Crestron **TPMC-4X**

Isys i/O™ Handheld WiFi Touchpanel

Operations Guide

CRESTRON®

This document was prepared and written by the Technical Documentation department at:

Contents

Isys i/O™ Handheld WiFi Touchpanel: TPMC-4X

Introduction

Functions and Features

- Stylish and ergonomic handheld design

- 3.5" active matrix touchscreen display | 240 x 320 resolution

- 16-bit Isys i/O graphics | Synapse image rendering algorithm

- Microsoft Windows CE.NET operating system

- 802.11b Wi-Fi 2-way wireless communications

- Wireless video support

- Backlit hard buttons, thumbpad, and toggle wheel

- Stylus with onboard storage slot included

- Docking station and Li-Ion battery pack included

Handheld Touchpanel Control

Far more than a mere universal remote, the TPMC-4X is designed to provide a powerful wireless control solution that is easy to hold and intuitive to use. True Crestron touchpanel versatility is afforded through a 3.5" active-matrix color touchscreen display, producing stunning 16-bit graphics with 3D effects, high-res images, dynamic graphics and text, transparency, and full-motion animation. A stylus is included for use with the on-screen keyboard, conveniently stowed in its own storage slot.

Wi-Fi Wireless

Integrated 802.11b Wi-Fi technology delivers secure, high-speed 2-way wireless performance, communicating with Crestron control systems, computers, and media servers via a wireless Ethernet access point. Fully bidirectional behavior means the

TPMC-4X is perfect for searching through tracks and titles on your music server complete with the dynamic display of cover art graphics. Of course, true-feedback is afforded for every connected device be it audio, video, satellite radio, lighting, security, or climate control.

Wireless Video

Viewing security cameras and other video sources is possible right on the touchscreen. The TPMC-4X includes built-in support for wireless streaming video from a variety of third-party web cameras and servers using the motion-JPEG format.

Backlit Hard Buttons

To complement its touchpanel with tactile pushbutton control, the TPMC-4X includes a 5-way thumbpad controller, side-mounted toggle wheel, and 13 additional pushbuttons. Every button is fully programmable to support quick access to functions ranging from simple volume adjustment and channel selection to on-screen menu navigation or even pan/tilt camera control. Adjustable button backlighting provides a striking appearance while facilitating operation in a darkened home theater or boardroom.

Built-in Stylus

The stylus supplied with your TPMC-4X is designed for your screen. The use of other pointers could damage the screen. To obtain an additional stylus, contact a Crestron customer service representative.

Li-Ion Rechargeable Batteries

A fast-charging Lithium Ion battery pack provides long-lasting wireless operation without the "memory" issues typical of other rechargeable batteries. Adjustable 'power off' mode and the included docking station provide charging convenience with an elegant appearance.

Embedded PC Applications

The TPMC-4X includes an MJPEG Viewer as an embedded PC application.

Future PC applications and features may be added, as they become available, through Crestron updates.

Wireless Access Point Compatibility

Several devices are compatible with the TPMC-4X for communication with a Cresnet System. Refer to the Crestron website (www.crestron.com), online help answer ID 3984, for information on compatible devices.

Applications

The following diagram illustrates a basic configuration that connects a TPMC-4X WiFi touchpanel to a control system via a wireless access point (WAP).
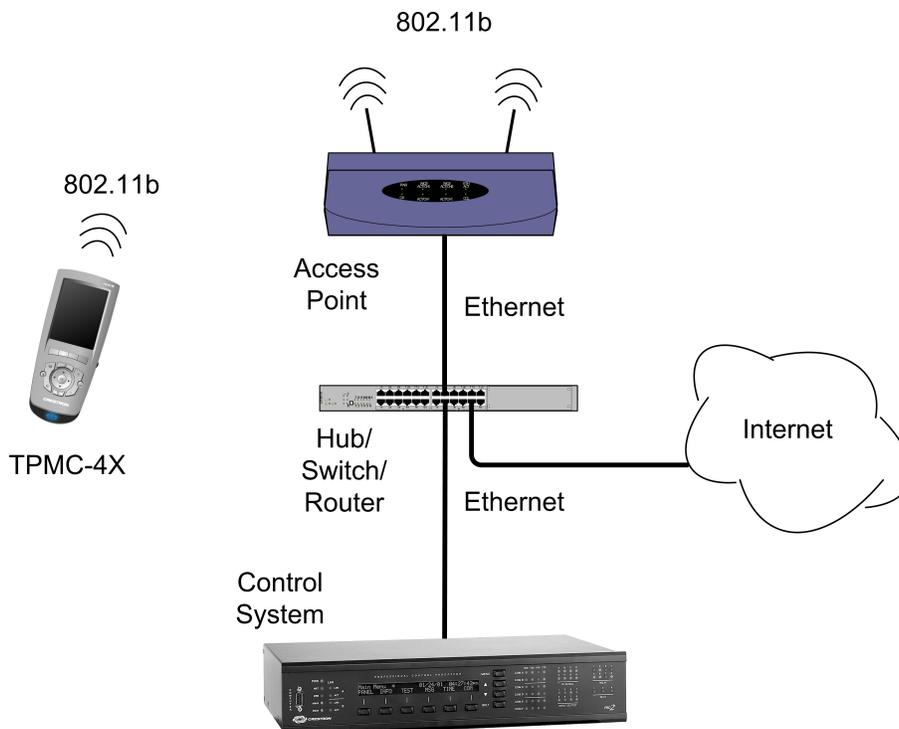
- The distance between the TPMC-4X and the dedicated WAP should not exceed 30 feet. The TPMC-4X is not a roaming device.

- Use a dedicated wireless router/access point for each TPMC-4X device.

- Each TPMC-4X must have only a single dedicated WAP listed in its *Preferred Networks* list. Refer to the "WLAN Settings" Window – Config Tab instructions on page 15.

The diagram on the next page presents a more complex configuration. In this scenario, the WAP is connected to port B of the control system's C2ENET-2 card. Port A is connected to the corporate LAN. The card's internal firewall controls data flow thus isolating the two subnets.

NOTE: When using a dual-port Ethernet card, Ports A & B must be different subnets (e.g., Port A = 128.x.x.x; Port B = 192.x.x.x).

For additional information on setting up and understanding an Ethernet network, refer to the latest version of the Crestron e-Control Reference Guide (Doc. 6052), which is available from the Crestron website (http://www.crestron.com/manuals).

