TPMC-12L

Isys™ 12" Wall Mount Touchpanel Media Center

The Isys™ TPMC-12L delivers a stylish and powerful touchpanel control solution, featuring blazingly fast performance with native capabilities for browsing the Internet, streaming multimedia, intercom, and more. A brilliant 12" active-matrix SVGA display, 24-bit color depth and 8-bit alpha channel transparency combine to produce stunning 3D graphics using DNav dynamic menu objects, dynamic graphics and text, animations, multimode objects, full-motion or streaming video, and exclusive Synapse™ image rendering - all with astonishing speed.

Isys™ Touchpanel Control
Crestron touchpanels offer an ideal user-interface for multimedia presentation, home automation, and much more, providing a wide-open canvas for the creation of custom control screens tailored to the needs of the end-user. Touchpanels do away with piles of remote controls, cryptic control panels and cluttered wall switches, simultaneously expanding and simplifying control over a broad range of complex devices and systems.

Synapse™
Crestron's exclusive Synapse Image Rendering Algorithm enables system programmers to produce amazing graphics - faster and easier. Advanced antialiasing delivers crisper, sharper objects and text. Enhanced 3D effects add new depth and style. And because Synapse is native to the touchpanel, memory requirements and upload time are substantially reduced.

Embedded PC
The power of Isys is in its embedded PC engine, combining rock solid touchpanel performance with built-in Windows Media® Player and RealPlayer®, Internet Explorer, Adobe® Acrobat® Reader, and Microsoft Word, Excel, and PowerPoint® document viewers. While simultaneously controlling your home, boardroom, or lecture hall, the TPMC-12L provides everything needed for enjoying online music and movies, viewing Web pages and accessing most types of digital media without necessitating a separate computer.

VNC Viewer support delivers enhanced cross-platform interaction with remote computers over the network or Internet, allowing access and control of desktop applications with live presentation capability.

Built on the Windows XP Embedded operating system, the TPMC-12L delivers a powerful and secure platform for touchpanel control with integrated PC capabilities. Programmatic control erases the lines between control system and PC, allowing programmers to customize each application's behavior within the touchpanel environment to create a truly powerful and user-friendly interface.

Integrated Video
For presentation preview, surveillance, or pure entertainment, the TPMC-12L provides multiple ways to view video signals from security cameras, movies, and other sources right on the touchscreen. Video images can be displayed full screen as well as in a fully-scalable window. High-quality, full-motion video is supported via a direct wire connection from an external AV source. Streaming video is also supported in a variety of formats over the LAN connection, enabling access to everything from online streaming videos to personal media servers to live Web cameras and servers like the Crestron CEN-NVS100.

Interactive Annotation
Built-in annotation capability allows presenters to write or draw over

video images right on the touchscreen using a finger or stylus. Remote annotation capability allows multiple touchpanel users to draw over the same image, supporting interactive annotation between several participants in a courtroom, classroom, or similar environment.

High-quality Audio
Built-in amplified speakers provide clear audio for external AV sources, streaming media, and internal PC applications, and enable 2-way intercom and VoIP communications in combination with the integrated microphone. New Crestron IP intercom capability facilitates direct panel-to-panel intercom and monitoring right over the LAN without requiring any additional AV wiring. Customized WAV files can be loaded on the touchpanel to add dimension to the touchscreen graphics with personalized sounds, button feedback, and voice prompts.

Crestron Home® CAT5 AV
Connecting external audio and video sources to the TPMC-12L is facilitated using inexpensive CAT5 wire, enabling direct connection to Crestron's popular CAT5 balanced audio and video distribution switchers. A single video input port accepts signals from composite, S-Video, and standard-definition component sources over wiring distances of up to 750 feet. A bidirectional audio port receives stereo program audio and intercom signals, and outputs audio from the internal PC and microphone. To facilitate the connection of conventional video and audio devices, an external interface module is included.

QuickMedia®[1]

The TPMC-12L is also equipped with a single QuickMedia input port. Through QuickMedia (QM), the TPMC-12L interfaces directly with Crestron's QM-based MediaManager products using a single CAT5e type cable. Over wiring distances of up to 450 feet, the QM Input port accepts video signals from composite, S-Video, and standard-definition component sources along with discrete audio signals from one (1) stereo program source and up to two (2) microphones.

High-Speed Connectivity
Both Cresnet and high-speed Ethernet are standard on the TPMC-12L, providing for easy network integration and seamless communications with Crestron control systems, media servers and computers. Two USB 2.0 ports are also included on the rear panel to support a mouse and

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keyboard, and external storage devices.

