i-Vu® Building Automation System
Zone Ctrl II

Part Number: OPN-B3-P-02

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 Zone Controller II provides zone level control for a variety of pressure-independent VAV and pressure dependent VVT applications. This completely programmable advanced controller features a separable actuator for easy installation onto fan-powered or single-duct air terminals. It also features native BACnet communications and plug-and-play connectivity to the Carrier i-Vu Building Automation System.

Application Features

- A library of sophisticated factory-engineered and tested control programs provide reliability and energy efficiency
- Programmable zone level control of terminal units, fan coils, lighting, exhaust fans and more
- Supports advanced control routines for zone level humidity control or zone level demand control ventilation (ASHRAE® 62)
- Supports Carrier communicating space sensors and touch screens which allow for local setpoint adjustment and local overrides
- Quick and easy test & balancing process

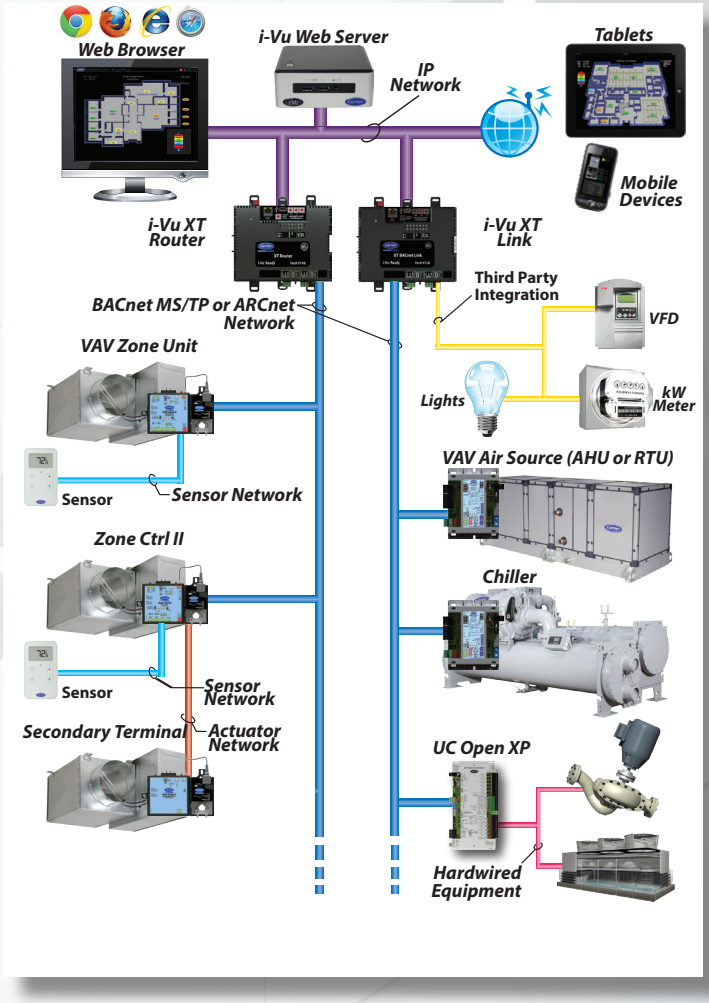
System Benefits

- Integrated Carrier airside linkage algorithm for plug-and-play integration with Carrier air sources
- Fully plug-and-play with the Carrier i-Vu Building Automation System
- Supports demand limiting for maximum energy savings
- Supports dual duct applications when used with Carrier's VAV Zone II Secondary Terminal Controller

Hardware Features

- Separable brushless actuator for reliability and longevity
- Capable of system or stand-alone operation
- Native BACnet MS/TP or ARCNET communications
- Controls up to 8 points (3 binary outputs, 4 universal inputs and 1 analog output)

The i-Vu Building Automation System



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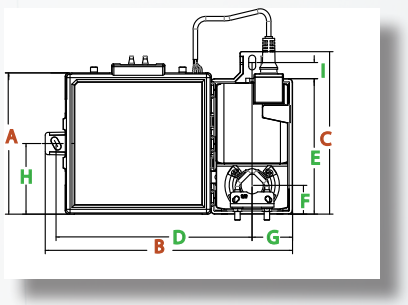
BACnet Support	Advanced Application Controller (B-AAC), as defined in BACnet 135-2012 Annex L Protocol rev. 9
Communication Ports	**BACnet port:** EIA-485 port for BACnet MS/TP communications (9600 bps, 19.2 kbps, 38.4 kbps, & 76.8 kbps) or ARCNET 156 kbps; **Local Access port:** For system start-up and troubleshooting (115.2 kbps); **Rnet port:** For connecting Carrier communicating room sensors and Carrier's touchscreen user interface **ACTnet Port:** For connecting the actuator cable
Separable Actuator	Brushless DC motor, torque 45 inch-pounds (5Nm), runtime 205 seconds for 90 degree travel during control
Integral Pressure Sensor	Precision low flow AWM series 0–2 in. H_2O, sensitive down to ±0.001 in. H_2O. Barbed tapered airflow connections accept 3/16 in. (4.75 mm) I.D. tubing. Allows for readings across the 0–2 in. H_2O range, accurate to ±5% of full flow at 2 in. H_2O
Inputs	**4 inputs:** Configurable for thermistor or dry contact. Inputs 1 and 2 are also configurable for 0–5 Vdc 10 bit A/D resolution. Binary input pulse frequency 10 pulses per second. Minimum pulse width (on or off time) required for each pulse is 50 msec
Outputs	**1 analog output:** 0 to 10VDC (5mA maximum) with 8 bit D/A resolution using filtered PWM. **3 binary outputs:** Relay contacts rated at 1A max @ 24VAC/VDC, configured normally open.
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 lasting no more than 10 msec.
Battery	10-year Lithium CR2032 battery provides a minimum of 10,000 hours of trend data retention during power outages
Status Indicators	LED status indicators for BACnet communication, run status, error, power, and all digital outputs
Controller Addressing	Rotary DIP switches set BACnet MS/TP or ARCNET address
Listed by	UL-916 (PAZX), cUL-916 (PAZX7), FCC Part15-Subpart B-Class A, CE EN50082-1997, UL94-5VA plenum rated enclosure
Environmental Operating Range	**Operating:** 32 to 130°F (0 to 54°C) 10 to 90% RH, non-condensing **Storage:** -24 to 140°F (-30 to 60°C) 0 to 90% RH, non-condensing
Power Requirements	24VAC ± 10%, 50-60Hz, 14 VA power consumption 26VDC (25V min, 30V max), Single Class 2 source only, 100 VA or less

Dimensions

Overall
A: 5.10" (12.95 cm)
B: 8.93" (22.68 cm)
C: 5.87" (14.90 cm)

Mounting
D: 7.00" (17.78 cm)
E: 4.89" (12.42 cm)
F: 1.04" (2.64 cm)
G: 1.46" (3.71 cm)
H: 2.55" (6.48 cm)
I: 0.58" (1.47 cm)



Depth: 2.5" (6.4 cm)
Weight: 1.8 lbs (0.82 kg)
Minimum Shaft Diameter: 3/8" (.95 cm)
Maximum Shaft Diameter: 1/2" (1.27 cm)
Minimum Shaft Length: 1-3/4" (4.45 cm)

Carrier
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For more information, contact your local Carrier Controls Expert.
Controls Expert Locator:
www.carrier.com/controls-experts

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