

Crestron® TPMC-4SM

4.3" Room Scheduling

Touch Screen

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Installation & Operations Guide



## Regulatory Compliance

As of the date of manufacture, the TPMC-4SM has been tested and found to comply with specifications for CE marking and standards per EMC and Radiocommunications Compliance Labelling.



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## Federal Communications Commission (FCC) Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following conditions:

(1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

**CAUTION:** Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

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## Industry Canada (IC) Compliance Statement

CAN ICES-3(B)/NMB-3(B)

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The product warranty can be found at [www.crestron.com/warranty](http://www.crestron.com/warranty).

The specific patents that cover Crestron products are listed at [patents.crestron.com](http://patents.crestron.com).

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# Contents

<b>4.3" Room Scheduling Touch Screen: TPMC-4SM</b>	<b>1</b>
Introduction .....	1
Features and Functions .....	1
Applications.....	5
Specifications .....	6
Physical Description.....	8
Setup.....	11
Network Wiring.....	11
Identity Code .....	11
Configuring the Touch Screen.....	12
Changing the Button Inserts .....	21
Installation.....	22
Hardware Hookup .....	26
Recommended Cleaning.....	26
Uploading and Upgrading.....	27
Establishing Communication.....	27
Programs, Projects and Firmware.....	28
Program Checks .....	28
Problem Solving .....	29
Troubleshooting.....	29
Reference Documents.....	29
Further Inquiries .....	30
Future Updates .....	30



# 4.3" Room Scheduling Touch Screen: TPMC-4SM

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## Introduction

With its clean, contoured appearance, the Crestron® TPMC-4SM Touch Screen makes an elegant statement in any environment. Perfectly at home in the most modern office building, hotel, or residence, the device's high tech good looks underline its power for simplifying everyday tasks and functions throughout any facility, all in a very affordable device that is versatile and easy to install.

An incredibly thin profile and small footprint allow the TPMC-4SM to be installed in places other touch screens cannot go, providing the choice of mounting to a standard electrical box or to virtually any flat surface; mounting is even possible on glass, granite, or marble. A table top enclosure is also available, affording a very stylish, space-saving solution for placement on a desktop or bedside table. Complete connectivity is provided through a single high-speed Ethernet connection, containing all control, video, intercom, and power signals within a single wire.

The TPMC-4SM provides a customizable touch screen controller featuring Smart Graphics™ technology, H.264 streaming video, audio feedback, and 2-way IP intercom, which are all cohesively merged into one seamless user interface. Additional features include dual-color backlit buttons, a built-in proximity sensor, PoE (Power over Ethernet) network power, occupancy sensor inputs, and out-of-the-box room scheduling capability for use with Crestron Fusion® Cloud On-Premises Enterprise Management software.

## Features and Functions

- Modern, contoured appearance
- Thin profile and small footprint
- Affordable and easy to install
- 4.3" (~109 mm) widescreen active matrix color touch screen
- 800 x 480 WVGA display resolution
- Smart Graphics technology support
- Crestron IP intercom
- Customizable audio feedback
- Built-in microphone and speaker
- Built-in proximity sensor

*(Continued on following page)*

## Features and Functions

(Continued)

- 10 optional “hard key” push buttons
- Dual-color button backlighting and feedback
- Custom engravable button text
- Crestron Fusion® Cloud software *Room Scheduling* mode
- Room occupancy sensor option\*
- Single-wire Ethernet connectivity
- PoE network powered
- Versatile wall, surface, and tabletop mounting options
- Available with black or white smooth finish

### **Advanced Touch Screen Control**

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

### **Smart Graphics Technology**

Crestron touch screens use Smart Graphics technology to deliver the ultimate user experience and the ultimate value by enabling the creation of dynamically-rich user interfaces with incredible efficiency and unparalleled functionality. Using Smart Graphics technology, programmers can swiftly integrate fluid gesture-driven controls, animated feedback, metadata, embedded apps and full-motion video for a deeply engaging and ultra-intuitive touch screen experience.

Crestron Smart Graphics technology includes the following enhancements:

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

\* Item(s) sold separately.

### ***Dual Color Backlit Buttons***

The TPMC-4SM comes standard with 10 programmable “hard key” push buttons for quick access to commonly used functions. Each button features a translucent button cap with a choice of red or green LED backlighting for each column of buttons. The backlighting is fully dimmable, either globally or separately for the left side and right side. Alternatively, each button LED can be programmed (via SIMPL Windows) to provide discrete feedback, affording a clear indication of the status of each individual button.

The TPMC-4SM comes standard with its buttons pre-labeled for room scheduling functions. Customized labeling can be attained using Crestron Engraver software. For a clean appearance, either column of buttons may be removed and covered using the no-button covers provided.

### ***Room Scheduling Mode***

The TPMC-4SM works directly with Crestron Fusion Cloud On-Premises Enterprise Management software to provide a powerful room scheduling solution. Installed outside the entrance to every meeting room, the TPMC-4SM provides an immediate view of each room’s availability, with the ability to look up the calendar for any room on the network and even to book the room right on the spot. The dual-color buttons give a clear indication of a room’s status at a glance, lighting green when the room is available and red when it is in use. The touch screen’s contoured shape assures that the buttons remain clearly visible at a distance to either side, even when mounted in a narrow hallway.

The TPMC-4SD is only compatible with on-premises installations of Crestron Fusion Cloud software (it is not compatible with cloud deployments or hosted scheduling). For more information, refer to the latest version of the Crestron Fusion Cloud Software Installation Guide (Doc.7892), at [www.crestron.com/manuals](http://www.crestron.com/manuals).

### ***Occupancy Sensing***

Crestron GLS-series room occupancy sensors can be connected directly to the TPMC-4SM to allow automation of the room’s lighting, climate control and other devices. In *Room Scheduling* mode, the sensors allow Crestron Fusion Cloud software to detect when no one has shown up for a scheduled meeting, so even if the meeting is not cancelled or rescheduled by its host, the calendar can be updated automatically to make the room available to other users.

### ***Proximity Sensor***

The TPMC-4SM senses as the user approaches it, waking its display automatically without having to touch the screen, so it is always ready for use.

### ***Streaming Video***

High performance streaming video capability makes it possible to view security cameras and other video sources over the network right on the touch screen. Native support for H.264 and MJPEG formats allows the TPMC-4SM to display live video images from IP cameras and servers such as the Crestron CEN-NVS200 Network Video Streamer (sold separately).

### ***IP Intercom***

Built-in IP intercom capability facilitates direct touch screen to touch screen intercom and monitoring over the LAN without requiring any additional AV wiring. The TPMC-4SM features an integrated microphone and speaker for clear speech communication.

### ***Audio Feedback***

Customized audio files can be loaded on the TPMC-4SM to add another dimension to its touch screen graphics using personalized sounds, button feedback, and voice prompts.

### ***Single Wire Connectivity***

A simple Ethernet LAN connection is all that is required to wire the TPMC-4SM, containing all control, video, intercom, and power signals within a single wire.

### ***Power over Ethernet***

Using PoE technology, the TPMC-4SM gets its operating power through the LAN wiring. PoE eliminates the need for a local power supply or any dedicated power wiring. A PoE Injector (PWE-4803RU, sold separately) simply connects inline with the LAN cable, allowing for installation at any convenient location. Crestron PoE switches (CEN-SW-POE-5, CEN-SWPOE-16 or CEN-SWPOE-24, all sold separately) may also be used to provide a total networking solution with built-in PoE.

