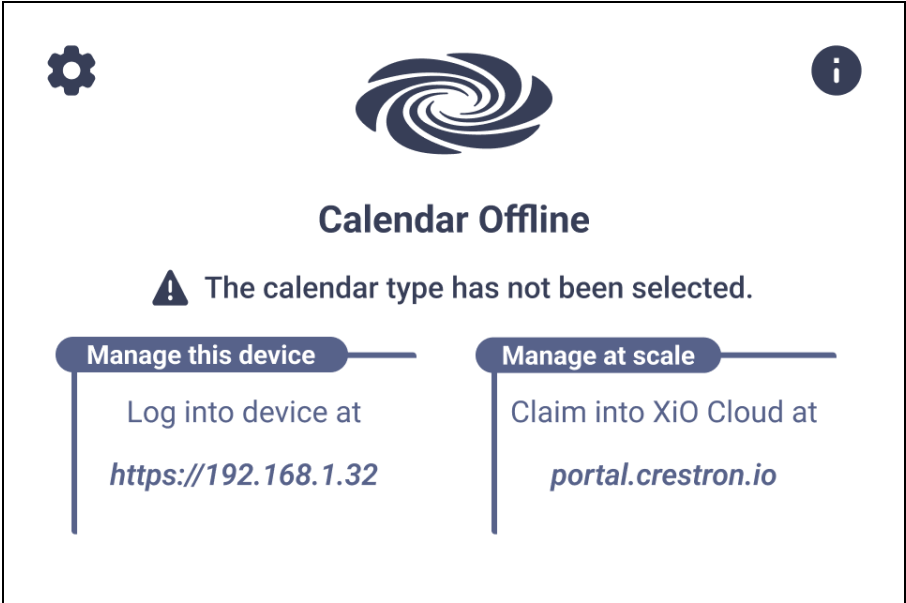
This section provides the following information:

- [Initial Setup](#)
- [Web Configuration](#)
- [Local Configuration](#)

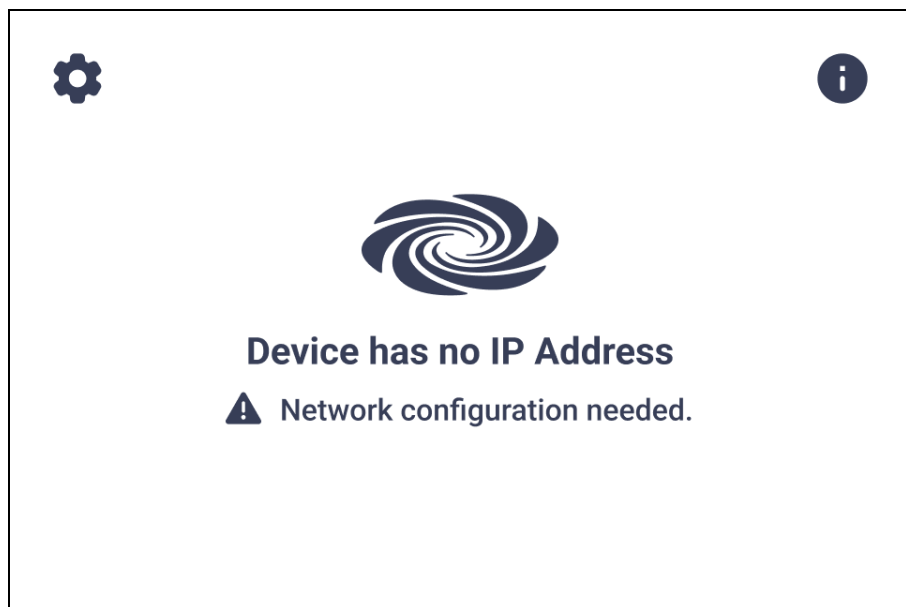
Initial Setup

When power is applied for the first time, the touch screen boots with a splash screen indicating that device configuration is required. This splash screen also provides the current IP address for the touch screen (if it is connected to the network over wired Ethernet), an information button that can be tapped to show various device and network information for the touch screen, and a gear icon that is used to access the local configuration screens.

NOTE: It is recommended to set up the touch screen over a wired Ethernet connection as described in [Set Up an Ethernet Connection on page 61](#) even if it will be deployed using Wi-Fi® communications. If the touch screen must be set up over a wireless connection, the Wi-Fi network settings must first be configured using the local setup screens as described in [Wi-Fi Setup on page 116](#).



If the touch screen encounters an error during operation, a similar screen is shown explaining the error with the same information and gear icons.



This section provides the following information:

- [Setup via XiO Cloud Service](#)
- [Setup via Device Configuration Interface](#)

Setup via XiO Cloud Service

Use the following procedures to set up one or more TSS-470E touch screens via the XiO Cloud® service.

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. Crestron Scheduling is also configured and deployed within an XiO Cloud service account. 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 www.crestron.com/Support/Tools/Licensing-Registration/XiO-Account-Registration.

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.

NOTE: Use the MAC address that is providing the primary connection (Ethernet or Wi-Fi communications) to the network. The MAC address listed on the shipping box or touch screen is for the Ethernet adapter. The MAC address for the Wi-Fi adapter can be located using the device web configuration interface or local setup pages after a Wi-Fi connection has been established.

2. Log in to your XiO Cloud account at portal.crestron.io.
3. Claim the touch screen to the XiO Cloud service:
 - To mass provision desks or rooms and claim their associated touch screens via a CSV file, refer to [XiO Cloud User Guide](#).
 - To claim one or more touch screens using the standard claiming workflow, refer to the [XiO Cloud User Guide](#).

Once the touch screen is claimed, associate it with a desk or room (if it is not associated already after mass provisioning) to view its status and settings. For more information, refer to [XiO Cloud User Guide](#)

Set Up a Network Connection

The touch screen can be configured to use a static IP address over an Ethernet or Wi-Fi network connection as described in the following sections.

NOTE: The touch screen does not support setting the same static IP address for both the Ethernet and Wi-Fi network connections.

The following sections describe how to set up a network connection using the XiO Cloud. To set up a network connection using the local setup screens, refer to [Local Configuration on page 113](#).

Set Up an Ethernet Connection

The touch screen ships with DHCP turned on by default. To set up an Ethernet connection with a static IP address for the touch screen:

1. Navigate to and select the touch screen from the XiO Cloud environment tree to open its configuration page.
2. Navigate to **Settings** > **System Setup** > **Network** to display network settings for the touch screen.

Network Configuration

Hostname TSS-470E-C ☒

Primary Static DNS ☒

Secondary Static DNS ☒

Ethernet

Adapter Enabled ☒ ☒

DHCP Enabled ☐ ☐

Domain lan

IP Address 192.168.1.192

Subnet Mask 255.255.255.0

Default Gateway 192.168.1.1

WiFi

Adapter Enabled ☐ ☐

DHCP Enabled ☒ ☐

Domain lan

IP Address 0.0.0.0

Subnet Mask 0.0.0.0

Default Gateway 0.0.0.0

WiFi Access Points

☐	SSID	Encryption Key	Password	Active
No records found				

+ Add - Remove

3. Turn on the **Adapter Enabled** toggle in the **Ethernet** subsection.
4. Turn off the **DHCP Enabled** toggle in the **Ethernet** subsection.
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 93](#).
6. Select **Save Changes** from the **Action** menu to restart the touch screen. The touch screen attempts to connect to the static IP address over the wired Ethernet connection after it restarts.

Set Up a Wi-Fi Network Connection

The touch screen ships with DHCP turned on by default. To set up a Wi-Fi network connection with a static IP address for the touch screen:

NOTE: The touch screen supports the following Wireless LAN channels: 1–11, 36, 38, 40, 42, 44, 46, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165.

1. Navigate to and select the touch screen from the XiO Cloud environment tree to open its configuration page.
2. Navigate to **Settings > System Setup > Network** to display network settings for the touch screen.

Network Configuration

Hostname: TSS-470E-C ☒

Primary Static DNS: ☒

Secondary Static DNS: ☒

Ethernet

Adapter Enabled: ☒ ☐

DHCP Enabled: ☒ ☐

Domain: lan

IP Address: 192.168.1.192

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.1.1

WiFi

Adapter Enabled: ☒ ☒

DHCP Enabled: ☐ ☐

Domain: lan

IP Address: 0.0.0.0

Subnet Mask: 0.0.0.0

Default Gateway: 0.0.0.0

WiFi Access Points ☒

☒	SSID	Encryption Key	Password	Active
☒		WPA		☐

+ Add - Remove

3. Turn on the **Adapter Enabled** toggle in the **Wi-Fi** subsection.
4. Turn off the **DHCP Enabled** toggle in the **Wi-Fi** subsection.

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 93](#).
6. Add a wireless access point (WAP) to the touch screen:

NOTE: A WAP can only be added manually in XiO Cloud. Scanning the network for open WAPs can be performed using the device web configuration interface. For more information, refer to [Network on page 93](#).

- a. Select **Add** to create a new entry in the WAP table.
- b. Enter the following information for the WAP in the appropriate fields:
 - **SSID:** Enter or modify the SSID (name) of the WAP.
 - **Encryption Key:** Select the security/encryption type used by the WAP.
 - **Password:** Enter the password used to connect to the WAP.

NOTE: No more than four WAPs can be assigned to the touch screen at once. An existing WAP must be removed before a new one can be added.

7. Select **Save Changes** from the **Action** menu to restart the touch screen. The touch screen attempts to connect to the static IP address over the selected WAP after it restarts.

Update Firmware

The touch screen firmware should always be updated to the latest version. Firmware can be loaded to the touch screen via the XiO Cloud service.

NOTE: Firmware updates can also be loaded to multiple touch screens at once at the group level.

For more information on updating the touch screen firmware in XiO Cloud, refer to the [XiO Cloud User Guide](#).

Set the Time Zone

The time zone must be set on the touch screen prior to selecting a scheduling application.

NOTE: Time zone settings can be pushed to multiple touch screens at once at the group level.

To set the time zone:

1. Navigate to and select the touch screen from the XiO Cloud environment tree to open its configuration page.

2. Navigate to **Settings > System Setup > Date/Time** to display date and time settings for the touch screen.

The screenshot shows the 'Date/Time' configuration page. At the top, there's a 'Synchronization' section with a 'Time Synchronization' toggle switch turned on and a blue checkmark icon. Below this is the 'NTP Time Servers' section, which has a blue checkmark icon. It contains a table with two columns: 'Address' and 'Port'. The first row has a checkbox, the address 'pool.ntp.org', and the port '123'. Below the table are '+ Add' and '- Remove' buttons. The 'Configuration' section at the bottom has three settings: 'Time Zone' set to '(UTC-08:00) Pacific Time (US & Canada)' with a dropdown arrow and a blue checkmark; 'Date Format' set to 'WMD' with a dropdown arrow and a blue checkmark; and 'Time Format' with radio buttons for '12' (selected) and '24', and a blue checkmark.

3. Select the time zone where the touch screen will be used from the **Time Zone** drop-down menu.
4. Select **Save Changes** on the top right of the page.

Select a Scheduling Application

The touch screen ships with various built-in scheduling applications. An application may be selected from the web configuration interface.

NOTE: Application settings can be pushed to multiple touch screens at once at the group level.

To select a scheduling application:

1. Navigate to and select the touch screen from the XiO Cloud environment tree to open its configuration page.

2. Navigate to **Settings > Applications** to display application settings for the touch screen.

The screenshot shows the 'Applications' settings page. At the top, there's a blue header with a dropdown arrow and the text 'Applications'. Below this, the 'Application Mode' is set to 'Crestron Scheduling' with a dropdown arrow. To the right, it says 'Setting is Inherited from Hillsboro'. Under the 'Crestron Scheduling' section, there are three settings: 'Scheduling Mode' set to 'Room Mode' with a dropdown arrow, an information icon, and a blue checkmark; 'Desk/Room Name' set to 'Crestron' with a text input field, and 'Setting is Inherited from Hillsboro'; and 'Enable Check-in' which is a toggle switch turned on, with an information icon and a blue checkmark. At the bottom, under the 'Language' section, the 'Language' is set to 'English (United States)' with a dropdown arrow, and it also says 'Setting is Inherited from Hillsboro'.

3. Select the desired scheduling provider from the **Application Mode** drop-down menu.
4. Enter any additional information (such as selecting a language or setting a desk/room name) that is required for connecting to the scheduling provider.

NOTE: If **Crestron Scheduling** is selected for **Application Mode**, the application can be set to run in desk mode or room mode depending on the desired scheduling use case. For more information on operating these modes, refer to [Operation on page 144](#).

5. Select **Save Changes** on the top right of the page.
6. When prompted, restart the touch screen. The touch screen restarts with the selected scheduling application running.

Connect to a Scheduling Calendar

Use the following procedures to connect the Crestron Scheduling app to a supported scheduling calendar.

NOTE: Certain scheduling calendar settings can be pushed to multiple touch screens at once at the group level.

Connect to Microsoft 365 Using Microsoft Graph

To connect to an Microsoft 365 scheduling calendar using Microsoft Graph:

NOTES:

- The Microsoft 365 account and scheduling calendar must be fully configured before the scheduling calendar shows as online. Each touch screen requires its own unique calendar email address.
- Additional registration steps are required in the Microsoft Entra® portal. Refer to [Configure Microsoft Graph for Crestron Scheduling on page 123](#) for more information.
- Only one Microsoft Graph application is required for all touch screens running the Crestron Scheduling app within the same Microsoft Entra tenant. The Microsoft Graph application credentials (outside of the calendar email address) can be reused all touch screens within the same deployment.

1. Navigate to and select the touch screen from the XiO Cloud environment tree to open its configuration page.
2. Navigate to **Settings** > **Schedule** to display scheduling calendar settings for the touch screen.
3. Configure the desired **Polling Interval** settings. For more information, refer to [Schedule on page 98](#).
4. Select **Microsoft 365** from the **Schedule Source** drop-down menu.

The screenshot shows the 'Schedule' configuration page. At the top, there's a 'Schedule' header with a dropdown arrow. Below it, the 'Polling Interval' is set to 5 minutes. The 'Schedule Source' is set to 'Microsoft 365'. There are two checkboxes for 'Setting is Inherited from Remote Workers', both of which are unchecked. Below these, there's a section for 'Microsoft 365' with four input fields: 'Calendar Email Address', 'Application (client) ID', 'Directory (tenant) ID', and 'Client Secret Value'. The 'Application (client) ID', 'Directory (tenant) ID', and 'Client Secret Value' fields have a yellow warning message: 'Inherited setting is pending delivery to the device'.

5. Enter the following Microsoft 365 account information:

NOTE: The **Application (client) ID**, **Directory (tenant) ID**, and **Client Secret Value** values are generated within the Microsoft Entra portal for the Microsoft Entra app. For more information, refer to [Configure Microsoft Graph for Crestron Scheduling on page 123](#).

- Enter the email address associated with the Microsoft 365 scheduling calendar in the **Calendar Email Address** text field.
- Enter the application (client) ID generated for the Microsoft Entra app in the **Application (client) ID** text field.

- Enter the directory (tenant) ID generated for the Microsoft Entra app in the **Directory (tenant) ID** text field.
 - Enter the client secret value generated for the Microsoft Entra app in the **Client Secret Value** text field.
6. Select **Save Changes** from the **Action** menu. The Microsoft 365 scheduling calendar connects to the scheduling application without requiring a restart.

Setup via Device Configuration Interface

Use the following procedures to set up an individual TSS-470E using its configuration interfaces.

Access a Configuration Interface

Device settings can be configured using the touch screen's web configuration interface. Additionally, a subset of device settings can be configured using the touch screen's local setup screens.

Access the Web Configuration Interface

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

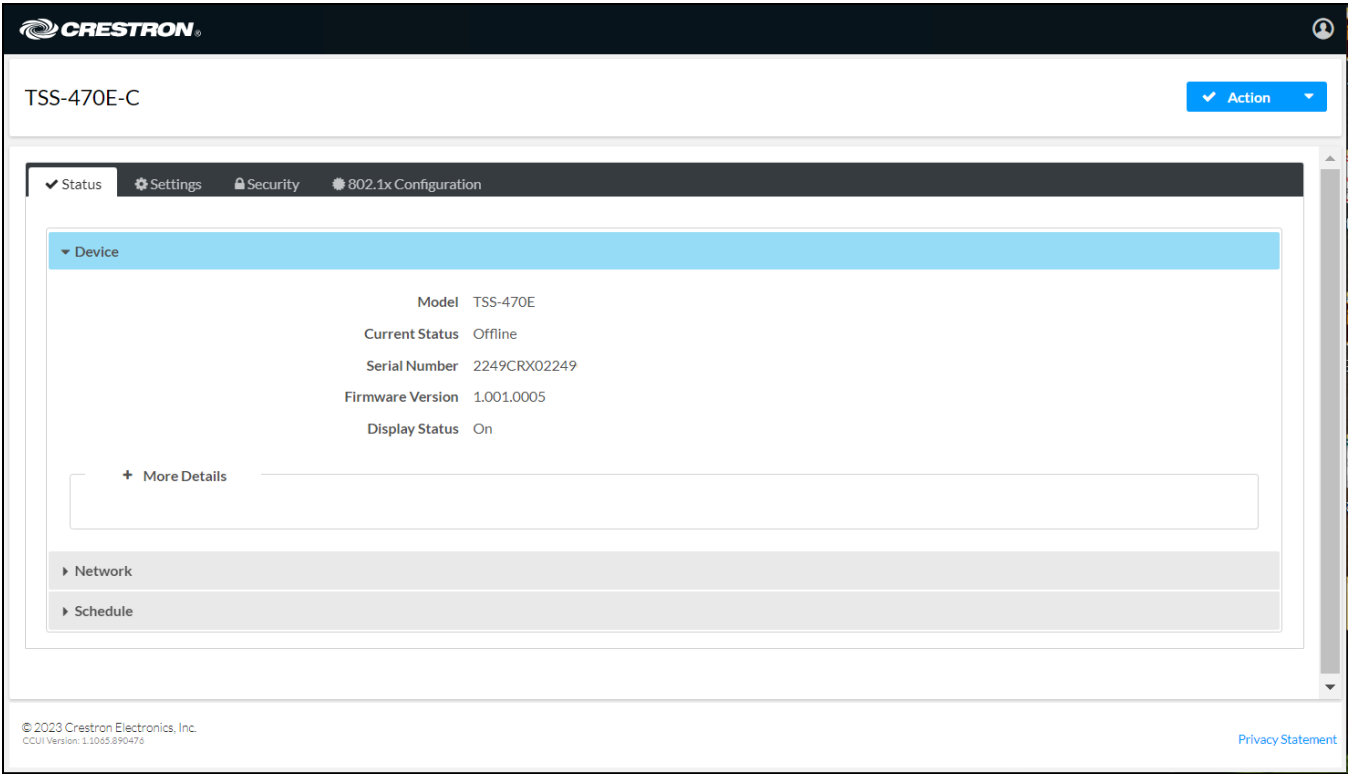
NOTE: The touch screen ships with DHCP turned on. A DHCP server is required to access the web configuration interface via the touch screen IP address. A static IP address can be configured for the touch screen as described in [Set Up a Network Connection on page 71](#).

1. Connect the touch screen to the Ethernet network.
2. Locate the touch screen IP address. The IP address is shown on the splash screen that is displayed after booting the touch screen for the first time. Additionally, the **Device Discovery** tool in [Crestron Toolbox™ software](#) can be used to discover the touch screen IP address.

NOTE: Crestron Toolbox software can only be used to discover the touch screen IP address on the network. The touch screen does not support device configuration or any other related functions via Crestron Toolbox.

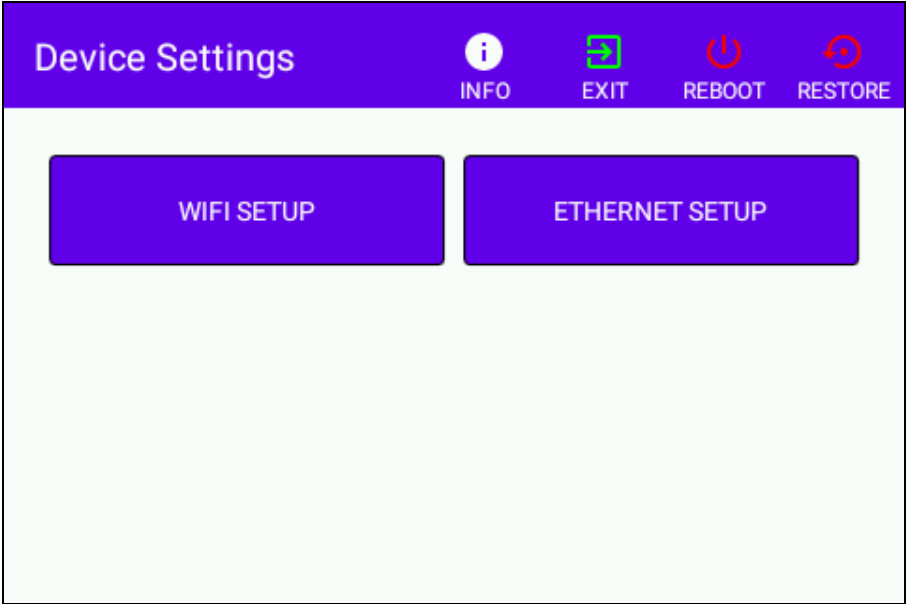
3. Enter the touch screen IP address into a web browser.
4. If connecting to the touch screen for the first time, create an admin account as described in [Create an Admin Account on page 70](#).
5. Enter the admin account login credentials when prompted, then select **Sign In**.

The touch screen web configuration 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 [Web Configuration on page 81](#).



Access the Local Setup Screens

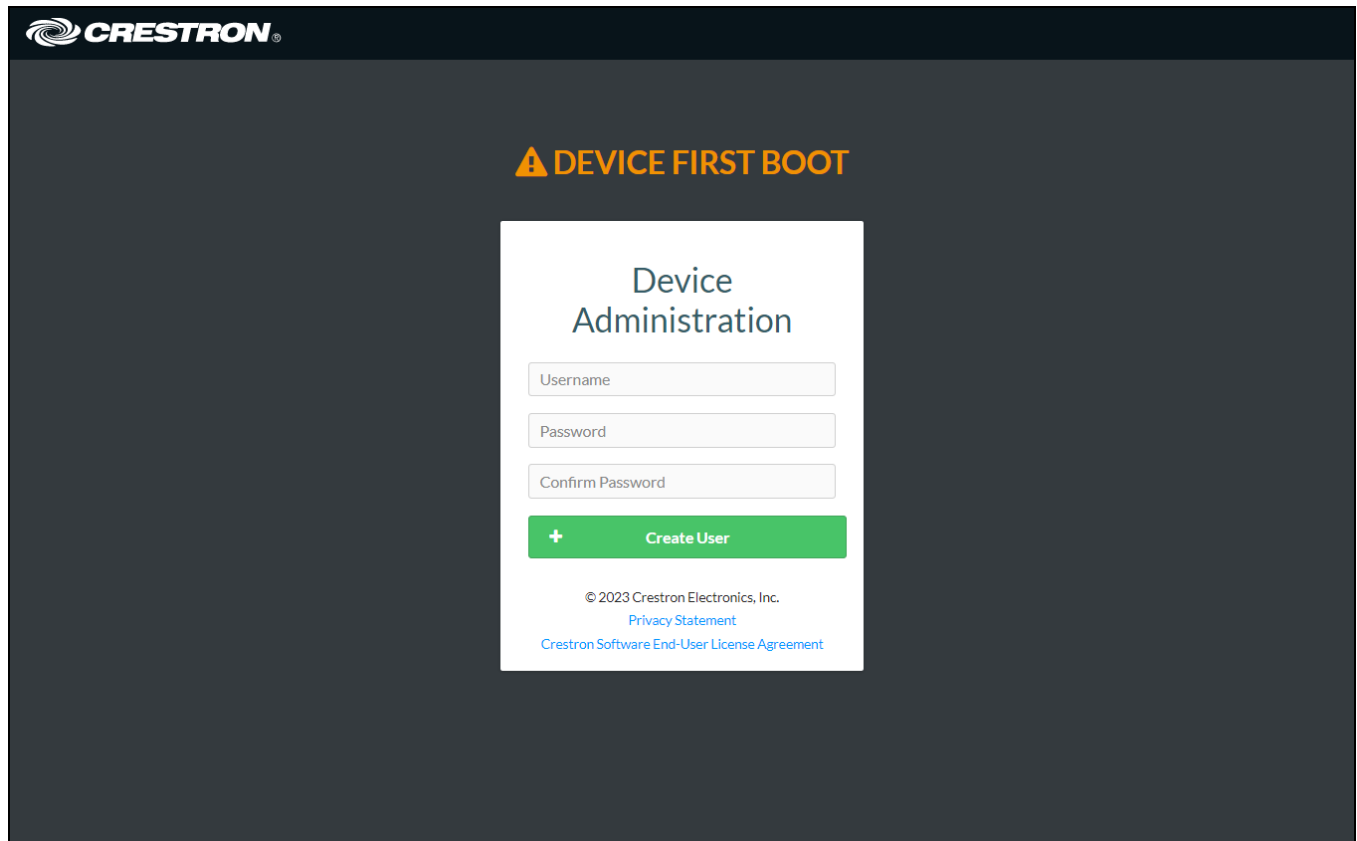
To access the local setup screens, place three fingers on the touch screen display and hold for 5 seconds. The **Device Settings** screen is displayed. For more information on using the local setup screens, refer to [Local Configuration on page 113](#).



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.

NOTE: The admin account for the touch screen is not related to an XiO Cloud admin account.

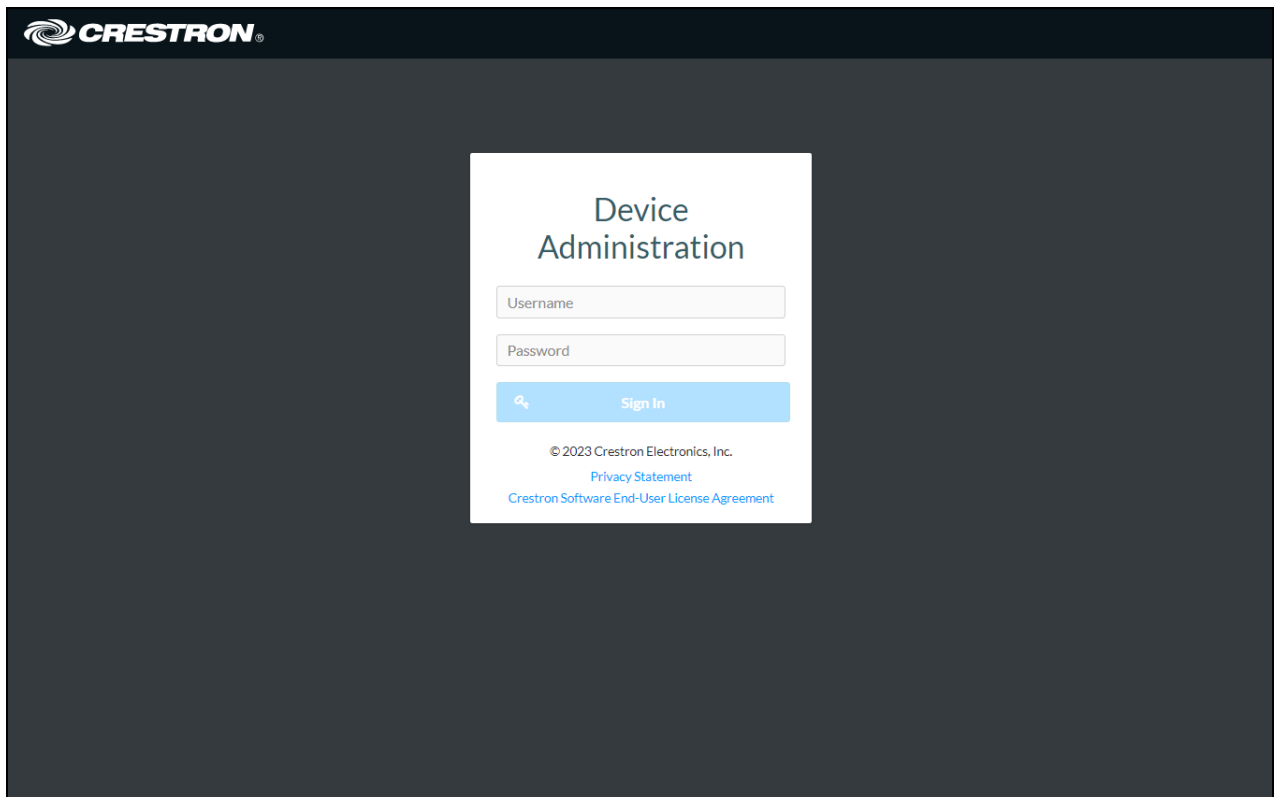
The screenshot shows the Crestron web configuration interface during a "DEVICE FIRST BOOT". At the top is the Crestron logo. Below it, the text "DEVICE FIRST BOOT" is displayed in orange. The main content area is a white box titled "Device Administration". Inside this box are three text input fields labeled "Username", "Password", and "Confirm Password". Below these fields is a green button with a white plus icon and the text "Create User". At the bottom of the white box, there is copyright information: "© 2023 Crestron Electronics, Inc.", followed by links for "Privacy Statement" and "Crestron Software End-User License Agreement".

