TSR-310

Handheld Touch Screen Remote

- *Customizable handheld wireless remote*
- *Available in black or white*
- *Ergonomic and rugged design*
- *3 in. (76 mm) HVGA capacitive color touch screen with Smart Graphics® technology*
- *Backlit buttons for AV/DVR control and on-screen menu (OSM) navigation*
- *Five-way navigation pad changes colors when accessing the four-color buttons mode*
- *Preprogrammed graphical interface for controlling Crestron Home® OS*
- *Voice recognition executes functions using spoken commands*
- *Fully programmable functionality via a Crestron control system*
- *High-performance Wi-Fi® wireless communications*
- *Movement sensing wakes the remote when picked up*
- *Instant-Waking® technology executes button presses without picking up the remote*
- *Autobrightness control maintains optimal visibility*
- *Setup and diagnostics via touch screen or web browser*
- *Li-Polymer rechargeable battery*
- *Space-saving table dock charger*

The Crestron TSR-310 is a durable handheld remote with a 3 in. (76 mm) color touch screen, backlit buttons, voice control capability, and enhanced Wi-Fi® network wireless communications. Movement sensing wakes the remote when it is handled, ensuring it is always ready to be used. The TSR-310 may also be paired with Crestron Home® OS and other Crestron control solutions for complete control over audio, video, lighting, shades, and other amenities.

The TSR-310 is available in black or white.

Backlit Tactile Buttons

Backlit tactile buttons provide access to everything needed to watch TV, listen to music, navigate on-screen menus, and browse through media titles. Each button is labeled for easy operation. The metal-plated five-way thumbpad enables directional navigation in normal use and changes colors when placed in four-color mode to provide access to the green, blue, red, and yellow option buttons. These colored buttons are used to access special functions.

Each button on the TSR-310 is fully programmable for adjusting audio volume and changing channels, browsing a media library or program guide, controlling a DVR or DVD player, or operating a pan/tilt camera.

Touch Screen with Smart Graphics Technology

The TSR-310 features a high-resolution, high-contrast capacitive touch screen that enables fully customizable control over a wide array of devices. Crestron Smart Graphics® technology delivers an intuitive touch screen experience with fluid gesture-driven controls, kinetic effects, animated feedback, rich metadata, embedded apps and widgets, and personalized themes.

Performance UI for Crestron Home

Performance UI is a built-in software program for the TSR-310 that provides a preprogrammed graphical interface for controlling a Crestron Home system. With Crestron Home, media, light, shades, and quick actions can be controlled directly from the remote. Scrolling menus of channel presets and media titles appear on the touch screen to access all your favorite TV channels, radio stations, movies, and music. User profiles are also provided to give users custom control over the media system, including the ability to save favorites for easy access.

Real-time lighting levels, shade positions, and thermostat modes are graphically displayed and can be adjusted with a simple finger stroke. Real-time Performance UI also supports voice control commands if Crestron Home is paired with a voice provider service.[1,2]

Voice Recognition

With built-in voice recognition, spoken commands to the TSR-310 can quickly turn devices on or off, change the channel, choose a lighting scene, lower the window shades, lock the doors, or arm the security system. Simply press the voice button and say a command to have the TSR-310 execute the action.[1,2]

Movement Sensor

A built-in accelerometer wakes the TSR-310 instantly whenever it's picked up or moved, so it's always ready for use.

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Instant-Waking Technology

The TSR-310 wakes instantly at the press of a button and transmits the command within milliseconds using Instant-Waking® Technology. Actions like muting audio, pausing video, or changing channels can be executed, even with the remote left lying on an armrest or placed in its charging dock.

Autobrightness Control

The TSR-310 includes a built-in light sensor, which regulates the brightness of the touch screen display and button backlight according to the light level in the room.

Advanced Wi-Fi Wireless Performance

Crestron enhanced Wi-Fi performance is optimized to deliver fast, dependable wireless communications with 50 ft (15 m) omnidirectional range (conditions permitting). The choice of 802.11 a, b, g, and n protocols offers reliable, high-speed wireless connectivity in any RF environment. For Wi-Fi networks with multiple access points, the TSR-310 supports the ability to hand off communication from one wireless access point (WAP) to another if an active connection is lost.[3]

> **NOTE:** The TSR-310 has been tested and verified to work with wireless access points from a variety of leading manufacturers. Please view the TSR-310 Wireless Access Point Configuration Guide for recommended WAP manufacturers and configurations.

Extended Battery Life

To conserve power, the TSR-310 goes into a sleep mode when not in use. In sleep mode, the TSR-310 maintains a low level connection to the wireless access point, ensuring instantaneous response upon waking. Maximum battery life and performance are ensured only when using a Crestron verified wireless access point. Under typical use, the TSR-310 can operate continuously for 5.5 hours between charges.

A replacement battery pack (TSR-310-BTP) is also available.

Table Dock Charger

The TSR-310-DS table dock is included and provides for charging the TSR-310 while occupying minimal space on the tabletop or shelf. When placed on the table dock, the remote remains upright and fully operational while charging.

A horizontal version of the dock (TSR-310-DS-H) may be ordered separately.

Third-Party Mounting Solution

The TSR-310 is compatible with Wall-Smart® retrofit mount products via a partnership with Crestron.