### ***Simple, Versatile Mounting***

The TPMC-4SM installs easily on virtually any mounting surface. As standard, it mounts directly to a 1-gang electrical box (horizontally oriented) or to a European electrical box, requiring only 1/2 inch (13 mm) mounting depth while protruding less than 3/4 inch (19 mm) from the wall surface. The device can also be adapted for mounting to a vertically oriented 1-gang or 2-gang electrical box or to a 2-gang UK electrical box by using the optional WMKU-4SM Universal Mounting Kit<sup>1</sup>, which can also be used without an electrical box for a low-profile surface mount solution.<sup>2</sup>

For impenetrable surfaces, such as decorative glass, granite, marble, plaster, smooth stone, and masonry, Crestron offers the MSMK-4SM Multi-Surface Mount Kit<sup>1</sup>, which provides a very versatile mounting solution complete with a low profile rear shell enclosure, adhesive mounting plate, optional angle bracket and, wire raceway. The TTK-4SM Table Top Kit<sup>1</sup> converts the TPMC-4SM into a stylish, compact tabletop touch screen, perfect for free standing use or permanently mounted on a tabletop or counter surface.

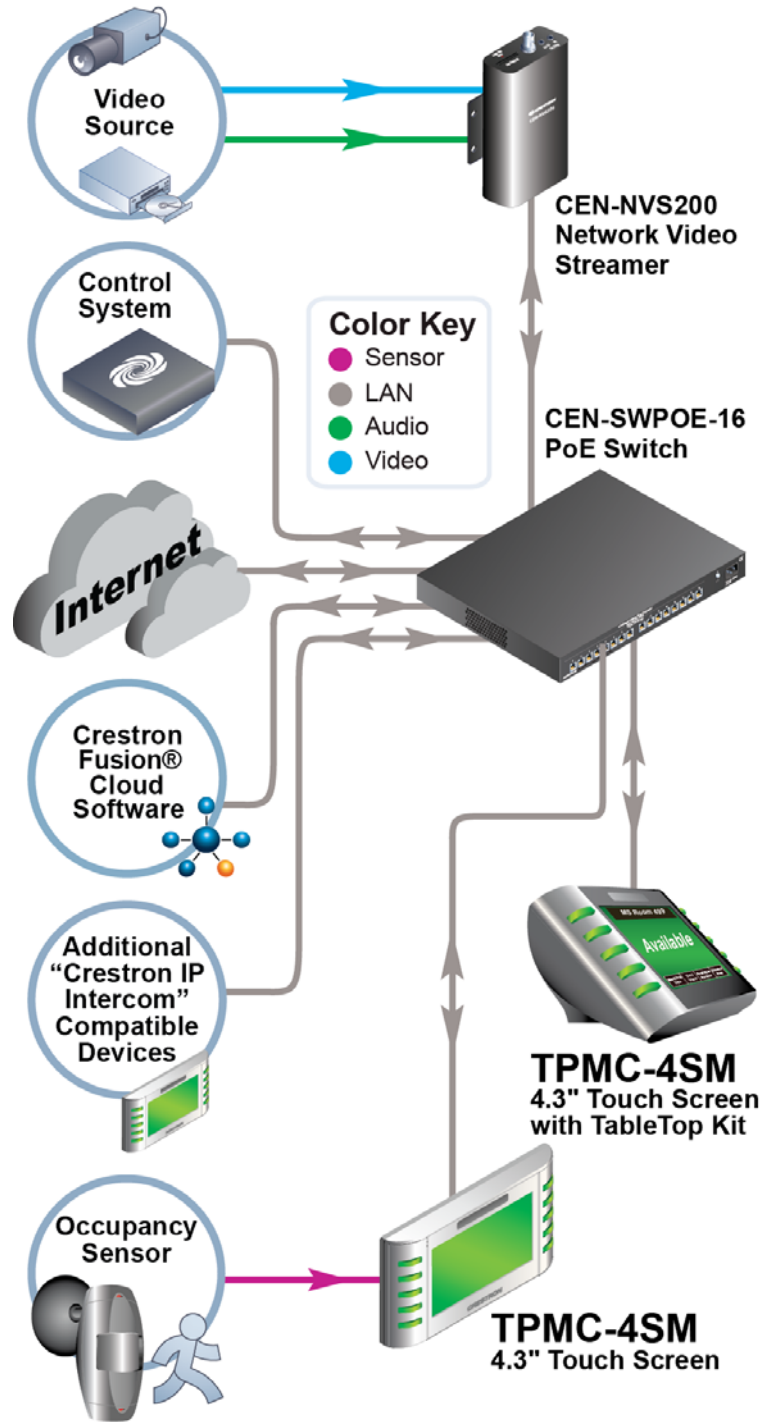
1. Item(s) sold separately.
2. WMKU-4SM mounting option requires a minimum surface cut out or electrical box opening of 1/7" (~43 mm) high and 2.0" (~51 mm) wide.



### Applications

The following diagram shows a TPMC-4SM in a typical application.

*TPMC-4SM in a Typical Application*



## Specifications

Specifications for the TPMC-4SM are listed in the following table.

### *TPMC-4SM Specifications*

<b>SPECIFICATION</b>	<b>DETAILS</b>
Touch Screen Display	
Display Type	TFT active matrix color LCD
Size	4.3 inch (109 mm) diagonal
Aspect Ratio	16:9 WVGA
Resolution	800 x 480 pixels
Brightness	270 nits
Contrast	300:1
Color Depth	16-bit, 64k colors
Illumination	Backlit LED
Viewing Angle	±80° horizontal, ±80° vertical
Touch Screen	Resistive membrane
Proximity Sensor <sup>1</sup>	
Type	Active infrared beam and receiver
Range	3-4 feet (0.9-1.2 meters)
Memory	
SDRAM	256 MB
Flash	2 GB
Maximum Project Size	60 MB
Graphics Engine	Supports Smart Graphics technology or "traditional" GUI projects
Communications	
Ethernet	10/100 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP, IEEE 802.3af and 802.3at compliant
Video	
Streaming Formats	H.264 (MPEG-4 part 10 AVC), MJPEG
Audio	
Features	Built-in microphone and speaker, Crestron IP Intercom
Amplification	Mono, 0.5 watts
Audio Feedback Formats	MP3 using Smart Graphics technology, WAV using "traditional" graphics
Power Requirements	
Power over Ethernet	IEEE 802.3af (802.3at Type 1) Class 3 PoE powered device
Default IP ID <sup>2</sup>	03
Environmental	
Temperature	32° to 104° F (0° to 40° C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	14 Btu/h

*(Continued on following page)*

*TPMC-4SM Specifications (Continued)*

SPECIFICATION	DETAILS
Enclosure	
Construction	Plastic, black or white, smooth finish
Front Bezel	Plastic, hard buttons installed with pre-labeled button covers, custom engraving sold separately, no-button covers also included
Mounting	Requires a horizontally oriented 1-gang electrical box or plaster ring or a 1-gang European (DIN 49073) electrical box; choice of standard or security screws provided; optional universal wall, multi-surface and table top mounting kits sold separately
Dimensions	
Height	3.47 in (89 mm)
Width	6.20 in (158 mm)
Depth	1.21 in (31 mm)
Weight	9 oz. (249 g)
Available Models	
TPMC-4SM-B-S	4.3" Touch Screen with Room Scheduling, Black Smooth
TPMC-4SM-W-S	4.3" Touch Screen with Room Scheduling, White Smooth
Available Accessories	
4SM-BTNO-[B, W]-S	Engravable Button Covers, set of two (specify color)
CEN-NVS200	Network Video Streamer
CEN-SW-POE-5	5-Port PoE Switch
CEN-SWPOE-16	16-Port Managed PoE Switch
CEN-SWPOE-24	24-Port Managed PoE Switch
GLS Series	Crestron Green Light® Occupancy Sensors
MSMK-4SM-[B W]-S	Multi-Surface Mount Kit (specify color)
PWE-4803RU	PoE Injector
SMK-4SM/730	Swivel Mount Kit for TTK-4SM & TSW-730-TTK
TTK-4SM-[B, W]-S	Table Top Kit (specify color)
WMKU-4SM-[B,W]-S	Universal Wall Mount Kit (specify color)
VMK-WIN	TouchPoint® Virtual Mouse & Keyboard Software for Windows® Software

