# TSW-560 ALPOVIDEOSUPPLY

### 5" Touch Screen

- > Ultra clean, modern appearance
- > Thin profile and small footprint
- > Affordable and easy to install
- > 5" (127 mm) widescreen active-matrix color display
- > 960 x 540 qHD display resolution
- > Capacitive touch screen technology
- > Multi-touch capable
- > Smart Graphics® performance
- > Backlit soft-touch capacitive buttons
- > Any/all button hide feature
- > Auto-brightness control
- > Voice recognition capability<sup>[1,2]</sup>
- > H.264 or MJPEG streaming video display
- > Built-in 5 MP H.264 IP camera<sup>[2]</sup>
- > Built-in microphone and speakers<sup>[2]</sup>
- > Rava<sup>®</sup> SIP intercom and phone technology<sup>[2]</sup>
- > Built-in PinPoint<sup>™</sup> beacon<sup>[2,4]</sup>
- > Customizable audio feedback
- > Built-in web browsing<sup>[1]</sup>
- > Multi-language support
- > On-screen keyboard
- > Customizable screensaver
- > Single-wire Ethernet connectivity
- > PoE or PoE+ network powered (refer to specifications)
- > Enterprise grade security
- > Web based configuration
- > Cloud-based provisioning and management
- > SNMP monitoring support
- > Pre or post-construction wall mounting
- > Lectern mount over a rectangular cutout
- > TSW-UMB-60 Universal Mounting Bracket included<sup>[5]</sup>
- > TSW-UMB-60-PMK Pre-Construction Mounting Kit included<sup>[5]</sup>
- > Masonry compatible back box available<sup>[3,5]</sup>
- > Tabletop and swivel mount options available<sup>[3]</sup>
- > 3 RU rack mount option available<sup>[3]</sup>
- > Available in smooth black or white finish

#### **Advanced Touch Screen Control**

A Crestron<sup>®</sup> touch screen offers an ideal user-interface for controlling all the technology in your home, boardroom, classroom, courtroom, or command center. Touch screens simplify and enhance the way you use technology, doing away with those piles of remote controls, cluttered wall switches, disparate smartphone apps, and cryptic computer screens.



For controlling audio, video, lighting, shades, HVAC, security, and other systems, Crestron touch screens are fully-customizable with easy-to-use controls and icons, true feedback and real-time status display, live streaming video, voice recognition, web browsing, and a full-featured media player for an enhanced multiroom entertainment experience.

With its clean, contemporary design highlighted by edge-to-edge glass and stunning color graphics, the Crestron TSW-560 Series touch screen makes an elegant statement on any wall, tabletop, lectern, or equipment rack. Perfectly at home in the most contemporary residence or modern office building, its high-tech good looks underline its power for simplifying everyday tasks and functions throughout any facility.

The TSW-560 Series delivers the ultimate touch screen experience in an unobtrusive, space-saving design. It features a brilliant 5 inch capacitive touch screen display with Smart Graphics<sup>®</sup> and 5 soft-touch buttons. PoE connectivity and a range of mounting options make installation a breeze for both new and retrofit applications. Additional advanced features include the abilities to control any function using voice commands, view security cameras and other video sources, communicate using built-in video intercom and phone capabilities, and browse the Internet.<sup>[1]</sup>

#### **Smart Graphics®**

Crestron touch screens use Smart Graphics 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, programmers can swiftly integrate fluid gesturedriven controls, animated feedback, rich metadata, embedded apps and widgets, and full-motion video for a deeply engaging and ultra-intuitive touch screen experience.



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TSW-560-B-S with TSW-560-TTK-B-S Tabletop Kit

Crestron Smart Graphics offers these enhancements and more:

Cool-looking graphical buttons, sliders, knobs, and gauges that are

- Kinetic effects to enhance the feeling of realism, with lists and toobars
- Kinetic effects to enhance the feeling of realism, with lists and toomars that scroll with momentum at the flick of a fingertip

TSW-560-W-S – Shown in White

- Drag-and-drop objects that snap into place, offering an easy way to switch sources
- Dashboard widgets to personalize the touch screen with clocks, weather, news, and other information <sup>[1]</sup>
- A power-saving screensaver that allows display of time, temperature, and other text content at a reduced brightness level
- Customizable themes allowing a completely different look and feel for every user, event, or season
- Fully-developed SmartObjects® that enable sophisticated control over complex devices with minimal programming
- A consistent look and feel across multiple touch screens of varying sizes

#### Soft-Touch Buttons

The TSW-560 includes five backlit, soft-touch capacitive buttons for quick access to commonly used functions. These buttons are pre-labeled with icons for "Power", "Home", "Lights", "Up", and "Down" functions. Each button is programmable via the control system for custom functionality, and any unused button can be hidden by simply turning off its backlight.