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 Up a Network Connection

The touch screen can be configured to use a static IP address over an Ethernet or Wi-Fi network connection as described in the following sections.

NOTE: The touch screen does not support setting the same static IP address for both the Ethernet and Wi-Fi network connections.

The following sections describe how to set up a network connection using the web configuration interface. To set up a network connection using the local setup screens, refer to [Local Configuration on page 113](#).

Set Up an Ethernet Connection

The touch screen ships with DHCP turned on by default. To set up an Ethernet connection with a static IP address for the touch screen:

1. Access the device configuration interface as described in [Setup via Device Configuration Interface on page 68](#).

2. Navigate to **Settings > System Setup > Network** to display network settings for the touch screen.

Network

Network Configuration

Hostname *

TSS-470E-C

Primary Static DNS

Secondary Static DNS

Ethernet

Adapter Enabled

DHCP Enabled

Domain *

url

IP Address *

192.168.0.1

Subnet Mask *

255.255.255.0

Default Gateway *

192.168.0.1

WiFi

Adapter Enabled

DHCP Enabled

Domain *

localdomain

IP Address *

0.0.0.0

Subnet Mask *

0.0.0.0

Default Gateway *

0.0.0.0

WiFi Access Points

Scan WiFi Access Points

Select Discovered Access Points

Add Access Points

The maximum configurable access points are limited to 4

	SSID	Encryption Key	Password	Active
☐	Hammons-Netv	WPA2		☐

Add

Remove

3. Turn on the **Adapter Enabled** toggle in the **Ethernet** subsection.
4. Turn off the **DHCP Enabled** toggle in the **Ethernet** subsection.

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 93](#).
6. Select **Save Changes** from the **Action** menu to restart the touch screen. The touch screen attempts to connect to the static IP address over the wired Ethernet connection after it restarts.

Set Up a Wi-Fi Network Connection

The touch screen ships with DHCP turned on by default. To set up a Wi-Fi network connection with a static IP address for the touch screen:

NOTE: The touch screen supports the following Wireless LAN channels: 1–11, 36, 38, 40, 42, 44, 46, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165

1. Access the device configuration interface as described in [Setup via Device Configuration Interface on page 68](#).

2. Navigate to **Settings > System Setup > Network** to display network settings for the touch screen.

Network

Network Configuration

Hostname *TSS-470E-C

Primary Static DNS

Secondary Static DNS

Ethernet

Adapter Enabled

DHCP Enabled

Domain *url

IP Address *192.168.0.1

Subnet Mask *255.255.255.0

Default Gateway *192.168.0.1

WiFi

Adapter Enabled

DHCP Enabled

Domain *localdomain

IP Address *0.0.0.0

Subnet Mask *0.0.0.0

Default Gateway *0.0.0.0

WiFi Access Points

Scan WiFi Access Points

Select Discovered Access Points

Add Access Points

The maximum configurable access points are limited to 4

	SSID	Encryption Key	Password	Active
☐	Hammons-Netv	WPA2		☐

Add

Remove

3. Turn on the **Adapter Enabled** toggle in the **Wi-Fi** subsection.
4. Turn off the **DHCP Enabled** toggle in the **Wi-Fi** subsection.

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 93](#).
6. Add a wireless access point (WAP) to the touch screen:
 - a. Select **Scan Wi-Fi Access Points** in the **Wi-Fi Access Points** subsection to scan the network for open WAPs. All discovered access points are displayed within the **Select Discovered Access Points** menu.
 - b. Select a discovered WAP from the **Select Discovered Access Points** menu, and then select **Add Access Point**. The WAP is added to the table below this setting with its **SSID** and **Encryption Key** settings populated.

NOTE: A WAP can also be manually entered by selecting **Add** below the provided table. For more information, refer to [Network on page 93](#).

- c. Enter the password for the selected WAP in the **Password** text field within the appropriate table row.
7. Select **Save Changes** from the **Action** menu to restart the touch screen. The touch screen attempts to connect to the static IP address over the selected WAP after it restarts.

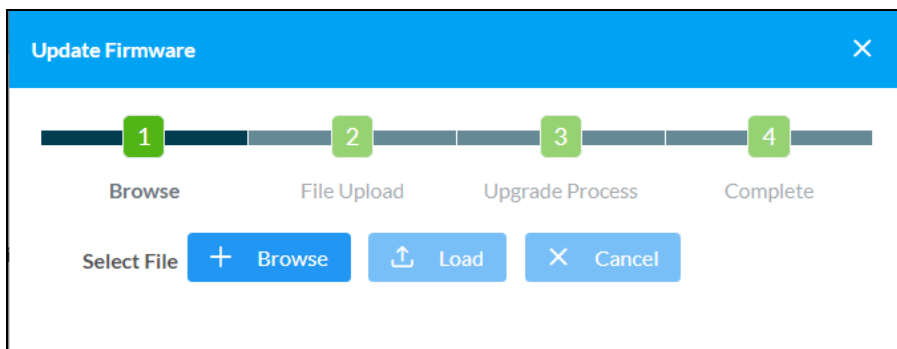
Update Firmware

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 97](#).

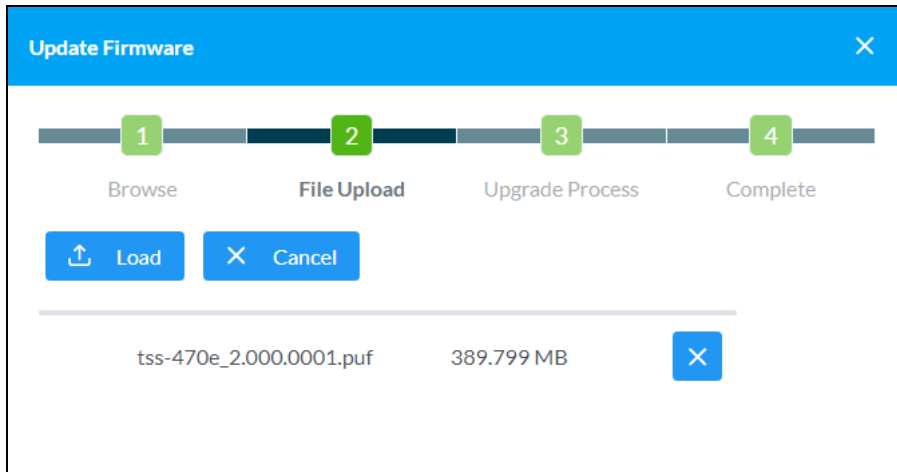
To update the touch screen firmware:

1. Download the latest firmware PUF (package update file) from the [TSS-470E product page](#) or www.crestron.com/Support/Resource-Library.
2. Access the web configuration interface as described in [Access the Web Configuration Interface on page 68](#).
3. 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**. The PUF is shown in the dialog box.



6. Select **Load** to load the PUF to the touch screen. The load progress is shown in the dialog box. The touch screen begins the firmware update automatically once the PUF is loaded.
7. Once the touch screen has completed the firmware update, select **OK** to close the dialog box.

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

Set the Time Zone

The time zone must be set on the touch screen prior to selecting a scheduling application.

To set the time zone:

1. Access the web configuration interface as described in [Access the Web Configuration Interface on page 68](#).
2. Navigate to **Settings > System Setup**.

3. Expand the **Date/Time** subsection to display date and time settings.

The screenshot shows the 'Date/Time' configuration page. At the top, there's a 'Synchronization' section with a 'Time Synchronization' toggle switch turned on and a 'Synchronize Now' button. Below this is the 'NTP Time Servers' section, which contains a table with columns: Address, Port, Authentication Method, Authentication Key, and Key ID. The table has one row with the values: pool.ntp.org, 123, None, a masked key, and 0. Below the table are '+ Add' and '- Remove' buttons. The 'Configuration' section at the bottom includes a 'Time Zone' dropdown menu set to '(UTC-05:00) Eastern Time (US & Can)', a 'Time Format' section with radio buttons for 12 and 24 (12 is selected), and a 'Date Format' dropdown menu set to 'WMDY'.

	Address	Port	Authentication Method	Authentication Key	Key ID
☐	pool.ntp.org	123	None		0

4. Select the time zone where the touch screen will be used from the **Time Zone** drop-down menu.
5. Select **Save Changes** on the top right of the page.

Select a Scheduling Application

The touch screen ships with various built-in scheduling applications. An application may be selected from the web configuration interface.

NOTE: Applications can be selected and configured from the web configuration interface at any time. For more information, refer to [Applications on page 101](#).

To select a scheduling application:

1. Access the web configuration interface as described in [Access the Web Configuration Interface on page 68](#).

2. Navigate to **Settings > Applications**.

Applications

Application Mode: Crestron Scheduling

Application Auto Update: ☐

Crestron Scheduling

Scheduling Mode: Desk Mode

Theme: Light

Desk/Room Name: Crestron HQ 6

Check-in and Decline for No Show

Check-in: ☒

Allow Check-in: 15 Minutes before start time

Decline for No Show: ☐

Check-in End Time: 15 Minutes after start time

QR code Settings

QR code Content: Custom URL

Custom URL:

Language

Language: English (United States)

3. Select the desired scheduling provider from the **Application Mode** drop-down menu.
4. If desired, turn on the **Application Auto Update** toggle to allow for automatic updates of the selected application.

NOTE: Ensure **Application Auto Update** is turned on before switching to a third-party application. The application may not download to the touch screen if **Application Auto Update** is turned off.

5. Enter any additional information (such as selecting a language or setting a desk/room name) that is required for connecting to the scheduling provider.

NOTE: If **Crestron Scheduling** is selected for **Application Mode**, the application can be set to run in desk mode or room mode depending on the desired scheduling use case. For more information on operating these modes, refer to [Operation on page 144](#).

6. Select **Save Changes** on the top right of the page.
7. When prompted, restart the touch screen. The touch screen restarts with the selected scheduling application running.

Connect to a Scheduling Calendar

Use the following procedures to connect the Crestron Scheduling app to a supported scheduling calendar.

Connect to Microsoft 365 Using Microsoft Graph

To connect to a Microsoft 365 scheduling calendar using Microsoft Graph:

NOTES:

- The Microsoft 365 account and scheduling calendar must be fully configured before the scheduling calendar shows as online. Each touch screen requires its own unique calendar email address.
- Additional registration steps are required in the Microsoft Entra® portal. Refer to [Configure Microsoft Graph for Crestron Scheduling on page 123](#) for more information.
- Only one Microsoft Graph application is required for all touch screens running the Crestron Scheduling app within the same Microsoft Entra tenant. The Microsoft Graph application credentials (outside of the calendar email address) can be reused all touch screens within the same deployment.

1. Navigate to **Settings > Schedule**.
2. Configure the desired **Polling Interval** settings. For more information, refer to [Schedule on page 98](#).

3. Select **Microsoft 365** from the **Schedule Source** drop-down menu.

The screenshot shows a configuration window titled "Schedule" with a light blue header. Below the header, there are two main sections. The first section contains a "Polling Interval" field set to "5" with a "Minutes" label and a "Schedule Source" dropdown menu currently set to "Microsoft 365". The second section, titled "Microsoft 365", contains four text input fields, each with a red border and a red error message to its right: "Calendar Email Address" (error: "Calendar Email Address is invalid"), "Application (client) ID" (error: "Application (client) ID is invalid"), "Directory (tenant) ID" (error: "Directory (tenant) ID is invalid"), and "Client Secret Value" (error: "Client Secret Value is invalid").

4. Enter the following Microsoft 365 account information:

NOTE: The **Application (client) ID**, **Directory (tenant) ID**, and **Client Secret Value** values are generated within the Microsoft Entra portal for the Microsoft Entra app. For more information, refer to [Configure Microsoft Graph for Crestron Scheduling on page 123](#).

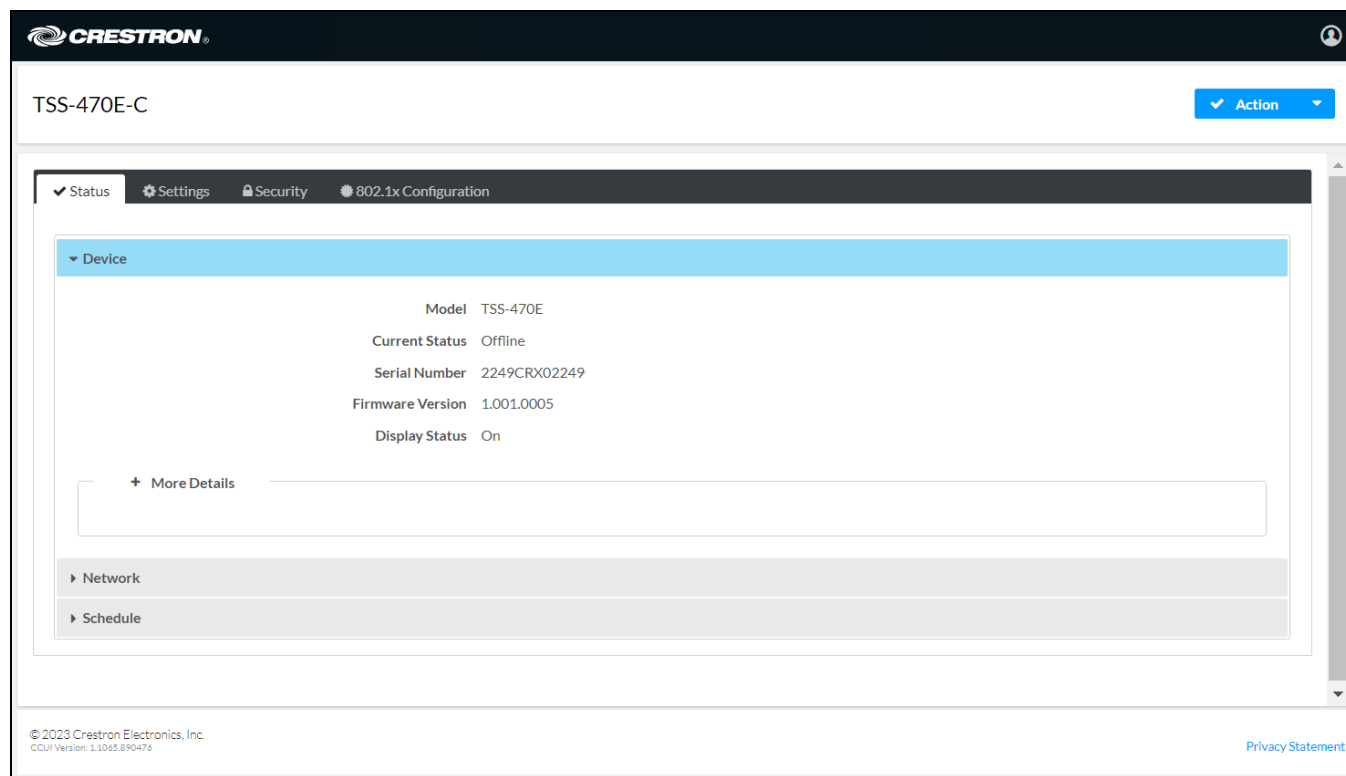
- Enter the email address associated with the Microsoft 365 scheduling calendar in the **Calendar Email Address** text field.
 - Enter the application (client) ID generated for the Microsoft Entra app in the **Application (client) ID** text field.
 - Enter the directory (tenant) ID generated for the Microsoft Entra app in the **Directory (tenant) ID** text field.
 - Enter the client secret value generated for the Microsoft Entra app in the **Client Secret Value** text field.
5. Select **Save Changes** from the **Action** menu. The Microsoft 365 scheduling calendar connects to the scheduling application without requiring a restart.

Web Configuration

The touch screen may be monitored and configured using its web configuration interface. The interface can be accessed via the touch screen IP address as described in [Access the Web Configuration Interface on page 68](#).

NOTE: A similar version of the web configuration interface is provided within the XiO Cloud service. Navigate to the desk associated with the touch screen in the XiO Cloud environment tree to view the touch screen status and settings. Additionally, certain settings can be configured for multiple touch screens at once at the group level. For more information, refer to the [XiO Cloud User Guide](#).

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



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

- **Status:** Select this tab to monitor the status of the touch screen and the scheduling application. For more information, refer to [Status on page 86](#).
- **Settings:** Select this tab to configure settings for the touch screen and the scheduling application. For more information, refer to [Settings on page 89](#).
- **Security:** Select this tab to create touch screen users and groups. For more information, refer to [Security on page 105](#).
- **802.1x Configuration:** Select this tab to configure IEEE 802.1X network authentication for touch screen security. For more information, refer to [802.1x Configuration on page 111](#).

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

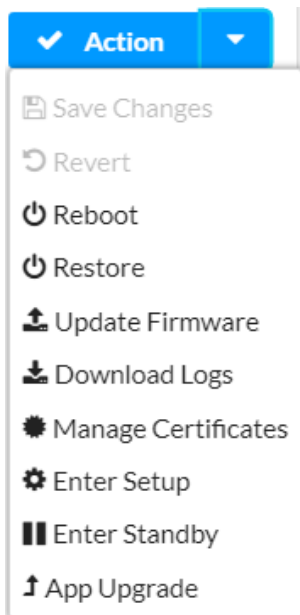
The following controls are also provided on the top right of the web configuration interface:

- Use the **Action** drop-down menu to perform various configuration actions. For more information, refer to [Action Menu on page 82](#).
- Select the profile button  to see the active touch screen user and to sign out of the web configuration utility.

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

Action Menu

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



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

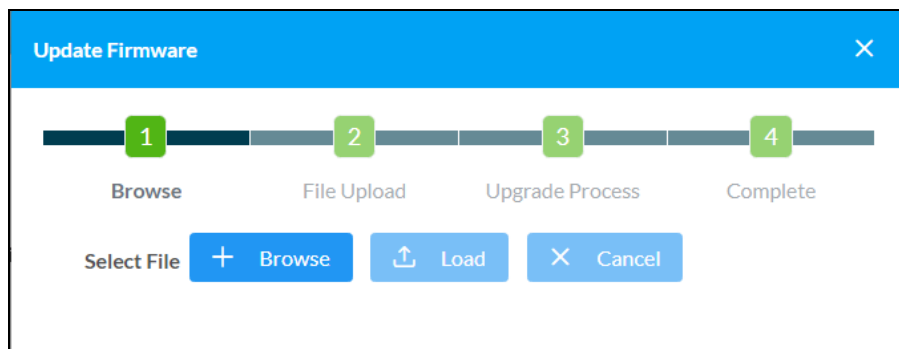
Select **Restore** to restore the touch screen settings to their default values.

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 (except for application settings) 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 138](#).

Update Firmware

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



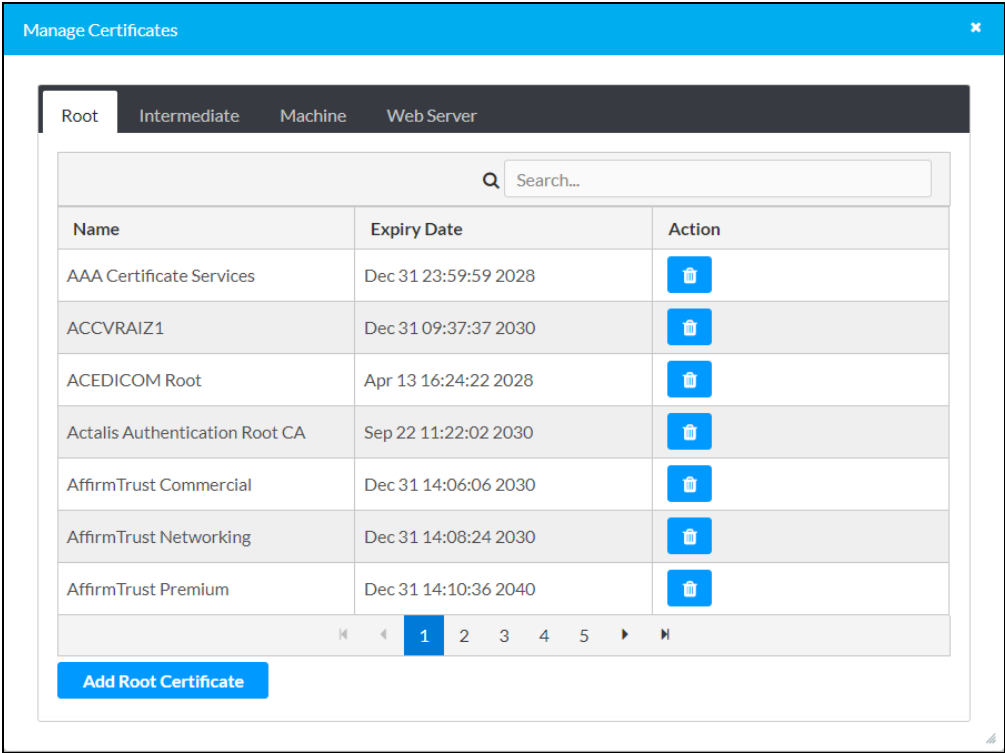
For more information on updating the touch screen firmware, refer to [Update Firmware on page 75](#).

Download Logs

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

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.

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

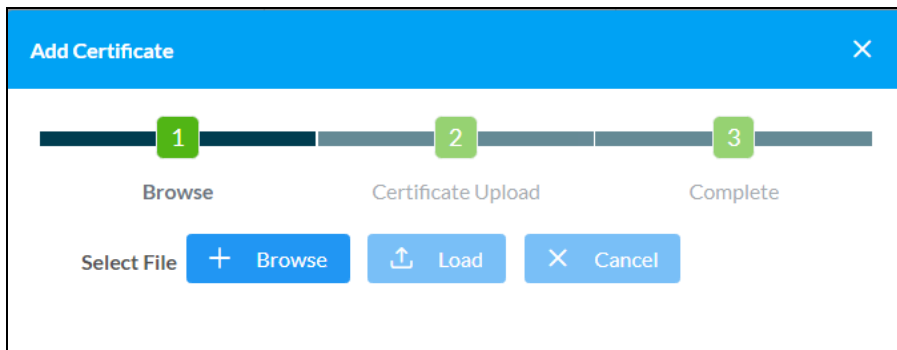
Delete Certificate

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.

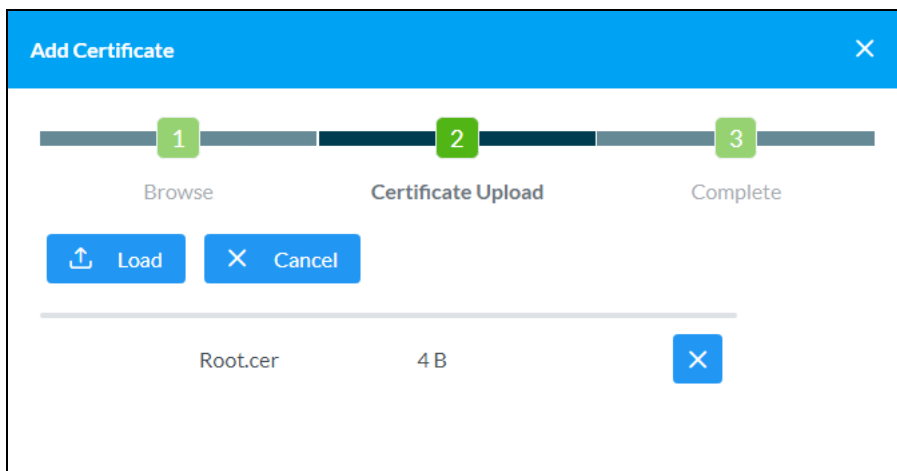
Add Certificate

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**. The CA file is shown in the dialog box



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 **x** button to close the **Add Certificate** dialog box at any time during the upload. Selecting the **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 more information on using certificates for 802.1X IEEE authentication, refer to [802.1X Configuration on page 111](#). 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 139](#).

Enter Setup

Select **Enter Setup** to open the local setup screens on the touch screen display.

For more information on configuring the touch screen with its local setup screens, refer to [Local Configuration on page 113](#).

Enter Standby

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

App Upgrade

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

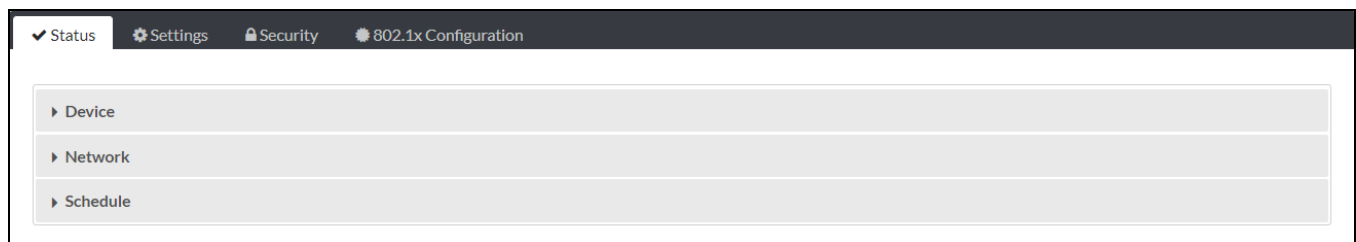
NOTE: This selection is not available if the touch screen is running the Crestron Scheduling App.

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 and the Crestron Scheduling app (if selected).

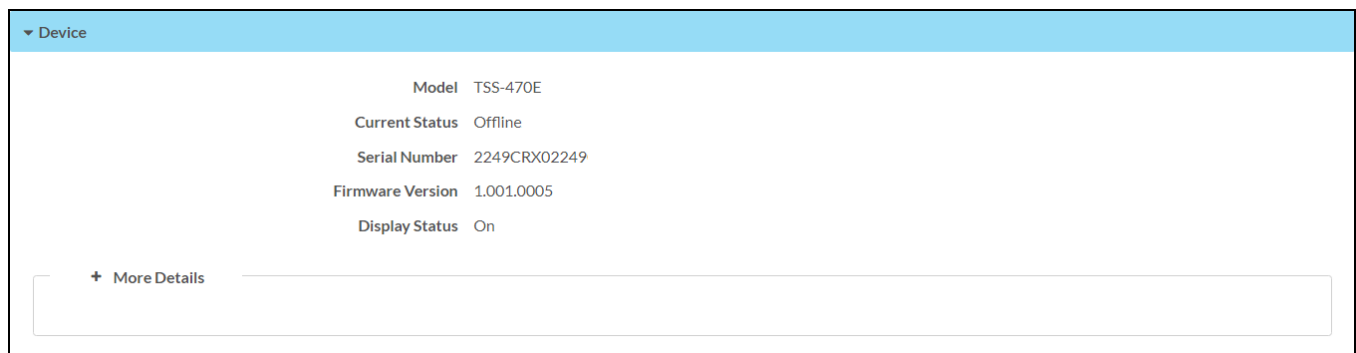
Select an accordion name to expand that accordion. If the accordion is expanded, select the accordion name again to collapse the accordion.