Versatile Flush Mount Design
The TPMC-12L is designed for easy flush-mount installation in a wall, lectern or similar flat surface. A variety of mounting accessories is offered including optional back box and 19" rack mount kit. Four backlit pushbuttons are also provided, allowing for quick access to commonly used functions.

> 12" active matrix touchscreen display

> 24-Bit Isys graphics | 800 x 600 resolution

> Synapse image rendering algorithm

> DNav dynamic menu objects

> Full-motion video with gamma correction

> Interactive annotation capability

> Windows XP Embedded operating system

> Onboard PC applications for Web browsing, streaming media,   and remote computer access

> Multi-format streaming video and audio

> Direct panel-to-panel intercom over IP

> WAV file audio feedback

> Built-in amplified speakers and microphone

> QuickMedia[1] and Crestron Home CAT5 AV connectivity

> High-speed Ethernet and Cresnet communications

> Rear-panel USB ports and memory card slot

> Backlit "hard key" pushbuttons

> Wall, lectern, and rack mounting options

> Available in black or white

SPECIFICATIONS

Touchscreen Display
Display Type: TFT Active matrix color LCD
Size: 12 inch (30.5 cm) diagonal
Aspect Ratio: 4:3 SVGA
Resolution: 800 x 600 pixels
Brightness: 400 nits (cd/m^2)
Contrast: 600:1
Color Depth: 18-bit, 256k colors
Illumination: Backlit fluorescent
Viewing Angle: ±80° horizontal, +80/-60° vertical
Touchscreen: Resistive membrane

Buttons
(4) Backlit "hard key" buttons, programmable
(1) Backlit hard reset button, reboots the touchpanel

Memory
SDRAM: 512 MB
Flash: 2 GB
Memory Card: expandable up to 4 GB using MMC compatible card (not included)

Maximum Project Size: 120 MB using external flash

Operating System
Microsoft® Windows® XP Embedded

Graphic Engine
Isys i/O engine, 24-bit non-palette graphics + 8-bit alpha channel transparency, 16.7 million colors, Synapse image rendering algorithm, multi-mode objects, DNav dynamic menu objects, dynamic graphics, PNG translucency, full-motion (60 fps) animation, transition effects, color key video windowing, remote annotation

Embedded PC Applications[2]
Microsoft Internet Explorer w/Macromedia® Flash® plug-in, Windows Media® Player, RealPlayer®, Crestron MJPEG Viewer, Crestron IP Intercom, NetMeeting®, Remote Desktop, VNC Viewer, Java™ Runtime, Crestron MediaMarker™ Notebook, Crestron Keyboard, Adobe® Acrobat® Reader, WordPad, MS Word Viewer 2007, Excel® Viewer 2007, PowerPoint® Viewer 2007

Ethernet
10/100/1000 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, TCP/IP, UDP/IP, CIP, DHCP

Video
Signal Types: Auto-detecting composite, S-Video, or component
Formats: NTSC 480i or PAL 576i
Color Depth: 24-bit, 16.7M colors
Features: Single-window scalable to full-screen, input switching between QM and VIDEO inputs, gamma correction, line doubling
Streaming/File Formats: MPEG4 & MJPEG via Crestron MJPEG Viewer, plus all formats supported by the embedded media player applications[2]

Audio
Hardware Features: Built-in microphone and amplified speakers, internal volume control and audio mixer
Streaming/File Formats: All formats supported by the embedded media player applications[2]
Audio Feedback (WAV): 8 & 16 bit PCM, mono & stereo, 8 - 44.1 kHz sampling rates
D-A Conversion (QM only): 24-bit, 48 kHz
Amplification: Mono, 5 Watts x 2

Connectors
NET: (1) 4-pin 3.5mm detachable terminal block, Cresnet Slave Port; Connects to Cresnet control network, or TPMC-CH-IMC interface module (included), via CresCAT, Cresnet, or TPS/TPMC-CBL-T "triamese" cable (sold separately)
G: (1) 6-32 screw, chassis ground lug
USB 1 - 2: (2) USB Type A female;
USB 2.0 ports for HID and storage devices[2]
MEMORY EXPANSION: (1) MMC compatible card slot;
Accepts Multimedia Memory Cards (MMC) up to 4 GB for memory expansion[2]
LAN: (1) 8-wire RJ45 with 2 LED indicators;
10/100/1000BaseT Ethernet port;
Amber/green dual-color LED (left) and green LED (right) indicate link status and activity
QM IN: (1) 8-wire RJ45 female, QuickMedia input port[1];
Signal Types: Auto-detecting component (YPbPr), S-Video (Y/C), or composite video with stereo program audio and (2) mic channels;
Video Formats: NTSC 480i or PAL 576i;
Connects to QM output port of a QM-TX or other QuickMedia device via CresCAT-QM or CresCAT-IM cable;
Maximum Cable Length: 450 ft (aggregate distance from QM origination)