Head End

Ethernet

Corp.
LAN A

Ethernet

PCs

Firewall

Ethernet

Dual-Port Ethernet Card
with Built-In NAT/Router
& Firewall

A   B

Internet

C2ENET-2

PRO2

Ethernet

802.11b

Local IR/RS-232/Relays
to Device Control &
Touchpanels

WAP
(Provided by
others)
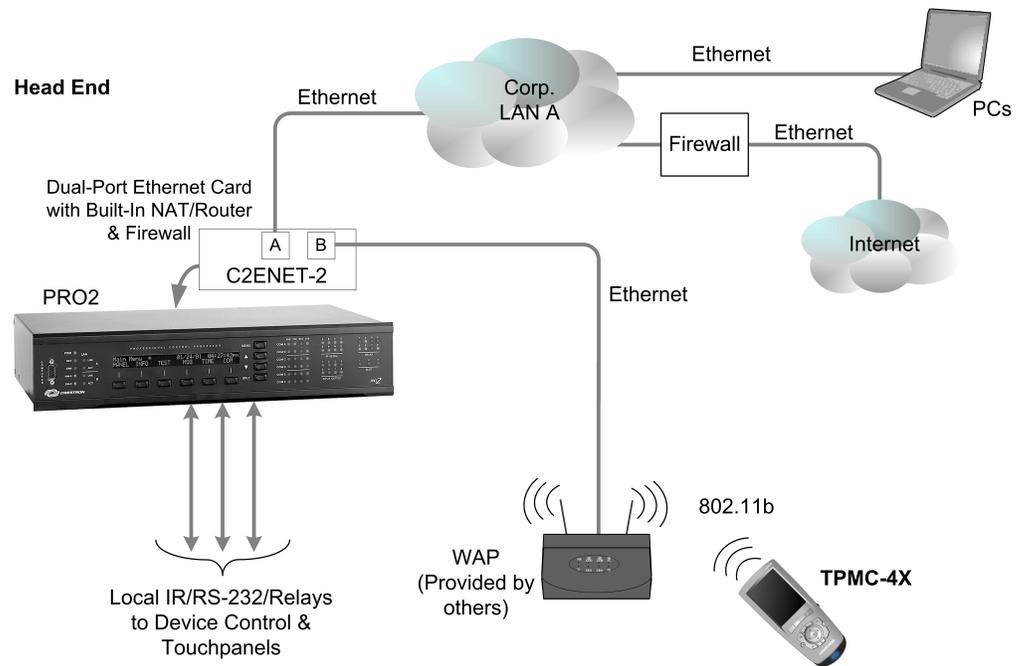
TPMC-4X

Specifications

The table below provides a summary of specifications for the TPMC-4X.

Specifications of the TPMC-4X

SPECIFICATION	DETAILS
Touchscreen Display 　Display Type: 　Size: 　Aspect Ratio: 　Resolution: 　Brightness: 　Contrast: 　Color Depth 　Viewing Angle: 　Response Time: 　Touchscreen Composition:	 Transflective TFT active matrix color LCD 3.5 inch (8.89 cm) diagonal 3:4 QVGA (portrait orientation) 240 x 320 pixels 100 nits (cd/m^2) 80:1 typical, 55:1 minimum 16-bit, 64k colors ±60° typical horizontal, ±60° typical vertical 15 msec Resistive membrane
Processor	Samsung 203MHz Processor
Memory 　SDRAM 　Flash	 64 MB 32 MB
Operating System	Microsoft® Windows® CE .NET 4.2
Graphic Engine	16-bit non-palette graphics, 65,536 colors. Synapse image rendering algorithm; translucency; multi-mode objects; animations; dynamic graphics
Wireless Ethernet[1] 　RF Transceiver 　Range	 IEEE 802.11b Wi-Fi 2.4 GHz 2-way RF 11/13 channels (2400 to 2483 MHz), DHCP/DNS or static IP, 64 and 128-bit WEP[2] encryption, TCP/IP, CIP; requires third-party 802.11b wireless access point and Ethernet-enabled Crestron 2-Series control system Up to 30 feet (10m) @ 11Mbps; range and speed vary upon environmental conditions

(continued on next page)

Specifications of the TPMC-4X (continued)

SPECIFICATION	DETAILS
Video Streaming Format	MJPEG
Battery[3] Battery Type	Lithium Ion 3.6 Volt, 1300 mAh (included)
Usage per Charge Charging Time	Three hours continuous at full brightness Eight hours

Power Requirements
    TPMC-4X-DS Docking
       Station/Charger (included)
    Power Supply (included)
	0.6 Amps @ 5 Volts DC
	0.3 Amps @ 100-240 Volts AC 60Hz

Default IP ID[4]	03
Minimum 2-Series Control System Update File[5, 6]	Version C2-3.137.CUZ or later

Environmental
        Temperature
        Humidity
	30° to 113°F (-5° to 45°C)
	10% to 90% RH (non-condensing)

Enclosure Construction	High-impact injection-molded case, silver; stylus storage slot (stylus included); integral docking station port

Dimensions – TPMC(I)-4X
        Height
        Width
        Depth
	1.17 in (2.96 cm)
	3.08 in (7.81 cm)
	7.39 in (18.76 cm)

Dimensions – TPMC(I)-4X-DS
        Height
        Width
        Depth
	2.25 in (5.72 cm)
	3.63 in (9.22 cm)
	6.25 in (15.88 cm)

Weight	0.46 lbs (0.21 kg)

International Version TPMCI-4X (230 VAC)
 	
All the features of the TPMC-4X except:
 	
Power Requirements:
 	
    TPMCI-4X-DS Docking
       Station/Charger (included)
    Power Supply (included)
	0.6 Amps @ 5 Volts DC
	0.3 Amps @ 100-240 Volts AC 50Hz

Included Accessories TPMC(I)-4X-DS	Docking Station/Charger

1. Requires a compatible 802.11b Wi-Fi access point. The RF signal range is dependent on construction of the building, obstructions, and RF interference from other devices. The location of the access point and the orientation of its antenna are also important factors in the RF performance.

2. Wired Equivalent Privacy (WEP) is a security protocol for wireless networks that encrypts transmitted data, and protects the integrity of the data.

3. Typical battery life is three hours continuous usage with display at full brightness. Actual operating time depends on usage and settings for display brightness and timeouts.

4. Refer to "Identity Code" on page 11 for details.

5. The latest software versions can be obtained from the Crestron website. Refer to NOTE after last footnote.

6. Crestron 2-Series control systems include the AV2 and PRO2. Consult the latest Crestron Product Catalog for a complete list of 2-Series control systems that are Ethernet-enabled directly or via a C2ENET-2 dual port Ethernet card.

NOTE: Crestron software and any files on the website are for Authorized Crestron dealers and Crestron Authorized Independent Programmers (CAIP) only. New users may be required to register to obtain access to certain areas of the site (including the FTP site).

