

# Connected Room

## Certified Thermostat Options

### HOW CAN I PREPARE?

All hotels procuring or replacing thermostats should only invest in Connected Room compatible thermostats in preparation for future standards.

Only Motto by Hilton hotels are **required** to install Connected Room compatible thermostats.

### WHAT ARE MY OPTIONS?

The Connected Room team has certified four devices:

- INNCOM e528
- INNCOM e7
- Telkonet Ecolnsight+
- Verdant VX-TR-HCR

*This document contains information on each of the Connected Room-certified thermostat options.*

**Questions?** Contact [in\\_room\\_technology@hilton.com](mailto:in_room_technology@hilton.com)

# Connected Room

Certified Thermostats as of May 3, 2019

Feature	INNCOM e7	INNCOM e528	Telkonet EcoInsight+	Verdant VX-TR-HCR
<b>New Thermostat Price</b>	\$179.00 – 239.00	\$124.43 – 254.43	From \$165.00	From \$165.68
<b>Dimensions (L x W x D)</b>	4.7" x 4.7" x 1"	4.7" x 4.7" x 1.2"	4.0" x 6.0" x 1.5"	4.0" x 5.5" x 0.9"
<b>Color Options</b>	White or Black	White	White, Black, or any Pantone color upon request	White or Black
<b>Power Source</b>	Hardwired	Hardwired	Hardwired	Hardwired
<b>Power Requirements</b>	24 VAC 100-277 VAC	24 VAC 100-277 VAC	12VAC 24 VAC 100-277 VAC	24 VAC 100-277 VAC
<b>Integrated PIR Occupancy Sensor</b> <i>Detects guest presence</i>	Yes	Available Standard or Flat	Yes	Yes
<b>Integrated Humidity Sensor</b> <i>Reports moisture in the guestroom air</i>	Yes	Available	Yes	Yes
<b>Integrated Light Level Sensor</b> <i>Determines if the lights in the guestroom are on or off</i>	Yes	Yes	Yes	Yes
<b>Integrated Proximity Sensor</b> <i>Dims the LCD screen when a guest is not nearby</i>	Yes	Yes	No	No
<b>Energy Management System Available?</b> <i>Optional add-on at an additional fee</i>	Yes INNCOM INNcontrol 3 or INNcontrol5	Yes INNCOM INNcontrol 3 or INNcontrol5	Yes Telkonet EcoCentral <i>Once Connected Room is deployed, EcoCentral functionality is no longer available. Hilton is actively working with Telkonet to allow this product to co-exist with Connected Room</i>	Yes Verdant EI
<b>Retrofit Available for Previously Deployed Devices?</b>	Yes A firmware update can be applied to most existing INNCOM e7 thermostats to enable controls via Connected Room	Yes Purchase the INNCOM PC502 hardware to enable controls via Connected Room	Yes A firmware update can be applied to most existing Telkonet EcoInsight+ thermostats to enable controls via Connected Room	Yes Purchase the Verdant VX-ZBU-HCR hardware to enable controls via Connected Room via ZigBee module

## INNCOM E7 Thermostat

The next generation of INNCOM energy management solutions

### OVERVIEW

The INNCOM E7 Thermostat is a direct digital control programmable thermostat that provides comfort and reduces in-room energy costs by up to 35% based on occupancy. This next generation thermostat offers simple solutions that reduce complexity in most HVAC applications. It is the main component of the INNCOM technology enabling platform that provides integrations with more third party technologies which range from property management systems to in-room voice control. The INNCOM E7 thermostat also provides real-time and trended data, when deployed in a networked application, for INNcontrol™3 to furnish room status, energy management, equipment alarm reporting, integration to PMS, BMS and other systems, allows the property to proactively manage the environment to ensure the most satisfying in-room experience.

### APPLICATIONS

- Standalone HVAC control
- Standalone EMS controlling in-room energy based on occupancy typically requiring a door switch monitor and a motion sensor
- Networked and Integrated EMS controls in-room energy based on occupancy and room status and is centrally controlled, monitored and analyzed using the INNControl™3 application



The New INNCOM Thermostat  
Available in Ice White or Black Onyx



## FEATURES & BENEFITS



A beautiful industrial design with a large easy to read keypad

Provides standalone or networked energy management



Integrates with Amazon Alexa Voice Control

Optional external wired or wireless temperature and humidity sensors

Compatible with most HVAC systems



On-board digital and analog I/O

On-board motion sensor

Smart wall plate captures configuration and will upload it into a replacement thermostat