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VID IN: (1) 8-wire RJ45 female;
CAT5 balanced video input port;
Signal Types: Auto-detecting component (YPbPr), S-Video (Y/C), or composite;
Formats: NTSC 480i or PAL 576i;
Input Impedance: 100 ohms balanced;
Connects to any Crestron CAT5 balanced video source, or TPMC-CH-IMC interface module (included), via CresCAT cable or TPS/TPMC-CBL-T "triamese" cable (sold separately);
Maximum Cable Length: 500 feet for component, 750 feet for composite/S-Video
AUD I/O: (1) 8-wire RJ45 female;
Bidirectional CAT5 balanced audio port;
Signal Types: Receives (1) balanced stereo audio signal, and transmits (1) balanced stereo audio signal from internal microphone;
Maximum Input Level: 4 Vrms;
Maximum Output Level: 2 Vrms;
Input/Output Impedance: 600 ohms;
Connects to any other Crestron CAT5 balanced audio port, or TPMC-CH-IMC interface module (included), via CresCAT cable or TPS/TPMC-CBL-T "triamese" cable (sold separately);
Maximum Cable Length: 1000 feet

Power Requirements
Cresnet Power Usage : 37 Watts (1.54 Amps @ 24 Volts DC)

Environmental
Temperature: 41° to 113°F (5° to 45°C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 126 BTU/Hr

Enclosure
Construction: Metal, flush mountable, 8U 19" rack-mountable (all mounting kits sold separately)
Front Bezel : Injection-molded plastic; black w/silver or white w/gray accent

Dimensions (with faceplate)
Height: 11.80 in (29.95 cm)
Width: 13.61 in (34.56 cm)
Depth: 3.81 in (9.66 cm)

Weight
8.5 lbs (3.86 kg)

Available Models
TPMC-12LB: Isys 12" Wall Mount Touchpanel, Black
TPMC-12LW: Isys 12" Wall Mount Touchpanel, White

Included Accessories
TPMC-CH-IMC CAT5 Balanced AV Interface Module [Included Quantity for TPMC-12LB, TPMC-12LW: 1]

Available Accessories
BB-12L: Pre-Construction Wall Mount Back Box
PMK-12L: Pre-Construction Wall Mount Kit
TMK-12L: Trim Ring [Discontinued]
MMK-12L: Mud Ring
WMKT-12L: Lectern or Post-Construction Wall Mount Kit with Trim Ring
WMKM-12L: Post-Construction Wall Mount Kit with Mud Ring
RMK-12L: Rack Mount Kit
TPMC-CH-IMW: CAT5 Balanced AV Interface Wall Plate
TPS/TPMC-CBL-T3-B: Triamese Cable, 3 ft, Black
TPS/TPMC-CBL-T3-W: Triamese Cable, 3 ft, White