Physical Description

This section provides information on the connections, controls, and indicators available on your TPMC-4X

TPMC-4X Physical View

TPMC-4X Overall Dimensions
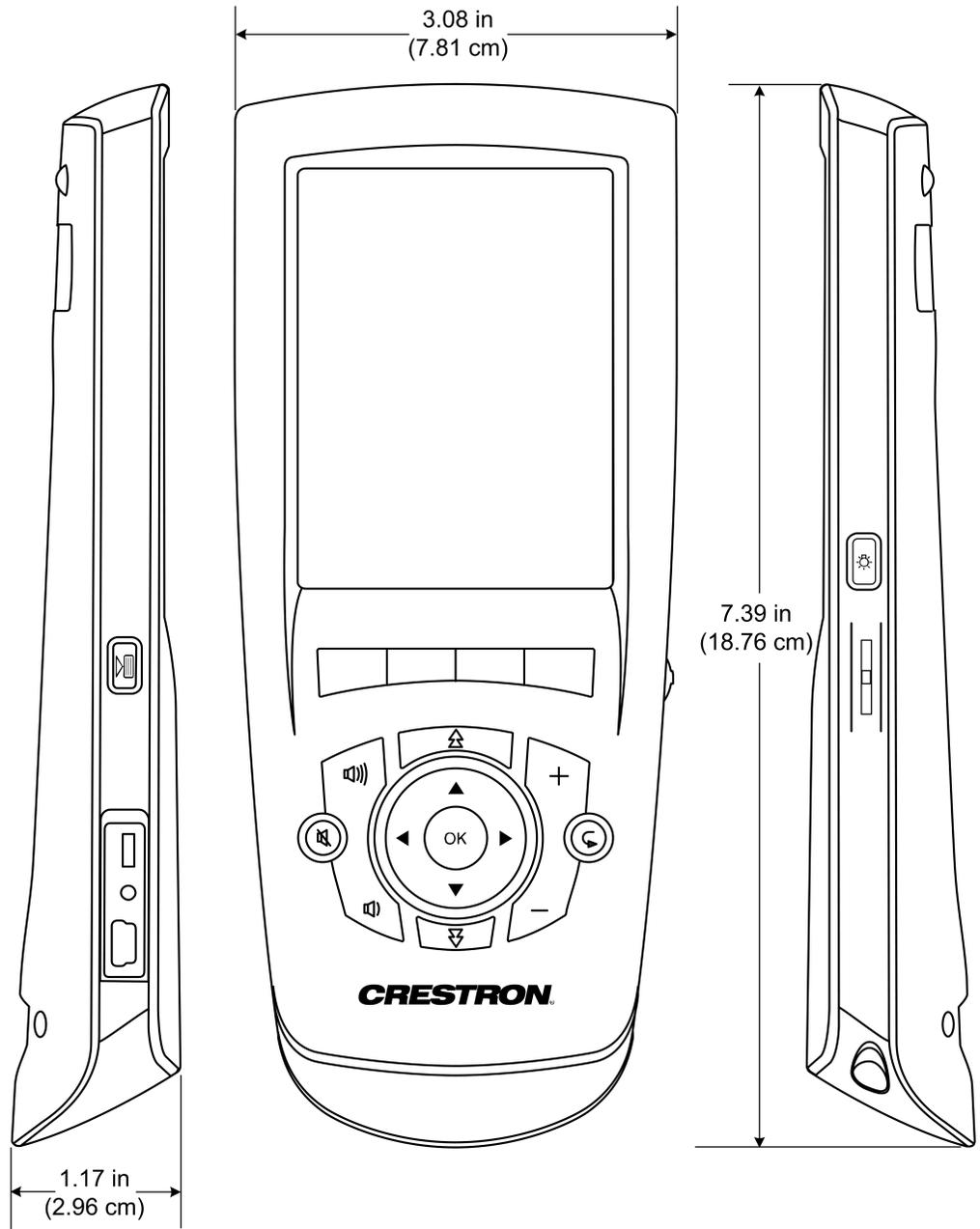
TPMC-4X Docking Station Dimensions

6.25 in
(15.88 cm)

3.63 in
(9.22 cm)

2.25 in
(5.72 cm)
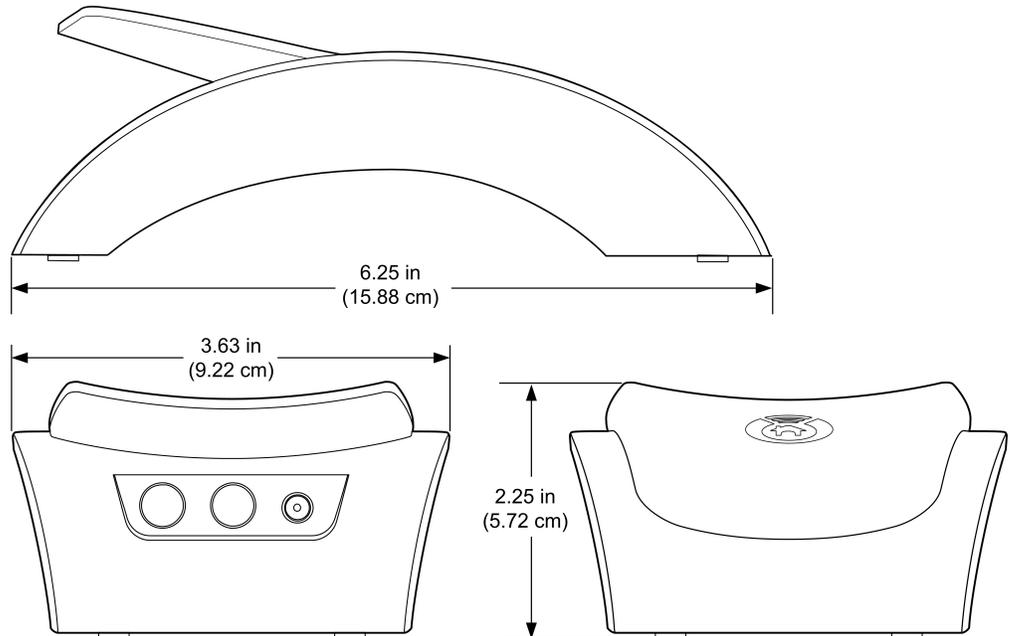
TPMC-4X Programmable Hard buttons
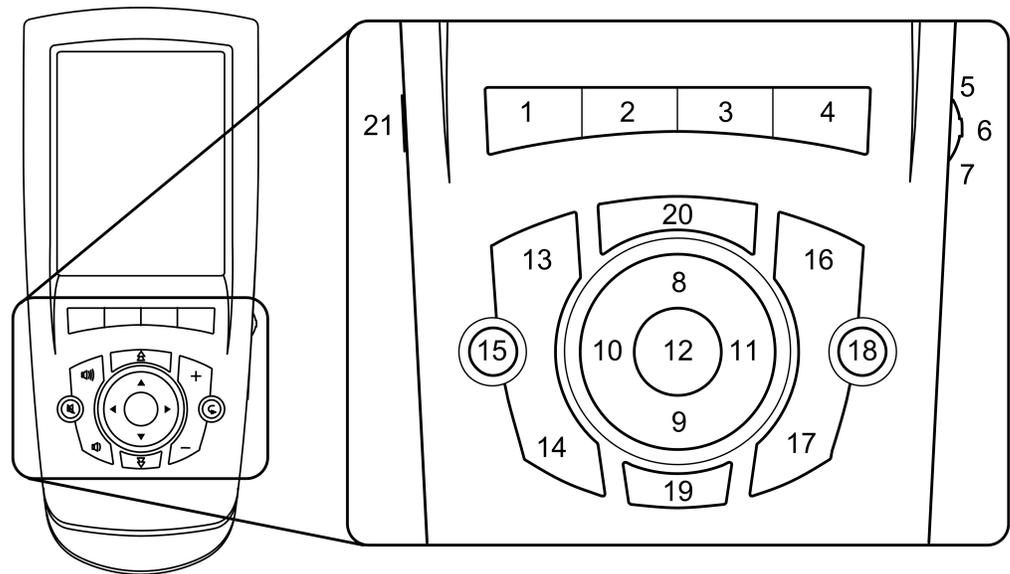
These hard pushbuttons, the five-way thumbpad, and the toggle wheel are programmable and can provide tactile control of many functions such as audio volume, channel selection, OSM navigation, or even pan/tilt cameras. Fixed join numbers are assigned to these buttons as shown above.

