



i-Vu® Building Automation System RTU Open

Part Number: OPN-RTUM2



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 program that provides optimum performance and energy efficiency. It also features plug-and-play connectivity to the Carrier i-Vu Building Automation System. For added flexibility, the RTU Open controller is capable of stand-alone operation, or, it can be integrated with any other Building Automation System utilizing the BACnet, Modbus®, LonWorks®, or N2 protocols.



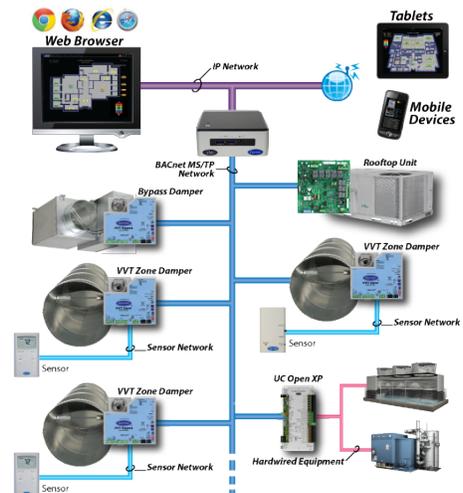
Application Features

- Controls up to 2 stages of DX cooling (3 stages for 48/50 LC WeatherExpert®) 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 economizer² and power exhaust control provide optimized free cooling in combination with mechanical cooling
- 2 fan speed control options provide maximum energy savings and comfort
- Built-in advanced control routines for zone level humidity control or zone level demand control ventilation (ASHRAE 62)

Hardware Features

- Can be factory-installed on Carrier WeatherExpert®, WeatherMaster®, and WeatherMaker® packaged rooftop units
- Can be field-installed on constant volume rooftop units; wiring harnesses (sold separately), provide quick field installation
- Integrates easily into any BAS using BACnet, Modbus, LonWorks¹, or N2 protocols
- On-board hardware clock, remote occupancy input, and support for Carrier communicating room sensors/thermistor sensors provide stand-alone operation
- Easy startup and configuration with i-Vu User interfaces

The i-Vu Building Automation System



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 Building Automation System
- Supports demand limiting for maximum energy savings
- Compatible with i-Vu Tenant Billing for tracking tenants' after-hours energy usage
- Performance and utilization runtime data stored locally on the controller for system analysis
- Includes multi-protocol support to integrate into BACnet, Modbus, N2 or LonWorks¹

¹LonWorks: Requires LON Option Card (part number LON-OC).

²Fault Detection and Diagnostics included as part of California Building Energy Efficiency Standard Title 24 Part 6.

i-Vu[®] Building Automation System

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Specifications

BACnet Support	Advanced Application Controller (B-AAC), as defined in BACnet 135-2004 Annex L, Protocol rev 9
Communication Ports	Network Comm port: EIA-485 port for BACnet MS/TP or ARCNET 156 kbps, 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 (115.2 kbps) Rnet port: For connecting Carrier communicating room sensors and Carrier's touchscreen user interface
Inputs	6 analog inputs: 4 analog inputs dedicated to Space Temperature, Setpoint Adjust, Supply Air Temperature, and Outside Air Temperature. 2 others configurable for the following functions: Indoor Air Quality, Outdoor Air Quality, or Relative Humidity. AIs have 10 bit A/D resolution. 5 binary inputs: 1 dedicated to Safety Chain Feedback, 4 others configurable for the following functions: Compressor Safety, Fire Shutdown, Enthalpy Switch, Humidistat, Supply Fan Status, Filter Status, Remote Occupancy, IGC Override (gas only), and Door Contact
Outputs	8 binary outputs: Supply Fan, Cool Stage 1, Cool Stage 2, Heat Stage 1, Heat Stage 2, Power Exhaust, Rev Valve/High Fan/Cool Stage 3, and Dehumidification. Relay contacts rated at 3A max @ 24VAC 2 analog outputs: Economizer and Fan Speed (VFD). AOs have 10 bit D/A resolution.
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.
Real Time Clock	Battery-backed real time clock keeps track of time in event of power failure
Battery	10-year Lithium CR2032 battery: a min of 10,000 hours of trend data/time retention during power outages
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 or ARCNET, Modbus, or N2 address of controller
Listed by	United States: FCC compliant to Title CFR47, Part 15, Subpart B, Class A; UL Listed, File E143900; CCN PAZX, UL 916, Energy Management Equipment; ANZ: RCM Mark AS/NZS 61000-6-3; Canada: UL Listed File E143900, CCN PAZX7, CAN/CSA C22.2 No. 205 Signal Equip., Industry Canada Compliant ICES-003, Class A; CE Mark Compliant with 2014/30/EU, and RoHS Compliant: 2015/863/EU; UKCA Mark compliant with Electromagnetic Compatibility Regulations 2016 – Gov.UK and RoHS for Electrical and Electronic Equipment 2012
Environmental	Operating & Storage: -40 to 158°F (-40 to 70°C) 10 to 95% RH, non-condensing
Power Requirements	24VAC ± 10%, 50 to 60Hz, 20 VA power consumption, single Class 2 source only, 100 VA or less

Dimensions

Overall

- A:** 6.5 in. (16.5 cm)
- B:** 6.5 in. (16.5 cm)
- Depth:** 2.5 in. (6.35 cm)
- Weight:** .74 lbs (.34 kg)

Mounting

(*) 7 mounting positions in various positions provided

