

# Crestron Isys® TPS-12G-QM

## G-Series 12" Tilt Touchpanel

w/QuickMedia™ Transport Technology



Crestron's Isys G-Series touchpanels deliver a higher level of performance with dual-window video, RGB, and HDTV display to meet the demands of today's sophisticated control and automation applications. Incorporating modern styling in a versatile tiltcase design, the Isys TPS-12G-QM features a spectacular 12" SVGA display offering a wide viewing angle with exceptional brightness and contrast for stunning control graphics, high-resolution images, and full-motion video.

Crestron touchpanels offer an ideal user-interface for multimedia presentation, videoconferencing, 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.

**Isys®**—Isys power and beauty are infused throughout Crestron's entire touchpanel lineup. Under the hood, the TPS-15G-QM offers vibrant 24-bit color depth to produce incredible 3D graphics, high-res images, translucency, dynamic text and graphics, full-motion animations, multimode objects, and dramatic transition effects, all with astonishing speed.

**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.

**Dual-Window HD Video and RGB\***—The TPS-12G-QM can simultaneously display two fully-scalable, full-motion video windows, each supporting standard video, HDTV, and high-resolution RGB signals from external AV and computer sources. Discrete video scalers with motion adaptive deinterlacing bring out the highest detail, minimizing visible scan lines and motion artifacts for a truly remarkable picture. Advanced gamma correction and built-in time base correction ensure accurate color reproduction and a jitter-free image.

**Touch-the-PC**—Crestron's exclusive "Touch-the-PC" technology allows real-time touchpanel navigation of any Windows PC through a direct high-speed serial connection.

**Built-in Annotation**—Built-in annotation capability allows presenters to write or draw over computer and video images on the touchscreen using a finger or stylus, and output the image live for audience display.

**High-Quality Audio\***—The high-powered biamplified speaker system provides amplification for external AV sources, and supports intercom functionality in combination with the integrated microphone. Customized WAV files can be loaded on the touchpanel to add dimension to the touchscreen graphics with personalized sounds, button feedback, and voice prompts.

**QuickMedia™**—All audio and video connections are facilitated using Crestron's revolutionary QuickMedia transport, providing a flexible yet remarkably simple wiring solution. Through QuickMedia (QM), the TPS-12G-QM interfaces directly with other QM-based products using inexpensive CAT5e type cable.

The two QM Input ports each support non-interlaced RGB up to 1600 X 1200 pixels, as well as composite, S-Video, and component video signals. QM Input #1 includes software-adjustable compensation for cable runs up to 328 feet; Input #2 allows up to 300 feet for video and HDTV, and shorter distances for RGB computer signals. Both QM Inputs receive audio signals from external microphone and stereo line level sources.

The QM Output port allows RGB output of the touchpanel screen image to feed a display device for audience presentation. A 24-bit digital audio signal is also present for distribution of the internal microphone signal.

**High-Speed Connectivity**—Both Cresnet and high-speed Ethernet are standard on the TPS-12G-QM, providing for easy network integration and seamless communications with Crestron control systems.

**Functional Tiltcase Design**—The stylish tiltcase housing allows smooth tilt adjustment from 45 to 90 degrees, and features an integral cable strain relief system and rear cover to secure and hide the connections at the back of the touchpanel. Five backlit pushbuttons are also provided, allowing for quick access to commonly used functions such as volume, home, and reset.

- > 12" active matrix touchscreen display | 800 x 600 resolution
- > 24-Bit Isys graphics | Synapse image rendering algorithm
- > Dual-window full-motion video, HDTV and RGB display
- > Built-in biamplified speaker system and microphone
- > QuickMedia AV connectivity | audience presentation output
- > High-speed Ethernet and Cresnet communications
- > Tiltcase housing with integral rear cover and cable strain relief
- > Built-in real-time annotation
- > Backlit "Softkey" pushbuttons

## 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<sup>2</sup>)  
**Contrast:** 300:1  
**Color Depth:** 18-bit, 256k colors  
**Illumination:** Backlit fluorescent  
**Viewing Angle:** ±70° horizontal, +45/-55° vertical  
**Touchscreen:** Resistive membrane