TPMC-4X Port and Controls
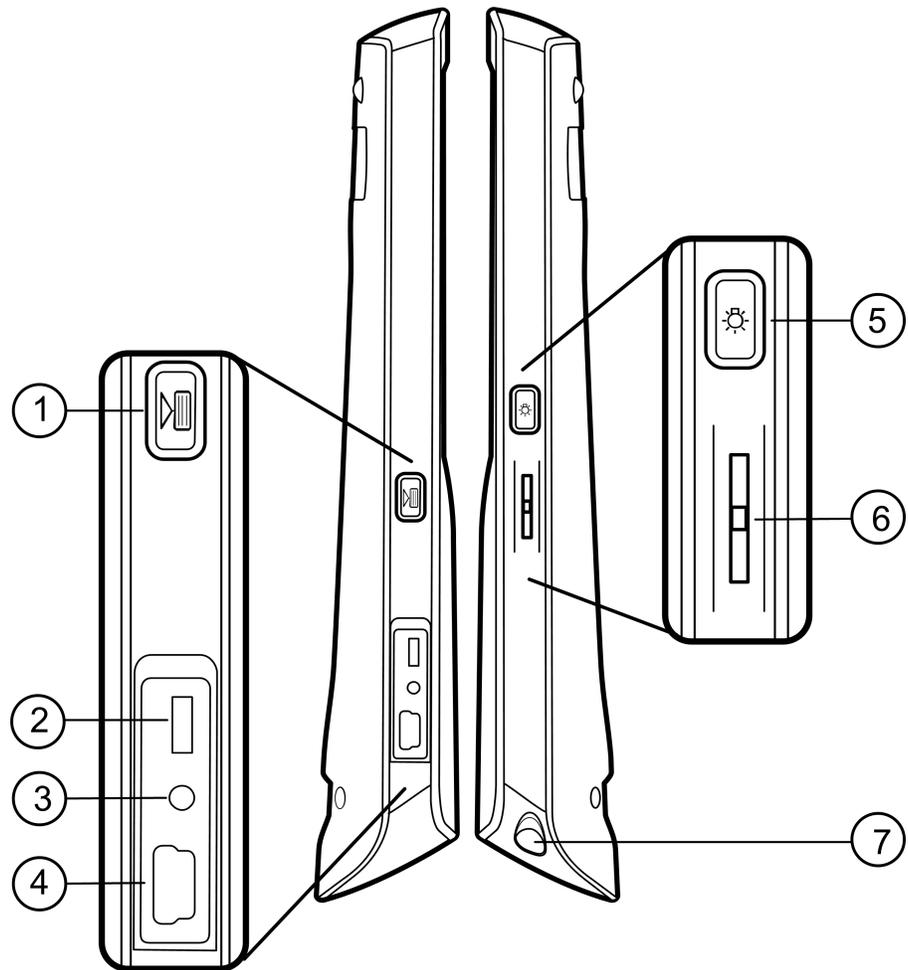
#	CONNECTORS & CONTROLS	DESCRIPTION
1		Programmable hard button
2	On/Off switch	up = On; down = Off
3	Reset button	Resets system power
4	USB Mini-B Port	Interface cable provided; used for uploading firmware and VT Pro-e projects
5		Backlight button; On/Off
6		Programmable toggle wheel (up, center, down)
7	Stylus	Used to "tap" or to do "select and drag" functions just as you would using a mouse. It is also used to "type" on the input panel "keyboard" when entering text or commands, and to activate the **On/Off** switch and **Reset** button on the side of the TPMC-4X and the **On/Off** switch on the bottom of the docking station.

Industry Compliance

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

$$CE \quad \checkmark$$

NOTE: This device complies with part 15 of the FCC rules. Operation is subject to the following two 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.

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.

Setup

Identity Code

The IP ID is set within the TPMC-4X's table using Crestron Toolbox or during configuration of the unit in the Setup pages of the TPMC-4X. For information on setting an IP table, refer to the Crestron Toolbox help file.

The IP IDs of multiple TPMC-4X 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 SIMPL Windows program.

- Each device using IP to communicate with a control system must have a unique IP ID.

Power

The TPMC-4X is powered via its internal battery. Connect the supplied power supply to the TPMC-4X-DS docking station.

NOTE: Before using the TPMC-4X for the first time, charge its internal battery for at least eight hours by placing it in the TPMC-4X-DS docking station.

It takes the TPMC-4X about eight hours to recharge while in use. A fully charged battery can provide up to three hours of use at the full screen brightness setting.

The battery recharge capacity is 500 cycles to 80% of original capacity.

NOTE: When not using the TPMC-4X, store the unit in its docking station.

Configuring the Touchpanel

When power is applied to the unit for the first time, the following screen appears.

Initial Opening Screen
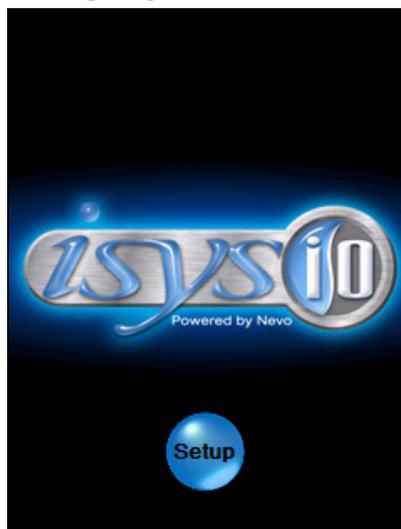
Touch the **Setup** button with the stylus or your finger to display the following TPMC-4X setup screen.

Setup Screen

The setup screen enables basic configuration procedures prior to regular operation of the touchpanel.