Provides real-time data to INNcontrol 3 for reporting, monitoring, central energy control, and diagnostics

Easy third party integrations with Central Electronic Lock Systems and other technologies



A dynamic, intuitive user interaction that welcomes the user, with an adjustable backlight based on detected light level

# The INNCOM E7 Thermostat

SPECIFICATIONS	
MOUNTING	<b>Standard US Double Gang:</b> w/ or w/o Mud Ring - Spacer ring optional <b>US Double Gang:</b> with separator - Spacer Required <b>Standard US Single Gang:</b> w/ or w/o mud ring - Spacer Required <b>British Gang:</b> not currently supported
DIMENSIONS	L 120mm x W 120mm x H (25)mm (w/o spacer)
POWER REQUIREMENTS	<b>Input</b> 24VAC input 100-277VAC <b>Output</b> 12VDC, 250mA Output
COLOR OPTIONS	Ice White & Black Onyx
RECOMMENDED WIRE	18 Gauge
INPUTS	3 digital inputs 0-5VDC, 1 remote temperature sensor input
OUTPUTS	5 on-board relays for low medium and high fan speeds, heat and cool, 1 0-10VDC Output
DISPLAY RESOLUTION	PMWV LCD (0.1 degree F in test mode)
STANDARD DEADBAND	2 degrees F (1 degree C) between heating and cooling

## TYPICAL HVAC APPLICATIONS

- 4 Pipe, 3 Fan, Heat/Cool FCU
- 2 Pipe, 3 Fan, Cool Only FCU
- Heat Pump, 2 Fan 2nd Stage Heat
- Heat Pump, 3 Fan Speeds
- PTAC, 2 Fan with Heat Strip
- 2 stage heat-2 stage cool 1 fan
- 2 stage heat pump (B/O, Y1, Y2) 2 fan
- 3 fan, digital heat, modulating cool (0-10VDC)
- Heat, cool, VFD (variable fan drive) 0-10VDC

## PART NUMBERS

\*Thermostat purchase includes Installation Kit, Screw Kit Assembly and Harness.

PART NUMBER	DESCRIPTION
201-528-24-BK*	24VAC Thermostat, Black Onyx
201-528-24-WH*	24VAC Thermostat, Ice White
201-528-100-BK*	100-277VAC Thermostat, Black Onyx
201-528-100-WH*	100-277VAC Thermostat, Ice White
203-528-100-BK	100-277VAC Thermostat Installation Kit - Black Onyx
203-528-100-WH	100-277VAC Thermostat Installation Kit - Ice White
203-528-24-BK	24VAC Thermostat Installation Kit - Black Onyx
203-528-24-WH	24VAC Thermostat Installation Kit - Ice White
32324212-001	Thermostat Screw Kit Assembly
62-1464.R	Thermostat 24VAC Harness
04-1096.FL	e7 Remote Thermistor
201-503	PC-503 Configuration Tool used with engINN
203-250	RS485 DM485 Communication Module
62-1455	Thermostat 100-277VAC Harness

SPECIFICATIONS	
SENSOR MEASUREMENT RANGES	<b>Thermostat Temp:</b> 33 to 99 degrees F (1 to 37 degrees C) +/- 1 degree F <b>Outdoor Air:</b> Temp 0 to 99 degrees F (-18 to 37 degrees C) +/- 1 degree F or as reported from web service <b>Humidistat:</b> 3 % RH, in range from 30-95 % RH +/- 5% <b>Motion Sensor:</b> 120° View Angle, 10M line of sight <b>Proximity Detection:</b> 20° horizontal view angle 1.5M maximum (configurable) line of sight range <b>Light Sensor:</b> Gamma Value 0.7, Spectral response 550 – 650nm
DIAGNOSTICS (NETWORKED)	HVAC alarms, equipment run-time, room occupancy, network connection, low battery
COMMUNICATIONS	<b>Zigbee RF</b> Range 100ft Transmit power For FCC, maximum 17dbm, for CE Mark, maximum 12dbm DMN Receive Sensitivity -94.6dBm Frequency Band 2.4Ghz Protocol 802.15.4 Frequency Channels 11-26  <b>BLE RF</b> Range 50ft Transmit Power 5dBm Receive Sensitivity -73.dBm Frequency Band 2.4Ghz  <b>Wired RS485</b> Data Rate 250kbps Protocol DeepMesh Signal A, B, Ground Network Topology Multi-Point, Daisy-Chain, Tree, Star Network Max. Devices 32  <b>In-room Wired S5Bus</b> Data Rated 2550 bps Range 50ft max no. nodes 20
OPERATING ENVIRONMENT	41 to 149 degrees F (5 to 40 degrees C), 0-99% RH non-condensing
STORAGE ENVIRONMENT	41 to 149 degrees F (5 to 40 degrees C), 0-99% RH non-condensing
APPROVALS	<b>EN</b> EN 60730-1, EN 60730-2-9 <b>UL (IEC)</b> UL 60730-1, 4th ed. References UL746C for impact requirements of polymeric enclosures UL 60730-2-9, 3rd ed <b>CSA (IEC Based)</b> – Note 1 on standards, Note 2 on aspects impacted by transition, CAN/CSA 60730-2-9, 4rd ed CAN/CSA 60730-2-9, 3rd ed