1. Wakes the touch screen and backlight.
2. Refer to "Identity Code" on page 11 for details.

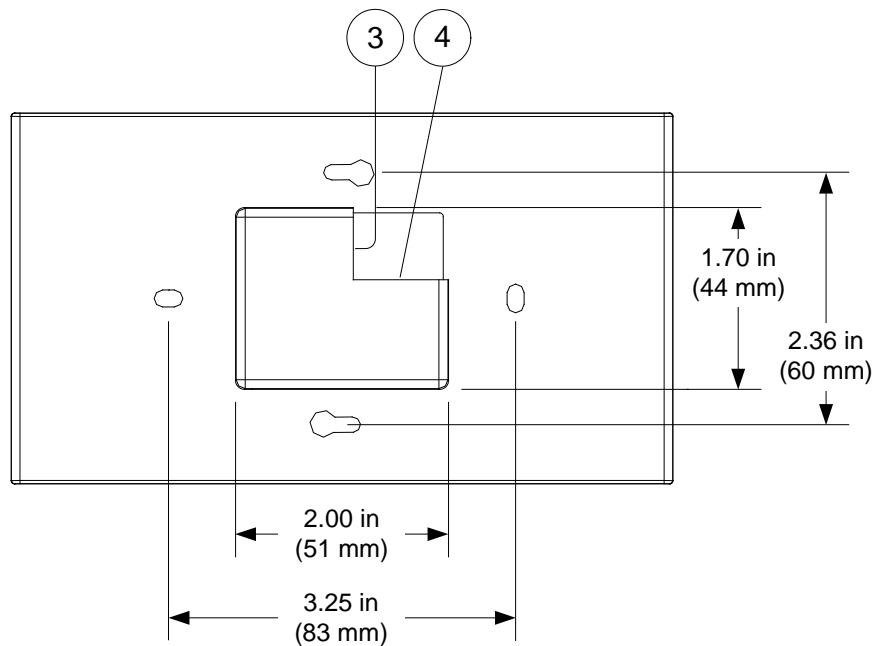
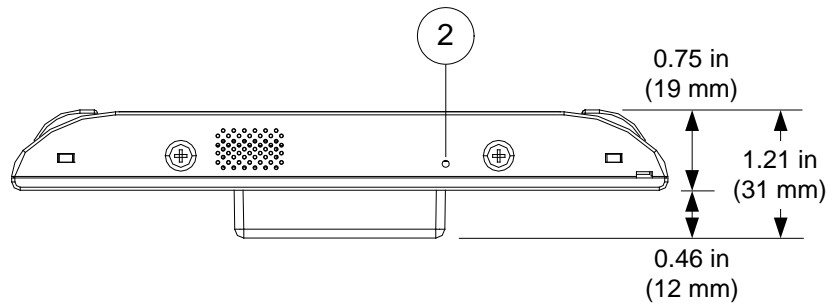
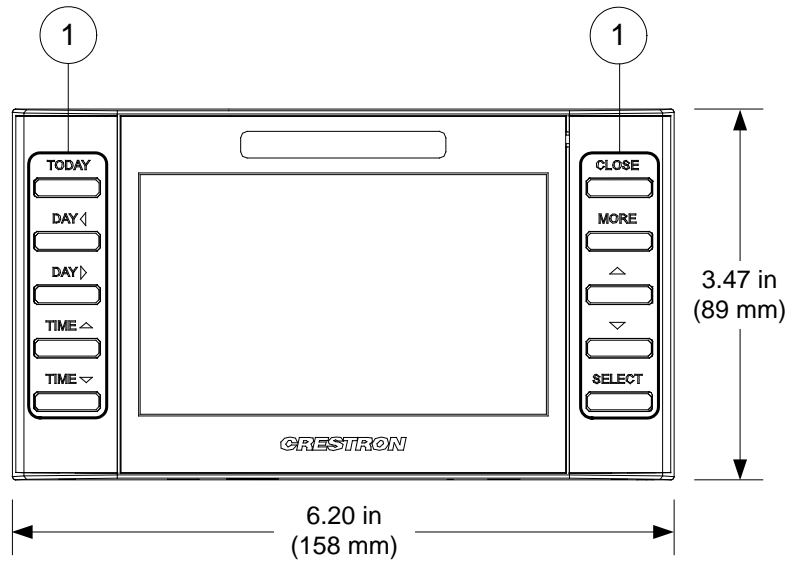
## Physical Description

This section provides information on the connections, controls, and indicators available on the TPMC-4SM.

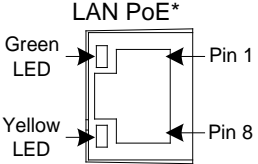
### *TPMC-4SM Physical View*



*TPMC-4SM Overall Dimensions (Front, Bottom and Rear Views)*



*Connectors, Controls & Indicators*

#	CONNECTORS, CONTROLS & INDICATORS	DESCRIPTION																				
1	Hard Keys with Feedback/ Backlight	(10) Optional programmable push buttons, translucent backlit with (1) red and (1) green LED per hard key, with each button column programmable for color and each color programmable for backlighting																				
2	Reset	(1) Recessed push button behind pinhole for hardware reset (press and hold for four seconds)																				
3	<p>LAN PoE*</p> 	<p>(1) 8-wire RJ-45 with two LED indicators; 10BASE-T/100BASE-TX Ethernet port, Power over Ethernet compliant; Green and yellow LEDs indicate Ethernet port status</p> <table border="1"> <thead> <tr> <th>PIN</th> <th>SIGNAL</th> <th>PIN</th> <th>SIGNAL</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>TX +</td> <td>5</td> <td>N/C</td> </tr> <tr> <td>2</td> <td>TX -</td> <td>6</td> <td>RX -</td> </tr> <tr> <td>3</td> <td>RX +</td> <td>7</td> <td>N/C</td> </tr> <tr> <td>4</td> <td>N/C</td> <td>8</td> <td>N/C</td> </tr> </tbody> </table>	PIN	SIGNAL	PIN	SIGNAL	1	TX +	5	N/C	2	TX -	6	RX -	3	RX +	7	N/C	4	N/C	8	N/C
PIN	SIGNAL	PIN	SIGNAL																			
1	TX +	5	N/C																			
2	TX -	6	RX -																			
3	RX +	7	N/C																			
4	N/C	8	N/C																			
4	Occupancy Sensor Input	(4) Captive screw terminals comprising (2) voltage sensing inputs (referenced to ground) with 24 Vdc power output; Input voltage range: 0-30 Vdc; Sensing threshold: ≥ 4.5 Vdc active, ≤ 1 Vdc inactive; Maximum dc load: 4 watts @ 24 Vdc, provides operating power for up to (4) Crestron GLS Series occupancy sensors																				

\* The pin out table indicates signal connections. dc power applied by Ethernet power sourcing equipment (PSE) can connect to either signal pins or N/C pins.

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## Setup

### Network Wiring

When wiring the Ethernet network, consider the following:

- Use Crestron Certified Wire.
- Use Crestron power supplies for Crestron equipment.
- Provide sufficient power to the system.

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**CAUTION:** Insufficient power can lead to unpredictable results or can cause damage to the equipment. Please use the Crestron Power Calculator to help calculate how much power is needed for the system ([www.crestron.com/calculators](http://www.crestron.com/calculators)).

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Unlike other Crestron network devices, the TPMC-4SM does not use the Cresnet® network for communications between the device and the control system. The TPMC-4SM requires the use of a high-speed Ethernet connection for control system communications.