NOTE: During regular operation of the touchpanel, there are two ways to activate the setup functions: either place a button on the project main page and assign the reserved join number (17242) that activates Setup, or hold your finger on the screen, use the stylus to press the **Reset** button, and continue to keep your finger on the screen until the setup screen appears (about 90 seconds).

SETUP FUNCTIONS

The setup functions control the basic operation of the TPMC-4X.

Disable System Messages

Selecting the **Disable System Messages** button allows you to disable pop-up messages that warn of communication failure between the TPMC-4X and the WAP or the control system.

Touch Screen

Selecting the **Touch Screen** button displays the following "Stylus Properties" window that allows you to set stylus properties and perform a screen calibration.

Use the supplied stylus and follow the instructions to customize the unit's sensitivity to your use of the stylus.

NOTE: The double-tap function is not supported at this time.

"Stylus Properties" Settings Window
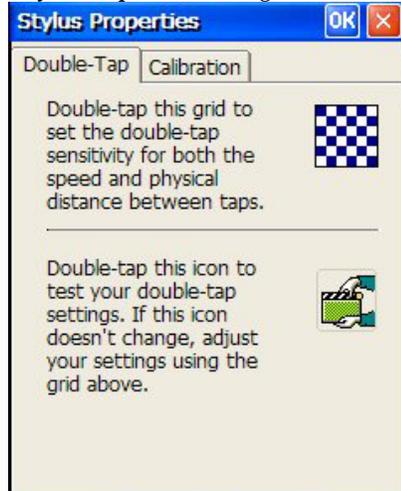
"Stylus Properties" Calibration Window

"Stylus Properties" Recalibration Window
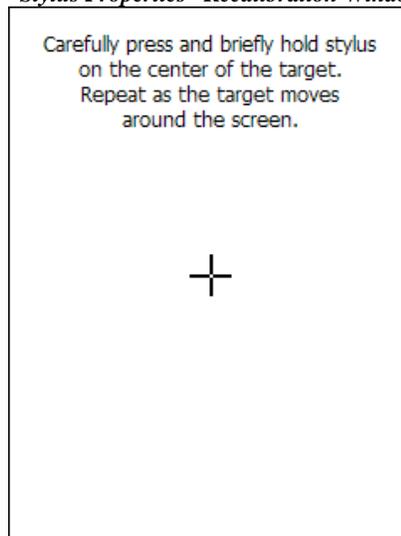
Brightness

Selecting the **Brightness** button displays the following window. Brightness can be set from Min to Max (full brightness). Lower brightness settings extend battery life.

"Screen Brightness" Window
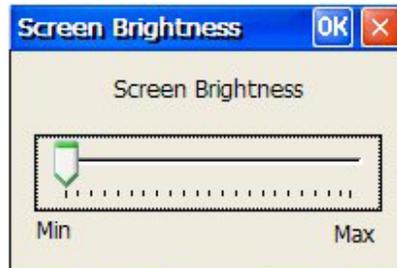
WiFi Access Point

Selecting the **WiFi Access Point** button displays the "WLAN Settings" window, which allows you to set up the parameters used to communicate with the control system via a wireless access point (WAP). Crestron recommends using a dedicated WAP for each TPMC-4X in the system.

Note that for screens that require data entry, touching an entry field with the stylus causes a keyboard display to appear at the bottom of the screen, allowing you to use the stylus to "type in" the necessary data.

"WLAN Settings" Window – Status Tab
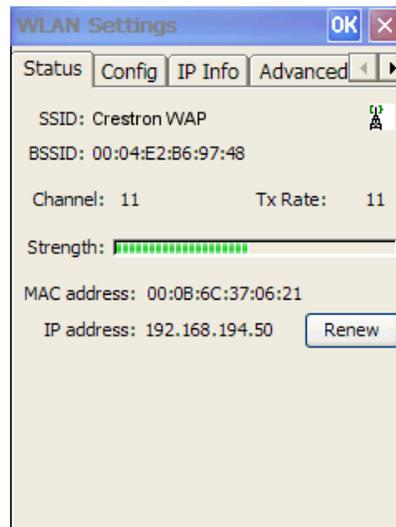
The *Status* tab displays basic information about your TPMC-4X in its default configuration. The **Renew** button resets the Wi-Fi adapter and re-requests an IP address from the DHCP server. (Note: Not supported by Crestron.)

Select the *Config* tab to display and configure the WAP network setup screen, as shown in the following figure.

Use the screen to establish a list of preferred networks that the system will use. The screen icons used to set up the lists are defined next to the figure.

"WLAN Settings" Window – Config Tab
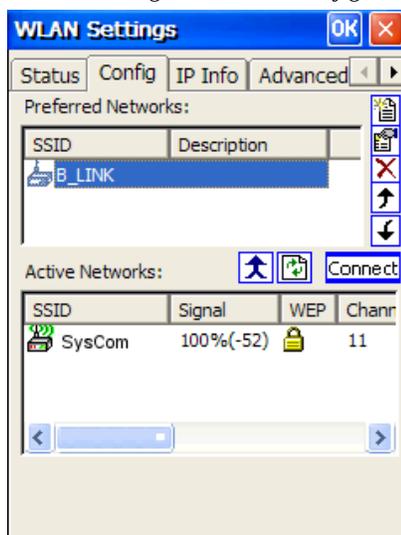
NOTE: There must be only a single dedicated WAP listed in the *Preferred Networks* list.

Select the *IP Info* tab to display IP addresses and other information relating to the network. (Refer to the following figure.) Use the **Renew** button at the bottom of the screen to renew the lease for the IP address if you are connected by DHCP. (Note: not supported by Crestron.)

The **Ping** and **Trace** buttons activate screens that are used to test the connectivity of the network, and let you see all the intermediate points in the network, respectively. The screens are shown on the following page.

"WLAN Settings" Window – IP Info Tab
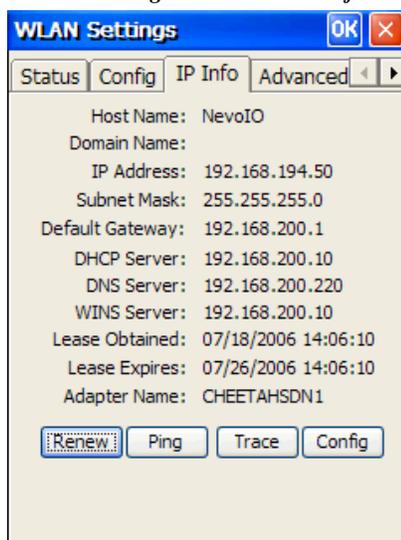
"WLAN Settings" Window - Ping Screen
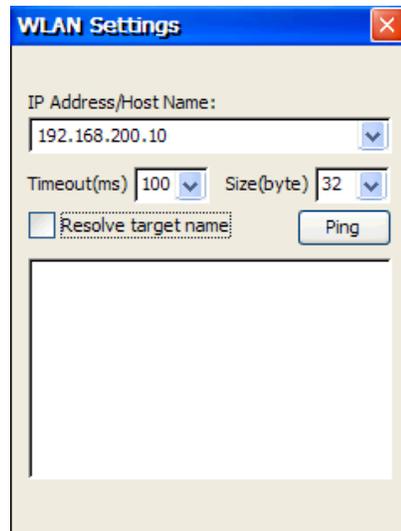
Enter the IP Address or the host name, and click the **Ping** button to send a test packet to verify the connectivity between the TPMC-4X and the control system.

