

## infiNET™ Thermostat



The CHV-TSTATRF is a wireless networked thermostat featuring infiNET wireless technology. The CHV-TSTATRF is designed to be installed easily in place of a conventional type thermostat without requiring additional control network wiring. Although functional as a standalone thermostat, the CHV-TSTATRF delivers enhanced functionality as part of a complete Crestron Home® automation system communicating via the infiNET wireless control network.

**Heat/Cool Thermostat**—The CHV-TSTATRF is designed for heating and cooling control of baseboard, forced air, heat pump<sup>1</sup>, and dual-fuel heat pump<sup>1</sup> HVAC systems. The large backlit LCD display provides a clear view of current temperature, setpoint, system mode, fan mode, system status, and setup functions. Climate control features include separate heating and cooling setpoints, and adjustable anticipators to prevent overshooting the desired temperature. Continuous fan operation can be selected when needed for increased circulation.

**infiNET™**—Crestron's groundbreaking infiNET wireless technology affords reliable 2-way communications throughout a home or office structure without the need for physical control wiring. Numerous infiNET thermostats and other devices can be linked to a control system via a single RF gateway. Employing a 2.4 GHz mesh network topology, every infiNET device functions as an RF repeater<sup>2</sup>, increasing effective range and reinforcing the complete network by providing multiple redundant signal paths within the mesh network.

**Automation System Integration**—Its wireless connection to the control system allows the functions of the CHV-TSTATRF to be controlled from touchpanels, keypads, wireless remotes, and computers to support unlimited flexibility for remote control, scheduling, and integration with other devices and systems. However, in the event that communication with the control system is disrupted for any reason, the CHV-TSTATRF will remain operable to control the HVAC system.

**Easy Installation**—System design, installation, and upgrade using infiNET thermostats along with lighting dimmers and other devices could not be easier. Since there's no control wire required, the CHV-TSTATRF can be installed just like any conventional thermostat.

Setting up a complete network of infiNET devices is simple, utilizing dynamic discovery (self-install) to locate and acquire each RF device automatically. Setting the RF ID of each device employs the same convention as Crestron's familiar TSID method, and each device is programmable using Crestron SIMPL™Windows®, SystemBuilder™ or D3Pro™ software just like any wired Cresnet device. Even firmware updates are performed over the wireless network.

No further action is required to configure the infiNET network. Each device assigned to a common gateway automatically behaves as a repeater<sup>2</sup> for any other devices within range (approximately 150 feet indoors), and additional repeaters may be added if necessary. At all times, the infiNET gateway monitors each device on the network, ignoring any other 2.4 GHz signals, and reconfiguring the entire network automatically in response to new sources of interference and other changes in RF conditions

- > *Wall mount heat/cool thermostat*
- > *For baseboard, forced air, and heat pump<sup>1</sup> HVAC systems*
- > *Crestron system integration via infiNET wireless network*
- > *Available in white, black, or almond*

### AVAILABLE MODELS

- CHV-TSTATRFA**  
infiNET Thermostat, Almond
- CHV-TSTATRFB**  
infiNET Thermostat, Black
- CHV-TSTATRFW**  
infiNET Thermostat, White

### SPECIFICATIONS

#### Wireless

**RF Transceiver:** 2-way RF, 2.4 GHz ISM Channels 11-26 (2400 to 2483.6 MHz), IEEE 802.15.4 compliant

**RF Output Power:** 10 mW

**Range (typical):** 150 feet indoor, 250 feet outdoor, subject to site-specific conditions; range is increased by adding additional devices or C2N-MNETRPT repeater; C2N-MNETGW gateway/transceiver required

#### Connectors

**HVAC:** (4) 2-position terminal blocks comprising the following:

- RH:** Reference Heat – Used for calls to heating system
- RC:** Reference Cool – Used for calls to cooling system
- G:** Fan – Energized to RC during call for fan
- Y:** Compressor – Energized to RC when compressor is run
- C:** 24V AC common terminal supplies remote power to thermostat
- W:** Heat – Energized to RH during a call for heat in heat/cool systems or aux heat in heat pump systems
- O:** Changeover control – Energized to RC during cooling modes
- B:** Energized to RC during heating modes

#### Buttons

**MODE:** Cycles through available System Modes: OFF, HEAT, AUX HEAT ONLY (for heat-pump or dual-fuel systems only), and COOL

**FAN:** Toggles fan setting between FAN AUTO and FAN ON

**RAISE:** Raises the setpoint

**LOWER:** Lowers the setpoint

**HOLD (combination):** Pressing MODE and FAN buttons simultaneously enters/exits HOLD mode

**SETUP (combination):** Holding the FAN button, then pressing the RAISE and LOWER buttons simultaneously for 5 seconds enters SETUP mode; pressing mode button advances to next setup parameter/function; pressing RAISE or LOWER adjusts value of current setup parameter or executes current setup function; pressing FAN button exits SETUP mode