Specifications

Touch Screen Display

Display Type	TFT active matrix color LCD
Size	3.00 in. (76 mm) diagonal
Aspect Ratio	3:2 HVGA (portrait orientation)
Resolution	320 x 480 pixels
Brightness	410 nits (cd/m^2) typical
Contrast	700:1 typical
Color Depth	18-bit, 262,144 colors
Viewing Angle	±80° horizontal, ±80° vertical
Illumination	LED backlit with autobrightness control (adjustable high, medium, and low settings)
Touch Screen	Projected capacitive, 3-point multi-touch capable

> **NOTE:** Pressing any button or moving the remote wakes the remote from sleep mode. A second button press or touching the touch screen wakes the touch screen display (configurable for any button or Power, Voice, and Home only). The touch screen display may also be configured to wake on movement.

Buttons

Power	(1) Programmable pushbutton with red power icon
Voice	(1) Pushbutton with microphone icon, initiates voice command capture [2]
Home	(1) Programmable pushbutton with list icon
Functions	(8) Programmable pushbuttons with text or icons for volume up, volume down, mute, guide, menu, up, down, and info
Navigation Pad	(1) Metal-plated programmable five-way directional navigation pad for up, down, left, right, and select; alternately functions as four context dependent option buttons when the 'four color mode' button is pressed (navigation pad icons illuminate green, blue, red, and yellow in this mode)
Transport	(11) Programmable pushbuttons with text or icons for exit, last, rewind, play, forward, previous, pause, next, stop, DVR, and record
Illumination	White LED backlighting behind all button labels with autobrightness control (adjustable high, medium, and low settings)

> **NOTE:** Pressing any button or moving the remote wakes the remote from sleep mode and turns on the button backlight if the room is dark.

![Crestron logo]

Graphics

Graphics Engine	Crestron Smart Graphics technology, on-screen numeric keypad and multi-language keyboard, screensaver, Performance UI for Crestron Home OS
Maximum Project Size	512 MB

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)
Performance UI	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

Wireless Communication

Transceiver	IEEE 802.11a/b/g/n Wi-Fi (2.4 or 5GHz 2-way RF), static IP or dynamic IP via DHCP [3]
Security	64 & 128-bit WEP, WPA & WPA2-PSK with TKIP & AES
Range	Up to 50 ft (15 m), subject to site-specific conditions
Handoff	Supports handoff between a maximum of four Wi-Fi wireless access points [3]
Gateway	Requires an 802.11a/b/g/n wireless access point and Ethernet-enabled Crestron control system

> **NOTE:** The TSR-310 has been tested and verified to work with wireless access points from a variety of leading manufacturers. Please view the TSR-310 Wireless Access Point Configuration Guide for recommended WAP manufacturers and configurations.

Wired Communication

USB	USB client for console only (installer setup)

Audio

Features	Built-in microphone for multi-language voice recognition[2]

Connectors

USB	(1) Micro-USB Type B console port behind battery compartment cover, for installer use only
Charging Contacts	(2) Contacts which mate with the charging terminals on the table dock

Battery

Rechargeable Battery	Li-Polymer, 3.7V, 2000 mAh, model TSR-310-BTP
Usage per Charge	5.5 hours continuous
Charging Time	3 hours

Power

Power Pack (included)	Input: 100-240VAC, 50/60 Hz; Output: 2A @ 5VDC; Power connection is made via the charging dock.

Environmental

Temperature	32° to 104°F (0° to 40°C); 50° to 104°F (10° to 40°C) while charging
Humidity	10% to 90% RH (noncondensing)

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Construction

Ruggedized ABS plastic, housing with textured back, buttons with backlit laser etched labeling

Dimensions

Height	0.95 in. (24 mm)
Width	2.28 in. (58 mm)
Depth	8.68 in. (221 mm)

Weight

0.40 lb (0.18 kg)

Compliance

Regulatory Model: TSR-310
CE, IC, FCC Part 15 Class B digital device

Models

TSR-310-B
Handheld Touch Screen Remote, Black

TSR-310-W
Handheld Touch Screen Remote, White

Included Accessories

TSR-310-DS-B or **TSR-310-DS-W**
Table Dock for TSR-310
(Qty. 1 included)

TSR-310-BTP
Battery Pack for TSR-310
(Qty. 1 included)

Available Accessories

For a list of available accessories, visit the TSR-310 product page.

Notes:

1. A complete Crestron control system, plus additional equipment and services, are required to deliver all the capabilities and functionality described. Please contact your Crestron representative to learn more.

2. Voice recognition, weather information, and certain other functions require an Internet connection.

3. Refer to the TSR-310 Wireless Access Point Configuration Guide for a list of recommended wireless access points. Wi-Fi "handoff" capability enables automatic handoff amongst up to four pre-designated Wi-Fi wireless access points, wherein the last successful Wi-Fi connection is maintained indefinitely until that connection is lost, at which point communication is handed off to the next nearest access point. A very brief interruption to wireless Ethernet communication may occur during the handoff.

This product may be purchased from select authorized Crestron dealers and distributors. To find a dealer or distributor, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/How-To-Buy/Find-a-Representative or contact us for additional information by visiting www.crestron.com/contact/our-locations for your local contact.

The original language version of this document is U.S. English. All other languages are a translation of the original document.

The product warranty can be found at www.crestron.com/warranty.

The specific patents that cover Crestron products are listed online at www.crestron.com/legal/patents.

Certain Crestron products contain open source software. For specific information, please visit www.crestron.com/opensource.

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