Carrier

TruVu

i-Vu® Building Automation System
TV-UCXP683T-V
Expandable Universal Controller

The TruVu™ Expandable Universal Controller is ideal for HVAC equipment control, advanced air quality control and most zone-level applications. The TV-UCXP683T-V features a built-in flow sensor, dual Ethernet ports with built-in fail-safe that supports direct connection or daisy chain topologies using BACnet/IP and 17 points of onboard control. Designed to operate in a wide range of environmental conditions, it is well suited for mechanical rooms, equipment boxes, or almost any other weather-tight location.

i Vu

Application Features

- Versatile controller suitable for a variety of applications, including: small AHUs, fan coils, exhaust fans
- Standard library of control programs available for most unitary equipment and zone applications
- Supports Snap graphical programming software
- Supports Carrier communicating sensors, which are available in a variety of zone and equipment sensing combinations
- Supports Carrier TruVu touchscreen interfaces for managing and troubleshooting the connected equipment easily and for occupant engagement
- Supports live, visual displays of control logic, which uses real time operational data and aids in optimizing and troubleshooting system operations
- Supports 50 Modbus points for system integrations

Hardware Features

- Dual 10/100 Mbps, BACnet IP and IP addressing
- Supports home run, daisy chain and ring IP network topologies
- Capacitor-backed real-time clock keeps time in the event of power failure or network interruption for at least three days
- Integral airflow sensor
- I/O expander bus supports two TV-UCXP IO Expanders
- USB port for local device updates, hard-wired, and wireless service connections
- DIN rail or screw mounting

System Features

- Connects seamlessly to the i-Vu building automation system

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TV-UCXP683T-V

Specifications

BACnet Comformance		Conforms to the BACnet Advanced Application Controller (B-AAC) and BACnet Broadcast Management Device (B-BBMD) standard device profiles, as defined in BACnet 135-2001 2012 Annex L Protocol Rev 14
Power		24Vac +/- 15% , 50 - 60Hz, 55VA | 24Vdc +/- 10%, 20W. (80VA / 35W if Act Net devices are connected)
Communication	BAS Primary port	Dual 10/100 BaseT Ethernet ports with built-in fail safe, supporting direct connection or daisy chain topology natively using BACnet/IP (non-routing)
	Serial port 1	RS-485 port for communication with third party devices (up to 50 points). Network at 9,600 to 115,200 bps.
	I/O Bus port	Supports up to two TV-UCXP I/O expanders
	Rnet port	12Vdc @ 260mA Supports the following: Up to 5 ZS sensors (freely mix ZS zone, ZS duct, ZS immersion and ZS outdoor sensors), iVu Equipment Touch, or TruVu ET Displays (external power required)
	Act Net port	Supports up to 5 Act Net communicating devices such as the i-Vu Smart Valves and Smart Damper Kit
	USB Service port	For TruVu ET Display support |configuration | wireless service access | firmware updates and controller recovery via USB drive | TruVu ET Displays
	USB Expansion port	For support of comm expansion devices (future)
Inputs	Universal	8 Universal Inputs configurable to any of the following: Dry | Pulse Counting |Thermistor | 0-10 Vdc
	Auxiliary Power	24Vdc @ 100mA total current capacity
Integral Airflow Sensor		Precision differential pressure sensor 0–2 in. H2O, sensitive down to ±0.001 in. H2O. Barbed tapered airflow connections accept 3/16 in. (4.75 mm) I.D. tubing. Allows for readings across the 0–2in. H2O range, accurate to ±5% of full flow at 2 in. H2O
Outputs	Universal output	1 Output selectable to 0–10 Vdc (20 mA max), 12 Vdc 80 Hz PWM, or (Dry Contact) Rated @24VAC 1 Amp
	Analog Output	2 Analog Outputs 10Vdc @ 20mA max (D/A Resolution 12 bits)
	Digital output	6 Digital outputs (Dry Contact) Rated @24Vac/Vdc 1 Amp. Configured normally open
Memory		4 GBs eMMC Flash memory and 256 MB DDR3 DRAM. User data is archived to non-volatile flash memory when parameters are changed, every 90 seconds
Real Time Clock		Real-time clock keeps track of time in the event of a power failure for at least 3 days
Compliance		**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.
Plastic Rating		Fire-retardant plastic ABS, UL94-5VA
Environmental		Operating Range: -22 to 158°F (-30 to 70°C), 10-95% RH, non-condensing Storage: -40 to 158°F (-40 to 70°C), 10-95% RH, non-condensing

Physical

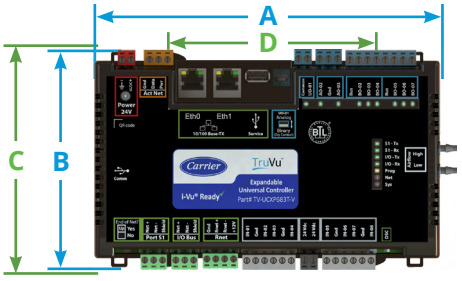
Minimum panel depth:
2.75 in. (7 cm)

Dimensions:
Overall

A: 7.785 in. (19.77 cm)
B: 4.89 in. (12.43 cm)
Depth: 2.00 in. (5.09 cm)
Weight: 1.6 lb. (0.82 kg)

Screw Mounting

C: 6.45 in (16.38 cm) (fully extended)
D: 4.5 in. (11.43 cm)



DIN rail or Screw mounting

supports up to two I/O expanders

TV-UCXPIO (future) | TV-UCXPIO (future)

For more information, contact your local Carrier Controls Expert.

Controls Expert Locator:
www.carrier.com/controls-experts