#### Auto-Brightness Control

To ensure optimal visibility under varying lighting conditions, the TSW-560 includes a built-in light sensor, which regulates the brightness of the display and button backlighting according to the ambient light level in the room. Separate auto-brightness settings are provided for the display and buttons to allow each to be adjusted or defeated as needed.

#### **Voice Recognition**

Some things are easier *said* than *done*, so why not just *say* what you want and let Crestron *do* it for you? With built-in voice recognition, the

TSW-560 provides the ability to use spoken commands to control virtually anything. Voice recognition can be used to quickly turn devices on or off, select and play a specific media title or playlist, change the channel, choose a lighting scene, lower the windows shades, lock the doors, arm the security system, or enter a password. Simply say a command and Crestron does the rest.<sup>[1,2]</sup>

### **Streaming Video**

High-performance streaming video capability makes it possible to view security cameras and other video sources right on the touch screen. Native support for H.264 and MJPEG formats allows the TSW-560 to display live streaming video from an IP camera, a streaming encoder (Crestron CEN-NVS200, DM-TXRX-100-STR, or similar<sup>[3]</sup>), or a DigitalMedia<sup>™</sup> switcher. Video is delivered to the touch screen over Ethernet, eliminating the need for any extra video wiring.

#### **Rava® SIP Intercom**

Rava SIP Intercom Technology enables hands-free VoIP communication with other Rava-enabled touch screens and door stations. Rava works over Ethernet, supporting 2-way intercom, video intercom, and paging without requiring any special wiring. VoIP phone capability is also possible through integration with a SIP-compatible IP phone system or SIP server, allowing hands-free telephone functionality complete with speed-dialing, caller ID, custom ringers, and other enhancements. Built-in echo cancellation affords full-duplex performance for clear, seamless voice communication using the TSW-560's integrated microphone and speakers.<sup>[2]</sup>

#### **Built-in Camera**

A 5 megapixel camera is built into the TSW-560 to support video intercom and room monitoring capabilities. This feature allows individuals to communicate both verbally and visually between two touch screens, or between one touch screen and a Rava-compatible video door station. It can also be used to visually monitor any room securely using an H.264 compatible decoder (Crestron DM-TXRX-100-STR, DM-RMC-100-STR, or similar<sup>[3]</sup>) or a third-party video monitoring system.<sup>[2]</sup>



# TSW-560 CONTRACTOR SUPPLY

#### PinPoint<sup>™</sup> Beacon (Coming Soon)

The built-in PinPoint proximity detection beacon enhances the intelligence and personalization of a Crestron system by enabling a smartphone or tablet device to always know what room it's in. It works with the Crestron App or Crestron PinPoint App, using Bluetooth<sup>®</sup> technology to determine when the mobile device is in or near the same room as the beacon, and signals the mobile app to automatically display the appropriate controls and information for that location.<sup>[2,4]</sup>

#### Web Browsing

Using its built-in web browser, the TSW-560 provides quick access to online program guides and other web-based services at the touch of a button, allowing enhanced touch screen control of DVRs and other appliances without having to pick up a separate tablet or smartphone. If a device can be controlled or managed through a web browser, it can be integrated into the Crestron system through the TSW-560. Of course, the web browser may also be used to simply browse the Internet, check traffic conditions, or look up a recipe.<sup>[1]</sup>

#### **On-Screen Keyboard**

Typing in passwords, URLs, and text searches is facilitated using the on-screen multi-language keyboard.

#### **Multi-Touch Support**

The TSW-560's capacitive touch screen affords enhanced capabilities for browsing web pages using multi-touch gestures.

#### **Audio Feedback**

Customized audio files can be loaded to add another dimension to the 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 TSW-560, containing all control, video, intercom, and power signals within a single wire.

#### **Power over Ethernet**

Using PoE technology, the TSW-560 gets its operating power right through the network cable. PoE (Power over Ethernet) eliminates the need for a local power supply or any dedicated power wiring. Crestron PoE switches (CEN-SW-POE-5 or CEN-SWPOE-16<sup>[3]</sup>) offer a total networking solution with built-in PoE for multiple touch screens. A PoE Injector (PWE-4803RU<sup>[3]</sup>) is also available to support a single touch screen.