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
- **Current Status:** The status of the scheduling calendar
- **Serial Number:** The touch screen serial number
- **Firmware Version:** The firmware version loaded onto the touch screen
- **Display Status:** The status of the touch screen display

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.

Network

Hostname TSS-470E-C

DNS Servers 192.168.0.1(DHCP)

Ethernet

Domain

DHCP On

IP Address 192.168.0.1

Subnet Mask 255.255.255.0

Default Gateway 192.168.0.1

Link Active True

MAC Address c4.42.68.18.c4.42

WiFi

Domain localdomain

Link Active False

MAC Address 78.04.73.0c.78.04

LAN

Network Proxy Settings Disabled

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 **Ethernet** to display the following Ethernet settings:

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

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.

Select the **+** (plus) icon next to **LAN** to display the following LAN settings:

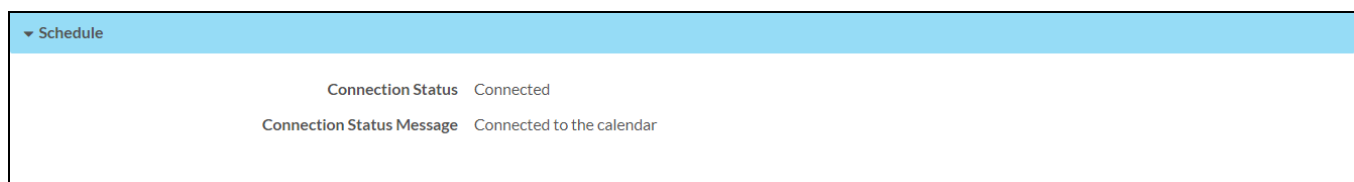
- **Network Proxy Settings:** Reports whether network proxy settings are turned on or off for the touch screen

For more information on configuring network settings, refer to [System Setup on page 90](#).

Schedule

Select the **Schedule** accordion to view the status of the connected scheduling calendar and the current reservation information.

NOTE: The **Schedule** accordion is shown only if **Crestron Scheduling** is selected for **Application Mode**.



The following **Schedule** information is displayed:

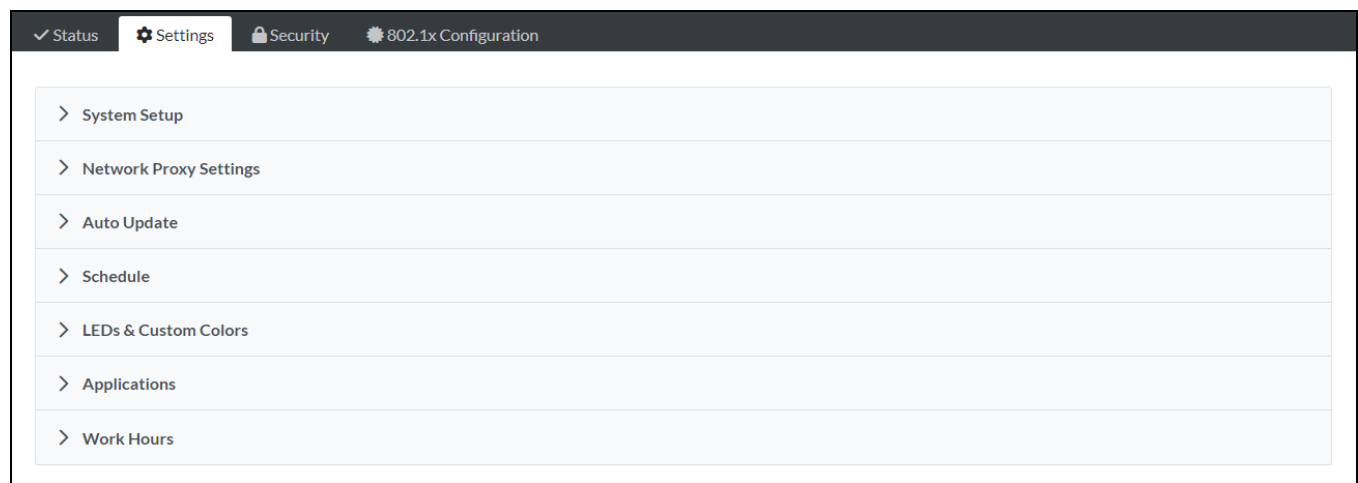
- **Connection Status:** Indicates the status of the scheduling calendar connection
- **Connection Status Message:** Displays information about the scheduling calendar connection status

Settings

Select the **Settings** tab on the top left of the interface to display accordions for configuring settings for the touch screens and Crestron Scheduling app (if selected).

NOTE: Settings cannot be updated or saved in the web configuration interface if the local configuration screens are active. Close the local configuration screens prior to opening the web configuration interface.

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 web 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.

A screenshot of the 'System Setup' menu. It has a light blue header with a downward arrow and the text 'System Setup'. Below the header are four expandable sections, each with a plus icon and a label: 'Device Settings Admin PIN', 'Date/Time', 'Network', and 'Device Display'. Each section is currently collapsed, showing only the header bar.

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

Device Settings Admin PIN

The **Device Settings Admin PIN** subsection is used to configure a security PIN that must be entered before accessing the Ethernet and Wi-Fi configuration settings or restore option in the local configuration interface. For more information, refer to [Enter an Admin PIN on page 114](#).

A screenshot of the 'Device Settings Admin PIN' configuration screen. It has a title bar with a minus icon and the text 'Device Settings Admin PIN'. The main area contains three settings: 'Enable PIN' with a green toggle switch turned on, 'Panel PIN' with a text input field and a red asterisk, and 'Confirm Panel PIN' with a text input field and a red asterisk.

The following **Device Settings Admin PIN** settings are provided:

- **Enable PIN:** Turn on the toggle to force users to enter a security PIN prior to accessing restricted areas in the local configuration interface.
- **Panel PIN:** Enter a six-digit PIN that must be entered to access restricted areas in the local configuration interface.
- **Confirm Panel PIN:** Confirm the value entered for **Panel PIN**.

Date/Time

The **Date/Time** subsection is used to configure date and time settings for the touch screen.

Date/Time

Synchronization

Time Synchronization ☒

[Synchronize Now](#)

NTP Time Servers

☐	Address	Port	Authentication Method	Authentication Key	Key ID
☐	pool.ntp.org	123	None		0

[+ Add](#) [- Remove](#)

Configuration

Time Zone: (UTC-05:00) Eastern Time (US & Can) ▼

Time Format: ☒ 12 ☐ 24

Date Format: WMDY ▼

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

- **Synchronization**

- **Time Synchronization:** Turn on the toggle to use time synchronization via NTP (Network Time Protocol).

NOTE: It is recommended that **Time Synchronization** is turned on to ensure accurate scheduling calendar data is pushed to the touch screen.

- **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:** If **Time Synchronization** is turned off, 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:** If **Time Synchronization** is turned off, select the time for the touch screen (in 24-hour format) using the pop-up menu that is displayed.

Network

The **Network** subsection is used to configure network settings for the touch screen.

Network

Network Configuration

Hostname *

TSS-470E-C

Primary Static DNS

Secondary Static DNS

Ethernet

Adapter Enabled

DHCP Enabled

Domain *

url

IP Address *

192.168.0.1

Subnet Mask *

255.255.255.0

Default Gateway *

192.168.0.1

WiFi

Adapter Enabled

DHCP Enabled

Domain *

localdomain

IP Address *

0.0.0.0

Subnet Mask *

0.0.0.0

Default Gateway *

0.0.0.0

WiFi Access Points

Scan WiFi Access Points

Select Discovered Access Points

Add Access Points

The maximum configurable access points are limited to 4

	SSID	Encryption Key	Password	Active
	Hammons-Netv	WPA2		

Add

Remove

The following **Network** settings are provided:

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

- **Network Configuration**

- **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.

- **Ethernet**

- **Adapter Enabled:** Turn on the toggle to use the touch screen Ethernet adapter, which allows the touch screen to make an Ethernet connection.
- **DHCP Enabled:** Turn on the toggle to use DHCP for the Ethernet 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.

- **Domain:** Enter the fully qualified domain name for the Ethernet connection.
- **IP Address:** Enter a static touch screen IP address for the Ethernet connection.
- **Subnet Mask:** Enter a touch screen subnet mask address for the Ethernet connection.
- **Default Gateway:** Enter the gateway router address on the network.

- **Wi-Fi**

- **Adapter Enabled:** Turn on the toggle to use the touch screen Wi-Fi adapter, which allows the touch screen to make a Wi-Fi network connection.
- **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.

- **Domain:** Enter the fully qualified domain name for the Wi-Fi network connection.
- **IP Address:** Enter a static touch screen IP address for the Wi-Fi network connection.
- **Subnet Mask:** Enter a touch screen subnet mask address for the Wi-Fi network connection.
- **Default Gateway:** Enter the gateway router address on the network.

- **Wi-Fi Access Points**

NOTE: The Ethernet adapter must be turned off before a Wi-Fi connection can be established.

- **Scan Wi-Fi Access Points:** Scans the network for open Wi-Fi access points (WAPs) that are in range of the touch screen. All discovered access points are displayed in the **Select Discovered Access Points** menu.

NOTE: Not all nearby WAPs may be discovered during a scan. If a desired WAP is still not discovered after multiple scans, it must be added manually using the WAP table below this setting.

- **Select Discovered Access Points:** Select an access point after completing a scan. Enter text in the search field to search for a specific WAP name.

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 139](#).

- **Add Access Points:** Adds the chosen access point entry from the **Select Discovered Access Points** field to the table below.

Each added WAP is displayed in a table that contains the following information:

NOTE: The **SSID** and **Encryption Key** fields are populated automatically when a discovered WAP is selected. This information must be entered manually when adding a new WAP.

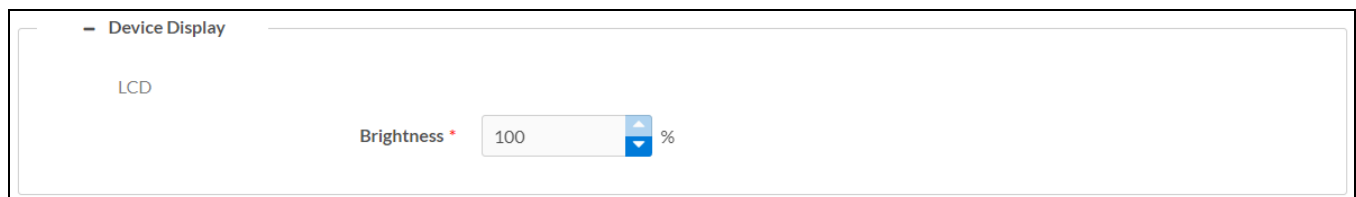
- **SSID:** Enter or modify the SSID (name) of the WAP.
- **Encryption Key:** Select the security/encryption type used by the WAP.
- **Password:** Enter the password used to connect to the WAP.
- **Active Access Point:** Indicates whether a connection to the WAP.

Select **Add** to add a new entry to the WAP table. After selecting one more entries in the WAP table, select **Remove** to delete the selected entries.

NOTE: No more than four WAPs can be assigned to the touch screen at once. An existing WAP must be removed before a new one can be added.

Device Display

The **Device Display** subsection is used to configure device display settings for the touch screen.



The screenshot shows a software interface for 'Device Display' settings. Under the 'LCD' section, there is a 'Brightness' label with a red asterisk. To its right is a horizontal slider control. The slider has a blue handle positioned at the far right end, and the numerical value '100' is displayed in the center of the slider track. To the right of the slider track is a percentage symbol (%).

Enter a value (1–100%) for the LCD display brightness in the **Brightness** text field.

Network Proxy Settings

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

▼ Network Proxy Settings

Proxy ☒

— HTTP Settings

HTTP Proxy ☒

HTTP Proxy Address *

HTTP Proxy Port *

Username

Password

— HTTPS Settings

HTTPS Proxy ☒

HTTPS Proxy Address *

HTTPS Proxy Port *

Username

Password

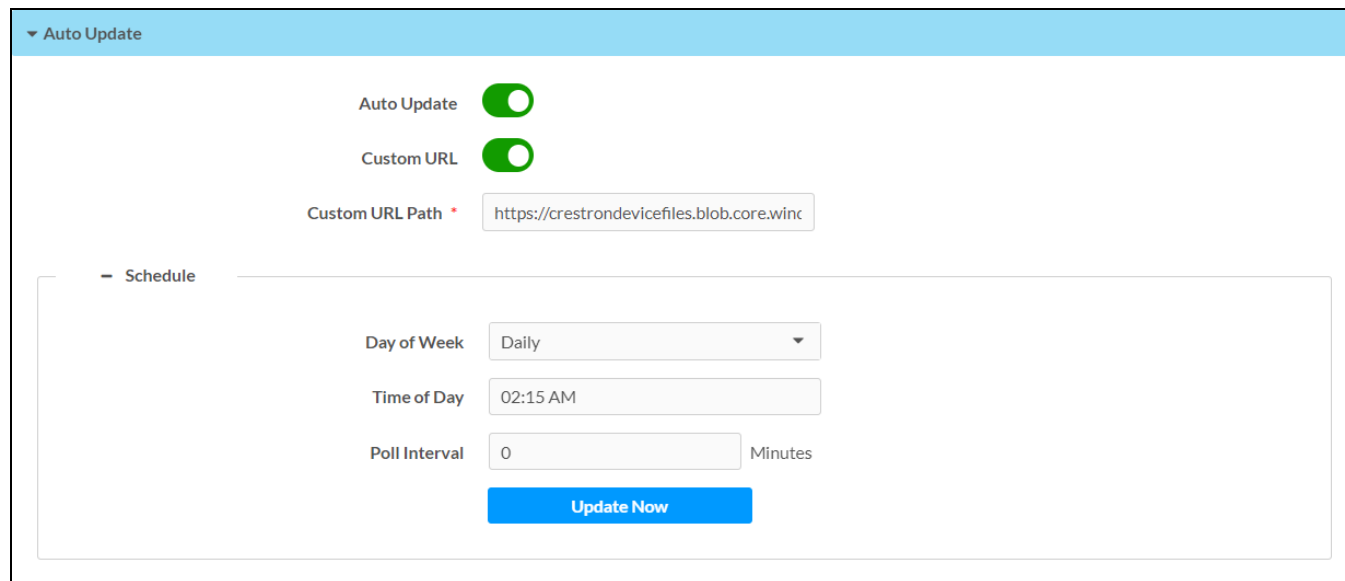
The following **Network Proxy Settings** settings are provided:

- **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.

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 screenshot shows the 'Auto Update' configuration interface. At the top, there is a blue header bar with a dropdown arrow and the text 'Auto Update'. Below this, there are two toggle switches: 'Auto Update' and 'Custom URL', both of which are turned on (green). Below the 'Custom URL' toggle, there is a text input field labeled 'Custom URL Path' with a red asterisk, containing the URL 'https://crestrondevicefiles.blob.core.winc'. Below this, there is a section titled 'Schedule' with a minus sign icon. Inside the 'Schedule' section, there are three input fields: 'Day of Week' with a dropdown menu set to 'Daily', 'Time of Day' with a text input set to '02:15 AM', and 'Poll Interval' with a text input set to '0' and a 'Minutes' label. At the bottom of the 'Schedule' section, there is a blue button labeled 'Update Now'.

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.

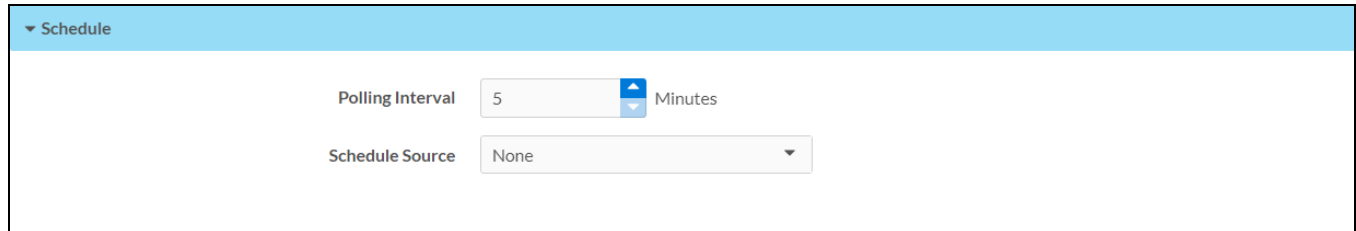
NOTE: When entering a custom URL path that uses Secure File Transfer Protocol (SFTP), ensure that the path explicitly includes the user's home directory. Otherwise, the root directory will be used by default.

- **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.

Schedule

Select **Schedule** to choose the scheduling calendar provider for the Crestron Scheduling app and to configure scheduling integration settings.

NOTE: The **Schedule** accordion is shown only if **Crestron Scheduling** is selected for **Application Mode**.



The screenshot shows a settings panel with a light blue header labeled 'Schedule'. Below the header, there are two settings: 'Polling Interval' with a numeric input field containing '5' and a unit selector set to 'Minutes', and 'Schedule Source' with a dropdown menu currently showing 'None'.

The following **Schedule** settings are provided:

- **Polling Interval:** Enter the interval (in minutes) that the scheduling application waits to poll the network for scheduling calendar data if changes are not pushed to the application.

NOTE: To override the current polling interval from the Crestron Scheduling app and fetch the latest scheduling calendar data, double tap the QR code displayed in the UI. For more information on the Crestron Scheduling app UI, refer to [Operation on page 144](#).

- **Schedule Source:** Select the scheduling calendar source from the drop-down menu that provides scheduling information to the application.

Depending on the scheduling calendar source that is selected for **Schedule Source**, the following subsections are displayed.

Microsoft 365

Select **Microsoft 365** under **Schedule Source** to display options for integrating a Microsoft Exchange account with the scheduling application using Microsoft Graph.

For more information on connecting to a Microsoft Exchange account, refer to [Connect to Microsoft 365 Using Microsoft Graph on page 79](#).

The screenshot shows a web interface with a blue header bar containing a dropdown arrow and the text "Schedule". Below the header, there are two configuration fields: "Polling Interval" with a value of "5" and a "Minutes" label, and "Schedule Source" with a dropdown menu showing "Microsoft 365". Below these fields is a section titled "Microsoft 365" which contains four text input fields, each with a red border and a red error message to its right:

- Calendar Email Address * (error: Calendar Email Address is invalid)
- Application (client) ID * (error: Application (client) ID is invalid)
- Directory (tenant) ID * (error: Directory (tenant) ID is invalid)
- Client Secret Value * (error: Client Secret Value is invalid)

NOTE: The **Application (client) ID**, **Directory (tenant) ID**, and **Client Secret Value** values are generated within the Microsoft Entra portal for the Microsoft Entra app. For more information, refer to [Configure Microsoft Graph for Crestron Scheduling on page 123](#).

- Enter the email address associated with the Microsoft Exchange scheduling calendar in the **Calendar Email Address** text field.
- Enter the application (client) ID generated for the Microsoft Entra app in the **Application (client) ID** text field.
- Enter the directory (tenant) ID generated for the Microsoft Entra app in the **Directory (tenant) ID** text field.
- Enter the client secret value generated for the Microsoft Entra app in the **Client Secret Value** text field.

LEDs & Custom Colors

Select **LEDs & Custom Colors** to customize the LED colors of the integrated light bar.

NOTE: The **LEDs & Custom Colors** accordion is shown only if **Crestron Scheduling** is selected for **Application Mode**.

LEDs & Custom Colors

Enable LEDs ☒

Custom LED colors ☒ ⓘ

— Custom Color Values —

Available

LED Color * #00ff00

Upcoming Reservation ⓘ

LED Color * #ffcc00

Reserved

LED Color * #ff0000

The following **LEDs & Custom Colors** settings are provided:

- **Enable LEDs:** Turn on the toggle to use the light bar with the Crestron Scheduling app.
- **Custom LED Colors:** Turn on the toggle to use custom colors for the light bar.
- Expand **Custom Color Values** to configure custom colors for the light bar (if **Custom LED colors** is turned on):
 - Select the color swatch buttons to the right of the **LED Color** text fields to display color pickers for each occupancy state (**Available**, **Upcoming Reservation**, and **Reserved**). Select the desired color using the color picker, and then select **OK**.

LEDs & Custom Colors

Enable LEDs ☒

Custom LED colors ☒ ⓘ

— Custom Color Values —

Available

LED Color * #00ff00

Upcoming Reservation ⓘ

LED Color * #ffcc00

Reserved

LED Color * #ff0000

#ff0000

✓ OK × Cancel

- Alternately, enter a hexadecimal color value in the **LED Color** text field to use the closest color supported by the light bar.

NOTES:

- The light bar LEDs do not support all possible hexadecimal color values. If an unsupported color value is entered in the **LED Color** text field, the closest supported color value will be used instead.
- The hexadecimal color values shown in the image above are the default values for the touch screen.

Applications

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

Applications

Application Mode

Crestron Scheduling

Application Auto Update

☐

Crestron Scheduling

Scheduling Mode

Desk Mode

Theme

Light

Desk/Room Name

Crestron HQ 6

Check-in and Decline for No Show

Check-in

☒

Allow Check-in *

15

Minutes before start time

Decline for No Show

☐

Check-in End Time *

15

Minutes after start time

QR code Settings

QR code Content

Custom URL

Custom URL *

Language

Language

English (United States)

The following **Applications** settings are provided:

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

Once a new application is selected, select **Save Changes** from the **Actions** 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. For more information on supported applications, refer to [Application Selection on page 122](#).

- **Application Auto Update:** Turn on the toggle to update the selected application automatically when an update is made available to the touch screen.

NOTE: Ensure **Application Auto Update** is turned on before switching to a third-party application. The application may not download to the touch screen if **Application Auto Update** is turned off.

- The following additional settings are provided if **Crestron Scheduling** is selected for **Application Mode**:

- **Crestron Scheduling**

- **Scheduling Mode:** Use the drop-down menu to switch between **Desk Mode** and **Room Mode**. For more information on operating these modes, refer to [Operation on page 144](#).
- **Theme:** Use the drop-down menu to switch between **Light** and **Dark** themes for the user interface.
- **Desk/Room Name:** Enter a custom name for the desk or room. This custom name overwrites the calendar name on the application user interface.

- **Check-in and Decline for No Show** (*Desk Mode Only*)

NOTE: For detailed information about check-in and decline for no show behavior in desk mode, refer to [Operation on page 144](#).

- **Require Check-In:** Turn on the toggle to require a user to check in to the reservation from the touch screen before the reservation begins.
- **Allow Check-In:** Enter the duration (in minutes) when a check in button becomes available on the touch screen before a reservation begins.

NOTE: If the check in button from the prior reservation is still active and has not been pressed, the check in button for the next reservation does not appear until the previous reservation expires.

- **Decline for No Show:** If **Check-In** is turned on, turn on the toggle to allow reservations to be declined automatically in the event of a no show.

NOTE: When **Decline for No Show** is turned on, a user must tap the check in button on the touch screen within a specified period after the reservation begins. If the user does not check in during this period, the reservation will be removed from the scheduling calendar.

- **Check-in End Time:** Enter the duration (in minutes) when the check button will be available on the touch screen after a reservation begins.

NOTE: If the length of a reservation is shorter than the **Check-in End Time** value, the **Check-in End Time** duration is limited to the length of the reservation, and the reservation will not be canceled.

- **Check in** (*Room Mode Only*)

- **Enable Check-in:** Turn on the toggle to allow a user to check in to the reservation from the touch screen before the reservation begins.

NOTE: For information about check-in behavior in room mode, refer to [Operation on page 144](#). The decline for no show functionality is not provided in room mode.

- **QR code Settings**

- **QR code Content:** Use the drop-down menu to select the content that will be stored in the QR code shown on the user interface (**Outlook.office.com (Microsoft Edge)** or **Custom URL**). For more information on the QR code, refer to [Operation on page 144](#).
- **Custom URL:** If **Custom URL** is selected for **QR code Content**, enter a custom text string to be stored in the QR code in the user interface.

- **Language**

- **Language:** Use the drop-down menu to select the language that will be used by the scheduling application.

Work Hours

Select **Work Hours** to configure power mode settings for the touch screen, which are controlled by a day and time range.

NOTE: The **Work Hours** accordion is shown only if **Crestron Scheduling** is selected for **Application Mode**.

▼ Work Hours

Power Mode

Work Hours Based

?

Standby Timeout

5

Minutes

Enable	Day	On Time	Off Time
☒	Monday	08:00	18:00
☒	Tuesday	08:00	18:00
☒	Wednesday	08:00	18:00
☒	Thursday	08:00	18:00
☒	Friday	08:00	18:00
☒	Saturday	08:00	18:00
☒	Sunday	08:00	18:00

The following **Work Hours** settings are provided:

- **Power Mode:** Use the drop-down menu to set the power mode settings for the touch screen display:
 - **Always On:** The touch screen display is always turned on and will not enter standby timeout mode regardless of scheduled work hours.
 - **Work Hours Based:** The touch screen display is turned on only during scheduled work hours and be placed in standby timeout mode during nonworking hours. The touch screen display can be tapped to wake it from standby timeout mode.
- **Standby Timeout:** If **Work Hours Based** is selected for **Standby**, enter a standby timeout duration (0–120 minutes) for the touch screen. If the touch screen display is tapped during nonworking hours, it will remain on for the specified duration before returning to standby timeout mode. Select "0" to always have the touch screen display turned on when using work hours.

NOTE: Work hours also control when all-day reservations will be declined if the decline for no show functionality has been configured for the touch screen. It is recommended to set the work hours **On Time** to reflect when most users in your organization typically start their work day.

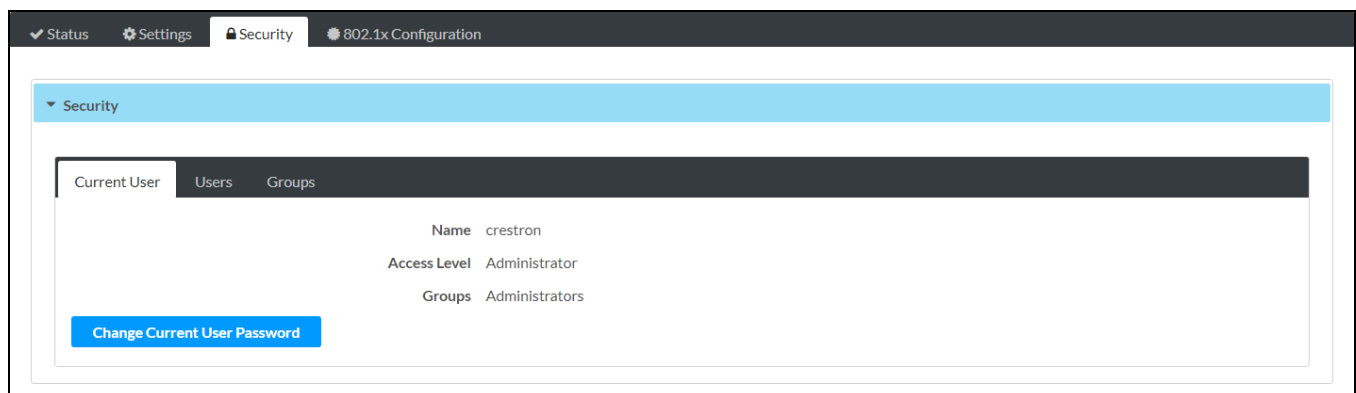
The following settings may be also configured for each day of the week listed in the corresponding **Day** column.

- **Enable:** Turn on the toggle to use power mode controls for the chosen day of the week. The touch screen display does not turn on for any day that is not selected by turning on the **Enable** toggle.
- **On Time:** Enter the time (in 24-hour format) when the connected touch screen display is turned on automatically for the chosen day of the week. The **On Time** value is also used to set when all day reservations will begin.
- **Off Time:** Enter the time (in 24-hour format) when the connected touch screen display is turned off automatically for the chosen day of the week. The **Off Time** value is also used to set when all day reservations will end.