For more information [www.inncom.com](http://www.inncom.com)

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## E-Series

### Smart Digital Thermostats E528 & E529

The E-Series is a hub for room automation. It is capable of controlling virtually any fan coil unit, heat pump or packaged terminal air conditioner found in rooms. It includes an easy to read illuminated liquid crystal display and five built-in relays.

#### OVERVIEW

The E-Series can be equipped with an on-board radio frequency (RF) transceiver, a passive infrared occupancy sensor (PIR), humidity sensor, outside temperature display, and the patented ecoMODE® green button.

The E-Series can be used to integrate the room to the property for central control and monitoring, to integrate controls within the guestroom, or as a stand alone thermostat.

As the key node in an Energy Management System (EMS), it receives inputs from the PIR motion detector and the wired or wireless door switches to determine guestroom occupancy. When the room is occupied but the occupant is not present, the temperature may range up or down within a programmable setback band from the selected temperature. This results in energy savings with no impact on an occupant's comfort.



E528 Smart Digital Thermostat with flat PIR and the patented ecoMODE button



E529 Battery Powered Smart Digital Thermostat

## FEATURES & BENEFITS



Precision DDC temperature control

Advanced energy management

Optional ecoMODE®



On-board PIR optional

RF Wireless Communication

Oversized framing plate for use in US applications



Customer programmable

Low voltage

Low installation costs

Optional Battery Powered



May be integrated with the INNCOM Room Automation System over the Deep Mesh Network with INNCOM's INNcontrol 3 software



Multi-point lamp control

Balcony Door Monitoring

Minibar & safe monitoring

Smoke detector monitoring

# E528 & E529 Smart Digital Thermostats

## APPLICATIONS

When connected to Honeywell's centrally controlled system, additional energy savings are achieved by using a broader set-back band, when the room is unoccupied for a certain length of time. It can also apply wider temperature set-back bands when the room is in hibernation off-season or extended away periods.

The INNCOM E-Series wireless transceiver allows it to seamlessly add lighting, drapery, and amenity controls through usage of the INNCOM's EVORA, and MODEVA wall switches. In addition, it can also receive inputs from other points in the room such as a balcony door, minibar or smoke detector and transmit their status to the central server.

## ADDITIONAL OPTIONS

Available with or without the Honeywell logo

Available with or without a Humidity Sensor

Available with or without Auxiliary Communications.  
The following are offered: RF, IR5, RS485

## CONFIGURATIONS

Blank

Standard PIR

Standard PIR & ecoMODE Button

ecoMODE Button

Flat PIR

Flat PIR and ecoMODE Button

SPECIFICATIONS	
DIMENSIONS	4.7" W x 4.7" H x 1.2" D (119 mm x 119 mm x 30 mm)
POWER REQUIREMENTS	24 VAC at 50/60 Hz, 24 VDC nominal, 2.4 VA (e528-3xx/7xx and e528-4xx) 100 to 277 VAC at 50/60 Hz, 2.4 VA (e528-8xx)
MOUNTING	Standard Double Gang Junction Box (4x4)
OPERATING RANGE	41°F to 149°F (5°C to 65°C)
TEMPERATURE	± 1°F 60°F to 85°F (± 0.5°C 15°C to 30°C)
APPROVALS	L listed #873, CAN/CSA C22.2 No. 24-93 File #E202540/Part 15 of the FCC Rules
STANDARD COLOR OPTIONS	White & Black
THERMOSTAT MEASUREMENT RANGE	33 to 99 degrees F (1 to 37 degrees C)
OUTDOOR AIR TEMPERATURE DISPLAY	0 to 99 degrees F (-18 to 37 degrees C)
DISPLAY RESOLUTION	Whole degree F, 0.5 degree C (0.1 degree F in test mode)
STANDARD DEADBAND	2 degrees F (1 degree C) between heating and cooling
C/F DEGREES DISPLAY	Toggle Button on front of display
AMBIENT OPERATING	41 to 149 degrees F (5 to 65 degrees C), 0-95% RH noncondensing
AMBIENT STORAGE	33 to 149 degrees F (1 to 65 degrees C)
RF DATA RATE	250kbps
OPTIONAL POWER SUPPLIES	No Power Supply 120-277VAC 265-277VAC 50/60Hz w/3.6FLA high fan relay (600 Series) 50/60Hz w/2.2FLA high fan relay (800 Series) 24VAC 50/60Hz (900 Series) Four AA Batteries (E529 Only)
INDOOR RANGE	70ft - 100ft+
FREQUENCY BAND	2.4GHz
PROTOCOL	802.15.4
FREQUENCY CHANNELS	11-26