For general information on connecting Ethernet devices in a Crestron system, refer to the latest version of the Crestron e-Control® Technology Reference Guide (Doc. 6052) at [www.crestron.com/manuals](http://www.crestron.com/manuals).

### Identity Code

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**NOTE:** The latest software can be downloaded from [www.crestron.com/software](http://www.crestron.com/software).

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The IP ID is set within the TPMC-4SM's IP table using Crestron Toolbox™ software. For information on setting an IP table, refer to the Crestron Toolbox software help file. The IP IDs of multiple TPMC-4SM devices in the same system must be unique.

When setting the IP ID, consider the following:

- The IP ID of each unit must match an IP ID specified in the Crestron Studio® software or SIMPL Windows program.
- Each device using IP to communicate with a control system must have a unique IP ID.

## Configuring the Touch Screen

**NOTE:** The only connection required to configure the touch screen is power. Refer to “Hardware Hookup” on page 26 for details.

**NOTE:** The TPMC-4SM can take up to 45 seconds to boot to a display after initial power up.

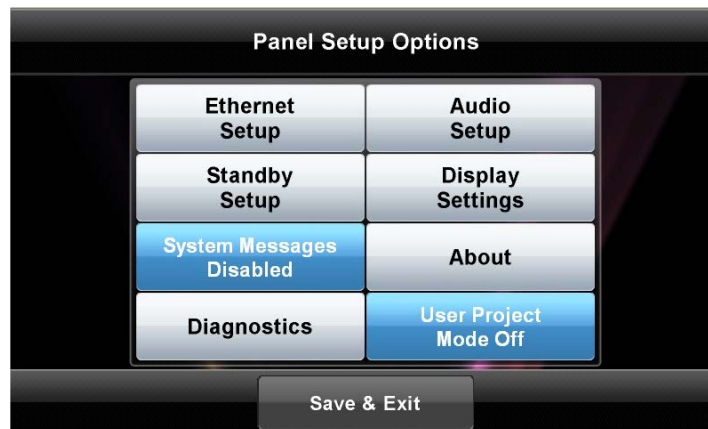
The setup screens allow basic configuration procedures prior to regular operation of the touch screen. To enter the setup screens, touch the screen while applying power to the unit. The setup screens can also be entered by pressing the top four push buttons on the left side of the touch screen twice in sequence (1, 2, 3, 4, 1, 2, 3, 4). Refer to the following illustration for push button numbering.

### *Push Button Layout and Join Number Assignment*



The **Panel Setup Options** menu opens. The functions provided by each button are detailed in subsequent paragraphs.

### *“Panel Setup Options” Menu*

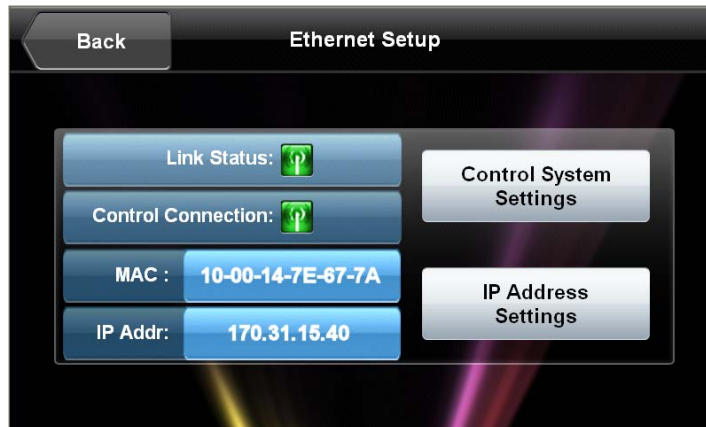




### **Ethernet Setup**

Touch **Ethernet Setup** to display information about the Link Status, Control Connection, MAC and IP addresses, and to access the **Control System Settings** and **IP Address Settings** buttons and their respective submenus. Touch **Back** to return to the **Panel Setup Options** menu.

#### *“Ethernet Setup” Menu*



Touch **Control System Settings** to access the **Edit Control System Settings** screen, where Auto Discovery can be enabled or disabled and where IP Address / Hostname, Port, and CIP ID can be entered.

#### *“Edit Control System Settings” Screen*



Touch the **IP Address / Hostname**, **Port (41794)**, or **CIP ID** fields to make an entry. Each field opens an on-screen keyboard appropriate for the field. For example, touching the **IP Address / Hostname** field opens the on-screen keyboard illustrated on the following page.

*On-Screen Keyboard*

Touch **CLEAR** to remove any previous entry. Touch **OK** to add the entry or **CANCEL** to cancel it. When the display returns to the **Edit Control System Settings** screen, touch **Save** to keep the new setting or **Cancel** to cancel it.

On the TPMC-4SM, DHCP is enabled by default. To switch to a static IP address, touch **IP Address Settings** on the **Ethernet Setup** menu to access the **Edit IP Address Settings** screen.

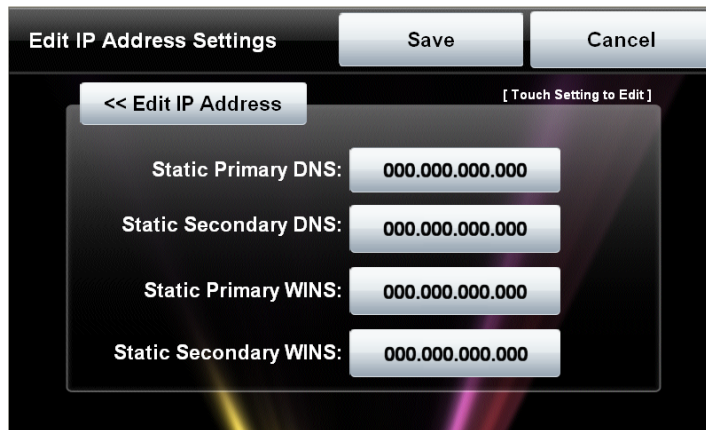
*“Edit IP Address Settings” Screen*

Touch the **Enabled/Disabled** button to toggle between enabling and disabling DHCP. Next, touch the field for the **Static IP Address**, **Static Subnet Mask**, or **Static Default gateway** desired. The on-screen keyboard opens. After entering the addresses, touch **OK** to add the entries or **CANCEL** to cancel them.

On the **Edit IP Address Settings** screen, touch **Edit DNS Servers** to enter the screen for editing these addresses.

Touch **Save** to keep the new setting or **Cancel** to cancel it.

*“Edit IP Address Settings” Screen (for DNS and WINS Servers)*



**Audio Setup**

On the **Panel Setup Options** menu, touch **Audio Setup** to display the **Audio Settings** screen. This screen provides controls for Master Volume, KeyClick Volume, Wave Volume, Mute controls for all three volumes, and a **Play Test Wave** button. Touch **Back** to return to the **Panel Setup Options** menu.

*“Audio Settings” Screen*



### Standby Setup

On the **Panel Setup Options** menu, touch **Standby Setup** to display the **Standby Timeouts** screen. This screen provides controls to adjust Standby Timeout from 0 to 120 minutes (select 0 for no timeout). Touch **Back** to return to the **Panel Setup Options** menu.

#### "Standby Timeouts" Screen



### Display Settings

On the **Panel Setup Options** menu, touch **Display Settings** to enter the **Display Settings** menu. This menu provides controls to adjust Green LED Brightness, LCD Brightness, and Red LED Brightness, as well as providing buttons to enter the **Left LED Color Settings**, **LCD Wake Options**, and **Right LED Color Settings** screens. Touch **Back** to return to the **Panel Setup Options** menu.

#### "Display Settings" Menu



Touch **Left LED Color Settings** to enter the **Display Settings** screen for Left Bank LED Color. Options are **Green**, **Red**, and **Off**. Touch **Back** to return to the main **Display Settings** menu.