#### Display

**Type:** Backlit LCD with (2) large 7-segment digits, (2) small 7-segment digits, (14) dedicated symbols; displays ambient temperature, setpoint, system mode, fan setting, call activity, low battery, RF or control system communication errors, firmware download progress, setup parameter/function and value

## Measurement Range

**Ambient Temperature:** -10° to 110°F (-23° to 43°C)  
**Display Limits:** -9° to 99°F (-9° to 43°C)

## Setpoint Range

**Heat Setpoint:** 38° to 89°F (3° to 32°C)  
**Cool Setpoint:** 59° to 99°F (15° to 37°C), or 38° to 99°F (3° to 37°C) extended cool mode enabled

## Relay Rating

1 Amp @ 40 Volts DC or 24 Volts AC (nominal)

## Environmental

**Temperature:** -10° to 110°F (-23° to 43°C)  
**Humidity:** 10% to 90% RH (non-condensing)

## Power Requirements

**24V:** 0.24 Watts (10 mA) @ 24 Volts AC, supplied by heating or cooling system  
**Battery:** (2) AA alkaline batteries required, estimated 1 year normal operation

## Housing

Injection-molded plastic, surface-mountable to the front of a horizontally-oriented 1-gang electrical box

## Dimensions

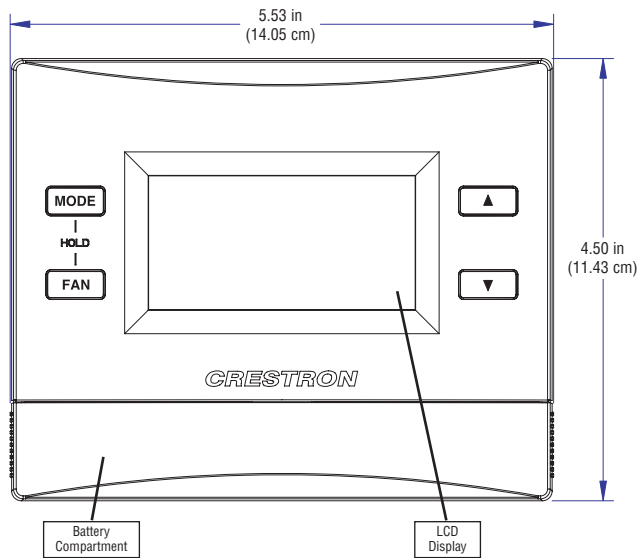
**Height:** 4.50 in (11.43 cm)  
**Width:** 5.53 in (14.05 cm)  
**Depth:** 1.03 in (2.60 cm)

## Weight

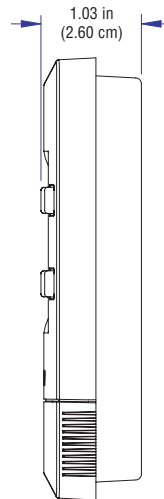
6.7 oz (190 g)

<sup>1</sup> Heat pump systems require addition of an outdoor temperature sensor; contact Crestron for additional design assistance.

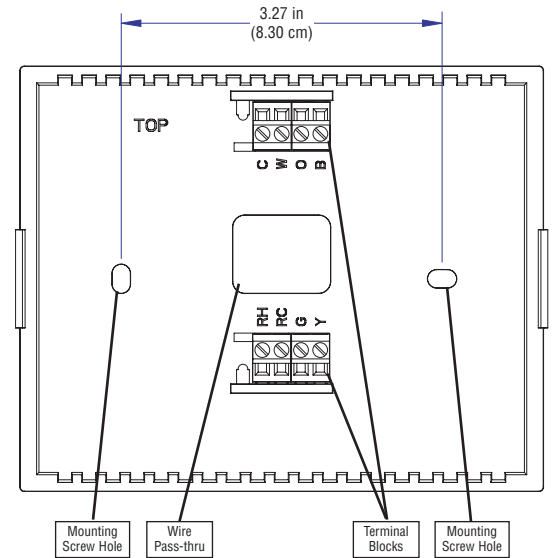
<sup>2</sup> CHV-TSTATRF must be powered by 24 Volt source to enable repeater functionality.



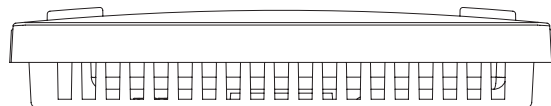
Front Panel View



Right Side View



Hardware Connections and Mounting — Front of Rear Panel



Bottom View



## AVAILABLE ACCESSORIES

**C2N-MNETGW**  
infiNET Gateway

**C2N-MNETRPT**  
infiNET Repeater