## For more information

[www.inncom.com](http://www.inncom.com)

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# EcoInsight+

## *Intelligent Thermostat and Room Automation Controller*

The EcoInsight+ is an intelligent thermostat. As the “brain” of the room, it serves as the EcoSmart room automation controller.

### Intelligent Automation

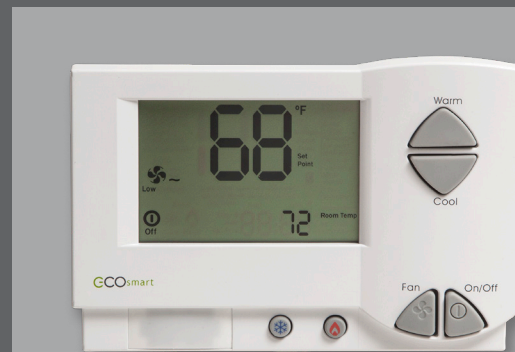
The EcoInsight+ is the next-generation intelligent thermostat and room automation controller within the EcoSmart energy management platform. This ZigBee HA (Home Automation) compliant device simplifies third party integration by serving as a ZigBee-enabled router, communicating wirelessly with the other EcoSmart devices in the network. Additionally, the EcoInsight+ provides advanced occupancy, light and humidity sensing for enhanced HVAC optimization.

### Extreme Compatibility

Designed with flexibility in mind, the EcoInsight+ is highly compatible across systems. It has over 125 field-configurable settings to control HVAC efficiency and is proven to be compatible with most HVAC systems, such as: packaged terminal air conditioners, fan coils, heat pumps, split systems, and more. Setup is simple and fast with its software-based relay control and fan speed configuration. The UL listing and the various power input options make the EcoInsight+ a versatile HVAC controller for most integrated systems.

### Beyond Temperature Control

With the EcoInsight+ you get more than just a thermostat, you get a network edge processor with a generous number of input and output options. Up to three Current Transformer (CT) inputs can be used to measure and log current. Two external temperature inputs can be used to monitor remote temperature, two dry contact pairs are available for door contacts or integration with third party building controls and finally 2 variable outputs are included for control of lighting, fans or valves, making the EcoInsight+ a fit for the basic to the most complicated installations.

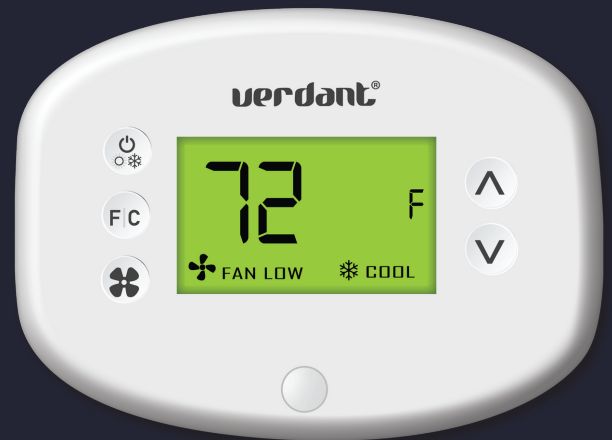


## Features

- UL and cUL Certified (CE certification in process)
- ZigBee HA Compliant (allows for more complex third party integrations)
- Wire harness with standard connector for quicker installation
- PIR occupancy detection, calibrated to extreme sensitivity.
- Proprietary Recovery Time Technology
- Networked or stand-alone operations
- Full remote control capability with any web browser via our EcoCentral web application
- ZigBee enabled router within the EcoSmart platform
- 2 configurable soft-buttons



# Introducing the Verdant VX Thermostat For Hilton Connected Room



Guests who stay at Hilton Connected Room-enabled properties will soon be able to use the Hilton Honors app to manage most things they would traditionally do manually in a room, such as controlling the temperature, lighting, and TV.