*“Display Settings” Screen (for Left Bank LED Color)*

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**NOTE:** The **Right LED Color Settings** button opens a similar screen, where the Right Bank LED Color can be selected.

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On the main **Display Settings** menu, touch **LCD Wake Options** to display the **LCD Wake Options** screen. This screen provides controls for turning the Hard Key Wakes LCD and Proximity Sensor Wakes LCD functions **ON** or **OFF**. Touch **Back** to return to the main **Display Settings** menu.

*“LCD Wake Options” Screen***System Messages Enabled/Disabled**

On the **Panel Setup Options** menu, the **System Messages Disabled** button toggles between this state (the default setting) and **System Message Enabled**, allowing system messages to be turned on or off.

**About**

On the **Panel Setup Options** menu, the **About** button opens a small window displaying the Firmware Version and the OS Image Version. Click **OK** to close the window.

## Diagnostics

On the **Panel Setup Options** menu, touch **Diagnostics** to display the **Diagnostics** menu, which shows information about Total RAM, Free RAM, Link Status, Control Connection, MAC and IP addresses, and provides **Keypad Test**, **Touch Test**, **Sensor Test**, **Calibrate Touch**, **Mic Test**, and **Test Patterns** buttons. Touch **Back** to return to the **Panel Setup Options** menu.

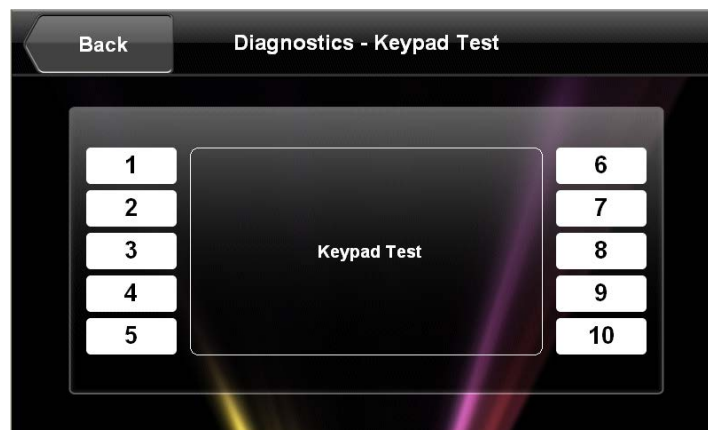
### “Diagnostics” Menu



### Keypad Test

Touch **Keypad Test** to display the **Diagnostics – Keypad Test** screen. Use this screen to test the function of the hard key push buttons on either side of the screen. When a button is pressed, its corresponding button lights on the screen. Touch **Back** to return to the main **Diagnostics** menu.

### “Diagnostics – Keypad Test” Screen



### Touch Test/Calibrate Touch

On the main **Diagnostics** menu, touch **Touch Test** to display the following screen, which includes a **Calibrate** button to initiate touch screen calibration. The **Calibrate Touch** button on the **Diagnostics** menu also initiates touch screen calibration.

*Touch Test Screen*



During touch screen calibration, a crosshair appears at the center of the screen. Touch the center of the crosshair, which then moves to the upper left part of the screen. Touch the center of the crosshair again, and it moves to another part of the screen. Continue touching the center of the crosshair until calibration is complete, and then touch **Return** to return to the main **Diagnostics** menu.

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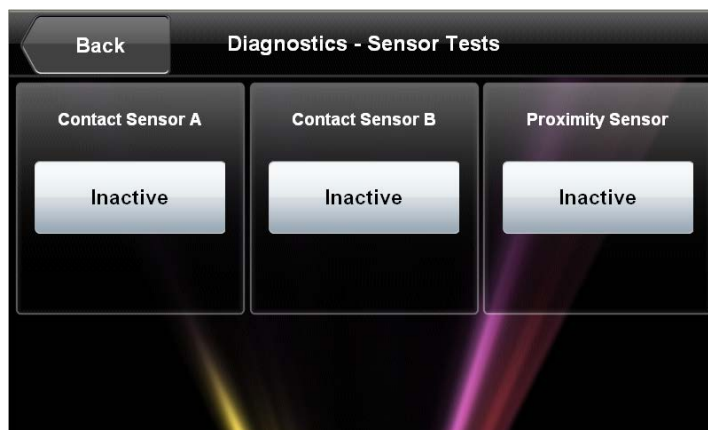
**NOTE:** When touching the screen during calibration, be as accurate as possible. For best results, use the tip of a capped pen or the eraser end of a pencil.

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*Sensor Test*

On the main **Diagnostics** menu, touch **Sensor Test** to display the **Diagnostics – Sensor Tests** screen. If contact sensors are connected to the TPMC-4SM, the respective indicator changes from Inactive to Active as appropriate for each sensor’s activity. Similarly, the TPMC-4SM’s own proximity sensor’s indicator changes from Inactive to Active when the TPMC-4SM senses motion in front of the unit. Touch **Back** to return to the main **Diagnostics** menu.

*“Diagnostics – Sensor Tests” Screen*

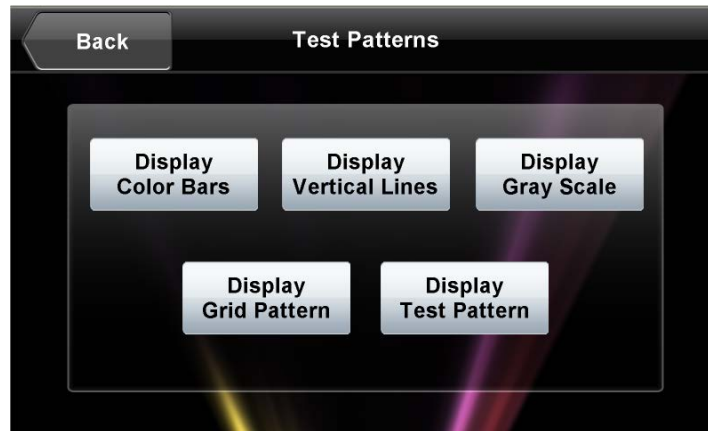




### Test Patterns

On the main **Diagnostics** menu, touch the **Test Patterns** button to display the **Test Patterns** menu, which contains buttons for selecting the different available test patterns: **Display Color Bars**, **Display Vertical Lines**, **Display Gray Scale**, **Display Grid Pattern** and **Display Test Pattern**. Touch **Back** to return to the main **Diagnostics** menu.

#### *“Test Patterns” Menu*



### Mic Test

On the main **Diagnostics** menu, touch **Mic Test** to perform a test of the TPMC-4SM's built-in microphone. The button label changes to **RECORDING/PLAYBACK**. Speak into the microphone on the front of the TPMC-4SM (for five seconds), and the recording is played back to confirm the microphone is functioning. After playback, the button reverts to its original **Mic Test** label. Touch **Back** to return to the **Panel Setup Options** menu.

### ***User Project Mode Off / User Project Mode On***

On the **Panel Setup Options** menu, the **User Project Mode Off** button toggles between this mode and **User Project Mode On**. **User Project Mode Off** is the default state for using the TPMC-4SM with the Crestron Fusion Cloud software interface.

### ***Save & Exit***

On the **Panel Setup Options** menu, touch **Save & Exit** to save all settings, to exit the setup screens, and to return to the main project.



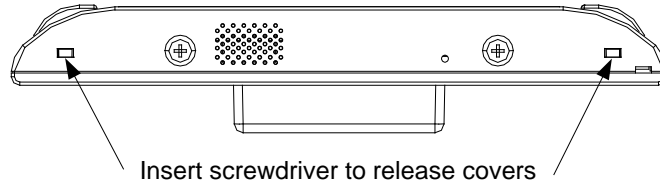
## Changing the Button Inserts

The TPMC-4SM ships with 10 “hard key” push buttons for quick access to commonly used functions. For a clean appearance, either column of buttons may be removed and covered using the no-button covers provided.