During the set date and time range, the touch screen display remains on regardless of whether any reservations are scheduled.

Security

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



Use the following **Security** settings to add, delete, and edit touch screen users and groups.

Current User

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

Current User

Users

Groups

Name

crestron

Access Level

Administrator

Groups

Administrators

Change Current User Password

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**)
- **Groups:** Lists any groups that contain the user

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

Change Password

Current Password *

Current Password is invalid

Password *

Password is invalid

Confirm Password *

OK

Cancel

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.

Current User

Users

Groups

Search...

Username	Groups	Action
crestron	Administrators	

1

10

Create User

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:

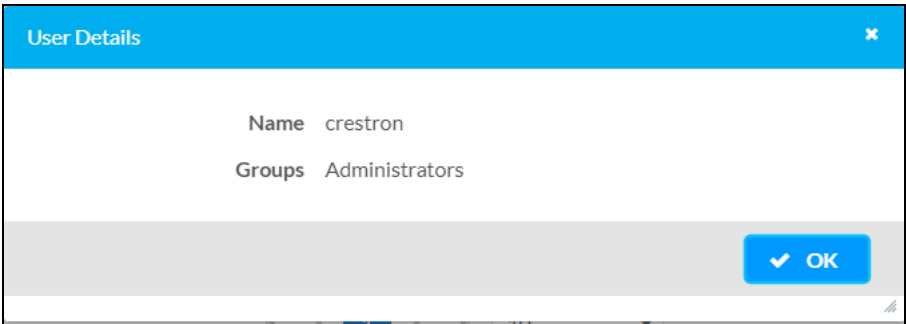
- **Username:** The chosen username
- **Groups:** Lists any groups that contain the user

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



The **User Details** dialog box has a blue header with the title "User Details" and a close button. The main area displays the user's details: "Name crestron" and "Groups Administrators". At the bottom right, there is a blue button with a checkmark and the text "OK".

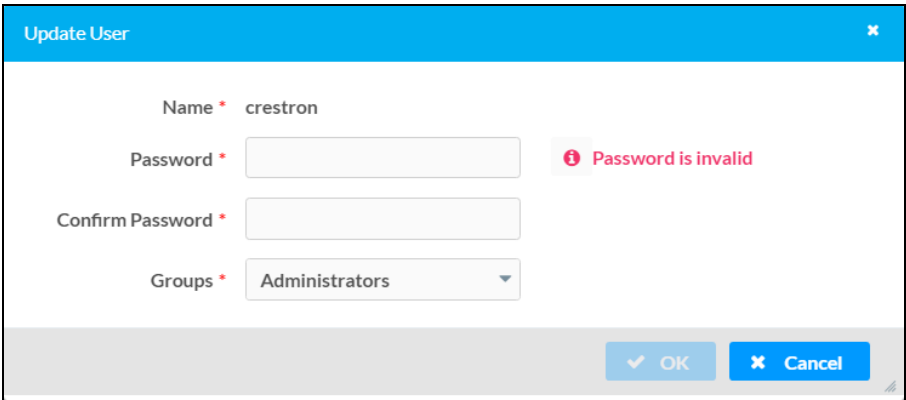
The following settings are displayed for the current user:

- **Name:** The chosen username
- **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 **Update User** dialog box has a blue header with the title "Update User" and a close button. The main area contains form fields for "Name" (with a red asterisk and the value "crestron"), "Password" (with a red asterisk and an empty field), "Confirm Password" (with a red asterisk and an empty field), and "Groups" (with a red asterisk and a dropdown menu showing "Administrators"). A red error message "Password is invalid" is displayed next to the Password field. At the bottom right, there are two buttons: a blue button with a checkmark and "OK", and a blue button with an 'X' and "Cancel".

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

- **Name:** The chosen username.
- **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 109](#).

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

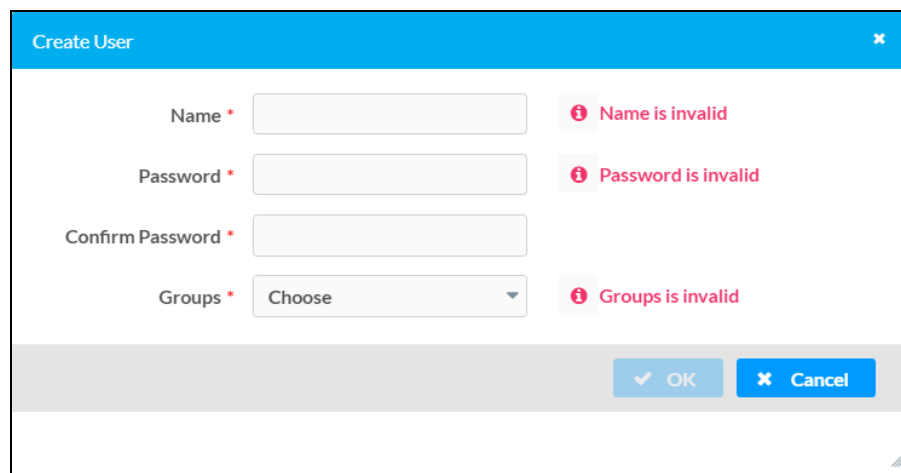
Delete User

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.



The image shows a 'Create User' dialog box with a blue header and a close button (X) in the top right corner. It contains four input fields with red asterisks indicating required fields: 'Name', 'Password', 'Confirm Password', and 'Groups'. Each field has a corresponding error message in red text: 'Name is invalid', 'Password is invalid', and 'Groups is invalid'. The 'Groups' field is a dropdown menu with 'Choose' selected. At the bottom right, there are two buttons: 'OK' with a checkmark icon and 'Cancel' with an X icon.

Use the following settings to create a new user:

- **Name:** Enter a username.
- **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 109](#).

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.

Current UserUsersGroups

Q Search...

Group Name	Access Level	Action
Administrators	Administrator	 
Connects	Connect	 
Operators	Operator	 
Programmers	Programmer	 
Users	User	 

1

10

Create Group

- 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
 - **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  in the **Action** column to view information for the selected group. The **Group Details** dialog box is displayed.

Group Details

Name

Administrators

Access Level

Administrator

✓ OK

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

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

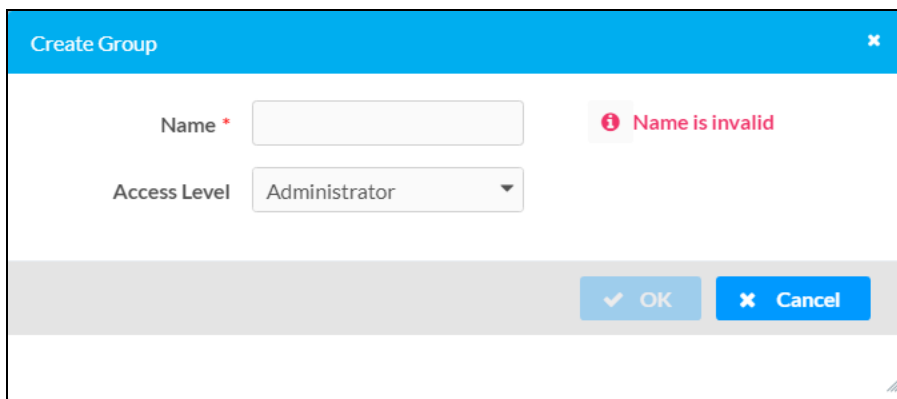
Delete Group

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.



The image shows a 'Create Group' dialog box with a blue header bar containing the title 'Create Group' and a close button (X). The main area is white and contains two input fields. The first field is labeled 'Name' with a red asterisk, and it is empty. To its right is a red error message: 'i Name is invalid'. The second field is labeled 'Access Level' and is a dropdown menu currently showing 'Administrator'. At the bottom of the dialog, there is a grey bar containing two buttons: 'OK' (with a checkmark icon) and 'Cancel' (with an X icon). A small icon is visible in the bottom right corner of the dialog box.

Use the following settings to create a new group:

- **Name:** Enter a group name.
- **Access Level:** Select an access level for the group and its users from the drop-down menu.

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

802.1x Configuration

Select the **802.1x Configuration** tab on the top left of the interface to display selections for configuring IEEE 802.1X network authentication for touch screen security.

The screenshot shows the '802.1x Configuration' tab selected in the top navigation bar. The main configuration area is titled '802.1x Configuration' and contains the following settings:

- IEEE 802.1x Authentication:** A toggle switch is turned on (green).
- Authentication Method:** A dropdown menu is set to 'EAP MSCHAP V2- password'.
- Domain:** An empty text input field.
- Username *:** An empty text input field with a red error message below it: 'Username cannot be empty'.
- Password *:** An empty text input field with a red error message below it: 'Password cannot be empty'.
- Enable Authentication Server Validation:** A toggle switch is turned on (green).
- Select Trusted Certificate Authoritie(s):** A list of certificate authorities with checkboxes. The list includes: AAA Certificate Services, ACCVRAIZ1, ACEDICOM Root, Actalis Authentication Root CA, AffirmTrust Commercial, AffirmTrust Networking, AffirmTrust Premium ECC, AffirmTrust Premium, Atos TrustedRoot 2011, Autoridad de Certificacion Firmaprofesional CIF A62634068, Baltimore CyberTrust Root, Buypass Class 2 Root CA, Buypass Class 3 Root CA, and CA Disig Root R1.

Use the following **802.1x Configuration** settings to configure IEEE 802.1X network authentication:

Expand the **802.1x Configuration** accordion to configure the following settings:

- **IEEE 802.1x Authentication:** Turn on the toggle to use 802.1X authentication for the touch screen.
- **Authentication Method:** Select an 802.1X authentication method (**EAP-TLS Certificate** or **EAP MSCHAP V2- password**) from the drop-down menu.

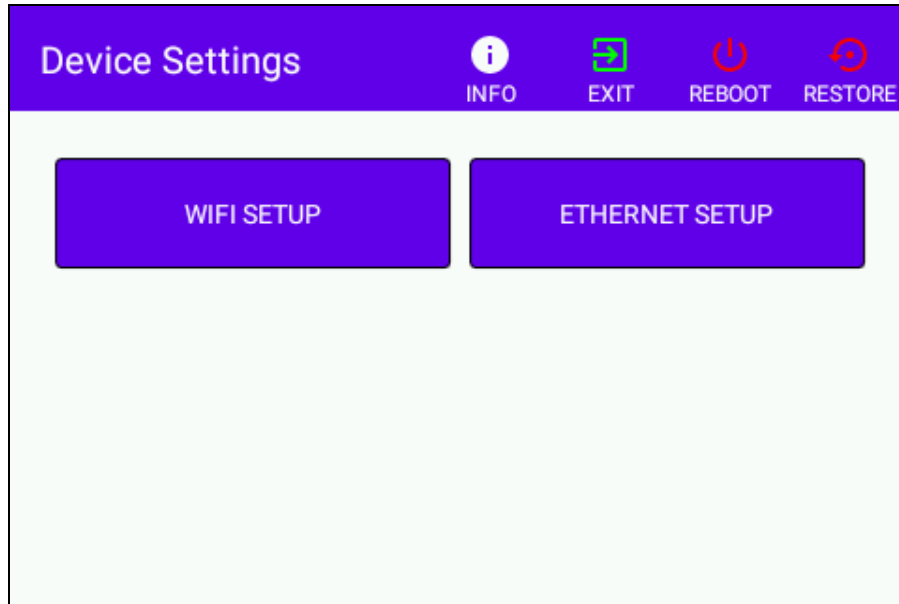
- **Domain:** If **EAP MSCHAP V2- password** is selected for **Authentication Method**, enter a domain name that is required for authentication.
- **Username:** If **EAP MSCHAP V2- password** is selected for **Authentication Method**, enter a username that is required for authentication.
- **Password:** If **EAP MSCHAP V2- password** is selected for **Authentication Method**, enter a password that is required for authentication.
- **Enable Authentication Server Validation:** Turn on the toggle to use server validation for increased security.
- **Select Trusted Certificate Authorities:** Select trusted CAs (Certificate Authorities) from the provided CAs to be used for server validation:
 - Select the check box to the left of a CA to select it as a trusted CA.
 - Enter a search term into the text field at the top of the CA menu to search for and display CAs that match the search term.
 - Select the check box to the left of the search field at the top of the CA menu to select all CAs as trusted CAs.

For more information on managing certificates for use with 802.1X IEEE authentication, refer to [Manage Certificates on page 84](#).

Local Configuration

Certain touch screen settings may be monitored and configured using its local configuration interface. The interface can be accessed as described in [Access the Local Setup Screens on page 69](#).

The **Device Settings** screen is displayed.



The **Device Settings** screen provides the following menu selections:

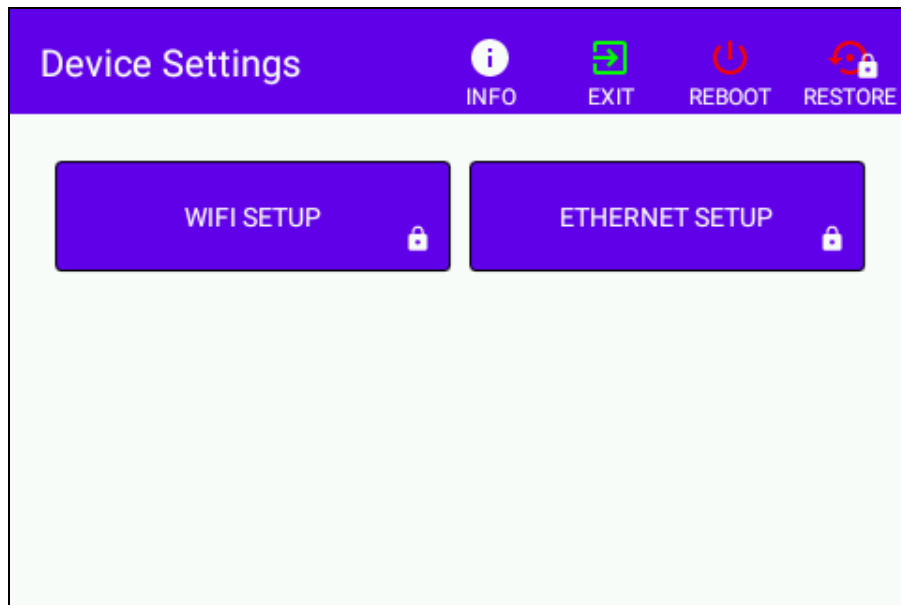
- Tap **Info** to display information about the touch screen and its network settings.
- Tap **Exit** to exit the local setup screens and to return to the application running on the touch screen.
- Tap **Reboot** to restart the touch screen. Tap **OK** when prompted by the touch screen to confirm the restart.
- Tap **Restore** to restore the touch screen to its factory default settings. Tap **OK** when prompted by the touch screen to confirm the restore.

CAUTION: Performing a restore returns all touch screen settings to their default values (except for application settings) 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 138](#).

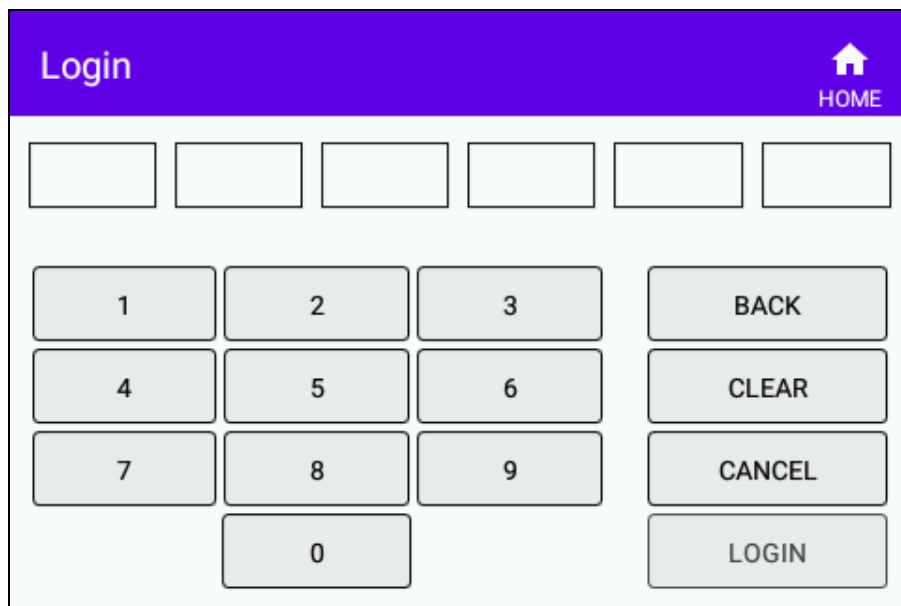
Additionally, selections for configuring a Wi-Fi® network connection or Ethernet connection are provided. Each selection is described in the following sections.

Enter an Admin PIN

If a device settings admin PIN has been configured for the touch screen, the **Restore**, **Wi-Fi Setup**, and **Ethernet Setup** selections will display a lock icon.



If one of these selections are made, a **Login** screen is displayed.

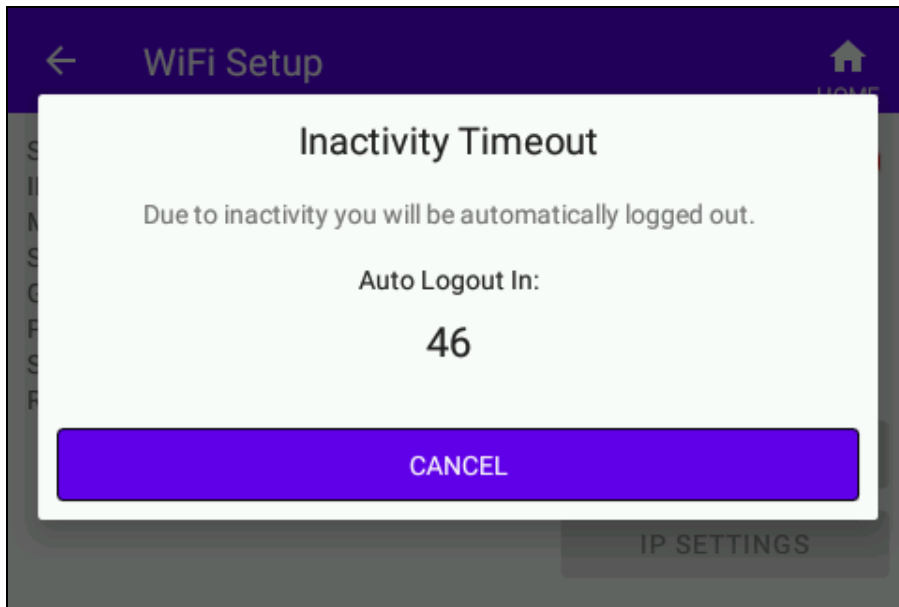


Use the numeric keypad to enter the six-digit admin PIN that has been created for the touch screen. The following controls are also provided:

- Tap **BACK** to delete the last number entered.
- Tap **CLEAR** to clear all entered numbers.
- Tap **CANCEL** to return to the **Device Settings** screen without entering a PIN.

- Tap **LOGIN** to log into the touch screen using the six-digit PIN. This selection is only available after entering all six digits of the PIN.

If the login is successful, the lock icons are cleared from the **Device Settings** screen and the selections can be accessed. The current session times out after four minutes of inactivity. An **Inactivity Timeout** window is displayed during the last minute before timeout to alert the user that their session will be ended.

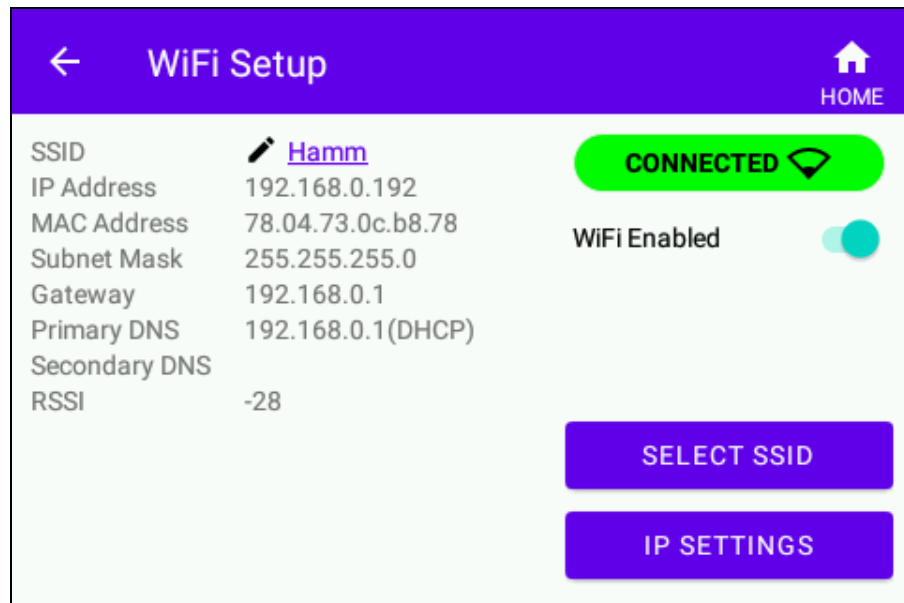


Once the session times out, the PIN must be reentered.

For more information on configuring a device settings admin PIN, refer to [Device Settings Admin PIN on page 90](#).

Wi-Fi Setup

Tap **Wi-Fi Setup** on the **Device Settings** screen to display the **Wi-Fi Setup** screen.



Use the **Wi-Fi Setup** screen to view the Wi-Fi network SSID, IP and MAC addresses, subnet mask address, default router address, primary and secondary DNS addresses, and various details about the Wi-Fi connection. A status bar is provided to indicate the status of the Wi-Fi connection (**Connected** or **Not Connected**).

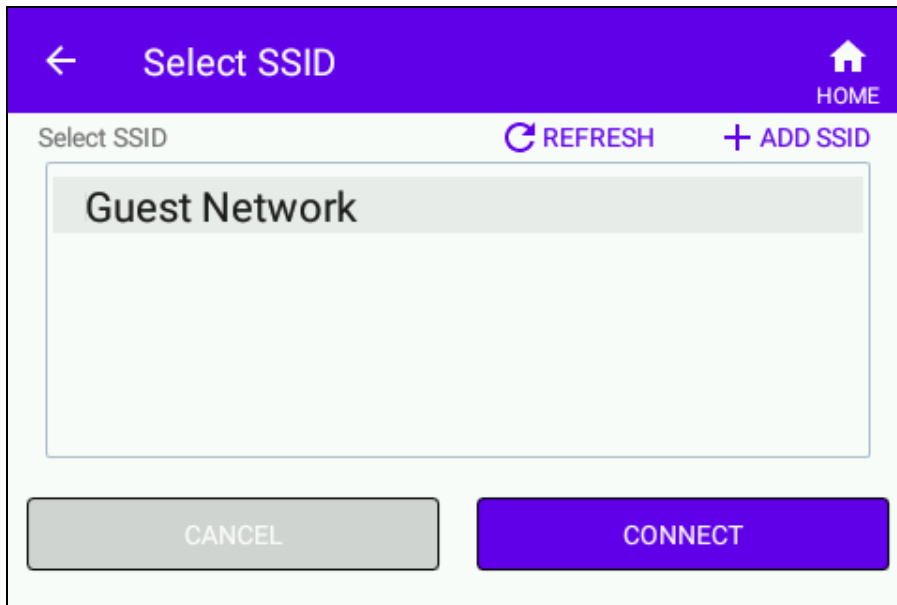
NOTE: The touch screen Ethernet adapter must be turned off before a Wi-Fi connection can be established.

Turn on the **Wi-Fi Enabled** toggle to turn on the Wi-Fi adapter. If the **Wi-Fi Enabled** toggle is turned off, Wi-Fi will not function and an Ethernet connection can be established.

Tap the **Home** button at the top of the screen at any time to return to the **Device Settings** screen.

Configure a Wi-Fi Access Point

On the **Wi-Fi Setup** screen, tap **Select SSID**. The **Select SSID** screen is displayed.



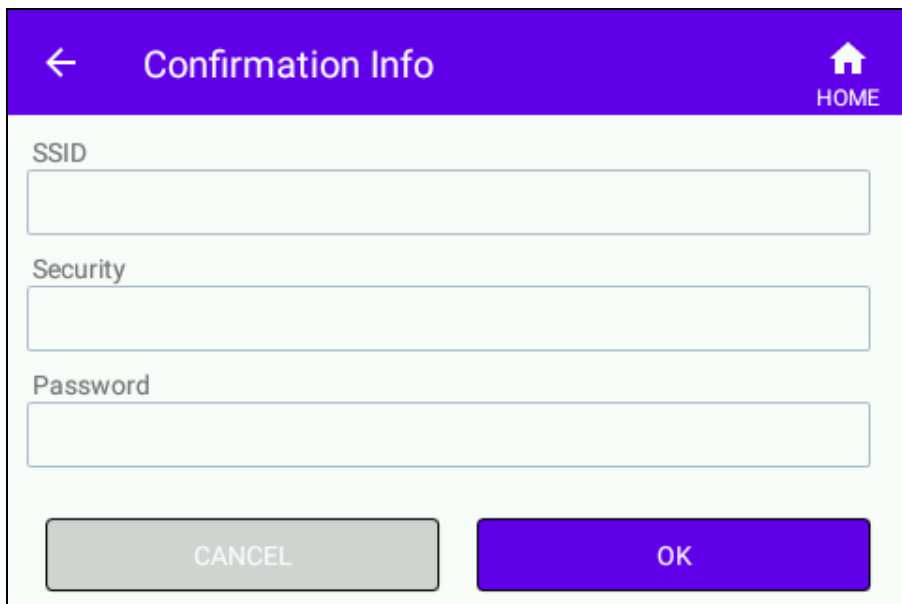
Use the **Select SSID** screen to connect the touch screen to an existing WAP that is in range or to configure a new WAP. Any WAPs that are in range and discoverable are displayed within this screen upon successful discovery. Select **Refresh** to refresh the listed of discovered WAPs.

NOTES:

- Not all nearby WAPs may be discovered during a scan. If a desired WAP is still not discovered after multiple scans, it must be added manually using the **+Add SSID** function.
- Only one WAP can be configured for the touch screen using the local configuration screens, while up to four WAPs can be configured using the web configuration interface. Attempting to configure a WAP using the local configuration screens will delete any additional WAPs that were previously added using the web configuration interface.

To set up a Wi-Fi network connection:

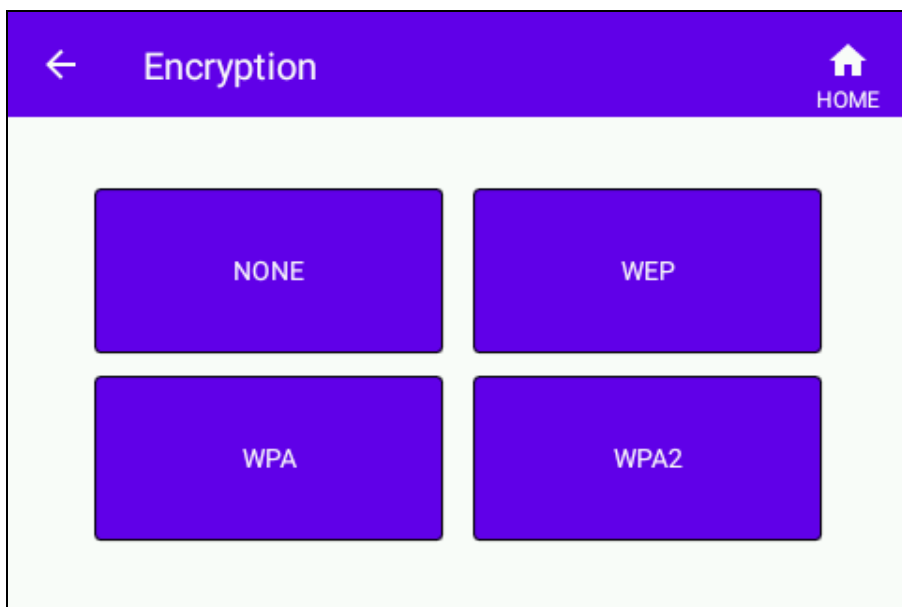
1. Select the desired WAP from the **Select SSID** screen. If the desired WAP is not shown, tap **+Add SSID**. The **Confirmation Info** screen is displayed.