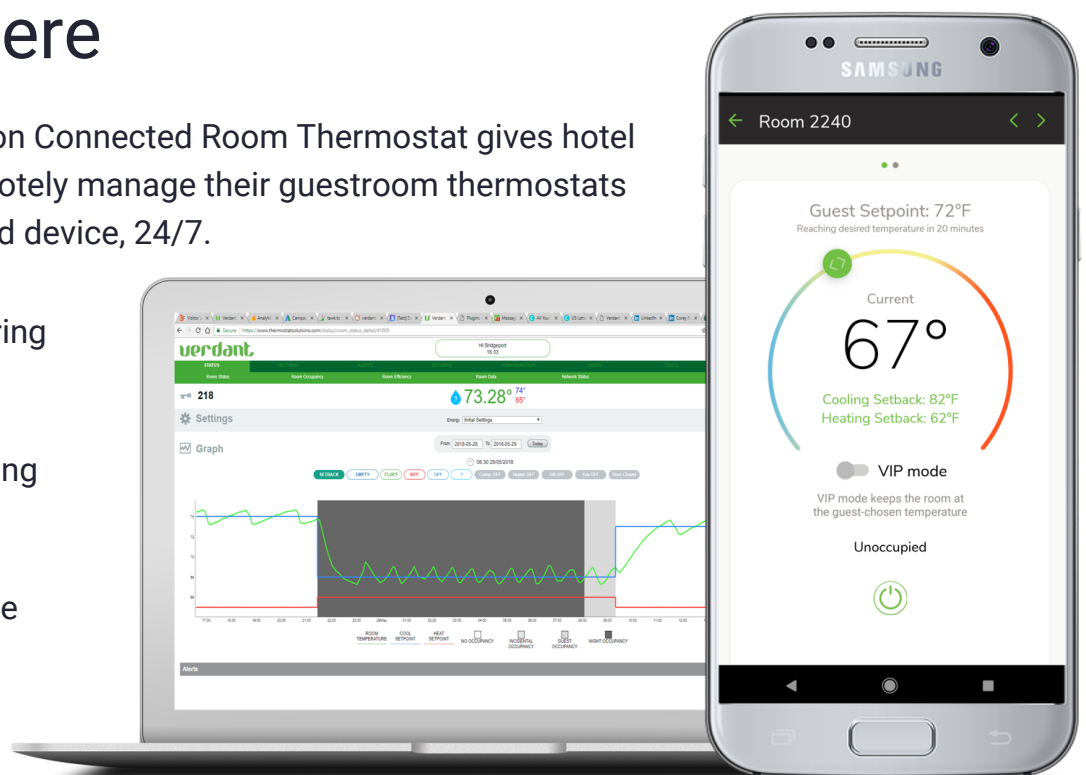
Verdant thermostats are approved for Hilton Connected Room and come with powerful energy management features to save energy while guestrooms are unoccupied.

## Manage and Monitor Your Rooms From Anywhere

The Verdant VX Series Hilton Connected Room Thermostat gives hotel operators the ability to remotely manage their guestroom thermostats from any internet connected device, 24/7.

Timely alerts help engineering and maintenance teams diagnose inefficient HVAC equipment without disrupting guests.

Housekeeping staff can use real-time room occupancy status to coordinate housekeeping duties.





# Energy Saving Features

Fully configurable energy saving features reduce HVAC related energy consumption by up to 40% without compromising the comfort of guests.

**Temperature Setback** automatically adjusts the temperature when the room is unoccupied in order to save energy.

**Setback Limits** allow maximum and minimum room temperature to be set when rooms are empty.

**Flexible Setbacks/Dynamic Recovery** ensures that the guest's chosen temperature for rooms is always restored within a predetermined period of time.

**Set Point Limits** prevents guests from setting room temperature above/below a predetermined temperature.

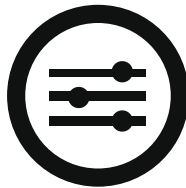
## Plug & Play

Verdant's hard-wired Hilton Connected Room thermostats can be installed and configured in under 15 minutes per room.



Install

Screw the thermostat on the wall with the provided screw kit



Configure

Assign a room number and equipment code



Save

Start saving on energy when guests are away from their rooms

## Already have a Verdant thermostat?

Most Verdant VX series thermostats can be upgraded to be Hilton Connected Room compatible with the addition of a small Zigbee module that plugs into the thermostat, hidden from the view of guests.