### Processor

**CPU:** 32-Bit Freescale ColdFire® Microprocessor  
**Processing Speed:** 410 MIPS (Dhrystone 2.1 benchmark)

### Memory

**DDR RAM:** 128 MB  
**Flash:** 64 MB, expandable to 192 MB via compact flash

### Graphic Engine

Isys engine, 24-bit non-palette graphics + 8-bit alpha channel translucency, 16.7 million colors, Synapse image rendering algorithm, multi-mode objects, dynamic graphics, full-motion (60 fps) animation, transition effects, color key video windowing

### Ethernet

10BaseT/100BaseTX, auto-switching, auto-negotiating, full/half duplex, TCP/IP, UDP/IP, CIP, IEEE 802.3U compliant

### Video/RGB\*

**Signal Types:** RGB and auto-detecting composite, S-Video, or component video  
**Formats:** SDTV 480i (NTSC) & 576i (PAL), EDTV 480p & 576p, HDTV 720p & 1080i; RGB(VGA) up to UXGA 1600 x 1200  
**Color Depth:** 24-bit, 16.7M colors  
**Features:** Dual-window each scalable to full-screen, time base correction, gamma correction, line doubling, motion adaptive deinterlacing, reverse 3:2:2 pulldown

### Audio\*

**Hardware Features:** Built-in microphone and biamplified speakers, stereo headphone output, internal volume control and audio mixer  
**Audio Feedback (WAV):** 8-bit PCM, mono, 8 kHz sampling rate  
**D-A Conversion (QM):** 24-bit, 48 kHz  
**Amplification:** Bi-amplified, mono, 5 Watts for high-frequency, 5 Watts for low-frequency

### Buttons

▼ ▲ ■ ✎ : (4) Backlit "softkey" buttons, programmable  
⏪ : (1) Backlit hard reset button, reboots the touchpanel

### Connectors - Rear Panel

**QM IN:** (1) 8-wire RJ45 female, QuickMedia input port  
Signal Types: Dynamically configurable under system control as:  
(1) RGB input with stereo program audio and (2) mic channels, or  
(1) Auto-detecting component (YPbPr), S-Video (Y/C), or composite video input with stereo program audio and (2) mic channels  
RGB Format: RGBHV  
RGB Input Resolution, Non-interlaced: 640 x 480 minimum to 1600 x 1200 maximum (70 Hz limit at 1600 x 1200);  
Video/HDTV Formats: 480i (NTSC), 576i (PAL), 480p, 576p, 720p and 1080i  
Horizontal Frequency: 15 to 100 kHz  
Vertical Frequency: 50 to 85 Hz  
Delay Skew Compensation: 0 - 22 nS  
Connects to QM output port of a QM-TX or other QuickMedia device via CresCAT-QM or CresCAT-IM cable;  
Maximum Cable Length: 328 ft (aggregate distance from QM origination)

**QM IN 2:** (1) 8-wire RJ45 female, QuickMedia input port  
Signal Types: Dynamically configurable under system control as:  
(1) RGB input with stereo program audio and (2) mic channels, or  
(1) Auto-detecting component (YPbPr), S-Video (Y/C), or composite video input with stereo program audio and (2) mic channels  
RGB Format: RGBHV  
RGB Input Resolution, Non-interlaced: 640 x 480 minimum to 1600 x 1200 maximum (70 Hz limit at 1600 x 1200);  
Video/HDTV Formats: 480i (NTSC), 576i (PAL), 480p, 576p, 720p and 1080i  
Horizontal Frequency: 15 to 100 kHz  
Vertical Frequency: 50 to 85 Hz  
Delay Skew Compensation: none  
Connects to QM output port of a QM-TX or other QuickMedia device via CresCAT-QM or CresCAT-IM cable;  
Maximum Cable Length (Video/HDTV): 300 ft (aggregate distance from QM origination)  
Maximum Cable Length (RGB @ 60Hz): 216 ft for 640x480, 136 ft for 800x600, 84 ft for 1024x768, 50 ft for 1280x1024, 20 ft for 1600x1200 (using CresCAT-QM or CresCAT-IM cable)

**QM OUT 1:** (1) 8-wire RJ45 female, QuickMedia output port containing RGB (same as touchscreen), WAV file audio, and internal microphone signals;  
RGB Format: RGBHV  
RGB Output Resolution, Non-interlaced: 800 x 600 pixels @ 60Hz  
Connects to QM input of any QuickMedia device via CresCAT-QM or CresCAT-IM cable