The **Confirmation Info** screen features a purple header with a back arrow, the title "Confirmation Info", and a "HOME" button with a house icon. Below the header, there are three text input fields labeled "SSID", "Security", and "Password". At the bottom, there are two buttons: a grey "CANCEL" button and a purple "OK" button.

NOTE: The **SSID** and **Security** fields are populated automatically when a discovered WAP is selected. This information must be entered manually when adding a new WAP.

2. Tap the **SSID** text field to display an on-screen keyboard.
3. Enter or modify the WAP name if necessary.
4. Tap the **Security** text field to display the **Encryption** screen.



The **Encryption** screen features a purple header with a back arrow, the title "Encryption", and a "HOME" button with a house icon. Below the header, there are four large purple buttons arranged in a 2x2 grid, labeled "NONE", "WEP", "WPA", and "WPA2".

5. Tap the appropriate encryption type used by the WAP to populate the setting in the **Confirmation Info** screen.
6. Tap the **Password** text field to display an on-screen keyboard.
7. Enter the password used to connect to the WAP.
8. Tap **OK**.

The touch screen attempts to connect to the WAP using the provided credentials. If a connection is established, the **Wi-Fi Setup** page updates to show a **Connected** status and information about the Wi-Fi connection.

Configure IP Settings

Tap **IP Settings** to display the **IP Settings** screen.

The screenshot shows the 'IP Settings' screen. At the top, there is a purple header bar containing a back arrow on the left, the title 'IP Settings' in the center, and a 'HOME' button with a house icon on the right. Below the header, the screen is divided into two columns. The left column contains three text input fields: 'IP Address' with the value '172.16.42.172', 'Subnet Mask' with '255.255.255.0', and 'Primary DNS' with '0.0.0.0'. The right column contains two text input fields: 'Gateway' with '172.16.42.1' and 'Secondary DNS' with '0.0.0.0'. Between these columns, there is a 'Use DHCP' toggle switch, which is currently turned on (indicated by a green circle). At the bottom of the screen, there are two large purple buttons: 'CANCEL' on the left and 'OK' on the right.

Use the **IP Settings** screen to configure DHCP and to set a static IP address if DHCP is turned off.

NOTE: DHCP is turned on by default for the Wi-Fi network connection.

- Turn on the **Use DHCP** toggle to turn on DHCP for the Wi-Fi network connection.
- If **Use DHCP** is turned off, static IP addresses can be entered manually. Tap the text fields under **IP Address**, **Subnet Mask**, **Gateway**, **Primary DNS**, or **Secondary DNS** to display an on-screen keyboard for editing the respective setting.

After any changes have been made, select **OK** to apply the new settings and restart the touch screen (if required). Select **Cancel** to cancel the changes.

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

Edit the Active Wi-Fi Access Point

Tap the **SSID** name on the **Wi-Fi Setup** screen to display the **Confirmation Info** screen for the active WAP.

Confirmation Info

HOME

SSID

Hamm

Security

WPA2

Password

CANCEL

OK

Tap the **SSID**, **Security**, and **Password** fields to edit their respective settings. After any changes have been made, select **OK** to apply the settings. Select **Cancel** to cancel the changes.

Ethernet Setup

Tap **Ethernet Setup** on the **Device Settings** screen to display the **Ethernet Setup** screen.

Ethernet Setup

HOME

IP Address

192.168.0.192

MAC Address

c4.42.68.18.f6.c4

Subnet Mask

255.255.255.0

Gateway

192.168.0.1

Primary DNS

192.168.0.1(DHCP)

Secondary DNS

CONNECTED

LAN Enabled

IP SETTINGS

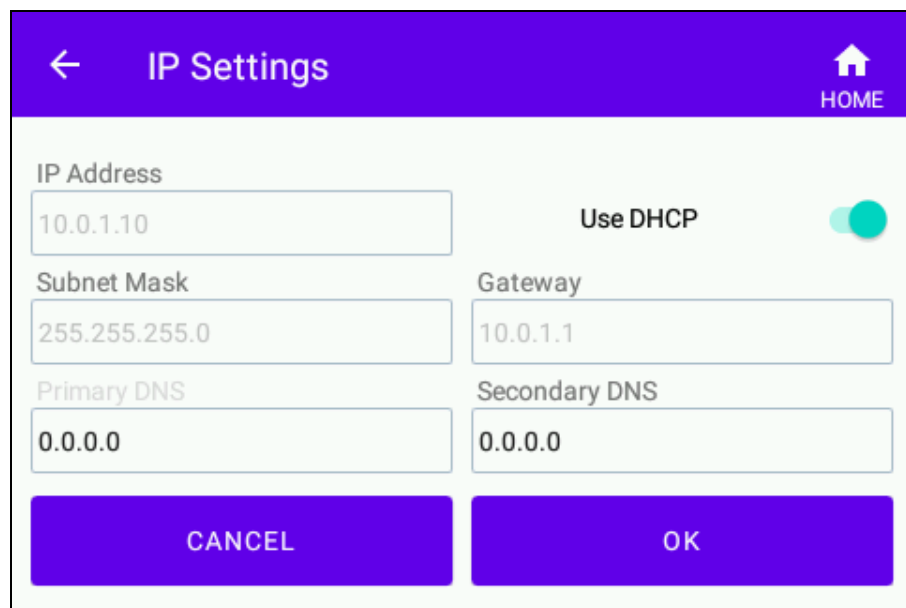
Use the **Ethernet Setup** screen to view the Ethernet IP and MAC addresses, subnet mask address, default router address, and primary and secondary DNS addresses. A status bar is provided to indicate the status of the Ethernet connection (**Connected** or **Not Connected**).

Turn on the **LAN Enabled** toggle to turn on the Ethernet adapter. If the **LAN Enabled** toggle is turned off, Ethernet will not function and a Wi-Fi network connection can be established.

Tap the **Home** button at the top of the screen at any time to return to the **Device Settings** screen.

Configure IP Settings

Tap **IP Settings** to display the **IP Settings** screen.



Use the **IP Settings** screen to configure DHCP and to set a static IP address if DHCP is turned off.

NOTE: DHCP is turned on by default for the Ethernet connection.

- Turn on the **Use DHCP** toggle to turn on DHCP for the Ethernet connection.
- If **Use DHCP** is turned off, static IP addresses can be entered manually. Tap the text fields under **IP Address**, **Subnet Mask**, **Gateway**, **Primary DNS**, or **Secondary DNS** to display an on-screen keyboard for editing the respective setting.

After any changes have been made, select **OK** to apply the new settings and restart the touch screen (if required). Select **Cancel** to cancel the changes.

Select the back arrow button to return to the **Ethernet Setup** screen.

Application Selection

The touch screen ships with a variety of preinstalled applications that provide out-of-the-box functionality. Once an application has been selected, it downloads from the cloud and installs on the touch screen automatically.

The following applications ship with the touch screen:

- [Crestron Scheduling](#) application
- [Appspace®](#) workplace management application
- [Tango Reserve by AgilQuest®](#) workplace management 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.

Configure Microsoft Graph for Crestron Scheduling

This topic describes how to configure Microsoft Graph support for the Crestron Scheduling app when using the Microsoft 365® scheduling calendar.

Microsoft Graph is provided by the Microsoft Entra® service to allow access to Microsoft Cloud service resources. Once Microsoft Graph is configured, the Crestron Scheduling app uses this access method to provide heightened user authentication.

NOTE: If access has not been granted for Microsoft Graph configuration or if account has not been provided to access the Microsoft Entra tenant, contact the tenant administrator within your organization's IT department.

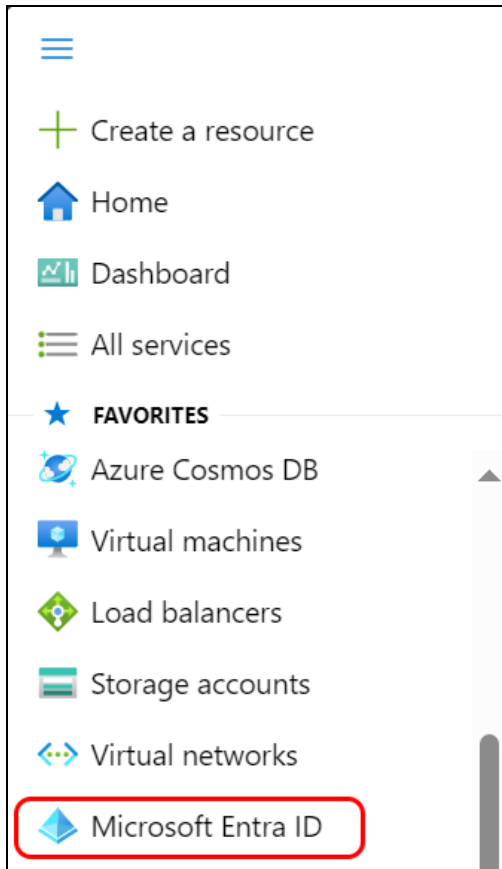
Configure the Crestron Scheduling App

Use the following procedures to define a new application in Microsoft Entra.

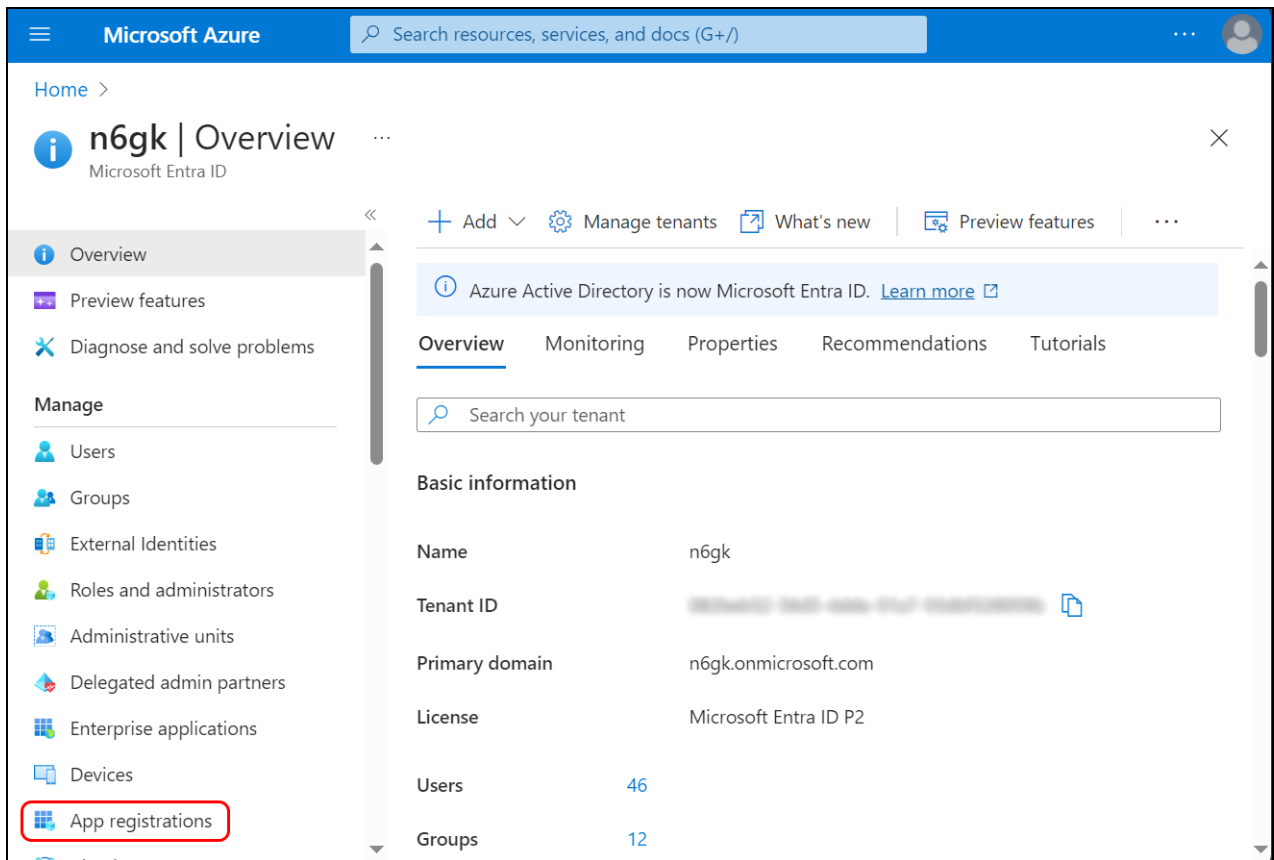
NOTE: Only one Microsoft Graph application is required for all touch screens running the Crestron Scheduling app within the same Microsoft Entra tenant. The Microsoft Graph application credentials (outside of the calendar email address) can be reused for all touch screens within the same deployment.

Create the Crestron Scheduling App

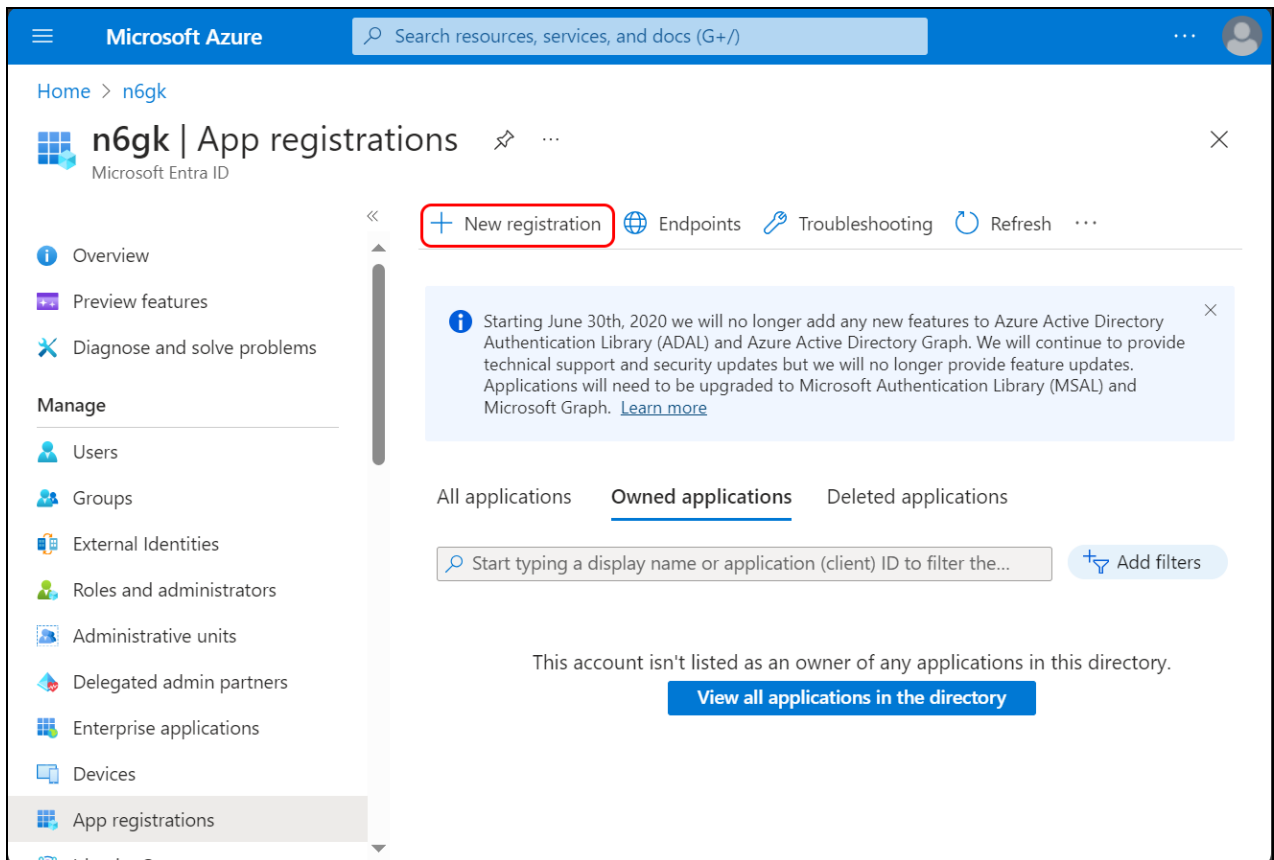
1. Sign into the Microsoft Entra portal with a user ID with sufficient permissions to create an app.
2. Select **Microsoft Entra ID** from the left navigation menu.



3. Select **App registrations** from the Microsoft Entra widget menu.



4. Select **+ New registration**.



A dialog box for creating the app is displayed.

Microsoft Azure Search resources, services, and docs (G+/)

Home > n6gk | App registrations >

Register an application

* Name

The user-facing display name for this application (this can be changed later).

Crestron Scheduling for Graph API

Supported account types

Who can use this application or access this API?

- ☒ Accounts in this organizational directory only (n6gk only - Single tenant)
- ☐ Accounts in any organizational directory (Any Microsoft Entra ID tenant - Multitenant)
- ☐ Accounts in any organizational directory (Any Microsoft Entra ID tenant - Multitenant) and personal Microsoft accounts (e.g. Skype, Xbox)
- ☐ Personal Microsoft accounts only

[Help me choose...](#)

Redirect URI (optional)

We'll return the authentication response to this URI after successfully authenticating the user. Providing this now is optional and it can be changed later, but a value is required for most authentication scenarios.

Select a platform e.g. https://example.com/auth

Register an app you're working on here. Integrate gallery apps and other apps from outside your organization by adding from [Enterprise applications](#).

By proceeding, you agree to the [Microsoft Platform Policies](#)

Register

5. Enter the following information:

- **Name:** Enter a user-facing name of the application (in the Microsoft Entra environment). This can be any string 120 characters or less. It is possible to have more than one application registered with the same display name.
- **Supported account types:** Select the supported account type. Only the **Accounts in this organizational directory only** option is supported by the Crestron Scheduling app at this time.

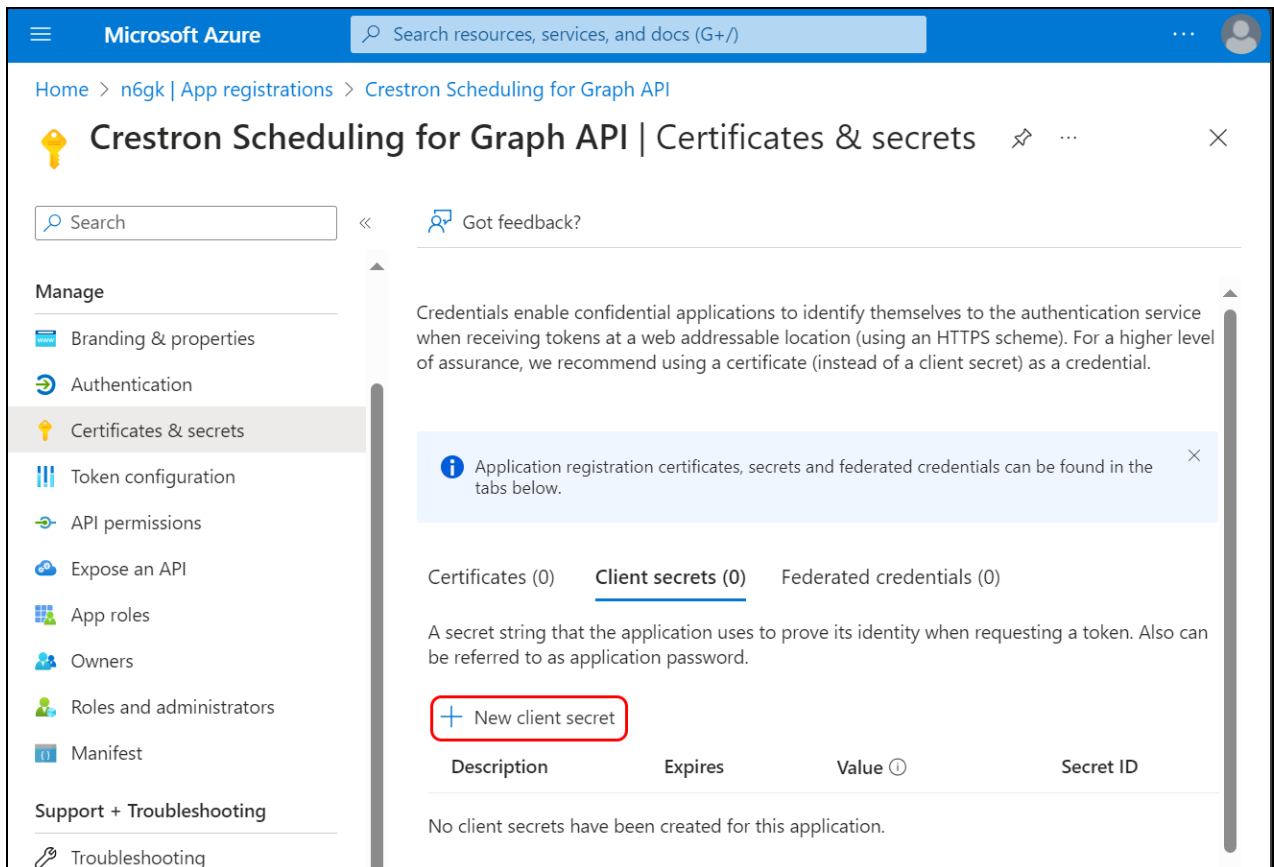
NOTE: The **Redirect URI (optional)** settings are not configured for this application.

6. Select **Register**.

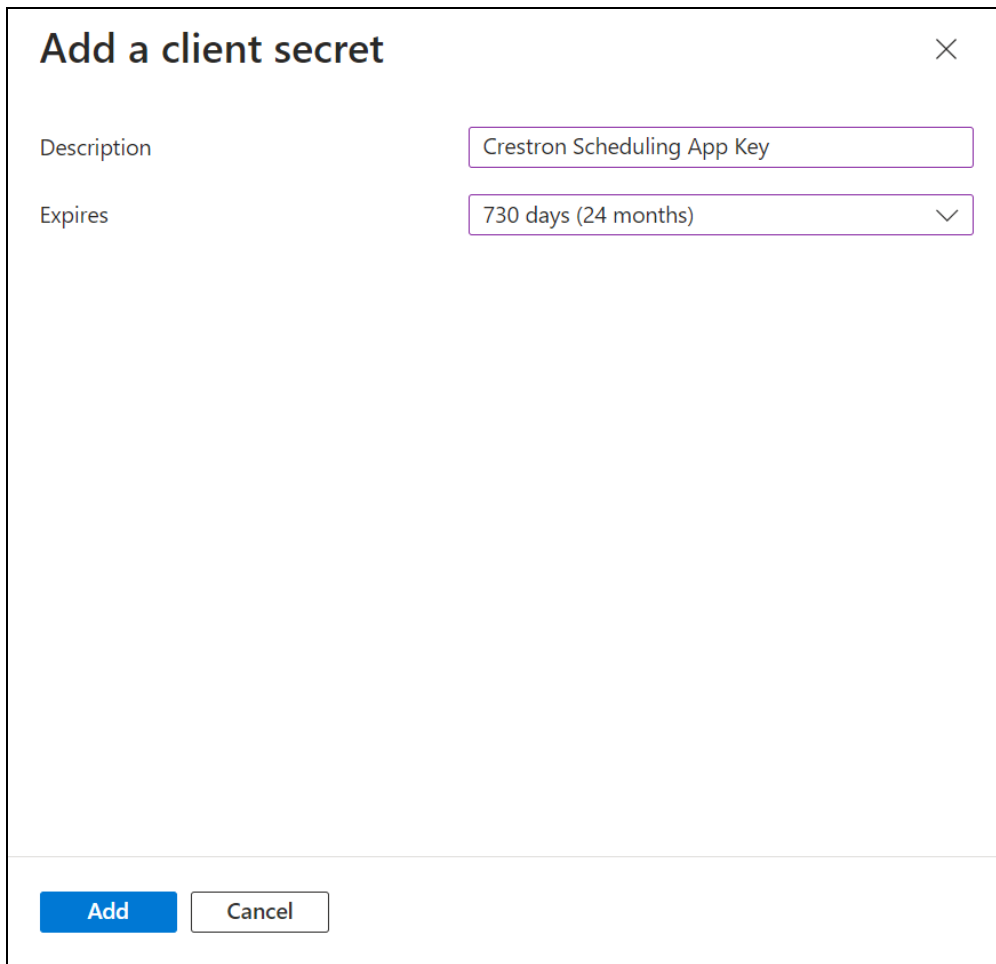
Create a Client Secret

Once the app is registered, a client secret must be created to connect the Crestron Scheduling App to the Microsoft Entra app.

1. Select **App registrations** from the Microsoft Entra widget menu.
2. Select the application created for the Crestron Scheduling App. An application dialog box is displayed.
3. Select **Certificates & secrets** from the navigation menu. The **Certificates & secrets** page for the Microsoft Entra app is displayed.



4. Select **+ New client secret**. The **Add a client secret** dialog box is displayed.



Add a client secret [X]

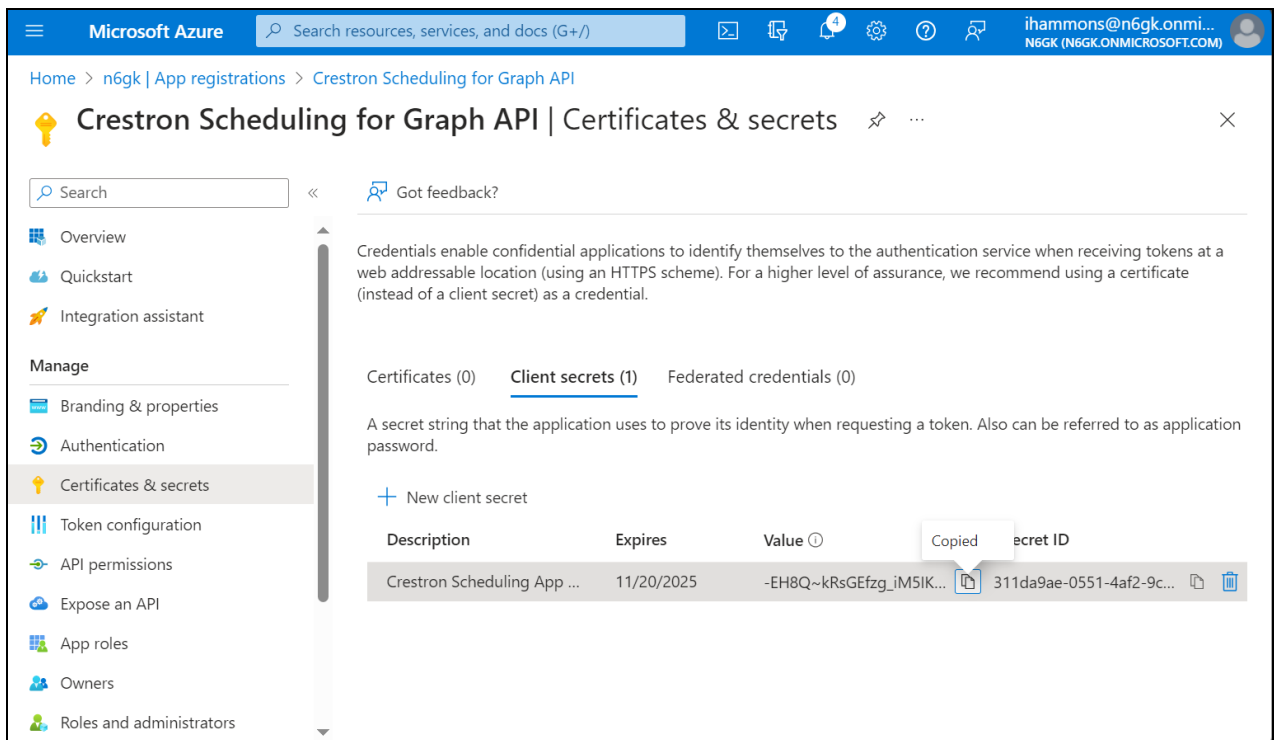
Description

Expires [v]

Add **Cancel**

5. Enter the following information:
- **Description:** Enter a description for the client secret.
 - **Expires:** Select the duration before the client secret expires from the drop-down menu.
6. Select **Add**. The new client secret is added to the **Certificates & secrets** page for the Microsoft Entra app.
7. Copy the client secret **Value** to the clipboard or a location where it can be accessed later when configuring the Crestron Scheduling App as described in [Connect the Scheduling App to Microsoft Graph on page 137](#).