To change the inserts, use the following procedure:

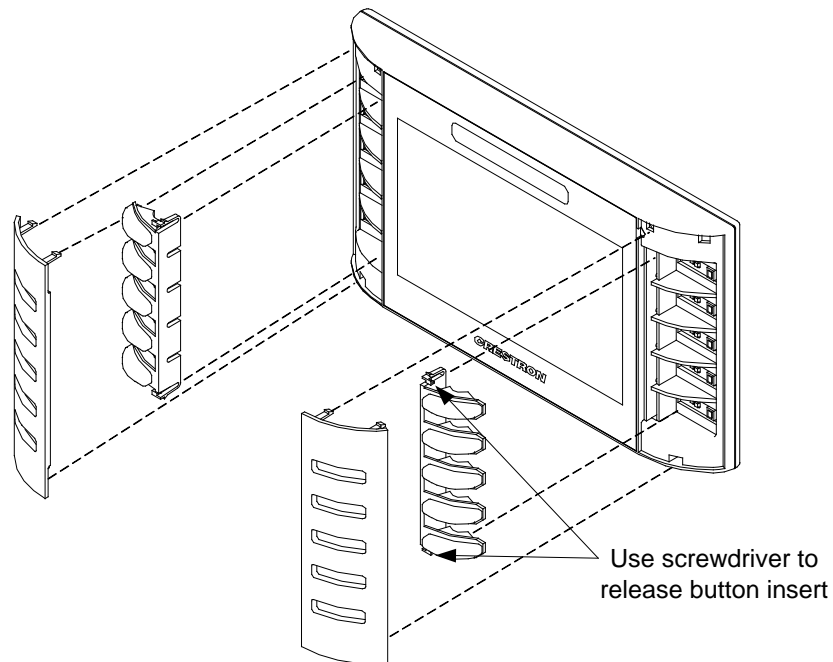
1. Insert a small, slot-head screwdriver into the appropriate hole on the bottom of the TPMC-4SM to release its cover. Refer to the following illustration.

### *Insertion Points for Button Cover Release*

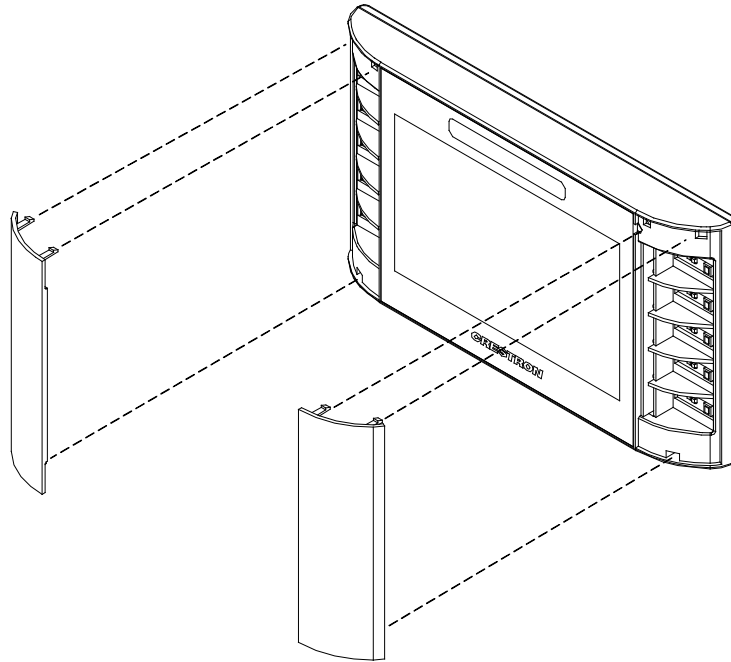


2. With the bottom of the cover released, gently remove it from the TPMC-4SM.
3. If removing the button insert, after releasing and removing the button cover, use a small slot-head screwdriver to press and gently lift the button insert from the TPMC-4SM. Refer to the following illustration for the press and lift points on the button insert.

### *TPMC-4SM with Button Inserts*



4. Gently place the new cover in position and press it into place.

*TPMC-4SM with No-Button Covers***Installation**

The TPMC-4SM touch screen installs simply and cleanly into a standard electrical box or on to virtually any flat surface.

A table top enclosure, the TTK-4SM and a swivel mount, the SMK-4SM, are also available (both sold separately). For mounting onto a flat surface, use the MSMK-4SM Multi-Surface Mounting Kit (sold separately).

The TPMC-4SM is supplied with screws for installation into an electrical box.

***Mounting in a US Electrical Box***

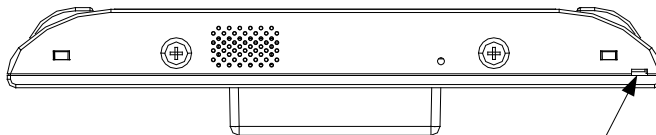

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**NOTE:** When mounting the TPMC-4SM into an electrical box, the box must be installed horizontally.

---

To mount the TPMC-4SM into an electrical box, use the following procedure:

1. Insert a small slot-head screwdriver into the hole shown in the following illustration and gently separate the back of the TPMC-4SM.

***Insertion Point for Separation of Back Panel***

Insert screwdriver to separate back of TPMC-4SM

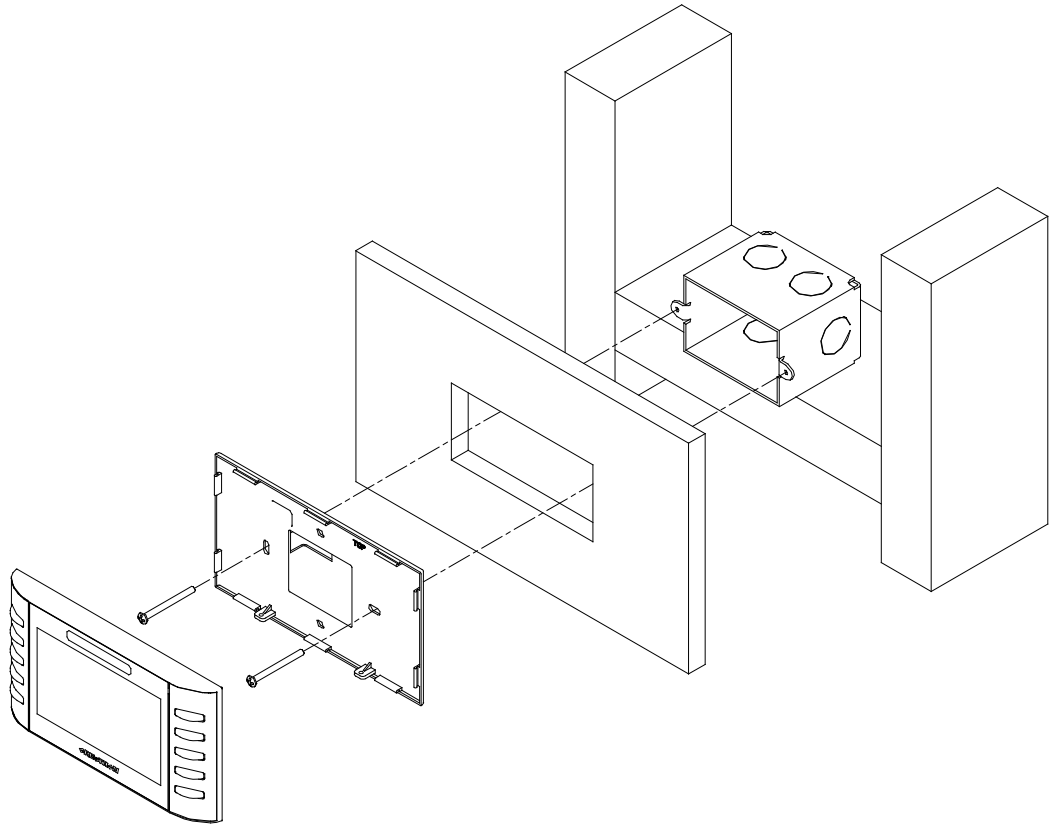
2. Use the two included #06-32 x 1 1/2" screws (2007254) to attach the back panel to a horizontally mounted electrical box, as shown in the following illustration.

