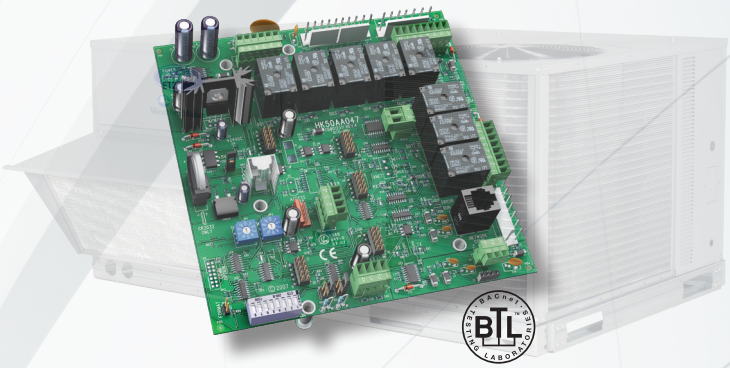
i-Vu® Building Automation System
RTU Open

Part Number: OPN-RTUM2

The i-Vu® Building Automation System provides everything you need to access, manage, and control your building, including the powerful i-Vu user interface, plug-and-play BACnet® controllers, and state-of-the-art Carrier equipment.



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.

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

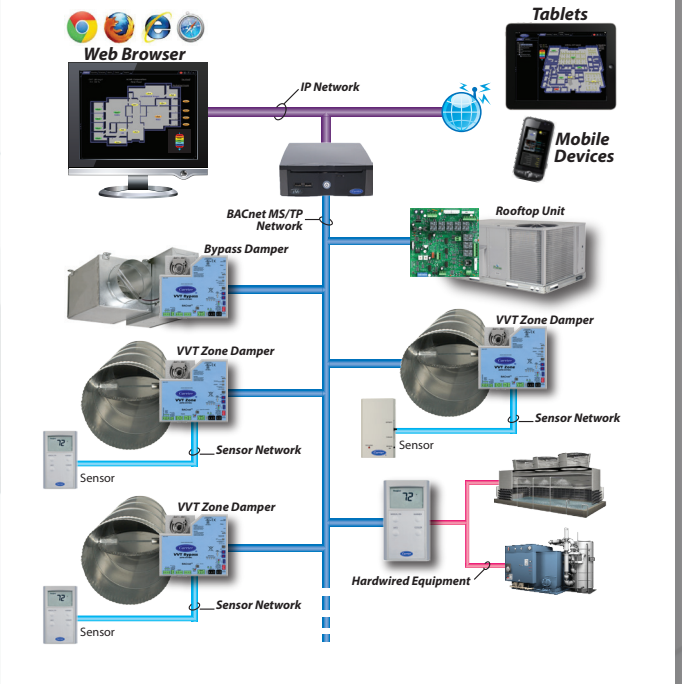
Hardware Features

- 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, LonWorks[1], 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

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 economizer[2] 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)

The i-Vu Building Automation System



[1]LonWorks: Requires LON Option Card (part number LON-OC).
[2]Fault Detection and Diagnostics included as part of California Building Energy Efficiency Standard Title 24 Part 6.

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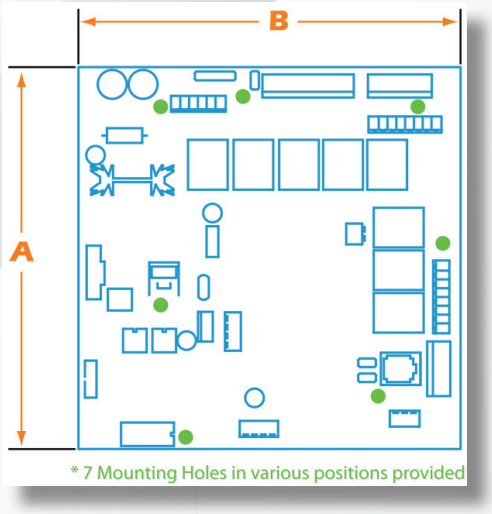
BACnet Support	Advanced Application Controller (B-AAC), as defined in BACnet 135-2004 Annex L
Communication Ports	**Network Comm port:** EIA-485 port for BACnet MS/TP, Modbus RTU, or N2 communications (protocol and baud rate are DIP switch selectable) **Comm Option port:** For connecting a LON Option Card **Local Access port:** For system start-up and troubleshooting (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	**2 analog outputs:** Economizer and Fan Speed (VFD). AOs have 10 bit D/A resolution. **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
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	**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:** 6-1/2" (16.5 cm) **B:** 6-1/2" (16.5 cm) **Depth:** 2-1/2" (6.35 cm) **Weight:** .74 lbs. (.34 kg) **Mounting** (•) 7 mounting holes in various positions provided



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Controls Expert Locator:
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