NOTE: The client secret **Value** is available only after it is first created. If the client secret **Value** is not copied before navigating away from the **Certificates & secrets** page, it will no longer be visible, and a new client secret must be created.



Add API Permissions

Use the following procedure to set Microsoft Graph API permissions for the Crestron Scheduling App.

NOTE: The Microsoft Entra app is created with one global API permission by default (**Users.Read**). This permission can be removed since it will be added later at the application level.

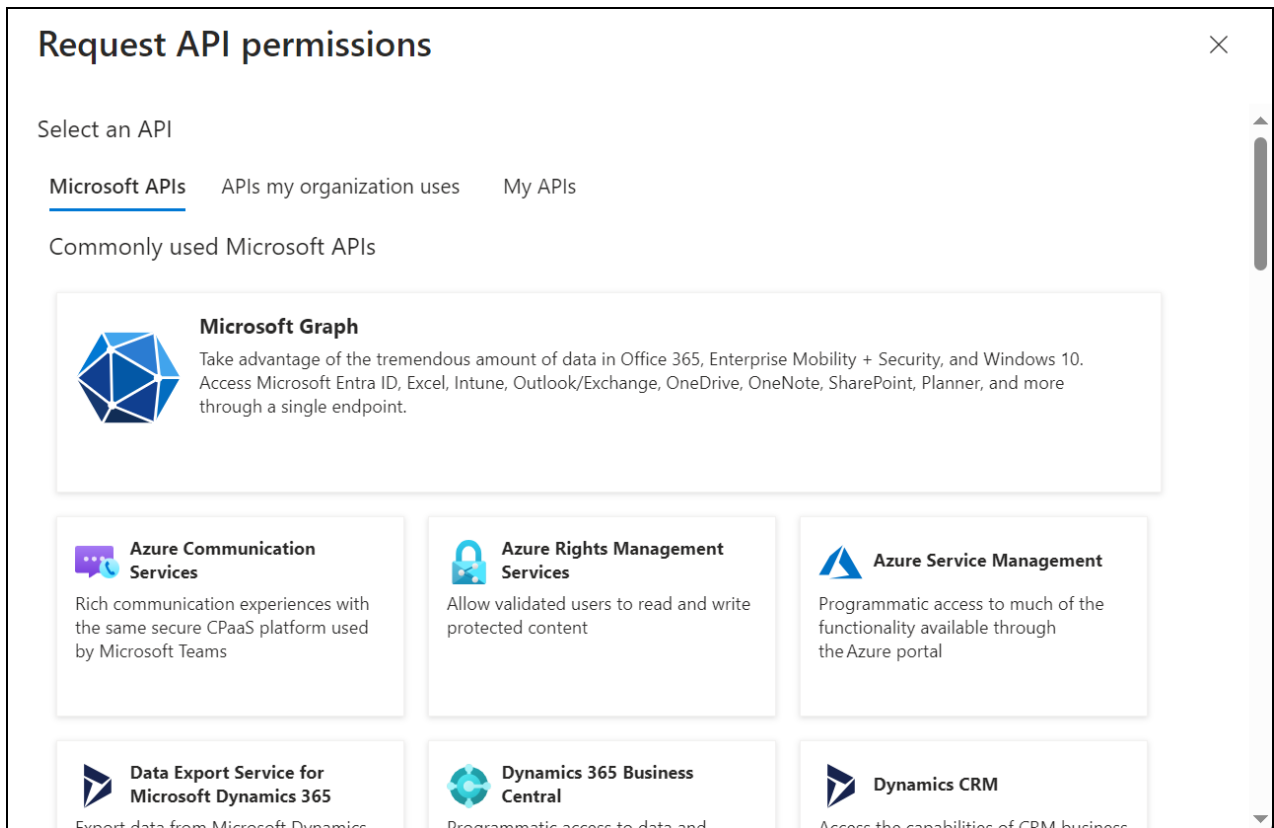
1. Select **App registrations** from the Microsoft Entra widget menu.
2. Select the application created for the Crestron Scheduling App. An application dialog box is displayed.

3. Select **API permissions** from the navigation menu. The **API permissions** page for the Microsoft Entra app is displayed.

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the 'Microsoft Azure' logo and a search bar. The breadcrumb trail indicates the path: Home > n6gk | App registrations > Crestron Scheduling for Graph API. The main heading is 'Crestron Scheduling for Graph API | API permissions'. The left-hand navigation pane lists various management options, with 'API permissions' currently selected. The main content area features a search bar, a 'Refresh' button, and a 'Got feedback?' link. A blue information banner explains the 'Admin consent required' column. Below this, the 'Configured permissions' section provides an overview of the consent process. A table lists the configured permissions for Microsoft Graph, showing one permission: 'User.Read' with a 'Delegated' type and the description 'Sign in and read user profile'. The 'Admin consent required' column for this permission is set to 'No'.

API / Permissions name	Type	Description	Admin consent required
Microsoft Graph (1)			
User.Read	Delegated	Sign in and read user profile	No

4. Select **+ Add a permission**. The **Request API permissions** dialog box is displayed.



5. Select **Microsoft Graph**. Permissions for the Microsoft Graph API are displayed.
6. Select **Application permissions** for the required permission type.

NOTE: Delegated permissions require that the app acts on the behalf of a logged-in user. Since the app has its own key, permissions are granted to the app directly.

Request API permissions

[< All APIs](#)



Microsoft Graph
<https://graph.microsoft.com/>
[Docs](#)

What type of permissions does your application require?

Delegated permissions
Your application needs to access the API as the signed-in user.

Application permissions
Your application runs as a background service or daemon without a signed-in user.

Select permissions [expand all](#)

Permission	Admin consent required
> AccessReview	
> Acronym	

Add permissions Discard

7. Fill the appropriate check boxes to select the following permissions:

- Within the **Calendars** section, select **Calendars.ReadWrite**.

Calendars (1)

☐	Calendars.Read ⓘ Read calendars in all mailboxes	Yes
☐	Calendars.ReadBasic.All ⓘ Read basic details of calendars in all mailboxes	Yes
☒	Calendars.ReadWrite ⓘ Read and write calendars in all mailboxes	Yes

- Within the **MailboxSettings** section, select **MailboxSettings.Read**.

MailboxSettings (1)

☒	MailboxSettings.Read ⓘ Read all user mailbox settings	Yes
☐	MailboxSettings.ReadWrite ⓘ Read and write all user mailbox settings	Yes

- Within the **Users** section, select **User.ReadAll**.

User (1)		
☐	User.EnableDisableAccount.All ⓘ Enable and disable user accounts	Yes
☐	User.Export.All ⓘ Export user's data	Yes
☐	User.Invite.All ⓘ Invite guest users to the organization	Yes
☐	User.ManageIdentities.All ⓘ Manage all users' identities	Yes
☒	User.Read.All ⓘ Read all users' full profiles	Yes
☐	User.ReadWrite.All ⓘ Read and write all users' full profiles	Yes

8. Select **Add permissions**. The three permissions are added under the **Configured permissions** section of the **API permissions** page for the Microsoft Entra app.
9. Select **Grant admin consent for [Microsoft Entra Account Name]** for the three added permissions, where **[Microsoft Entra Account Name]** is the name of the active Microsoft Entra account, then select **Yes** when prompted within the dialog box that is displayed.

Microsoft Azure

Search resources, services, and docs (G+)

Home > n6gk | App registrations > Crestron Scheduling for Graph API

Crestron Scheduling for Graph API | API permissions

Search

Refresh Got feedback?

Grant admin consent confirmation.

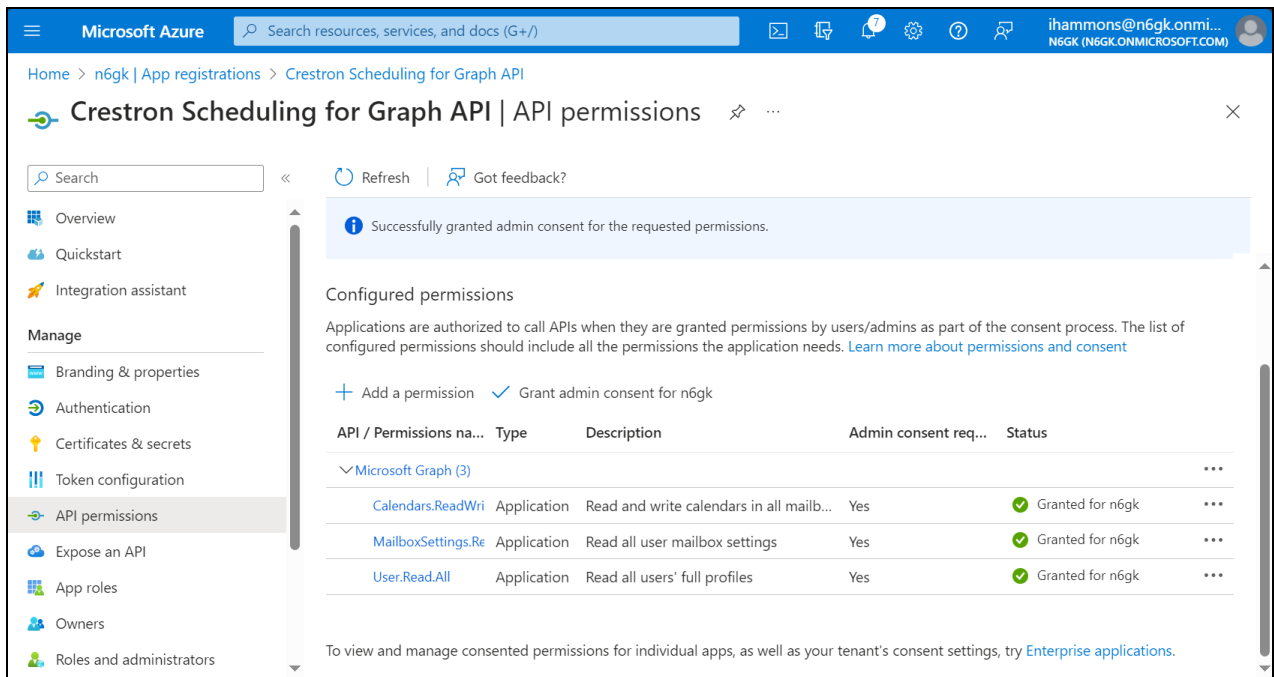
Do you want to grant consent for the requested permissions for all accounts in n6gk? This will update any existing admin consent records this application already has to match what is listed below.

+ Add a permission ☒ Grant admin consent for n6gk

API / Permissions na...	Type	Description	Admin consent req...	Status
Microsoft Graph (3)				
Calendars.ReadWrite	Application	Read and write calendars in all mailb...	Yes	⚠ Not granted for n6gk
MailboxSettings.Re	Application	Read all user mailbox settings	Yes	⚠ Not granted for n6gk
User.Read.All	Application	Read all users' full profiles	Yes	⚠ Not granted for n6gk

To view and manage consented permissions for individual apps, as well as your tenant's consent settings, try [Enterprise applications](#).

10. Verify that the **Status** column for each permission changes to show a green check icon and states that permission has been granted for the active Microsoft Entra account.

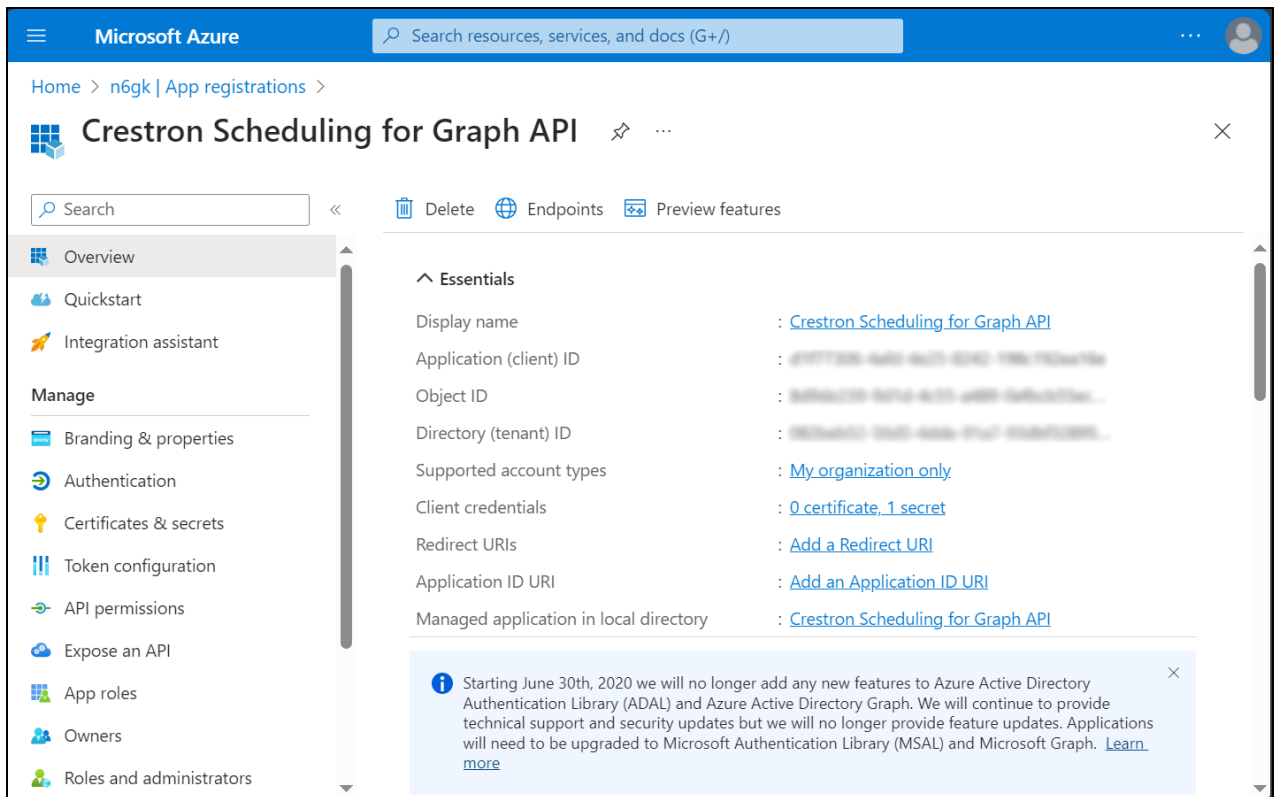


Obtain Authentication IDs

Use the following procedure to obtain the application and directory IDs that are required to connect the Crestron Scheduling app to the Microsoft Entra app.

1. Select **App registrations** from the Microsoft Entra widget menu.
2. Select the application created for the Crestron Scheduling app. An application dialog box is displayed.

3. Select **Overview** from the navigation menu. Information about the Microsoft Entra app is provided.



4. Copy the following fields from the **Overview** pane to an accessible location. Use the **Copy to Clipboard** button that appears when hovering over each field to ensure accuracy.
 - **Application (client) ID:** The unique identification string for the Microsoft Entra app.
 - **Directory (tenant) ID:** The unique identification string for the Microsoft Entra directory.

Connect the Scheduling App to Microsoft Graph

Once an app has been registered in Microsoft Entra, the Crestron Scheduling app can be connected to Microsoft Graph from the touch screen web configuration interface.

To connect the Crestron Scheduling App to Microsoft Graph:

1. Navigate to **Settings > Schedule**.
2. Select **Microsoft 365** from the **Schedule Source** drop-down menu.

The screenshot shows the 'Schedule' configuration page in the Crestron Scheduling App. At the top, there's a blue header with a dropdown arrow and the text 'Schedule'. Below this, there are two settings: 'Polling Interval' set to '5' with a 'Minutes' unit selector, and 'Schedule Source' set to 'Microsoft 365' with a dropdown arrow. Below these, there's a section titled 'Microsoft 365' containing four text input fields, each with a red border and a red error message to its right: 'Calendar Email Address *' with the message 'Calendar Email Address is invalid', 'Application (client) ID *' with 'Application (client) ID is invalid', 'Directory (tenant) ID *' with 'Directory (tenant) ID is invalid', and 'Client Secret Value *' with 'Client Secret Value is invalid'.

3. Enter the following information in the appropriate fields:
 - Enter the email address associated with the Microsoft 365 scheduling calendar in the **Calendar Email Address** text field.
 - Copy and paste the application (client) ID obtained in [Obtain Authentication IDs on page 135](#) into the **Application (client) ID** text field.
 - Copy and paste the directory (tenant) ID obtained in [Obtain Authentication IDs on page 135](#) into the **Directory (tenant) ID** text field.
 - Copy and paste the client secret value obtained in [Create a Client Secret on page 128](#) into the **Client Secret Value** text field.
4. Select **Save Changes** from the **Action** menu. The Microsoft 365 scheduling calendar connects to the scheduling application without requiring a restart.

Perform a Factory Restore

If the TSS-470E 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 (except for application settings) and removes any static IP addresses and wireless access points (WAPs) that were previously added.

1. Press the **RESET** button on the rear of the touch screen. The touch screen will begin to reset.
2. Once the Crestron logo is shown on the touch screen display, the reset process has completed. Press 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 and performs a file system cleanup without prompting. After the cleanup has finished, controls are displayed for restarting or restoring the touch screen. Select **Factory Restore Menu**, and then follow the provided instructions to restore the touch screen.

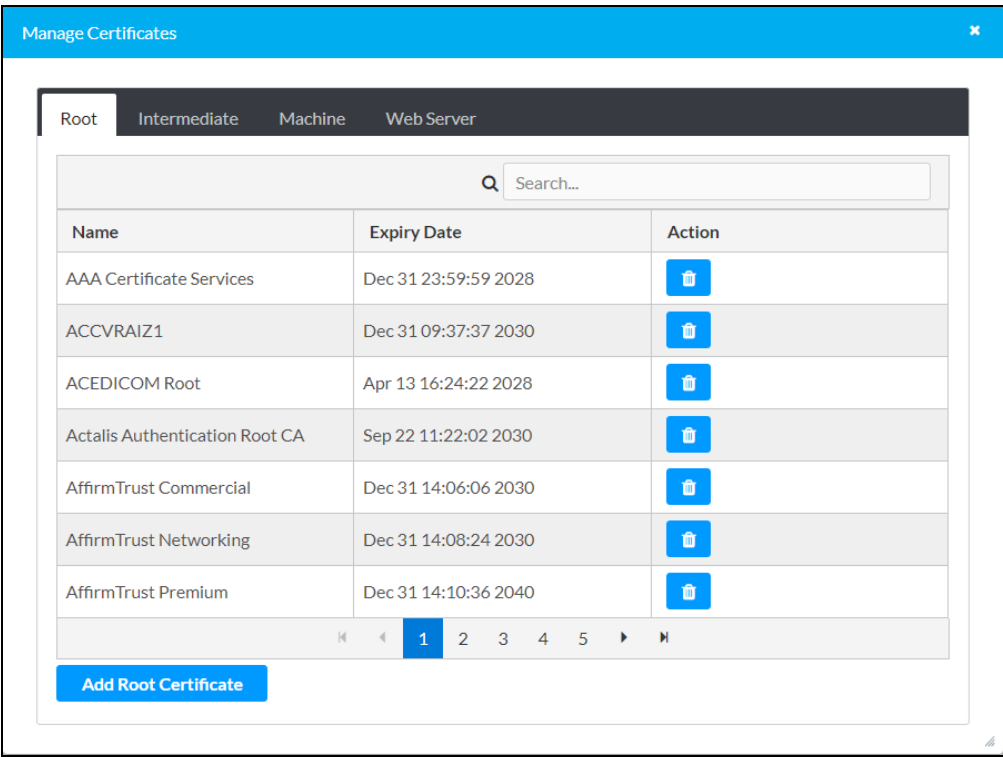
Once the touch screen restarts after completing the factory restore process, it can be configured as described in [Initial Setup on page 58](#).

Configure a WPA2 Enterprise Wireless Access Point Connection

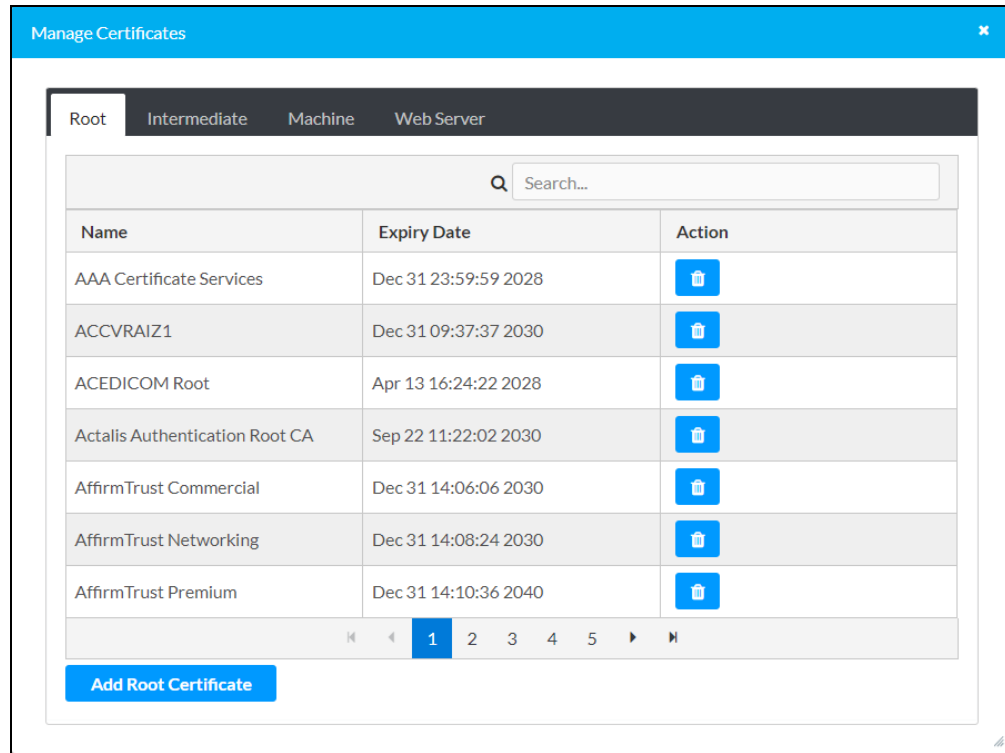
The TSS-470E supports Wi-Fi® network connections over a wireless access point (WAP) with WPA2 Enterprise encryption. Additional configuration steps are required to use the touch screen with the WPA2 Enterprise WAP, including loading 802.1X IEEE certificates to the touch screen.

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

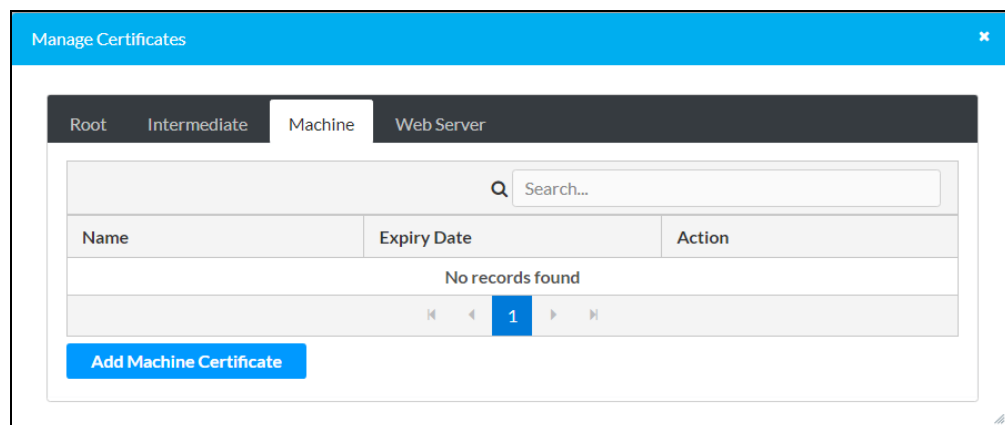
1. Access the touch screen web configuration interface as described in [Access the Web Configuration Interface on page 68](#).
2. Load the required 802.1X IEEE certificates to the touch screen as directed by your IT administrator:
 - a. Select **Manage Certificates** from the **Action** menu. The **Manage 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 85](#).
- 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 85](#).

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

Network

Network Configuration

Hostname *

TSS-470E-C

Primary Static DNS

Secondary Static DNS

Ethernet

Adapter Enabled

DHCP Enabled

Domain *

url

IP Address *

192.168.0.1

Subnet Mask *

255.255.255.0

Default Gateway *

192.168.0.1

WiFi

Adapter Enabled

DHCP Enabled

Domain *

localdomain

IP Address *

0.0.0.0

Subnet Mask *

0.0.0.0

Default Gateway *

0.0.0.0

WiFi Access Points

Scan WiFi Access Points

Select Discovered Access Points

Add Access Points

The maximum configurable access points are limited to 4

	SSID	Encryption Key	Password	Active
☐	Hammons-Netv	WPA2		☐

Add

Remove

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4. In the **Wi-Fi Access Points** 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 93](#).

Connect to Access Point

SSID: WPA2-Enterprise-WAP

Security Mode: WPA2 Enterprise

EAP Method: PEAP

Phase 2 Authentication: None

CA Certificate * Select CA Certificate
This field is required.

Identity *
This field is required.

Anonymous Identity *
This field is required.

Password *
This field is required.

OK Cancel

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), use the **Device Discovery Tool** in Crestron Toolbox™ software to discover the touch screen, 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 following sections describe controls that are available when using the native Crestron Scheduling app in desk mode and room mode. For more information on setting the Crestron Scheduling app modes, refer to [Applications on page 101](#).

NOTE: Alternatively, press and hold three fingers on the desk or room name in the user interface to switch between modes locally.

Crestron Desk Scheduling User Interface

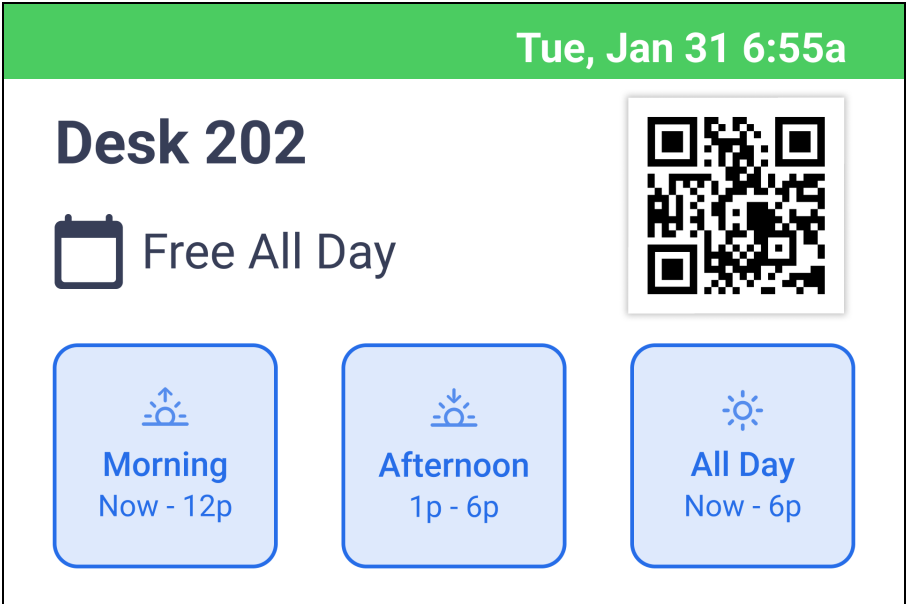
If **Desk Mode** is selected for the Crestron Scheduling app, the Crestron Desk Scheduling user interface is displayed.