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**NOTE:** Use the left and right screw holes for attachment to the electrical box.

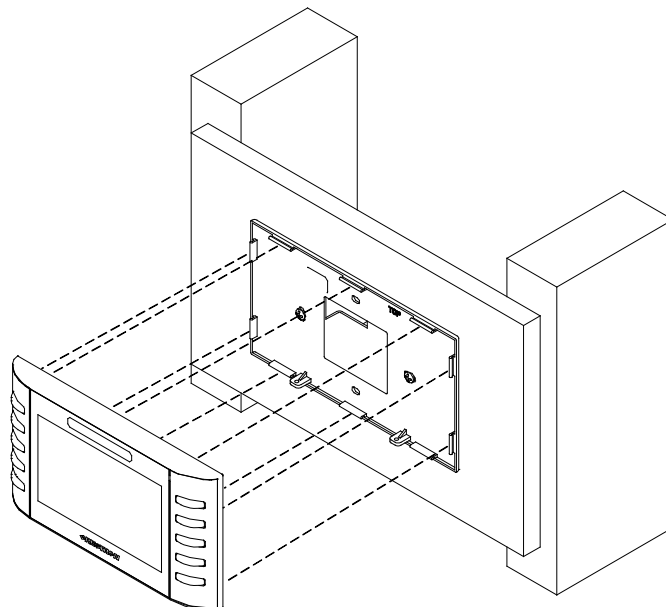
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*Mounting the TPMC-4SM into an Electrical Box*



3. Carefully position the front of the TPMC-4SM over the back panel and gently snap it into place, as shown in the following illustration.

*Snap the TPMC-4SM into Place*



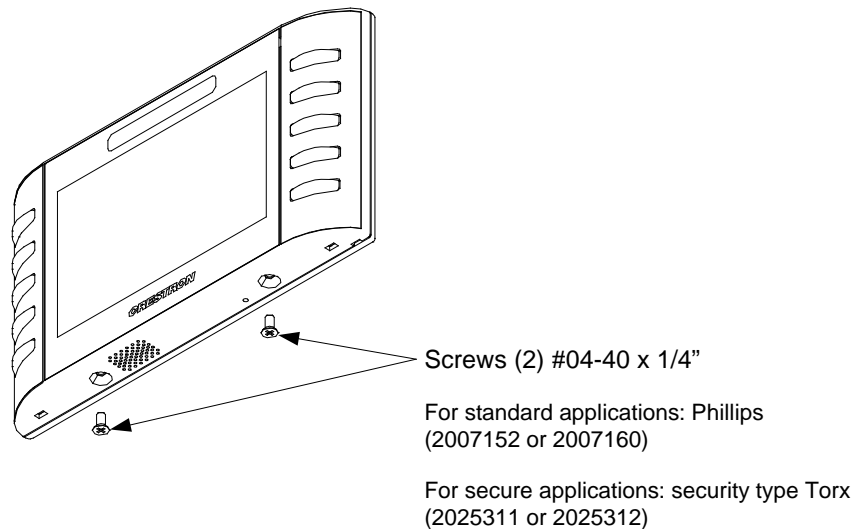
4. Use two of the included #04-40 x 1/4" screws to secure the TPMC-4SM, as shown in the following illustration:
  - a. For standard applications, use the Phillips screws (2007152 or 2007160).
  - b. For secure applications, use the security type Torx® screws (2025311 or 2025312) along with the included Torx screwdriver bit (2025915).

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**NOTE:** Parts 2007152 and 2025311 come with black models.  
Parts 2007160 and 2025312 come with white models.

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*Secure TPMC-4SM*



### ***Mounting in a European Electrical Box***

To mount the TPMC-4SM into a European electrical box, use the following procedure:

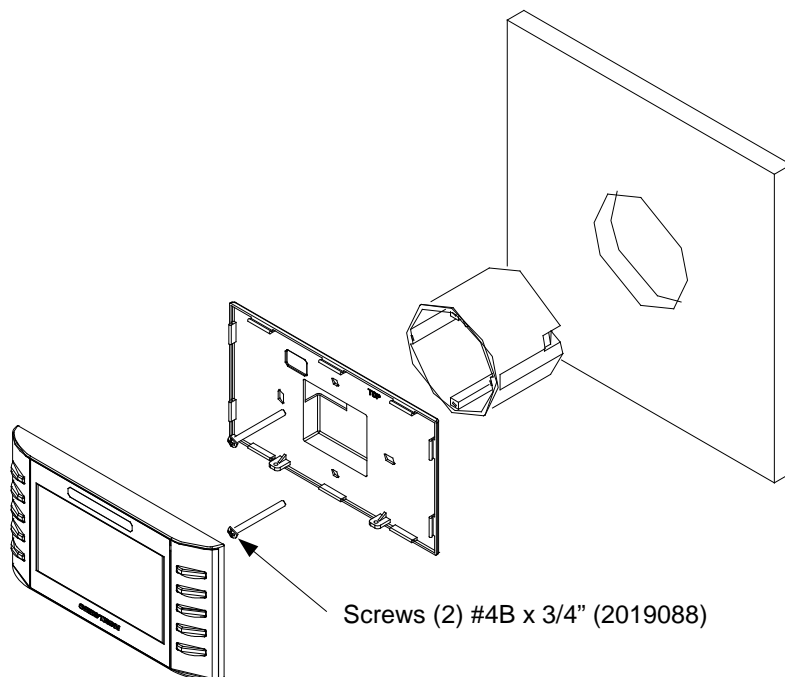
1. Insert a small slot-head screwdriver into the hole shown in the illustration at the top of page 21 and gently separate the back of the TPMC-4SM.
2. Use the two included #4B x 3/4" screws (2019088) to attach the back panel to the electrical box, as shown in the following illustration.

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**NOTE:** For European electrical boxes, use the top and bottom screw holes for attachment to the electrical box.

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### ***Mounting the TPMC-4SM into a European Electrical Box***



3. Carefully position the front of the TPMC-4SM over the back panel and gently snap it into place, as shown in the illustration at the bottom of page 23.
4. Use either the two included #04-40 x 1/4" Phillips screws (2007152 or 2007160) or the two included #04-40 x 1/4" security type Torx screws (2025311 or 2025312) along with the included Torx screwdriver bit (2025915) to secure the TPMC-4SM, as shown in the illustration on page 24.

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**NOTE:** Parts 2007152 and 2025311 come with black models.  
Parts 2007160 and 2025312 come with white models.

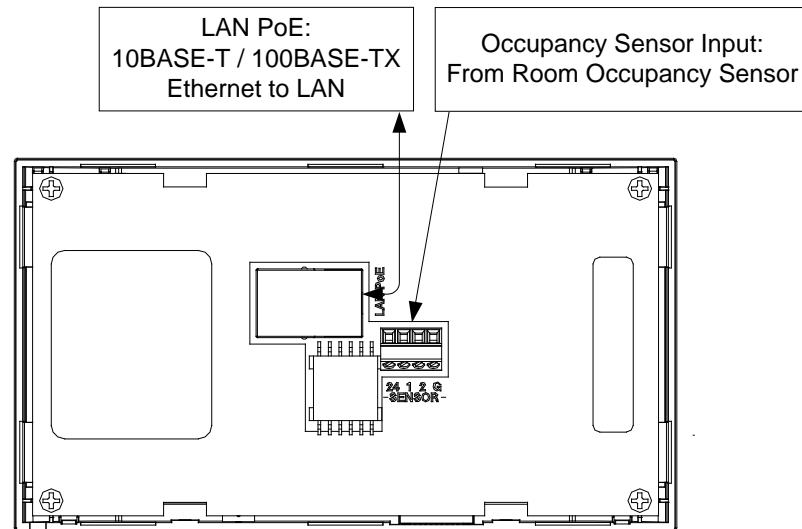
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## Hardware Hookup

Make the necessary connections as called out in the illustration that follows this paragraph.