Note: Refer to the "Power" specifications for additional details.

#### **Enterprise Grade Security**

Crestron touch screens employ enterprise-grade networking with robust security features such as 802.1X authentication, TLS encryption, HTTPS connectivity, and Active Directory<sup>®</sup> integration. These features are imperative to protect your network against service interruptions and malicious intrusions, and to ensure compliance with your organization's stringent network policies. Cloud-based provisioning and management streamlines the process of configuring and monitoring every touch screen on the network and keeping them updated. Additional support for SNMP

allows every touch screen to be monitored by your IT administrator alongside every other device on the network.

#### XiO Cloud<sup>™</sup> Connected

XiO Cloud is Crestron's unifying cloud-based platform for remotely provisioning, monitoring, and managing Crestron devices across an enterprise or an entire client base. XiO Cloud enables installers and IT managers to deploy and manage thousands of devices in the amount of time it would ordinarily take to manage just one. It provides a zero-touch solution that allows complete configuration of device settings without any hardware in hand, then simply connect each device on site and let XiO Cloud push out the settings, licenses, drivers, and firmware updates – automatically and securely – for a quick and painless, ready-to-use deployment.

Ongoing XiO Cloud services facilitate daily management and monitoring of every device through a single dashboard with comprehensive reporting and logging, live status viewing and alerts, performance metrics and analytics, scheduled actions and updates, and more. As requirements grow and evolve, new features and functionality can be added easily to one or many devices at any time without ever going on site. XiO Cloud is a subscription-based service offering an adaptable SaaS (Software as a Service) solution with graduated levels of functionality and unlimited scalability

#### Wall or Lectern Mounting Options

The TSW-560 is easily installed into drywall and other surfaces using the included TSW-UMB-60 Universal Mounting Bracket. By itself, the TSW-UMB-60 provides a post-construction solution for retrofitting the TSW-UMB-60 can be used along with the included TSW-UMB-60-PMK Pre-Construction Mounting Kit. Masonry and concrete applications are accommodated using the TSW-UMB-60 along with a TSW-UMB-60-BBI back box (sold separately). The TSW-UMB-60 is compatible with TSW-560, TSW-760, and TSW-1060 series touch screens, making it easy to swap out devices at any time without having to cut or patch the wall.<sup>[5]</sup>

The TSW-560 can also be installed in a wooden lectern or podium. When installed, the touch screen protrudes just 1/2 inch from the mounting surface and latches firmly into the mounting bracket leaving no visible screws for an ultra clean appearance. A security latch option is included to deter unauthorized removal of the touch screen.

#### **Tabletop Option**

Using the optional Tabletop Kit (TSW-560-TTK  $^{[3]}$ ), the TSW-560 becomes a stylish, freestanding touch screen that fits perfectly on a table, desk, or countertop. It can even be permanently attached to the surface using the optional Swivel Mount Kit (TSW-560/760/1060-SMK  $^{[3]}$ ).

#### **Rack Mount Option**

The TSW-560 can be mounted in a 19" EIA equipment rack using the optional Rack Mount Kit (TSW-560/760-RMK-1<sup>[3]</sup>). When rack mounted, the touch screen occupies three rack spaces.



# TSW-560 CONTRACTOR SUPPLY

### SPECIFICATIONS

#### **Touch Screen Display**

Display Type: TFT active matrix color LCD Size: 5 inch (127 mm) diagonal Aspect Ratio: 16:9 qHD Resolution: 960 x 540 pixels Brightness: 400 nits (cd/m<sup>2</sup>) Contrast: 750:1 Color Depth: 24-bit, 16.7M colors Illumination: Edgelit LED w/auto-brightness control Viewing Angle: ±80° horizontal, ±80° vertical Touch Screen: Projected capacitive, 5-point multi-touch capable

#### Buttons

Hard Keys: (5) Projected capacitive pushbuttons, backlit w/auto-brightness control, per-button show/hide (backlight enable/disable), pre-labeled with icons for "Power", "Home", "Lights", "Up", and "Down"

Reset: (1) Miniature pushbutton on rear panel for hardware reset

#### **Graphics Engine**

Crestron Smart Graphics, multi-language web browser<sup>[1]</sup>, multi-language on-screen keyboard, screensaver, single scalable streaming video window setup and diagnostics via web browser or onscreen UI