"WLAN Settings" Window - Trace Screen
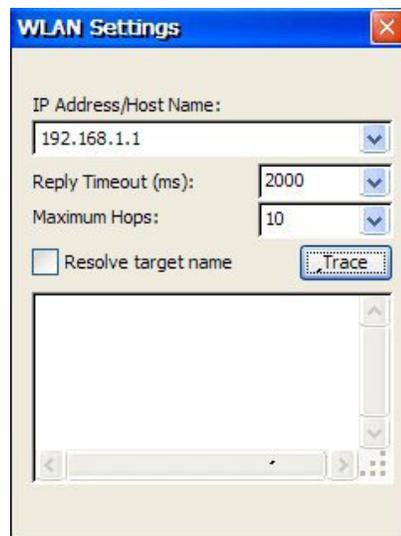
Press the **Trace** button to display all the intermediate points the packet goes through to reach the destination.

Checking the **Resolve target name** check box will display the host name of the entered IP address.

Press the **Config** button on the "IP Info" screen to display the following Config screen. Use the screen to specify the static IP address for the TPMC-4X.

NOTE: The supported usage model of the TPMC-4X requires the use of a static IP address.

"WLAN Settings" Window - Config Screen
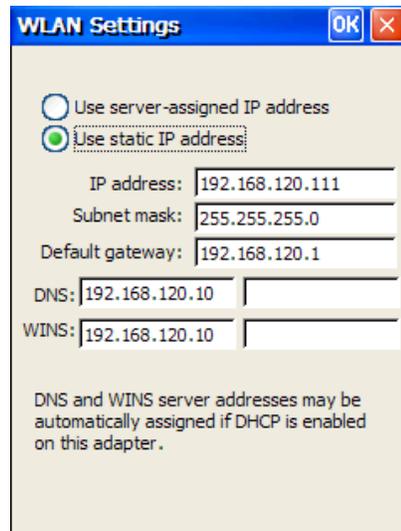
Select the *Advanced* tab of the "WLAN Settings" window to show the following display. Crestron recommends not changing these settings.

"WLAN Settings" Window – Advanced Tab
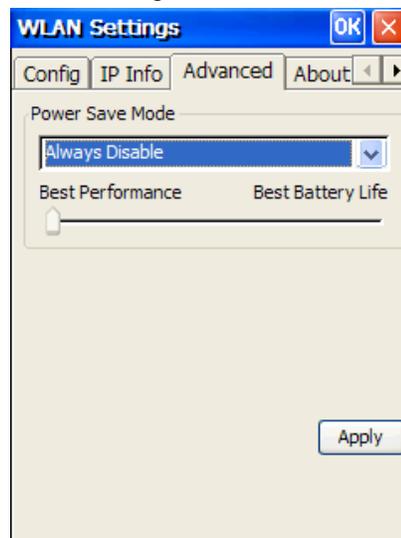
Select the *About* tab of the "WLAN Settings" window to display basic information about your TPMC-4X, similar to the following figure.

"WLAN Settings" Window – About Tab

The tab shows version information for the WiFi subsystem of the TPMC-4X. For the overall software version of the TPMC-4X, press the **About** button on the setup screen.

CtrlSys IP Address

Selecting the **CtrlSys IP Address** button displays the "Control System Information" window that allows you to enter the control system's name, its port address, and its IP ID. Refer to the following figure.

"Control System Information" Window
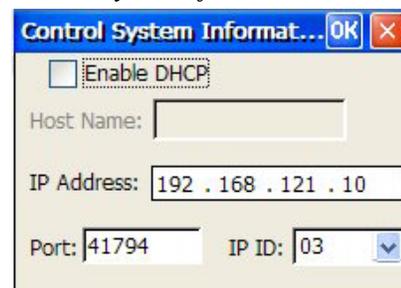
STANDBY and POWER DOWN Timeouts

Use these two settings on the setup window to specify the standby and the power down timeout values. Standby timeout (default is 5 minutes) is the time (up to 120 minutes) from the last use of the touchpanel before going into standby mode (screen display is off but the unit is still on). Power down timeout (default is 25 minutes) is the time (up to 120 minutes) from going into standby mode before turning off unit power. Both timeouts are adjustable in one-minute increments.

About

Press the **About** button to display a screen that shows software and OS version information.

Save & Exit

Press the **Save & Exit** button to save any setup changes you have made and exit to normal operation mode.

General Use and Safety

WARNING: To avoid possible damage to the unit, do not use the touchpanel in the rain or expose it to unnecessary moisture.

Recommended Touchpanel Cleaning

Keep the surface of the touchscreen 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. The surrounding plastic enclosure may not provide a watertight seal. Therefore, apply cleaning solution to the cloth rather than the surface of the touchscreen. Wipe touchscreen clean and avoid leakage of moisture beneath the panel.

Programming Software

Have a question or comment about Crestron software?

Answers to frequently asked questions (FAQs) can be viewed in the Online Help section of the Crestron website. To post a question or view questions you have submitted to Crestron's True Blue Support, log in at http://support.crestron.com. First-time users will need to establish a user account.

Earliest Version Software Requirements for the PC

NOTE: Crestron recommends that you use the latest software to take advantage of the most recently released features. The latest software is available from the Crestron website.

Crestron has developed an assortment of Windows®-based software tools to support a controlled system. The following are the minimum recommended software versions for the PC:

Software

TASK	REQUIRED SOFTWARE VERSION
Program control system to operate TPMC-4X	SIMPL Windows version 2.07.32 or later with SIMPL+ Cross Compiler version 1.1 or later and Library update 395 or later; also requires Crestron Database version 18.2.0 or later
Graphical touchscreen design	VT Pro-e version 3.5.1.5 or later
Upload projects and firmware	Crestron Toolbox 1.02.29 or later

Programming with Crestron SystemBuilder

This is the easiest method of programming, but does not offer as much flexibility as SIMPL Windows. For additional details, download SystemBuilder from the Crestron website and examine the extensive help file.

Programming with SIMPL Windows

NOTE: While SIMPL Windows can be used to program the TPMC-4X, it is recommended to use SystemBuilder for configuring the system.

NOTE: In the following description, the MC2E control system is used. However, any 2-Series processor that is e-control enabled can be used.

SIMPL Windows is Crestron's premier software for programming Crestron control systems. It is organized into two separate, but equally important "Managers."

Configuration Manager　　　Configuration Manager is the view where programmers "build" a Crestron control system by selecting hardware from the *Device Library*.