The Crestron Desk Scheduling user interface allows a user to reserve and obtain schedule information for the current desk. The user interface comprises screens that display the status of the desk and that provide options for scheduling reservations, determining the desk availability, and performing other reservation-related functions.

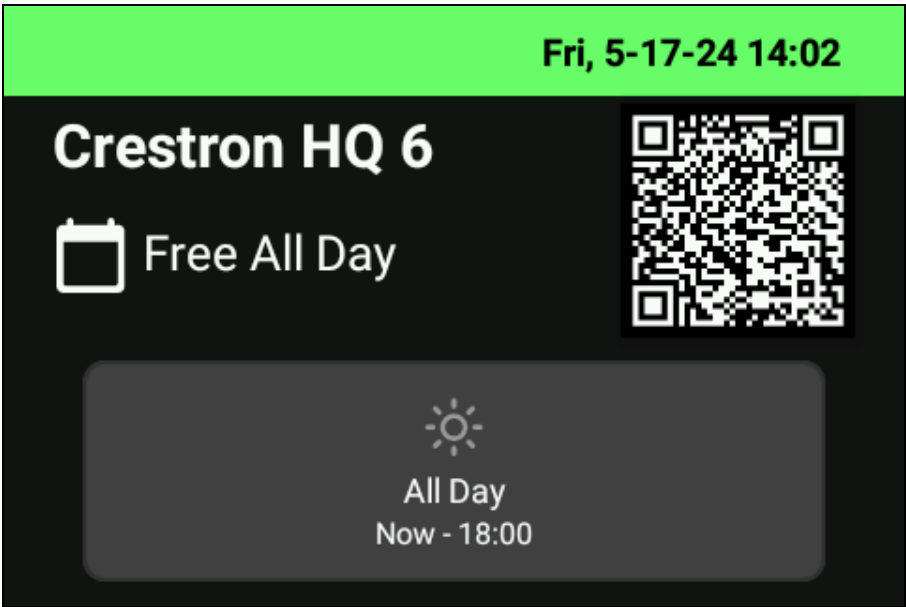
The following image shows a typical user interface screen when the desk is available (in light and dark themes). For more information on switching themes, refer to [Applications on page 101](#).

NOTE: Themes can only be selected locally using the touch screen web configuration interface.

Light Theme



Dark Theme



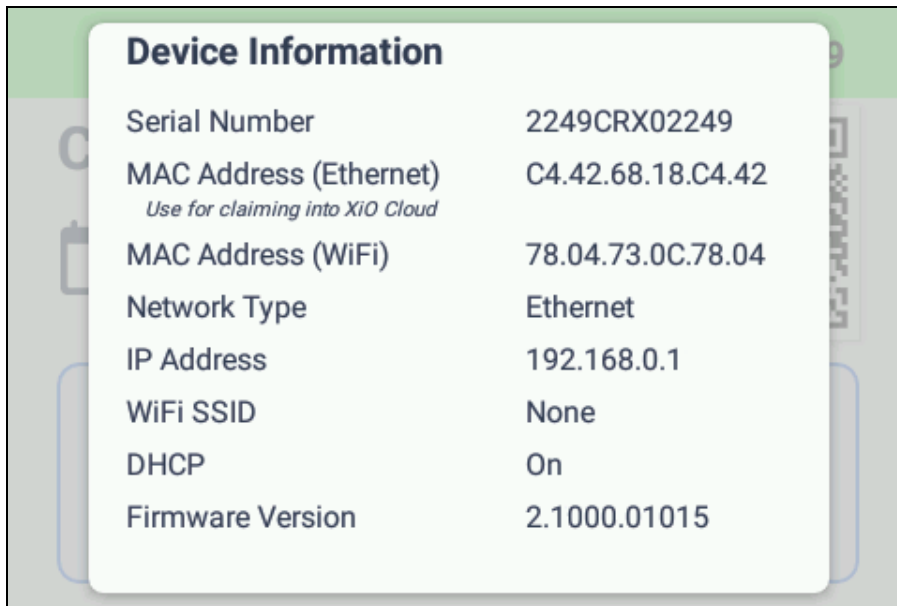
NOTE: The information displayed on the user interface may vary depending upon how the scheduling application settings have been configured.

The user interface indicates whether the desk is available, scheduled for an upcoming reservation, or reserved. The current desk status may be determined by the color of the interface on the display:

- If the desk is not reserved, the interface displays a green available screen and shows the start time of the next scheduled reservation (if available).

- If the desk is scheduled for a reservation within the next hour, the interface displays an amber upcoming reservation screen and shows the start time of the next scheduled reservation and options for checking in (if configured).
- If the desk is reserved, the interface displays a red reserved screen and shows the end time of the current reservation.

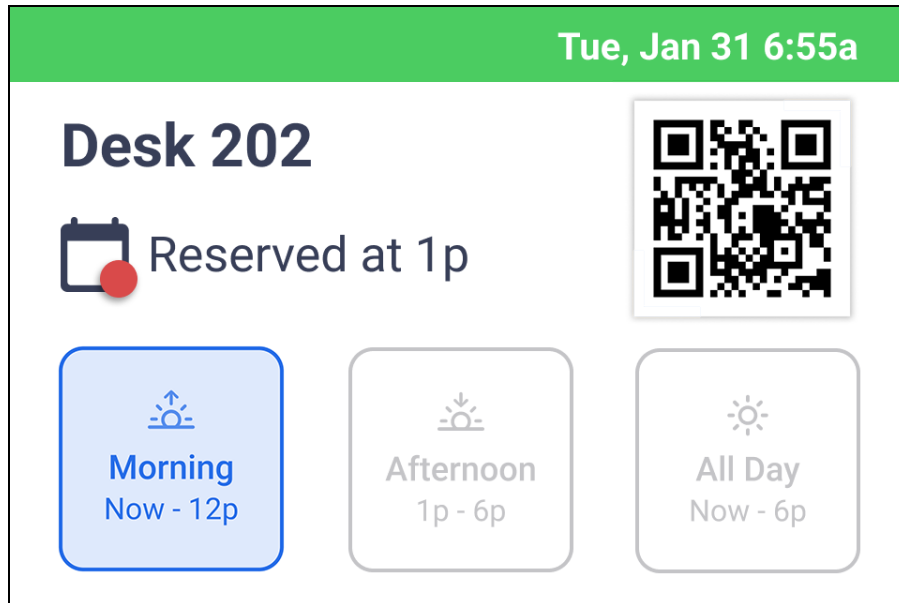
Press and hold your finger on the date and time text at the top of the user interface to display a **Device Information** window that provides various information about the device and its network settings for troubleshooting purposes.



These screens are described in the sections that follow.

Available Screen

If the desk is available, the available screen indicates that the desk is available with a green background. The available screen shows the start time of the next scheduled reservation (if available) or shows a message indicating that the desk is available for the entire day.



The following information and controls are provided:

- The desk name and the current date and time.
- Indicates that the desk is free all day or shows the start time of the next reservation (if one is scheduled).
- Buttons that allow the desk to be reserved for **Morning**, **Afternoon**, and **All Day** time periods.

NOTE: A time period button can be selected only if the current time is before or within that specified range and if no other meetings have been scheduled within that range. Buttons for previous time periods are hidden from the available screen for the remainder of the day.

- A calendar icon that can be selected to view upcoming reservations for the day.
- A QR code that, by default, opens the Microsoft Outlook® sign in page to allow users to create a new future reservation with the scheduling calendar resource. The QR code can also be customized to open a custom URL as described in [Applications on page 101](#).

NOTE: QR code content can only be customized locally using the touch screen web configuration interface.

The QR code provides the following additional functions:

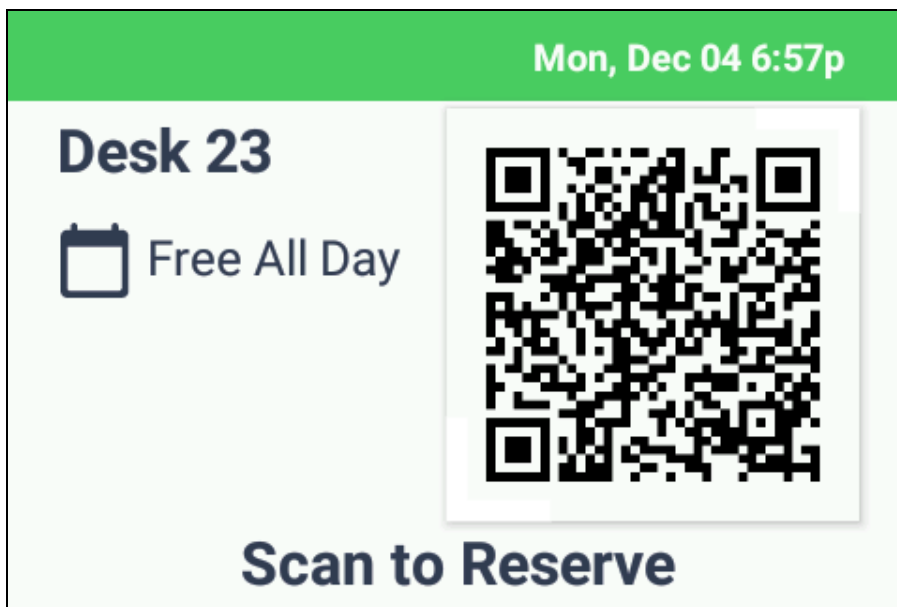
- Tap the QR code once to expand its size within the UI, allowing for easier scanning by smart devices. Tap the QR again to return it to its normal size.

- Tap the QR code twice to push the latest data from the scheduling calendar to the touch screen immediately. Otherwise, the latest scheduling calendar data will be pushed to the touch screen later based on a configured polling interval.

If the desk is available and can be reserved (as indicated by the green available screen), an ad hoc reservation may be created from the touch screen.

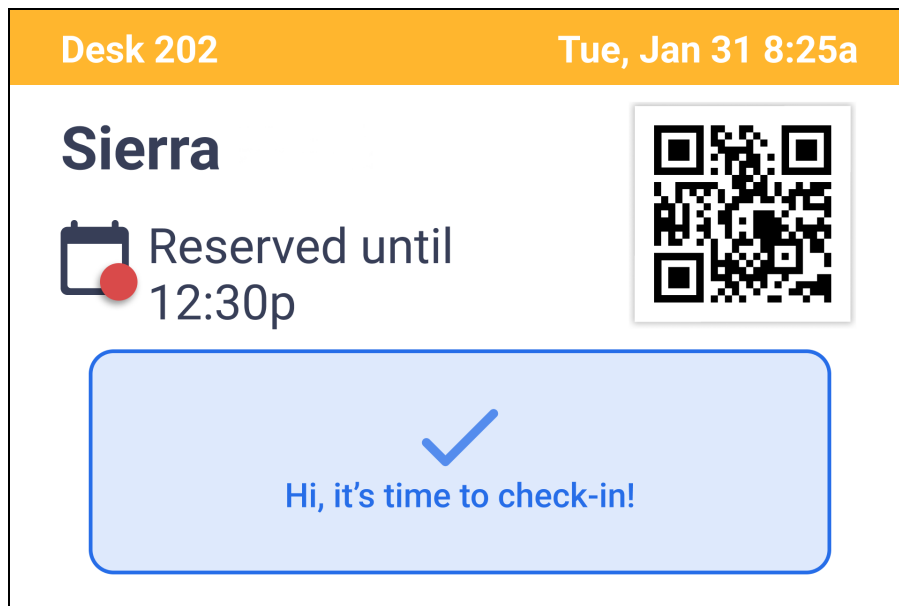
To create an ad hoc reservation, tap one of the available time period buttons (**Morning**, **Afternoon**, or **All Day**). Once reserved, the desk status changes to reserved, and the ad hoc reservation information is displayed on the screen. Ad hoc reservations can also be booked directly through the scheduling calendar resource based on the desk schedule.

If it is past working hours, a "Scan to Reserve" message replaces the time period buttons, allowing the desk to be reserved for the following day via the scheduling calendar resource.



Upcoming Reservation Screen

If the desk is available but a reservation is scheduled to occur within the next hour, an amber upcoming reservation screen is shown name and start (or end) time of the upcoming reservation. An ad hoc reservation may not be created from the touch screen at this time.



The following information and controls are provided:

- The desk name and the current date and time.
- The organizer or meeting name (if it is not set to private in the scheduling calendar).
- Indicates that the desk will be reserved and shows the start time of the upcoming reservation (or end time if the reservation is in progress).
- A calendar icon that can be selected to view upcoming reservations for the day.
- A QR code that, by default, opens the Microsoft Outlook® sign in page to allow users to create a new future reservation with the scheduling calendar resource. The QR code can also be customized to open a custom URL as described in [Applications on page 101](#).

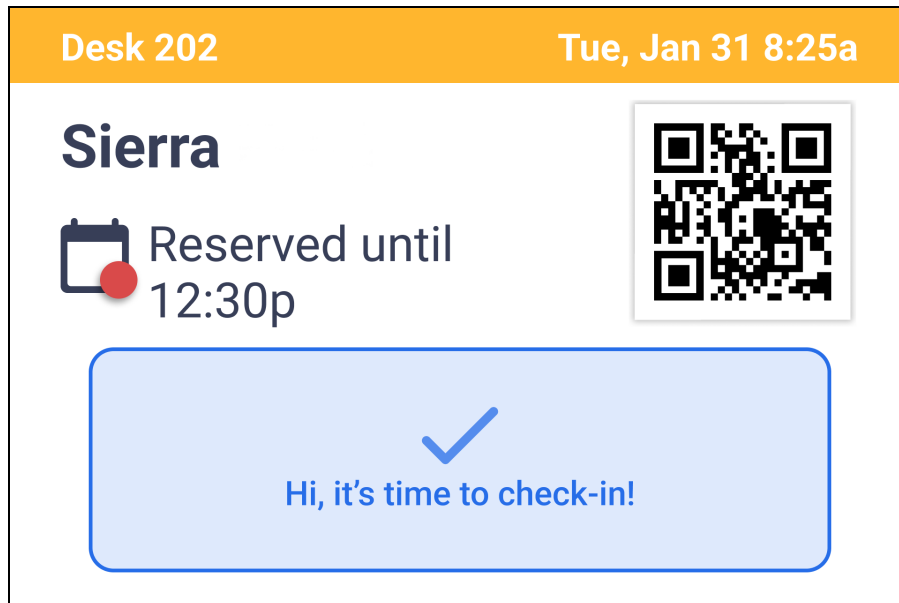
NOTE: QR code content can only be customized locally using the touch screen web configuration interface.

The QR code provides the following additional functions:

- Tap the QR code once to expand its size within the UI, allowing for easier scanning by smart devices. Tap the QR again to return it to its normal size.
- Tap the QR code twice to push the latest data from the scheduling calendar to the touch screen immediately. Otherwise, the latest scheduling calendar data will be pushed to the touch screen later based on a configured polling interval.

Upcoming Reservation Screen (with Check-in Button)

If the check in functionality has been configured, a user may check into their upcoming reservation from the touch screen early. A check in button is provided on the touch screen UI during a specified period before the reservation begins.

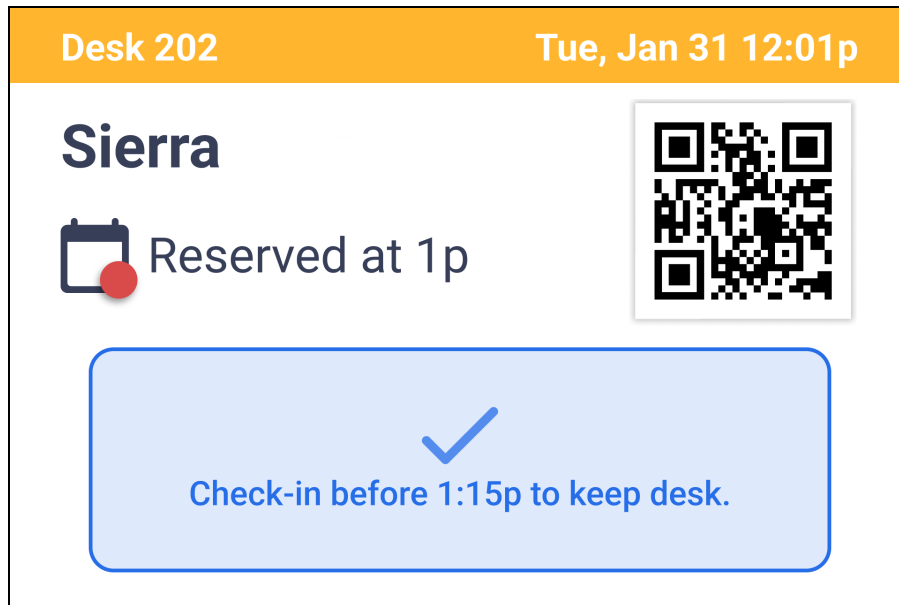


Once the user checks into their reservation by tapping the check in button, the desk enters the reserved state immediately.

NOTE: If the user does not tap the check in button and decline for no show is turned off, the touch screen UI and light bar remain amber for the duration of the reservation.

Upcoming Reservation Screen (with Decline for No Show)

If the check in functionality has been configured with the decline for no show option, a user must check into their reservation during a specified period to keep the reservation. A check in button is provided on the touch screen UI during this period. The check in button also indicates when the reservation will be declined if the user does not check in.

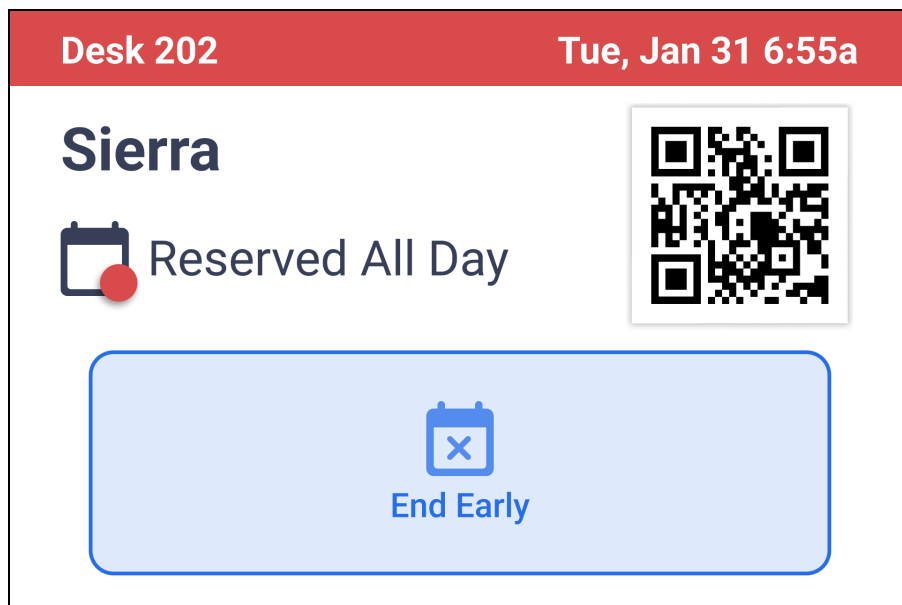


Once the user checks into their reservation by tapping the check in button, the desk enters the reserved state immediately. If the user does not check into their reservation before the check-in period expires, then the reservation is removed from the scheduling calendar and the desk changes back to the available state.

NOTE: For recurring reservations that have been booked through the scheduling calendar, the reservation will be removed from the scheduling calendar only after three consecutive no shows are reported. The reservation will be shortened to the length of the decline for no show period for the first and second reported no shows.

Reserved Screen

If the desk is reserved, the reserved screen indicates that the desk is reserved with a red background. The reserved screen shows the end time of the current reservation.



The following information and controls are provided:

- The desk name and the current date and time.
- The organizer or meeting name (if it is not set to private in the scheduling calendar).
- Indicates that the desk is reserved all day or shows the end time of the current reservation.
- An **End Early** button that can be selected to end the current reservation early.
- A calendar icon that can be selected to view upcoming reservations for the day.
- A QR code that, by default, opens the Microsoft Outlook® sign in page to allow users to create a new future reservation with the scheduling calendar resource. The QR code can also be customized to open a custom URL as described in [Applications on page 101](#).

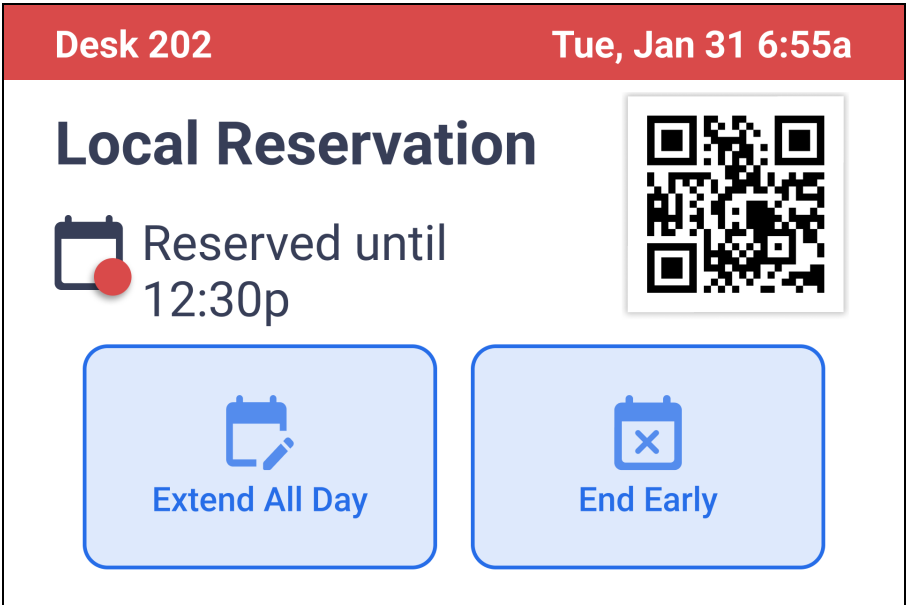
NOTE: QR code content can only be customized locally using the touch screen web configuration interface.

The QR code provides the following additional functions:

- Tap the QR code once to expand its size within the UI, allowing for easier scanning by smart devices. Tap the QR again to return it to its normal size.
- Tap the QR code twice to push the latest data from the scheduling calendar to the touch screen immediately. Otherwise, the latest scheduling calendar data will be pushed to the touch screen later based on a configured polling interval.

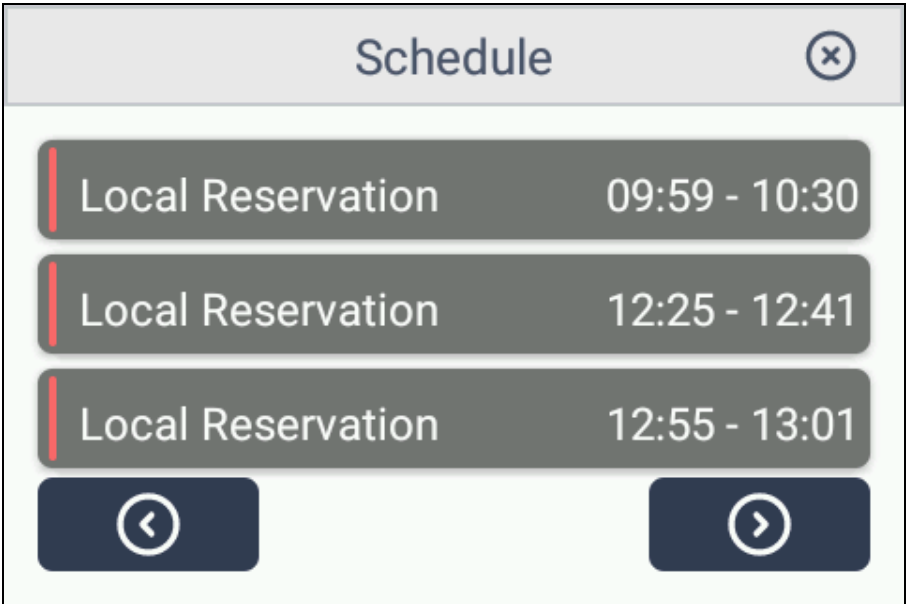
To end the reservation early, tap **End Early**. Once the reservation is ended, the desk status changes back to available, the reservation is modified in the scheduling calendar, and new reservations can be scheduled.

If the current reservation is only scheduled for part of the day and no other upcoming reservations are scheduled, an **Extend All Day** button is provided that allows the reservation to be extended for the remainder of the work day.



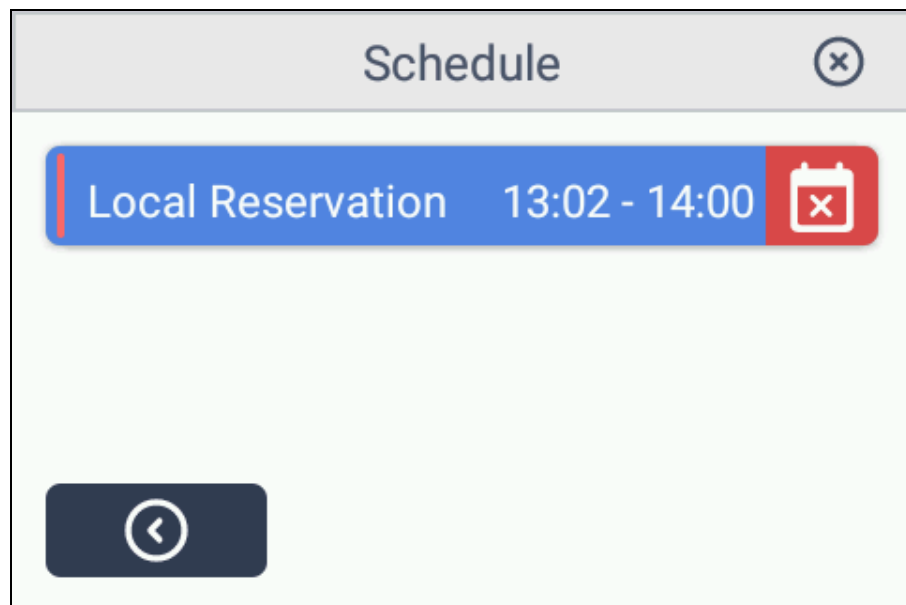
Schedule Screen

Tap the calendar icon within the Crestron Desk Scheduling user interface to display a **Schedule** screen for viewing the desk schedule for the current day.



If a reservation is in progress, the name and duration of the reservation is highlighted in blue. Upcoming and previous reservations can be viewed by selecting the forward and backward arrow buttons to move through the schedule for the day. These arrow buttons are hidden if the scheduled reservations are confined to one page.

Current and upcoming reservations can be deleted from the **Schedule** screen by swiping left on the reservation. A delete button  is shown to the right of the reservation. Tap the delete button  to remove the corresponding reservation from the touch screen and the scheduling calendar resource.



Crestron Room Scheduling User Interface

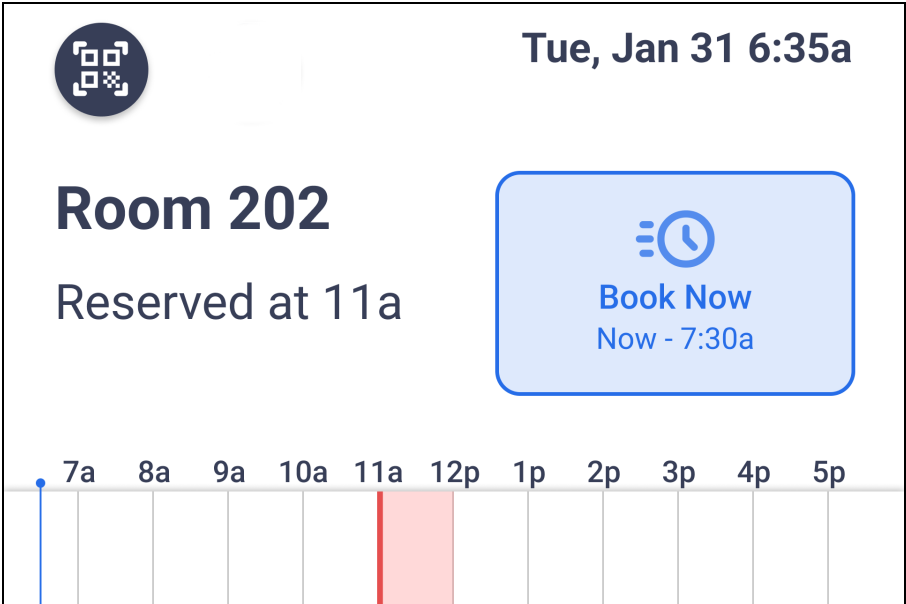
If **Room Mode** is selected for the Crestron Scheduling app, the Crestron Room Scheduling user interface is displayed.