CRESCAT-QM-NP-SP500: QuickMedia® Cable, Low-skew CAT5e & Cresnet, non-plenum, 500 ft spool
CRESCAT-QM-P-SP500: QuickMedia® Cable, Low-skew CAT5e & Cresnet, plenum, 500 ft spool
CRESCAT-IM-P-DRN-SP500: iMedia Cable, Low-skew CAT5e w/drain wire for iMedia and QuickMedia, plenum, 500 ft spool
CRESCAT-IM-P-DRN-SP1000: iMedia Cable, Low-skew CAT5e w/drain wire for iMedia and QuickMedia, plenum, 1000 ft spool
CRESNET-NP-TL-B250: Cresnet® Control Cable, non-plenum, teal, 250 ft box
CRESNET-NP-TL-B500: Cresnet® Control Cable, non-plenum, teal, 500 ft box
CRESNET-NP-TL-SP500: Cresnet® Control Cable, non-plenum, teal, 500 ft spool
CRESNET-NP-TL-SP1000: Cresnet® Control Cable, non-plenum, teal, 1000 ft spool
CRESNET-NP-BK-B500: Cresnet® Control Cable, non-plenum, black, 500 ft box
CRESNET-NP-OR-B500: Cresnet® Control Cable, non-plenum, orange, 500 ft box
CRESNET-NP-YL-B500: Cresnet® Control Cable, non-plenum, yellow, 500 ft box
CRESNET-P-TL-SP500: Cresnet® Control Cable, plenum, teal, 500 ft spool
CRESNET-P-TL-SP1000: Cresnet® Control Cable, plenum, teal, 1000 ft spool
CRESNET-P-BK-SP500: Cresnet® Control Cable, plenum, black, 500 ft spool
CRESNET-P-OR-SP500: Cresnet® Control Cable, plenum, orange, 500 ft spool
CRESNET-P-YL-SP500: Cresnet® Control Cable, plenum, yellow, 500 ft spool
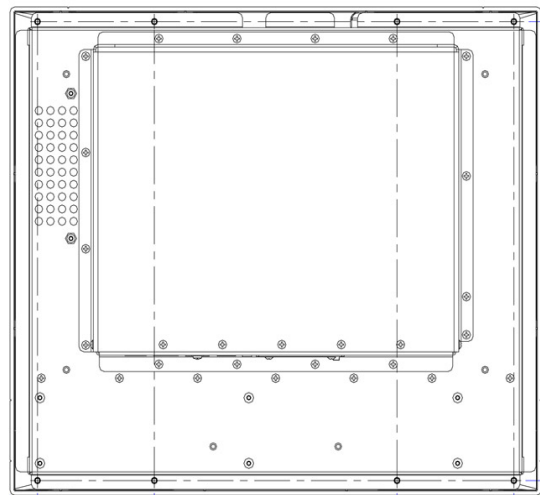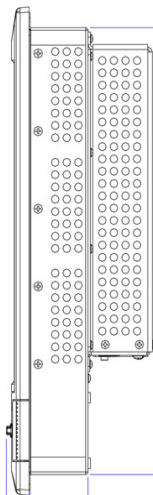**CRESNET-HP-NP-TL-SP500:** Cresnet® "High-Power" Control Cable, non-plenum, teal, 500 ft spool
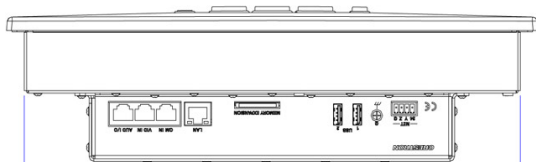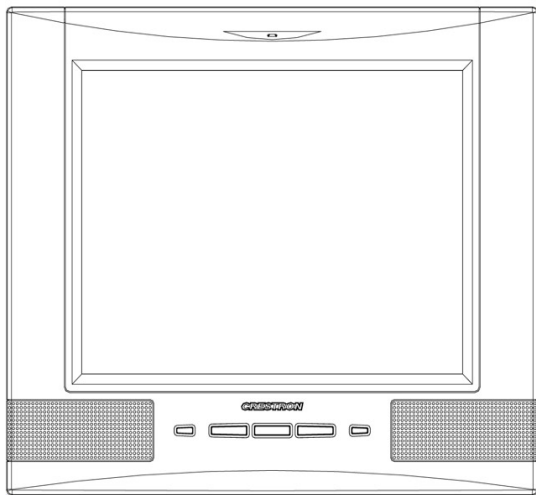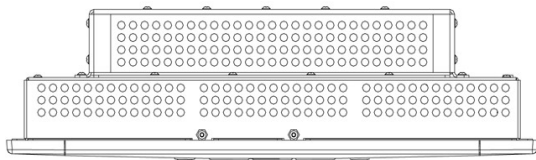**CRESNET-HP-NP-TL-SP1000:** Cresnet® "High-Power" Control Cable, non-plenum, teal, 1000 ft spool

Notes:
1. QuickMedia implementation on this product supports standard definition video only; does not support HDTV or high-resolution RGB.

2. Contact Crestron for a current list of compatible devices and embedded applications. To ensure reliable performance, new device drivers and applications are available only from Crestron through firmware updates.

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11.8 in
(29.95 cm)

13.61 in
(34.56 cm)

12.7 in
(32.25 cm)

0.61 in
(1.55 cm)

2.09 in
(5.31 cm)

3.81 in
(9.66 cm)

10.79 in
(27.41 cm)

0.71 in
(1.79 cm)

3 in
(7.6 cm)

9.21 in
(23.38 cm)

12.2 in
(30.98 cm)

11.08 in
(28.15 cm)

0.36 in
(0.91 cm)