When making connections to the TPMC-4SM, use Crestron power supplies for Crestron equipment. Apply power after all connections have been made.

### *Hardware Connections for the TPMC-4SM*




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**NOTE:** To prevent overheating, do not operate this product in an area that exceeds the environmental temperature range listed in the table of specifications.

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## Recommended Cleaning

Keep the surface of the touch screen free of dirt, dust, or other materials that could degrade optical properties. Long-term contact with abrasive materials can scratch the surface, which may detrimentally affect image quality.

For best cleaning results, use a clean, damp, non-abrasive cloth with any commercially available non-ammonia glass cleaner. Bezels may not provide a complete watertight seal. Therefore, apply cleaning solution to the cloth rather than to the surface of the touch screen. Wipe the touch screen clean and avoid getting moisture beneath the bezels.

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**CAUTION:** Do not apply excessive pressure to the touch screen display during handling. Doing so can crack the screen and damage the device.

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## Uploading and Upgrading

Crestron recommends using the latest programming software and that each device contains the latest firmware to take advantage of the most recently released features. However, before attempting to upload or upgrade it is necessary to establish communication. Once communication has been established, files (for example, programs, projects or firmware) can be transferred to the control system (or device). Finally, program checks can be performed (such as changing the device ID or creating an IP table) to ensure proper functioning.

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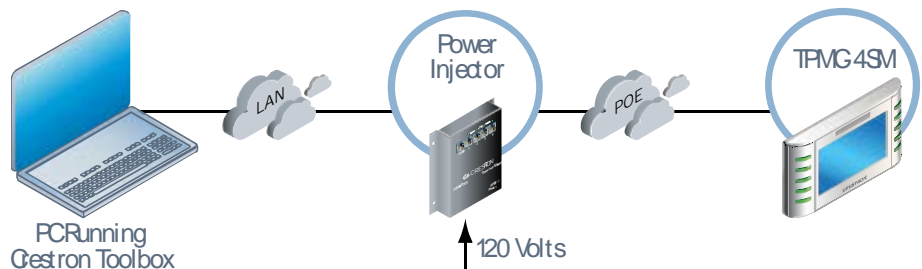
**NOTE:** Crestron software and any files on the website are for authorized Crestron dealers and Crestron Service Providers (CSPs) only. New users must register to obtain access to certain areas of the site (including the FTP site).

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## Establishing Communication

Use Crestron Toolbox software for communicating with the TPMC-4SM; refer to the Crestron Toolbox software help file for details. There is a single method of communication: TCP/IP communication.

### *Ethernet Communication*



The TPMC-4SM connects to PC via Ethernet:

1. Use the Device Discovery Tool (click the  icon or select **Tools > Device Discovery Tool**) in Crestron Toolbox software to detect all Ethernet devices on the network and their IP configuration. This tool is available in Crestron Toolbox software version 1.15.143 or later.
2. Click on the TPMC-4SM to display information about the device.

## Programs, Projects and Firmware

Program, project, or firmware files may be distributed from programmers to installers or from Crestron to dealers. Firmware upgrades are available from the Crestron FTP website as new features are developed after product releases. One has the option to upload programs and projects via the programming software or to upload and upgrade via the Crestron Toolbox software. For details on uploading and upgrading, refer to the Crestron Studio software help file, the SIMPL Windows help file, the VT Pro-e® software help file, or the Crestron Toolbox software help file.

### Crestron Studio Software or SIMPL Windows

If a Crestron Studio (or SIMPL Windows) program is provided, it can be uploaded to the control system using Crestron Studio software (or SIMPL Windows) or Crestron Toolbox software.

### Crestron Studio Software or VT Pro-e Software

Upload the Crestron Studio software (or VT Pro-e software) file to the touch screen using Crestron Studio software (or VT Pro-e software) or Crestron Toolbox software.

### Firmware

Check <ftp://ftp.crestron.com> to find the latest firmware. (New users must register to obtain access to certain areas of the site, including the FTP site.)

Upgrade TPMC-4SM firmware via Crestron Toolbox software.

1. Establish communication with the TPMC-4SM and display the **System Info** window (**Tools > System Info**).
2. Select **Functions > Firmware...** to upgrade the TPMC-4SM firmware.

## Program Checks

Using Crestron Toolbox software, open the **System Info** window (**Tools > System Info**) and select the **Functions** menu to display actions that can be performed on the TPMC-4SM-FD.

Be sure to use Crestron Toolbox software to create the TPMC-4SM IP table.

1. Select **Functions > IP Table Setup...**
2. Add, modify or delete entries in the IP table. The TPMC-4SM can have only one IP table entry.
3. A defined IP table can be saved to a file or sent to the device.

Edit the control system's IP table to include an entry for the TPMC-4SM. The entry should list the TPMC-4SM's IP ID (specified on the TPMC-4SM's IP table), and the internal gateway IP address 127.0.0.1.



## Problem Solving

### Troubleshooting

The following table provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

#### *TPMC-4SM Troubleshooting*

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Device does not function.	Device is not communicating with the network.	Use Crestron Toolbox software to poll the network. Verify network connection to the device.
	Device is not receiving power from a Crestron power source.	Use the provided Crestron power source. Verify connections.
	Device is not receiving sufficient power.	Use the Crestron Power Calculator to help calculate how much power is needed for the system.
TPMC-4SM is not responding.	No IP address configured/obtained.	Use the internal setup menu (refer to "Ethernet Setup," which starts on page 13) or Crestron Toolbox software to create/verify Ethernet settings.
	Invalid control system IP address / IP ID set up on the TPMC-4SM	The IP address (or host name) for the control system is invalid or the IP ID does not match the one defined in the SIMPL program. Refer to "Ethernet Setup," which starts on page 13, to define IP addresses.
TPMC-4SM boots up in setup screens every time.	Invalid VT Pro-e software project or no VT Pro-e software project is loaded.	Load/reload VT Pro-e software project using the Crestron Toolbox software.

### Reference Documents

The latest version of all documents mentioned within the guide can be obtained from the Crestron Web site ([www.crestron.com/manuals](http://www.crestron.com/manuals)).

#### *List of Related Reference Documents*

DOCUMENT TITLE
Crestron e-Control Technology Reference Guide
Crestron Fusion Cloud Software Installation Guide

## Further Inquiries

To locate specific information or to resolve questions after reviewing this guide, contact Crestron's True Blue Support at 1-888-CRESTRON [1-888-273-7876]. For assistance within a particular geographical region, refer to the listing of Crestron worldwide offices at [www.crestron.com/offices](http://www.crestron.com/offices).

To post a question about Crestron products, log onto [www.crestron.com/onlinehelp](http://www.crestron.com/onlinehelp). First-time users must establish a user account to fully benefit from all available features.

## Future Updates

As Crestron improves functions, adds new features, and extends the capabilities of the TPMC-4SM, additional information may be made available as manual updates. These updates are solely electronic and serve as intermediary supplements prior to the release of a complete technical documentation revision.

Check the Crestron website periodically for manual update availability and its relevance. Updates are identified as an "Addendum" in the Download column.

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Installation & Operations Guide – DOC. 6845F  
(2024510)  
09.16  
Specifications subject to  
change without notice.