#### Languages

Smart Graphics: Arabic, Chinese (Simplified), Chinese (Traditional), Czech, Danish, Dutch, English (UK), English (US), Finnish, French, German, Greek, Hebrew, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Portuguese (Brazilian), Romanian, Russian, Slovak, Spanish, Swedish, Thai

**On-Screen Keyboard:** Arabic, Chinese (Simplified), Croatian, Czech, Danish, Dutch, English (UK), English (US), Finnish, French (Canada), French (Switzerland), German, Hebrew, Hungarian, Italian, Japanese, Norwegian Bokmal, Polish, Portuguese, Russian, Serbian, Spanish, Swedish, Turkish **Voice Recognition:** Afrikaans (South Africa); Chinese, Mandarin (China, Simplified); Chinese, Mandarin (Hong Kong, Simplified); Chinese, Mandarin (Taiwan, Traditional); Chinese, Yue (Hong Kong, Traditional); Czech (Czech Republic); Dutch (Netherlands); English (Australia); English (Canada); English (Generic); English (India); English (New Zealand); English (South Africa); English (UK); English (US); French (France); German (Germany); isiZulu (South Africa); Italian (Italy); Japanese (Japan); Korean (South Korea); Polish (Poland); Portuguese (Brazil); Russian (Russia); Spanish (Spain); Turkish (Turkey)

Web Browser: Arabic, Bulgarian, Catalan, Chinese, Croatian, Czech, Danish, Dutch, English, Filipino, Finnish, French, German, Greek, Hebrew, Hindi, Hungarian, Indonesian, Italian, Japanese, Korean, Latvian, Lithuanian, Norwegian Bokmal, Pashto, Persian, Polish, Portuguese, Romanian, Romansh, Russian, Serbian, Slovak, Slovenian, Spanish, Swedish, Thai, Turkish, Ukrainian, Vietnamese

#### Memory

#### RAM: 2 GB DDR3L

Storage: Firmware/Application: 4 GB Class 10 microSD card; System: 4 GB eMMC Maximum Project Size: 600 MB

#### Communications

**Ethernet:** 10/100 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, TCP/IP, UDP/IP, CIP, DHCP, SSL, TLS, SSH, SFTP (SSH File Transfer Protocol), IEEE 802.1X, SNMP, IPv4 or IPv6, Active Directory authentication, HTTPS web browser setup, XiO Cloud client, IEEE 802.3at compliant **Bluetooth:** Crestron PinPoint proximity detection beacon<sup>[2,4]</sup>

#### Streaming Decoder

Video Formats: H.264 (MPEG-4 part 10 AVC), MJPEG Audio Formats: AAC stereo Bitrates: Up to 25 Mbps (20 Mbps maximum recommended) Streaming Input Resolutions: Up to 1920x1080@30fps Streaming Protocol: RTSP

#### Streaming Encoder & Camera<sup>[2]</sup>

Camera Resolution: 5.0 MP Field of View: 50° horizontal Video Format: H.264 (MPEG-4 part 10 AVC) Streaming Output Resolution: 1280x720 Streaming Protocol: RTSP, ONVIF discovery

### Audio

**Features:** Built-in microphone and speakers, Rava SIP Intercom, multilanguage voice recognition<sup>[1,2]</sup> **Audio Feedback Formats:** MP3

#### Connectors

LAN PoE: (1) 8-pin RJ45 connector, female, with 2 LED indicators; 10Base-T/100Base-TX Ethernet port; PoE+ PD port; Green and yellow LEDs indicate Ethernet port status

**USB:** (1) USB Type A connector, female; (not used)

#### Power

#### Power over Ethernet:

IEEE 802.3at Type 2 compliant PoE+ PD (Powered Device);

- Requests 15 Watts from an 802.3at Type 2 PSE with LLDP advanced power management;
- Requests 30 Watts (PoE+ Class 4) from an 802.3at Type 2 PSE without LLDP;
- Requests 15.4 Watts (PoE Class 0) from an 802.3af (or 802.3at Type 1) PSE



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#### Environmental

Temperature: 32° to 112° F (0° to 45° C) Humidity: 10% to 90% RH (non-condensing) Heat Dissipation: 44 BTU/hr

#### Construction

Housing: Plastic, smooth black or white finish, edge-to-edge glass with black or white surround