**HEADPHONES:** (1) 3.5 mm TRS mini phone jack  
Output Power: 12mW per channel  
Minimum Impedance: 32 ohms

**RS-232:** (1) 6-pin RJ11 female; computer console, touch output, or mouse input port  
Bidirectional RS-232 up to 115.2k baud; hardware and software handshaking support

**LAN:** (1) 8-wire RJ45 with 2 LED indicators, 10BaseT/100BaseTX Ethernet port  
Green LED indicates link status; Yellow LED indicates Ethernet activity

**24VDC:** (1) 2mm barrel power jack, 24V DC power input

**NET:** (1) 4-pin 3.5mm detachable terminal block  
Cresnet Slave Port, connects to Cresnet control network

**USB:** (2) USB Type A female (reserved for future applications)

**G:** (1) 6-32 screw, chassis ground lug

**MEMORY EXP.:** (1) Type II Compact Flash card slot for memory expansion

**PC CARD A - B:** (2) Type II PCMCIA Card slots (reserved for future applications)

### Power Requirements

**24VDC:** 50 Watts (2.08 Amps) @ 24 Volts DC (power supply not included)  
**Cresnet Power Usage:** 50 Watts (2.08 Amps @ 24 Volts DC)

Note: If power is applied to the 24VDC jack and the NET port simultaneously, power will be drawn from whichever is highest.

### Enclosure

**Construction:** High impact injection-molded case, tilt screen with adjustable tension, integral rear cover and cable strain relief in base  
**Screen Tilt:** Adjustable 45 to 90 degrees

### Environmental

**Temperature:** 41° to 113°F (5° to 45°C)  
**Humidity:** 10% to 90% RH (non-condensing)

### Dimensions

**Height:** 12.45 in (31.63 cm)  
**Width:** 12.85 in (32.64 cm)  
**Depth:** 13.75 in (34.93 cm)

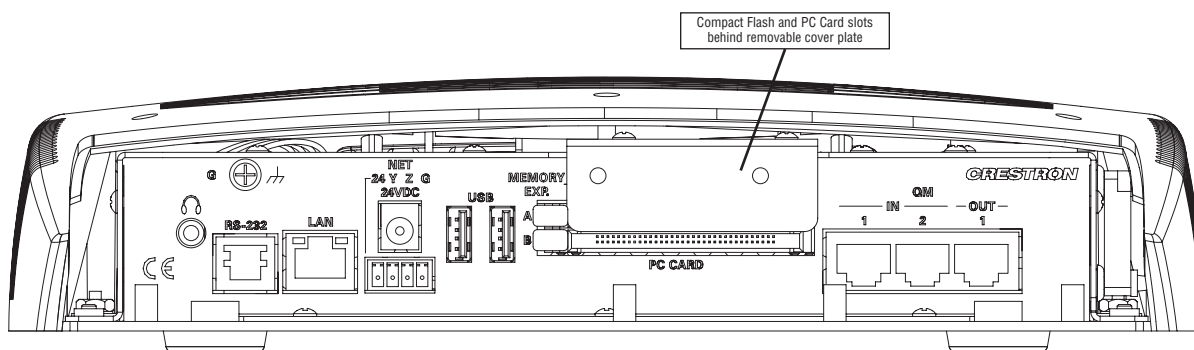
### Weight

13.8 lbs (6.2 kg)

\* One of more QuickMedia devices are required to facilitate the input and output of audio, video, and RGB signals. Visit the Crestron Website for more information about QuickMedia.

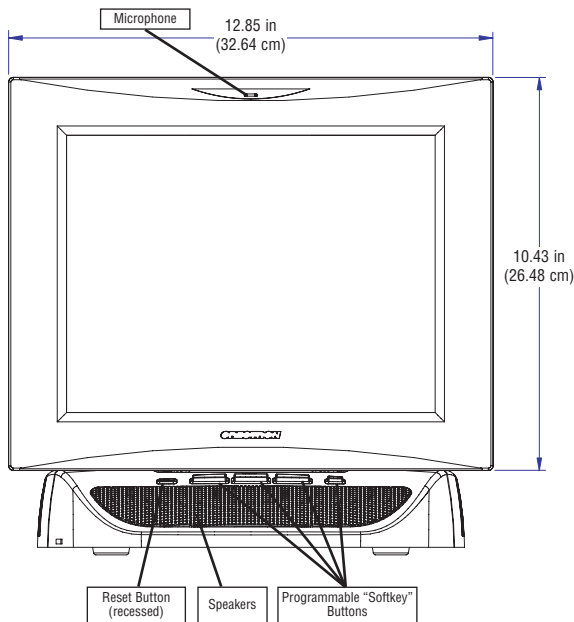


TPS-12G-QM – "Softkey" Buttons on top of Base (below touchscreen)