- To incorporate the TPMC-4X into the system, drag the TPMC-4X from the Touchpanels | Touchpanels (Ethernet) folder of the *Device Library* and drop it in the *System Views*.

Locating the TPMC-4X in the Device Library
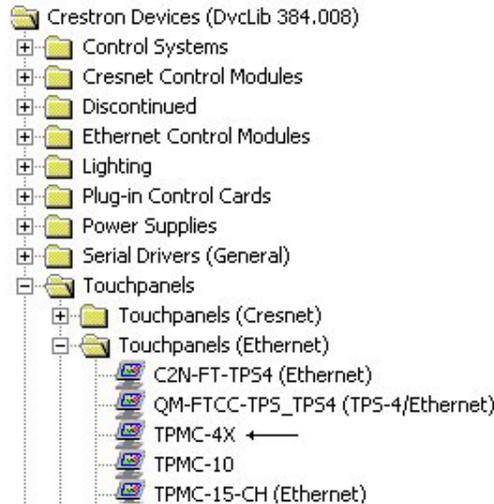
- The system tree of the control system displays the device in the appropriate slot with a default IP ID as shown in the following illustration.

C2Net Device, Slot 5
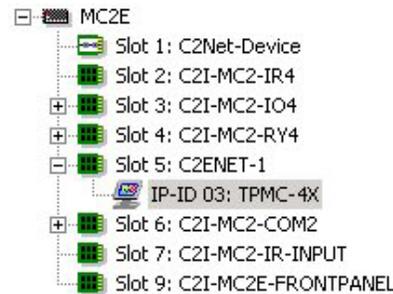
- Additional TPMC-4X devices are assigned different IP ID numbers as they are added.

- If necessary, double click a device to open the "Device Settings" window and change the IP ID as shown in the following figure.

"TPMC-4X Device Settings" Window
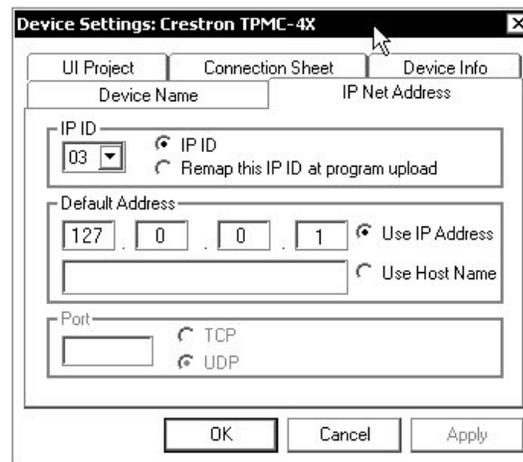
- The ID code specified in the SIMPL Windows program must match the IP ID of each unit.

Programming Manager

Programming Manager is the view where programmers "program" a Crestron control system by assigning signals to symbols. The symbol can be viewed by double clicking on the icon or dragging it into *Detail View*. Each signal in the symbol is described in the SIMPL Windows help file (**F1**).

Programming with VisionTools Pro-e

Touchpanel screens should be created in VisionTools Pro-e to allow switching of source signals to desired outputs as well as selection of the system mode. There are no special programming requirements to use the functions of the TPMC-4X in a room-control system.

Embedded Applications

The following third-party or in-house applications are embedded in a VT Pro-e TPMC-4X project. (Refer to the following illustration.)

- Calibration
- Keyboard
- MJPEG Viewer

The embedded applications have the following features:

- All embedded applications listed in the VT Pro-e ProjectView workspace are created by default for a new TPMC-4X project.
- All applications are created at project-level – one instance per project.
- The static position and size of each application can be viewed from any page.
- Four analog joins can be assigned to each application to dynamically change position and size.
- One digital feedback join or one analog join can be assigned to dynamically show/hide an application.

Embedded Applications in ProjectView
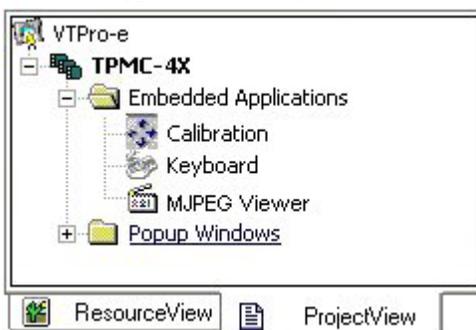
The "Embedded Application Property" window permits a choice of positions on the screen, assignment of an analog touch join type and number, and a show/hide join number.

Edit the *Default Position and Size* in the "Embedded Application Property" window to point to your new location.

"Embedded Application Property" Window
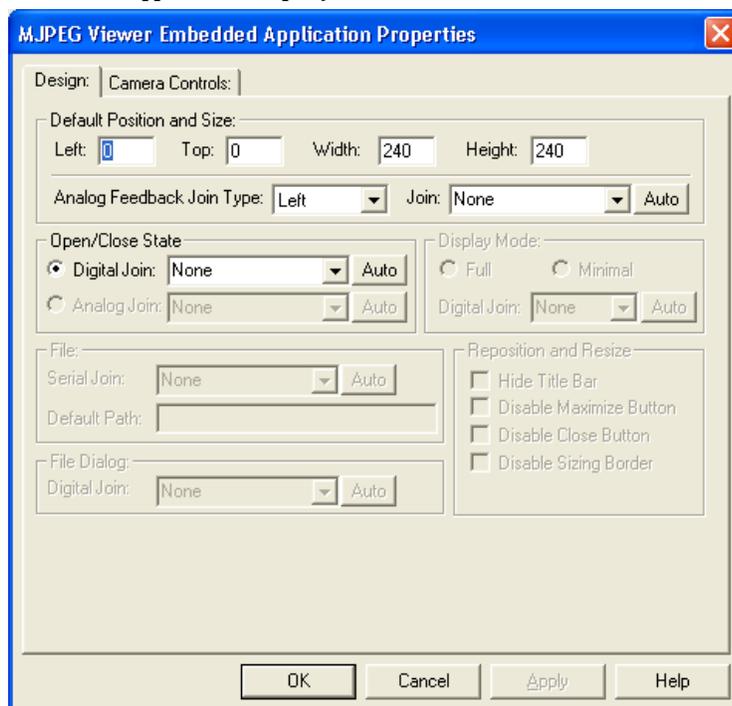
Example Program

An example program for the TPMC-4X is available from the "Example Program" section of the Crestron website (http://www.crestron.com/exampleprograms). Search for TPMC-4X.ZIP.

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.

Establishing Communication

Use Crestron Toolbox for communicating with the TPMC-4X; refer to the Crestron Toolbox help file for details. There are two methods of communication.

TCP/IP Communication

NOTE: Required for operation with a Crestron control system.