**Mounting:** Surface mount over a 2-1/5" H x 3-3/4" W (56 mm H x 96 mm W) cutout, 2-13/16 in (72 mm) minimum mounting depth, 1-1/4 in (32 mm) maximum mounting surface thickness, pre/post-construction mounting bracket assembly included <sup>[5]</sup>; optional back box, rack mount, and tabletop options available separately

#### Dimensions

Height: 3.49 in (89 mm) Width: 5.68 in (145 mm) Depth: 1.52 in (39 mm)

Dimensions do not include the mounting bracket or add-on accessories

#### Weight

9.5 oz (267 g)

Compliance

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

Notes:

- Voice recognition, web browsing, weather information, and certain other functions require an Internet connection.
- The camera, microphone, and Bluetooth transceiver may each be defeated programmatically at any time. For applications demanding an extra measure of privacy, Crestron offers models TSW-560-NC-B-S and TSW-560-NC-W-S, which have no physical camera, microphone, or Bluetooth transceiver installed.
- 3. Item(s) sold separately. Refer to each product's spec sheet for complete information.
- 4. Onboard PinPoint beacon functionality is not currently supported and will be enabled through a future update. When enabled, the TSW-560 will provide an integrated, equivalent alternative to the standalone PP-100-W beacon. For more details, refer to the PP-100-W spec sheet. Bluetooth technology is used solely for proximity detection and does not transmit or receive any control, multimedia, or personal data. PinPoint beacons are only visible to Bluetooth enabled devices that are specifically programmed and configured to work with them.
- 5. The TSW-UMB-60 mounting bracket (included) is compatible with older TSW-UMB-PMK preconstruction mounting kits and TSW-550-BBI back boxes, allowing the TSW-560 touch screen to be installed in place of a previous generation TSW-5xx series touch screen, or any other device that was originally installed using a TSW-UMB-PMK or TSW-550-BBI, without modification to the wall.

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### **MODELS & ACCESSORIES**

#### **Available Models**

TSW-560-B-S: 5" Touch Screen, Black Smooth TSW-560-W-S: 5" Touch Screen, White Smooth

#### **Included Accessories**

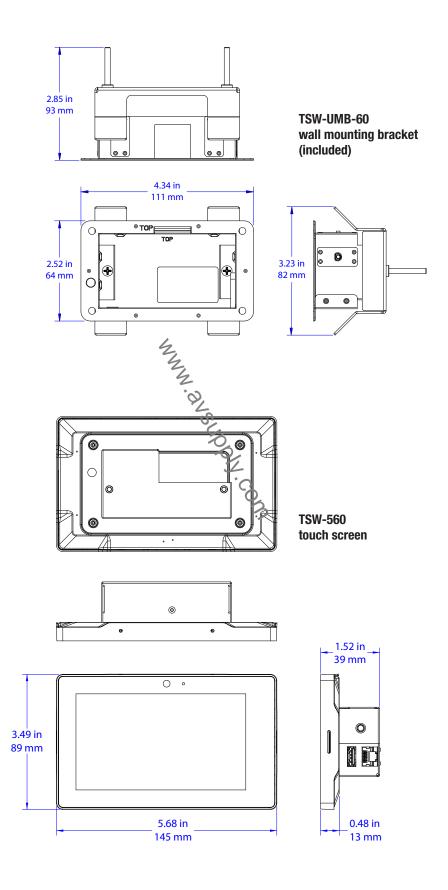
TSW-UMB-60: Universal Mounting Bracket for TSW-x60 Series TSW-UMB-60-PMK: Pre-Construction Mounting Kit for TSW-UMB-60

#### Available Accessories

TSW-560-TTK Series: Tabletop Kit TSW-560/760/1060-SMK: Swivel Mount Kit for TSW-560-TTK TSW-560/760-RMK-1: Rack Mount Back Box for TSW-UMB-60 TSW-560/760-RMK-1: Rack Mount Kit PWE-4803RU: PoE Injector CEN-SW-P0E-5: 5-Port PoE Switch CEN-SWP0E-16: 16-Port Managed PoE Switch CEN-NVS200: Network Video Streamer DM-TXRX-100-STR: HD Streaming Transmitter/Receiver DM-RMC-100-STR: HD Streaming Receiver & Room Controller 100 SW-XIOC-S Series: Xi0 Cloud<sup>™</sup> Standard Provisioning and Management Service for one device SW-XIOC-P Series: Xi0 Cloud<sup>™</sup> Premium Provisioning and Management Service for one device

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