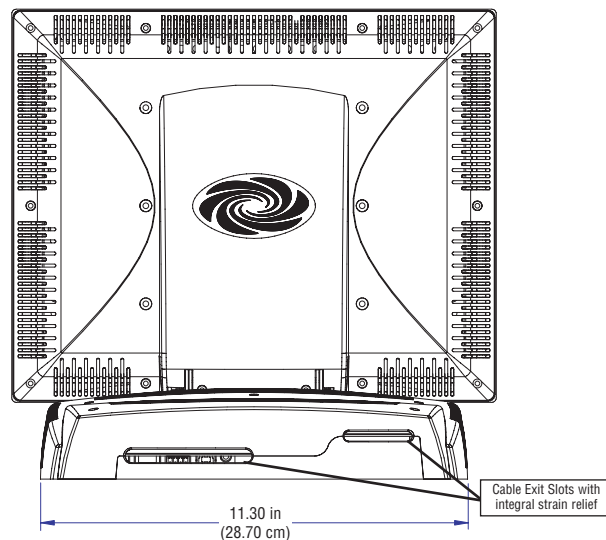


TPS-12G-QM Touchpanel – Rear View of Base (rear cover removed to show I/O panel)

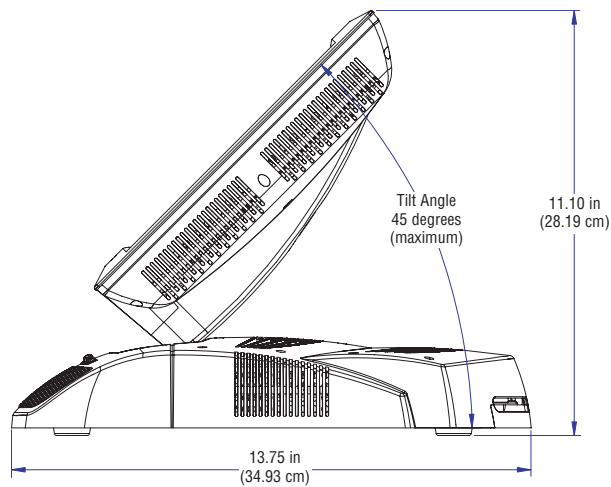
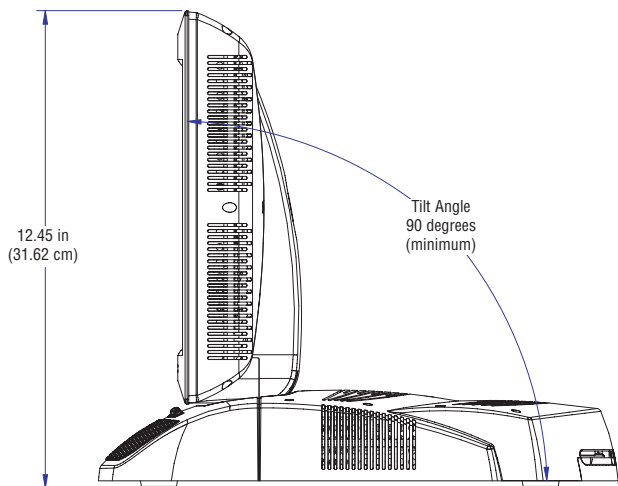
# Crestron Isys® TPS-12G-QM G-Series 12" Tilt Touchpanel w/QuickMedia™ Transport Technology



**Front View**



**Rear View**



**Right Side View**

## AVAILABLE ACCESSORIES

**PW-2420RU**

Power Supply

**QM-TX**

QuickMedia Transmitter

**TPS/TPMC-CBL-T**

Triamase Interface Cables

**SMK-12/15/17**

Swivel Mount Kit

**ST-PK**

Programming Cable Kit