Ethernet Communication
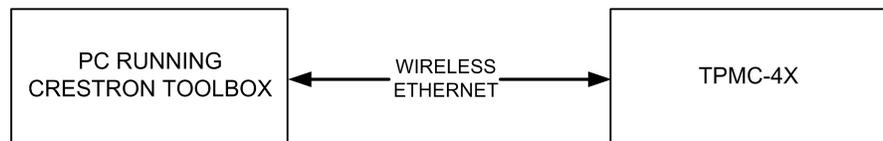
- Establish wireless communication between TPMC-4X and PC via the WAP.

- Enter the IP address, IP mask, and default router of the TPMC-4X via the Crestron Toolbox (**Functions | Ethernet Addressing**); otherwise enable DHCP.

- Confirm Ethernet connections between TPMC-4X and PC.

- Use the Address Book in the Crestron Toolbox to create an entry for the TPMC-4X with the TPMC-4X's TCP/IP communication parameters.

- Display the "System Info" window (click the ![icon] icon) and select the TPMC-4X entry.

- Use the Crestron Toolbox to create the TPMC-4X IP table.

    ⇒ Select **Functions | IP Table Setup**.

    ⇒ Add, modify or delete entries in the IP table. The TPMC-4X can have only one IP table entry.

    ⇒ 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-4X. The entry should list the TPMC-4X's IP ID (specified on the TPMC-4X's IP table) and the internal gateway IP address 127.0.0.1.

- To prevent interference with other 802.11 devices that may be operating nearby, channels should be adequately spaced when configuring your wireless network; channels 1, 6, and 11 are the only non-overlapping channels. Refer to the information supplied with the WAP for instructions concerning channel selection.

USB Communication
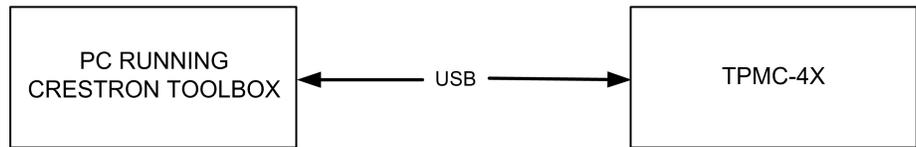
- The TPMC-4X should be used with a static IP address whenever possible.

- Use a USB cable to connect the TPMC-4X to a PC running the Crestron Toolbox.

- Open the System Info window; click the "Enter an address . . ." icon (pencil) to display the "Edit Address" window.

- Select USB as the connection type, and select "TPMC-4X" from the **Device Type** drop down list (click OK when the "Warning" notice appears).

Programs, Projects, and Firmware

- Display the network device tree (**Tools | Network Device Tree**) to show all network devices connected to the control system. Right-click on the TPMC-4X to display actions that can be performed on the TPMC-4X:

  ⇒ Upgrade firmware

  ⇒ Change Net ID

- Upload the SIMPL Windows file to the control system using SIMPL Windows or Crestron Toolbox.

- Upload the VisionTools Pro-e file to the touchpanel using VisionTools Pro-e or the Crestron Toolbox.

- Upgrade TPMC-4X firmware via Crestron Toolbox.

  ⇒ Establish TCP/IP communications with the TPMC-4X and display the "System Info" window.

  ⇒ Select **Functions | Firmware…** to upgrade the TPMC-4X firmware.

For details on uploading and upgrading, refer to the SIMPL Windows help file, VisionTools Pro-e help file, or the Crestron Toolbox help file.

NOTE: ActiveSync 3.7 or later is required for Toolbox to communicate with the TPMC-4X via USB to upload firmware and display lists. Refer to the Microsoft website www.microsoft.com to download the ActiveSync driver.

Problem Solving

Troubleshooting

The table below and continued on the next page provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

TPMC-4X Troubleshooting

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Touchpanel does not turn on.	Battery was not charged or is discharged.	Place the TPMC-4X on the docking station and charge the battery using the provided power supply.
Cannot upload VT Pro-e project or firmware from Toolbox via WiFi.	TPMC-4X is off or in suspend mode, or has no power.	Verify that TPMC-4X has power and is on or in standby mode.
	No WAPs defined /selected on the TPMC-4X.	Refer to "WiFi Access Point" on page 14 to define/select WAPs.
	No IP address configured/obtained on the TPMC-4X.	Refer to "IP address" on page 15 to define IP addresses. If the TPMC-4X is set up to use DHCP (not recommended), you can use the WAP window box to verify the IP address provided. If the number is invalid for your subnet, or no number is present, verify that the DHCP server is working properly.
	TPMC-4X is out of range or has poor access to the WAPs.	The TPMC-4X is out of range of the WAP or is experiencing interference. Refer to the WAP documentation for instructions on setting up a wireless network with minimum interference and no dead spots.
TPMC-4X does not show feedback and/or does not control any devices.	No WAPs defined /selected on the TPMC-4X.	Refer to "WiFi Access Point" on page 14 to define/select WAPs.
	No IP address configured/obtained on the TPMC-4X.	Refer to "IP address" on page 15 to define IP addresses. If the TPMC-4X is set to use DHCP (not recommended), you can use the WAP window box to verify the IP address provided. If the number is invalid for your subnet, or no number is present, verify that the DHCP server is working properly.
	Invalid control system IP address / IP ID set up on TPMC-4X.	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 "IP address on page 15 to define IP addresses.
	TPMC-4X is out of range or has poor access to the WAPs.	The TPMC-4X is out of range of the WAP or is experiencing interference. Refer to the WAP documentation for instructions on setting up a wireless network with minimum interference and no dead spots.
TPMC-4X shows unexpected or intermittent feedback and/or has intermittent device control.	TPMC-4X is out of range or has poor access to the WAPs.	The TPMC-4X is out of range of the WAP or is experiencing interference. Refer to the WAP documentation for instructions on setting up a wireless network with minimum interference and no dead spots.

TPMC-4X Troubleshooting (continued)

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
TPMC-4X boots up in setup screens every time.	Invalid VT Pro-e project or no VT Pro-e project is loaded.	Load/reload VT Pro-e project using the Toolbox.

Reference Documents

The latest version of all documents mentioned within the guide can be obtained from the Crestron website (http://www.crestron.com/manuals). This link will provide a list of product manuals arranged in alphabetical order by model number.

List of Related Reference Documents

DOCUMENT TITLE
Crestron e-Control Reference Guide

Further Inquiries

If you cannot locate specific information or have questions after reviewing this guide, please take advantage of Crestron's award winning customer service team by calling the Crestron corporate headquarters at 1-888-CRESTRON [1-888-273-7876]. For assistance in your local time zone, refer to the Crestron website (http://www.crestron.com/) for a listing of Crestron worldwide offices.

You can also log onto the online help section of the Crestron website to ask questions about Crestron products. First-time users will need to 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-4X, 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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3. Return freight charges following repair of items under warranty shall be paid by CRESTRON, shipping by standard ground carrier. In the event repairs are found to be non-warranty, return freight costs shall be paid by the purchaser.

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