



Turn to the Experts.™

RTU Open Controller

Part Number: OPN-RTUM

The RTU Open controller continuously monitors and regulates constant volume rooftop operation with reliability and precision. This advanced controller features a sophisticated, factory-engineered control algorithm that provides optimum performance and energy efficiency. The RTU Open controller also features plug-and-play connectivity to the Carrier i-Vu Open Control System. The Carrier i-Vu Open Control System combines state-of-the-art Carrier equipment, plug-and-play controllers, and the powerful, web-based i-Vu user interface to form a cohesive, intuitive, and fully-integrated BACnet® Building Automation System.

For added flexibility, the RTU Open controller is capable of stand-alone operation. Or, it can be integrated with any Building Automation System utilizing the BACnet, Modbus, LonWorks®, or N2 protocols.

Application Features

- Controls 2 stages of DX cooling to maintain space temperature setpoint
- Controls up to 2 stages of gas heat or combination of mechanical and electric heat to maintain space temperature setpoint (controls up to 4 stages of heat in heat pump mode)
- Integrated economizer and power exhaust control provide optimized mechanical cooling
- Built-in advanced control routines for zone level humidity control or zone level demand control ventilation (ASHRAE 62)

System Benefits

- Integrated Carrier airside linkage algorithm for plug-and-play integration with the Carrier VVT System
- Fully plug-and-play with the Carrier i-Vu Open Control System
- Supports demand limiting for maximum energy savings
- Compatible with i-Vu Tenant Billing for tracking tenants' after-hours energy usage

Hardware Features

- Can be factory-installed on Carrier WeatherMaster® and WeatherMaker® Puron® packaged rooftop units
- Can be field-installed on constant volume rooftop units; wiring harness (part# OPN-RTUHRN), provides quick field installation
- Integrates easily into any BAS using BACnet, Modbus, LonWorks®, or N2 protocols
- On-board hardware clock, remote occupancy input, and support for SPT/thermistor sensors provide stand-alone operation
- Easy startup and commissioning using Carrier's BACview Handheld Service Tool



*Requires LON Option Card (LON-OC)

Specifications

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BACnet Support	Conforms to the Advanced Application Controller (B-AAC) Standard Device Profile as defined in BACnet 135-2001 Annex L
Communication Ports	Network Comm port: EIA-485 port for BACnet MS/TP, Modbus RTU, or N2 communications (protocol and baud rate are DIP switch selectable); Comm Option Port: For connecting a LON Option Card; Local Access port: For system start-up and troubleshooting using a PC or BACview (115.2 kbps); Rnet port: For connecting SPT room sensors. The Rnet port supports up to four SPT Standard sensors and one SPT Plus or SPT Pro sensor for averaging or high/low select control.
Inputs	Six analog inputs: Four analog inputs dedicated to Space Temperature, Setpoint Adjust, Supply Air Temperature, and Outside Air Temperature. Two others configurable for the following functions: Indoor Air Quality, Outdoor Air Quality, or Relative Humidity. All analog inputs have 10 bit A/D resolution. Five binary inputs: One dedicated to Safety Chain Feedback, four others configurable for the following functions: Compressor Safety, Fire Shutdown, Enthalpy Switch, Humidistat, Supply Fan Status, Filter Status, Remote Occupancy, and Door Contact
Outputs	One analog output: Economizer Position. Analog output has 10 bit D/A resolution. Seven binary outputs: Supply Fan, Cool Stage 1, Cool Stage 2, Heat Stage 1, Heat Stage 2, Power Exhaust/Reversing Valve, and Dehumidification. Relay contacts rated at 3A max @ 24VAC, configured normally open
Real Time Clock	Battery-backed real time clock keeps track of time in event of power failure
Battery	10-year Lithium CR2032 battery provides a minimum of 10,000 hours of trend data & time retention during power outages
Protection	Incoming power and network connections are protected by non-replaceable internal solid-state polyswitches that reset themselves when the condition that causes a fault returns to normal. The power, network, input, and output connections are also protected against voltage transient and surge events.
Status Indicators	LED status indicators for network communications, run status, error, power, and all digital outputs
Controller Addressing	Rotary dip switches set BACnet MS/TP, Modbus, or N2 address of controller
Listed by	UL-873, FCC Part 15-Subpart B-Class A, CE EN50082-1997
Environmental Operating Range	-40°F to 158°F (-40°C to 70°C); 10 to 95% relative humidity, non-condensing
Power Requirements	24VAC \pm 10%, 50 to 60Hz, 20 VA power consumption, single Class 2 source only, 100 VA or less

Dimensions



Overall

A: 6-1/2" (16.5 cm)

B: 6-1/2" (16.5 cm)

Depth: 2-1/2" (6.35 cm) min. panel depth

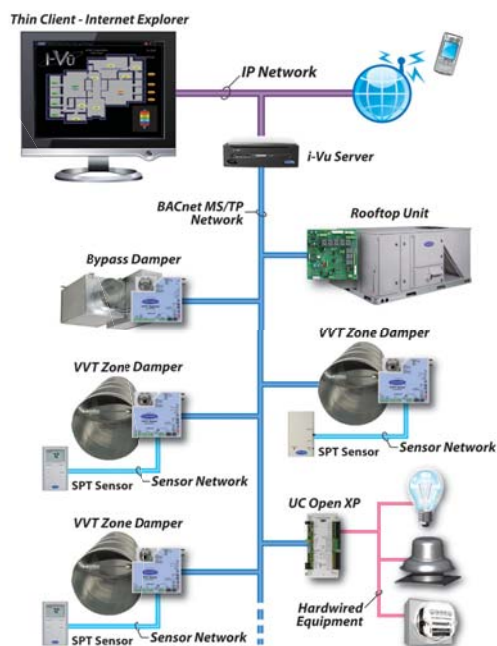
Weight: .74 lbs. (.34 kg)

Mounting

(●) 7 mounting holes in various positions provided

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs, without notice or without incurring obligations.

Carrier i-Vu Open Control System



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