The Crestron Room Scheduling user interface allows a user to reserve and obtain schedule information for the current room. The user interface comprises screens that display the status of the room and that provide options for scheduling reservations, determining the room availability, and performing other reservation-related functions.

The following image shows a typical user interface screen when the desk is available (in light and dark themes). For more information on switching themes, refer to [Applications on page 101](#).

NOTE: Themes can only be selected locally using the touch screen web configuration interface.

Light Theme



Dark Theme



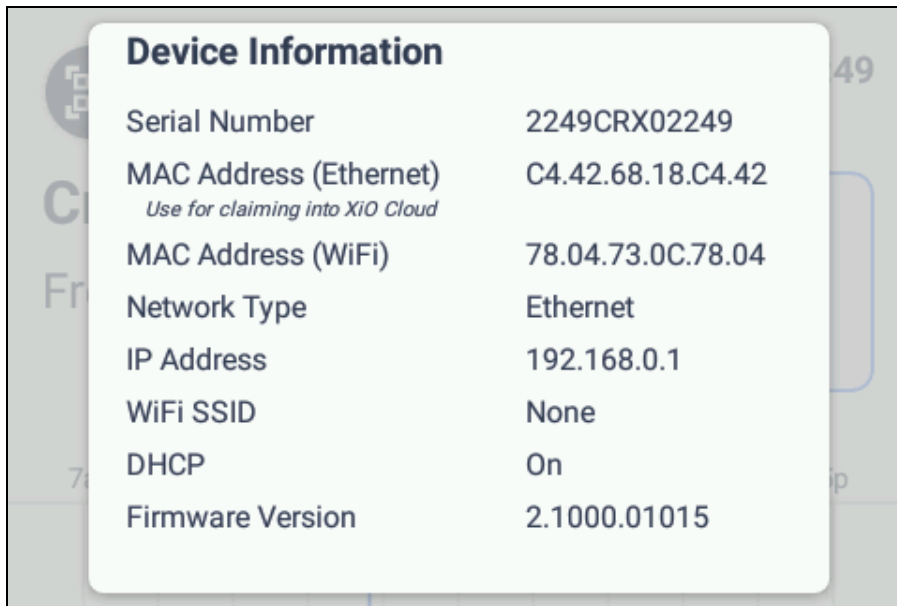
NOTE: The information displayed on the user interface may vary depending upon how the scheduling application settings have been configured.

The user interface indicates whether the room is available, scheduled for an upcoming reservation, or reserved. The current room status is shown on the user interface:

- If the room is not reserved, the user interface shows the start time of the next scheduled reservation (if available) and provides a **Book Now** button for creating a new local reservation.

- If the room is scheduled for a reservation within the next five minutes, the interface shows the start time of the next scheduled reservation and options for checking in (if configured). A local reservation cannot be created during this period.
- If the room is reserved, the interface shows the end time of the current reservation and provides controls for extending the reservation.

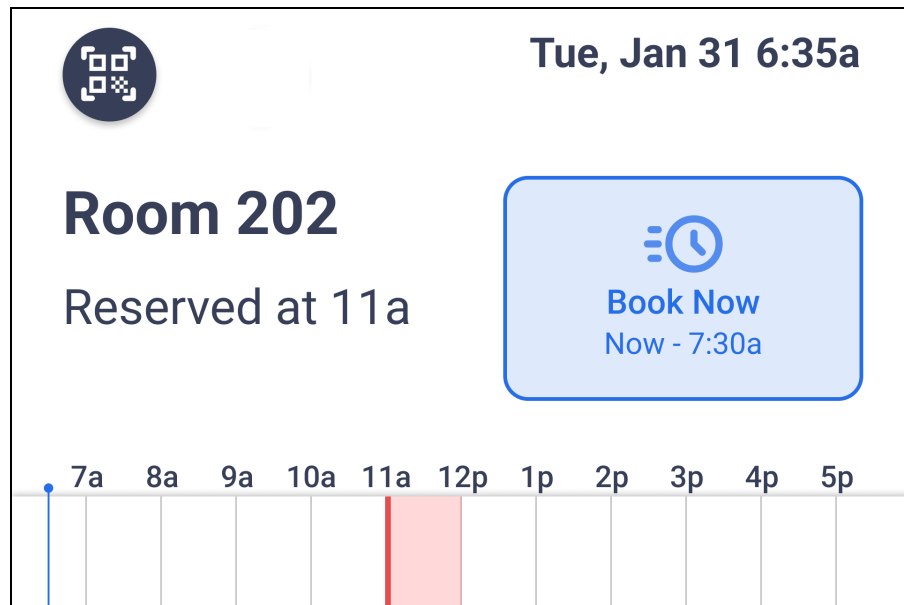
Press and hold your finger on the date and time text at the top of the user interface to display a **Device Information** window that provides various information about the device and its network settings for troubleshooting purposes.



These screens are described in the sections that follow.

Available Screen

If the room is available, the available screen shows the start time of the next scheduled reservation (if available) or shows a message indicating that the room is available for the entire day.



The following information and controls are provided:

- The room name and the current date and time.
- Indicates that the room is free all day or shows the start time of the next reservation (if one is scheduled).
- A **Book Now** button that allows a new local reservation to be created.
- A scheduling timeline located on the bottom of the UI that displays the room availability for the current day:
 - The timeline is divided into time slots for each hour within a fixed period (6:00 AM to 6:00 PM).
 - The current time is represented on the timeline as a blue line.
 - Reserved time slots are indicated by red blocks within the timeline. A darker red line indicates the reservation start time.
 - Tap a time slot on the scheduling calendar to view a **Schedule** screen that provides information on reservations booked at or near that time slot (if available). For more information, refer to [Schedule Screen on page 163](#).
- A calendar icon that can be selected to view upcoming reservations for the day.

- A QR code icon that can be selected to display a QR code that opens the Microsoft Outlook® sign in page, allowing users to create a new reservation with the scheduling calendar resource. The QR code can also be customized to open a custom URL as described in [Applications on page 101](#).

NOTE: QR code content can only be customized locally using the touch screen web configuration interface.



If the room is available and can be reserved, an ad hoc reservation may be created from the touch screen. To create an ad hoc reservation, tap **Book Now**. Once reserved, the room status changes to reserved, and the ad hoc reservation information is displayed on the screen. Ad hoc reservations can also be booked directly through the scheduling calendar resource based on the room schedule.

Ad hoc reservations are scheduled for a minimum length of 30 minutes and are booked until the next possible top or bottom of the hour unless there is a conflicting reservation within that period. Refer to the following examples:

- If a reservation is created at 8:00 AM with no conflicting reservations in the available period, the reservation will be booked until 8:30 AM.
- If a reservation is created at 8:10 AM with no conflicting reservations in the available period, the reservation will be booked until 9:00 AM.
- If a reservation is created at 8:10 AM but another reservation is scheduled at 8:30 AM, the ad hoc reservation will be booked until 8:30 AM.

If it is past 6:00 PM, reservations can still be booked in 30-minute increments using the same rules described above. After 12:00 AM, the next day's scheduling calendar is used to determine room availability.



Tue, Jan 31 6:00p

Room 202
Free All Day



Book Now
Now - 6:30p

7a	8a	9a	10a	11a	12p	1p	2p	3p	4p	5p

Upcoming Reservation Screen

If the desk is available but a reservation is scheduled to occur within the next five minutes, an upcoming reservation screen is shown with the start time of the upcoming reservation. An ad hoc reservation may not be created from the touch screen at this time.



Tue, Jan 31 10:55a

Room 202
Charles
Reserved at 11a

7a	8a	9a	10a	11a	12p	1p	2p	3p	4p	5p

The following information and controls are provided:

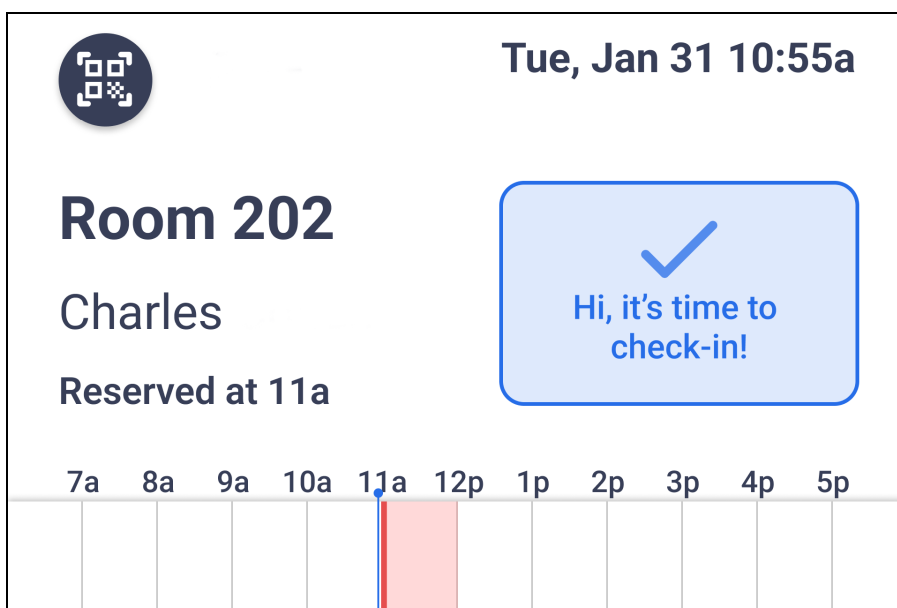
- The room name and the current date and time.
- The organizer or meeting name (if it is not set to private in the scheduling calendar).

- Indicates that the room will be reserved and shows the start time of the upcoming reservation.
- A scheduling timeline located on the bottom of the UI that displays the room availability for the current day:
 - The timeline is divided into time slots for each hour within a fixed period (6:00 AM to 6:00 PM).
 - The current time is represented on the timeline as a blue line.
 - Reserved time slots are indicated by red blocks within the timeline. A darker red line indicates the reservation start time.
 - Tap a time slot on the scheduling calendar to view a **Schedule** screen that provides information on reservations booked at or near that time slot (if available). For more information, refer to [Schedule Screen on page 163](#).
- A calendar icon that can be selected to view upcoming reservations for the day.
- A QR code icon that can be selected to display a QR code that opens the Microsoft Outlook® sign in page, allowing users to create a new reservation with the scheduling calendar resource. The QR code can also be customized to open a custom URL as described in [Applications on page 101](#).

NOTE: QR code content can only be customized locally using the touch screen web configuration interface.

If the check in functionality has been configured, a user may check into their upcoming reservation from the touch screen early. A check in button is provided on the touch screen UI during the five-minute period before the reservation begins.

NOTE: The decline for no show functionality is not provided in room mode, so reservations will not be removed from the scheduling calendar automatically if the organizer does not check in. A reservation can be removed from the scheduling calendar manually using the **Schedule** screen.

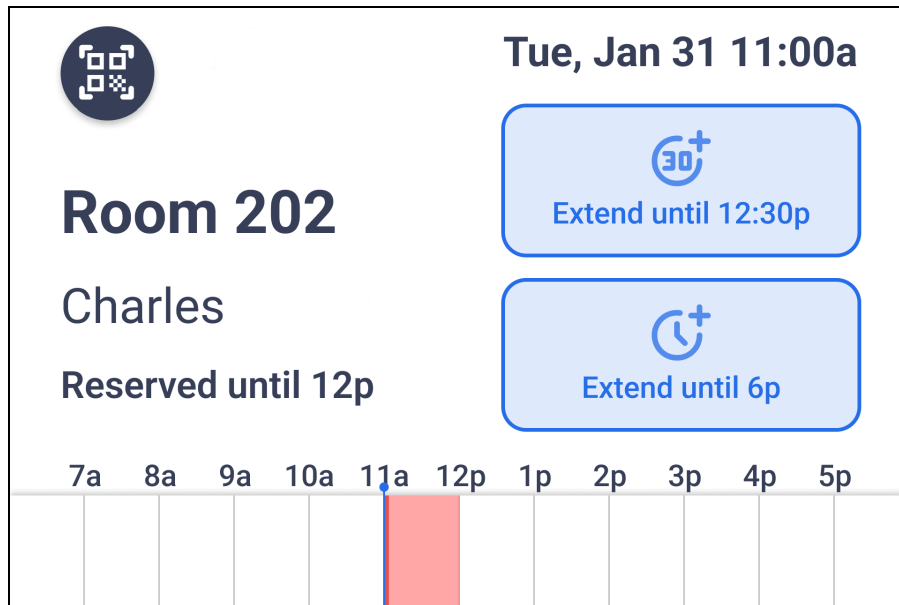


Once the user checks into their reservation by tapping the check in button, the room enters the reserved state immediately.

NOTE: If the user does not tap the check in button, the touch screen light bar remains amber (if a custom color was not used for this state) for the duration of the reservation.

Reserved Screen

If the room is reserved, the reserved screen shows the end time of the current reservation and provides controls for extending the reservation.



The following information and controls are provided:

- The room name and the current date and time.
- The organizer or meeting name (if it is not set to private in the scheduling calendar).
- Indicates the end time of the current reservation.
- A scheduling timeline located on the bottom of the UI that displays the room availability for the current day:
 - The timeline is divided into time slots for each hour within a fixed period (6:00 AM to 6:00 PM).
 - The current time is represented on the timeline as a blue line.
 - Reserved time slots are indicated by red blocks within the timeline. A darker red line indicates the reservation start time.
 - Tap a time slot on the scheduling calendar to view a **Schedule** screen that provides information on reservations booked at or near that time slot (if available). For more information, refer to [Schedule Screen on page 163](#).
- A calendar icon that can be selected to view upcoming reservations for the day.

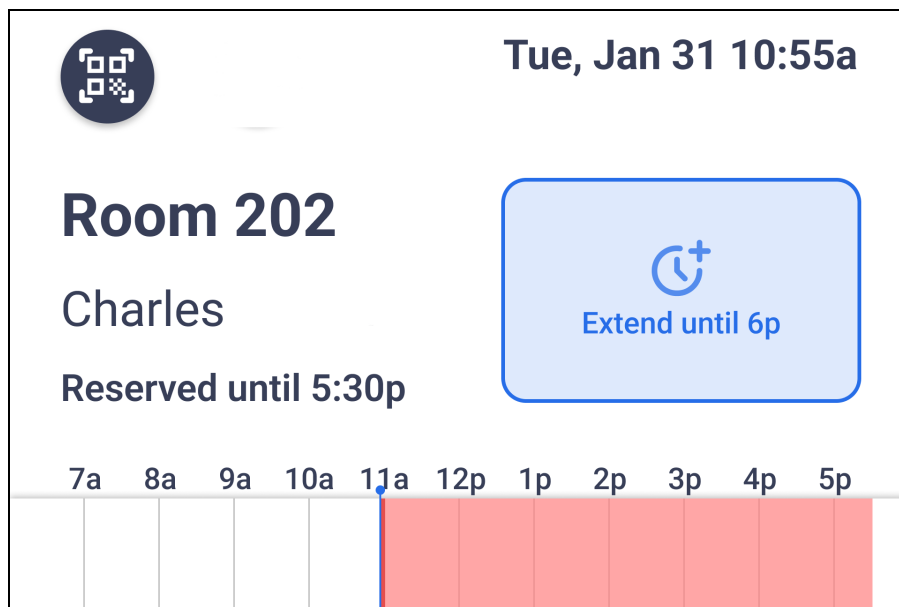
- A QR code icon that can be selected to display a QR code that opens the Microsoft Outlook® sign in page, allowing users to create a new reservation with the scheduling calendar resource. The QR code can also be customized to open a custom URL as described in [Applications on page 101](#).

NOTE: QR code content can only be customized locally using the touch screen web configuration interface.

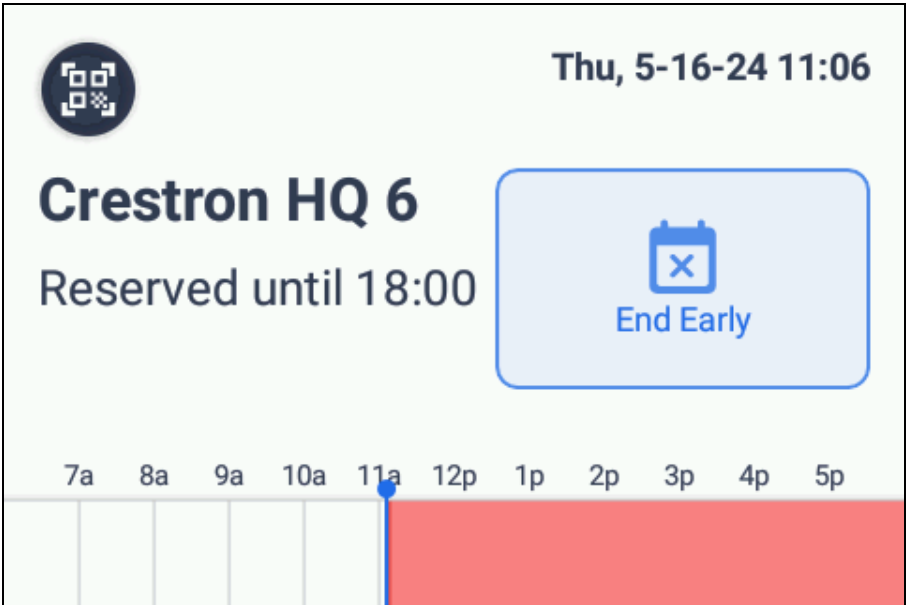
Controls are provided that allow reservations to be extended:

- Tap the top extend button to extend the reservation until the next top or bottom of the hour (in 30-minute intervals).
- Tap the bottom extend button to extend the reservation until the next scheduled reservation. If no upcoming reservations are scheduled, then the current reservation will be extended to the end of the scheduling timeline (6:00 PM).

The top extend button is not shown if an upcoming reservation (or the end of the scheduling timeline) will occur directly after the current available period.



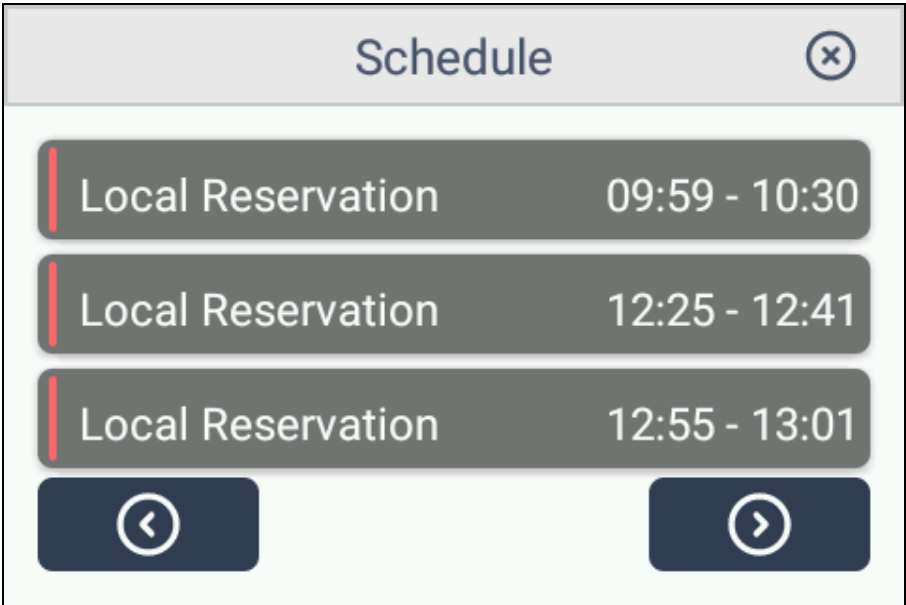
If there is no available period before the next scheduled reservation begins (or before the end of the scheduling timeline), controls to extend the reservation are not provided. Instead, a control to end the reservation early is provided.



To end the reservation early, tap **End Early**. Once the reservation is ended, the room status changes back to available, the reservation is modified in the scheduling calendar, and new reservations can be scheduled.

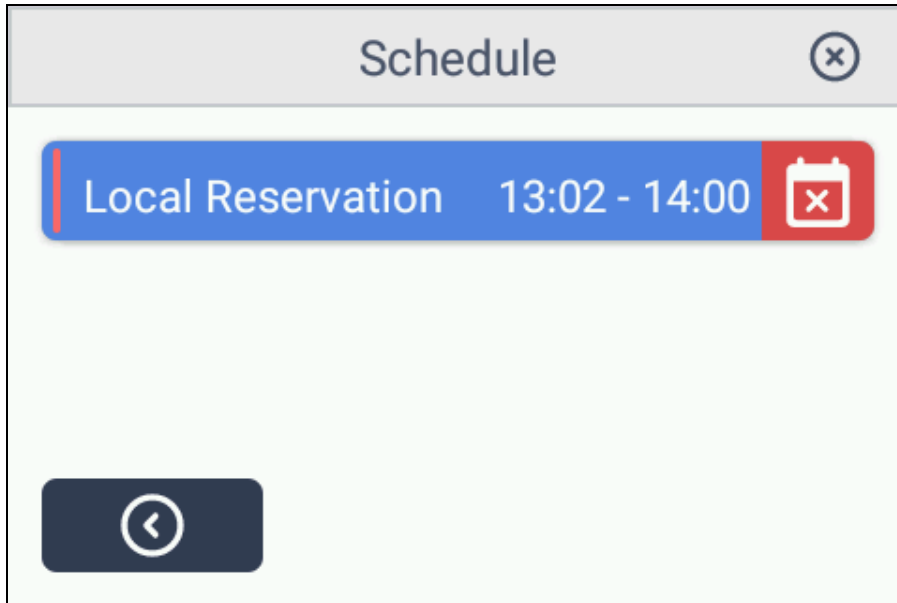
Schedule Screen

Tap a time slot on the scheduling calendar to view a **Schedule** screen for viewing the room schedule for the current day. The **Schedule** screen shows reservations at or near the selected time slot by default.



If a reservation is in progress, the name and duration of the reservation is highlighted in blue. Upcoming and previous reservations can be viewed by selecting the forward and backward arrow buttons to move through the schedule for the day. These arrow buttons are hidden if the scheduled reservations are confined to one page.

Reservations can be deleted from the **Schedule** screen by swiping left on the reservation. A delete button  is shown to the right of the reservation. Tap the delete button  to remove the corresponding reservation from the touch screen and the scheduling calendar resource.



Scheduling Calendar Behavior (Desk Mode)

The Crestron Desk Scheduling user interface receives its calendar data from a connected Microsoft 365 scheduling calendar resource. Performing the following actions within the user interface will trigger the corresponding updates to the scheduling calendar data:

- Early check-in
- Late check-in
- Extend reservation
- End reservation early
- Cancel reservation

Scheduling calendar data is not updated in the following scenarios:

- If a reservation was never checked in and decline for no show functionality has not been turned on, the reservation remains on the scheduling calendar.
- If a reservation was never checked in and decline for no show functionality is turned on, but the reservation length was shorter than the decline for no show threshold, the reservation remains on the scheduling calendar.

The sections below describe specific use cases that can occur between the Crestron Desk Scheduling user interface and scheduling calendar resource.

Check-In Behavior for Modified Active Reservations

Whenever a reservation start time is modified in the scheduling calendar, the check-in flag is reset, which affects check-in behavior for the Crestron Desk Scheduling user interface. Refer to the following example scenarios:

- If a reservation is checked in from the touch screen during the specified check-in period, but the reservation time is moved in the scheduling calendar, then the reservation is no longer shown as checked in.
 - **Scenario:** A reservation is scheduled to start at 9:00 AM with a 30-minute check-in period starting at 8:30 AM. The user checks in to the reservation during the check-in period. However, the reservation start time is moved to 2:00 PM in the scheduling calendar after the reservation is checked in.
 - **Result:** The reservation start time moves to 2:00 PM with a 30-minute check-in period starting at 1:30 PM. The user must check into the reservation again during the new check-in period.
- If a reservation has a check-in period of 0 minutes and is checked in at its start time, but the reservation time is moved in the scheduling calendar, then the reservation is no longer shown as checked in and the UI enters an available state.
 - **Scenario:** A reservation is scheduled to start at 11:30 AM with a 0-minute check-in period. The user checks in to the reservation when it begins. However, the reservation start time is moved to 2:00 PM in the scheduling calendar after the reservation is checked in.
 - **Result:** The reservation start time moves to 2:00 PM with a 0-minute check-in period. The touch screen UI returns to an available state and the user must check into the reservation again after it begins.
- If a reservation is checked in early, but it is canceled from the scheduling calendar while it is in progress, then the reservation is removed from the scheduling calendar and the touch screen UI enters an available state.
- If a reservation is checked in after 6:00 PM and it is extended within the scheduling calendar, then the user must check into the reservation again after it is extended.

Decline for No Show and All Day Reservations

All day reservations that are booked from the scheduling calendar start at 12:00 AM. If the decline for no show functionality is turned on, by default, the reservation would be canceled within 60 minutes from the 12:00 AM start time depending on the specified decline for no show period. Since the desk would not typically be occupied until later in the morning, the Crestron Desk Scheduling user interface specifies the decline for no show period based on other factors.

Refer to the following example scenarios:

- If an all day reservation is scheduled for a future day in the scheduling calendar, the Crestron Desk Scheduling user interface uses the scheduled **On Time** for that day's work hours to determine the decline for no show period.

NOTE: To prevent reservations from being declined prior to users arriving at your workspace, it is recommended to set the work hours **On Time** to reflect when most users in your organization typically start their work day.

- **Scenario:** An all day reservation has been scheduled for the following day (Monday) from the scheduling calendar. The work hours **On Time** value for Monday is currently set to 7:00 AM in the touch screen settings. Decline for no show is turned on with a 30-minute threshold.
- **Result:** The reservation will be canceled and removed from the scheduling calendar if the user does not check in by 7:30 AM. The upcoming reservation screen is shown from 11:00 PM the prior night to the end of the check-in period (though the touch screen display is only powered on during scheduled work hours).

NOTE: If an all day reservation is scheduled for a day that does not have configured work hours in touch screen settings (typically weekend days), then the default **On Time** value (8:00 AM) is used to determine the decline for no show period instead.

- If an all day reservation is scheduled for the current day in the scheduling calendar, the Crestron Desk Scheduling user interface uses the time that the reservation was created to determine the decline for no show period.
 - **Scenario:** An all day reservation has been scheduled for the current day from the scheduling calendar at 9:00 AM. Decline for no show is turned on with a 30-minute threshold.
 - **Result:** The reservation will be canceled and removed from the scheduling calendar if the user does not check in by 9:30 AM. The upcoming reservation screen is shown immediately after the reservation is scheduled.

Check-In Behavior for Multiple Day Reservations

If a multiple day reservation is scheduled from the scheduling calendar, a user only needs to check into the reservation once at the start of the reservation period. The check in button is shown until either the user checks into the reservation or the reservation period ends.

Resources

The following resources are provided for the TSS-470E.

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

Crestron Support and Training

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

Programmer and Developer Resources

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

Product Certificates

To search for product certificates, refer to the [Product Certificates](#) section of the Crestron Resource Library.

Related Documentation

- [XiO Cloud® Service User Guide](#)

