

ZigBee Wireless Rooftop Unit Thermostat

The WZ_RTU Wireless Thermostat replaces mechanical thermostats with no additional wiring required for communication or power.

The WZ_RTU uses the ZigBee wireless protocol to control a rooftop heating and cooling unit (RTU) in a single heating zone. It wirelessly connects to a central station for remote control and monitoring as part of a larger system.

Advanced software techniques are used to estimate a room's heat gain/loss and predict the amount of heat required to be added or removed, resulting in extremely stable room temperatures. The WZ_RTU is nevertheless very responsive to sudden changes in heating/cooling demand.

Digital signal processing is also used to compensate for thermostat self heating, a common problem with thermostats affecting temperature measurement accuracy. The WZ_RTU achieves unparalleled 0.5°C accuracy for comfort and energy savings.

Benefits

- Reduced heating/cooling costs.
- Consistent, accurate temperature.
- Inexpensive installation.
- Remote monitoring and control of a broad range RTUs.

Features

- **ZigBee Radio** - connects to a central controller through a wireless, self healing mesh network.
- **Digital Signal Processing** - uses advanced digital techniques to even out heating/cooling cycles for a consistent, accurate room temperature.
- **Multiple setpoints** - stored locally for stand alone mode in case of loss of radio reception to the controller.
- **Multiple schedules** - separate settings for day/night and 7 days of the week.
- **Min/max temperature** - prevents users from setting the temperature too high or too low.
- **Programmable** - simple yet powerful programming language for creating complex heating/cooling algorithms.
- **Motion sensor** - reduces the heat when the room is not in use.
- **Simple installation** - doesn't require additional control lines.
- **Warranty** - 3 years.



Specifications

Operating Characteristics

Operating Voltage	Max Current Draw	Frequency
24VAC	200mA	50~60Hz

Output Characteristics

Outputs	Max Load	Voltage
8 relay contacts	1A	24VAC/30VDC
2 analog	20mA	0-10 VDC

Input Characteristics

Inputs	Voltage Input	Current Draw
4 inputs	0-5 VDC/Contact closure	10mA

Motion Detect

Type	Max Viewing Range	Max Viewing Angle
Infrared	5m	135°

Temperature Characteristics

Sensing Range	Setpoint Range	Accuracy
-10°C~120°C	15°C~27°C	0.5°

Communication Ports

Type	Connection	Baud Rate/Frequency	Max Distance
RS232	3 Pin	9.6Kbps	15m
ZigBee	Wireless	2.4GHz	25m