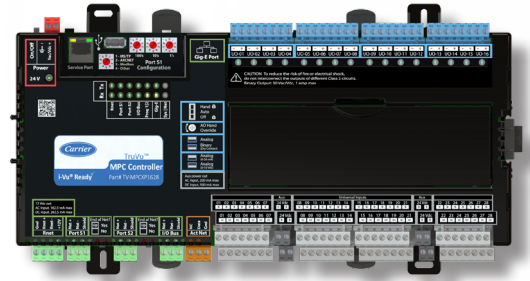




i-Vu® Building Automation System TruVu™ MPCXP1628 Controller

Part Numbers: TV-MPCXP1628, TV-MPCXP1628-NR

TruVu



The Carrier® TruVu™ MPCXP1628 controller provides multi-purpose monitoring and control for a variety of HVAC system applications. Flexible and versatile, it supports multiple I/O configurations for accomplishing both common and custom HVAC control strategies.



The TruVu MPCXP1628 controller features built-in routing and integration capabilities, 44 universal I/O points, and support for up to nine TruVu MPC I/O expansion modules for a total of 224 hardware control points.

The TruVu MPCXP1628-NR controller has the same features as the TruVu MPCXP1628, but does not support BACnet routing.

Application Features

- Comprehensive library of factory-engineered control programs available for complete air-side and water-side system control
- Graphically programmable using the Snap programming tool
- Supports Carrier communicating room sensors, which allow for local setpoint adjustment and local overrides

Hardware Features

- Gig-E 1000 Mbps Ethernet port supports BACnet/IP, Modbus TCP/IP and DHCP addressing
- Local access 10/100 Ethernet port for system startup and troubleshooting
- Real-time clock keeps time in the event of power failure for up to 3 days without batteries
- Capable of system or stand-alone operation
- Can be din-rail or screw mounted
- Supports up to 9 TruVu MPC I/O expanders (any combination of TV-MPCXP1048, TV-MPCXP10812 or TV-MPCXP10012)
- Act Net bus supports up to 16 communicating i-Vu smart valves

System Benefits

- Fully plug-and-play with the Carrier i-Vu building automation system
- Supports demand limiting and optimal start for maximum energy savings
- Supports up to 1,500 third-party BACnet points and up to 200 Modbus points for system integration

BACnet Features

- Conforms to the BACnet Building Controller (B-BC), BACnet Router (B-RTR, not applicable to -NR version), and BACnet BBMD (B-BBMD), standard device profiles
- Supports BACnet interoperability and routing with and between BACnet/IP, and BACnet MS/TP
- Can serve as a BACnet Broadcast Management Device (BBMD)
- Supports BACnet Foreign Device Registration (FDR)

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Specifications

BACnet Support	Conforms to the BACnet Building Controller (B-BC), BACnet Router (B-RTR, not applicable to -NR version), and BACnet BBMD (B-BBMD) device profiles as defined in in BACnet 135-2012 Annex L Protocol Revision 14
Communication Ports	Gig-E: 10/100/1000 BaseT Ethernet port for BACnet/IP and/or BACnet/Ethernet and/or Modbus TCP/IP communication S1 MSTP: High-speed EIA-485 port with End of Net switch for connecting one of the following: • BACnet MS/TP network at 9600 to 115.2 kbps • Modbus RTU at 9600 to 115.2 kbps S2 MSTP: Electrically isolated EIA-485 port with End of Net switch for connecting one of the following: • BACnet MS/TP network at 9600 to 115.2 kbps or Modbus RTU at 9600 to 115.2 kbps Service: 10/100 Base T Ethernet port for system start-up and troubleshooting and for connecting to TruVu EQT2 touch screens IO Bus port: Provides communication for wired TruVu MPC I/O expanders IO Bus edge connector: 6-pin connector that provides communication and power to a directly-connected TruVu MPC I/O expander ActNet: Communication port for connecting up to 16 smart actuators / valves Rnet: For connecting Carrier communicating room sensors and Carrier's touchscreen user interface
Third Party Integration	Supports up to 1,500 third-party BACnet points and 200 Modbus points (memory dependent).
Physical	Fire-retardant plastic ABS, UL94-5VA
Universal Inputs	16 Bit A/D with 28 channels electronically configured to any of the following input types: Dry Contact OR Pulse Counting inputs up to 60Hz OR Voltage (0-10 Vdc) OR Current (0-20 mA) OR Thermistor (Precon Type II 10kΩ OR Precon Type III 10kΩ OR Carrier YSI 5kΩ OR S-5700-850 10kΩ w/ 11kΩ shunt) OR RTD (Platinum RTD TS-8000 1kΩ @ 32°F (0.00385 TCR) OR Platinum RTD 1kΩ @ 32°F (0.00375 TCR) OR Nickel-iron RTD 1kΩ @ 70°F, 699 Ω @ -40°F OR Balco (Nickel-iron) TS8000 RTD 1kΩ @ 70°F, 779 Ω @ -40°F) 24VDC auxiliary sensor power: 200mA max. (AC power input) 500 mA max. (DC power input)
Universal Outputs	D/A Resolution (analog out) 12 bits; 16 channels configurable to any of the following output types: Voltage (0-10 Vdc) OR Current (0-20 mA) OR Relay contacts , potential free, normally open, rated 24VAC/DC @ 1 Amp (resistive) Hand/Auto/Off override switches for all outputs, Potentiometer for manual adjustment of all analog outputs, Status LED for all outputs
Protection	Two fast acting, 5mm x 20mm glass fuses: • A 2.5A fuse for the TV-MPCXP1628's power • A 4A fuse for the I/O bus edge connector The power and network ports comply with the EMC requirements EN50491-5-2.
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 and RoHS for Electrical and Electronic Equipment 2012.
Real Time Clock	Real-time clock keeps track of time in the event of a power failure for up to 3 days.
Environmental Operating Range	Operating: -40 to 158°F (-40 to 70°C) 10 to 95% RH, non-condensing
Power Requirements	24VAC ± 15%, 50-60Hz; 100 VA power consumption; 24VDC ± 10% 48W; Single Class 2 source only, 100 VA or less
Dimensions	Overall: Length: 12.75 in. (32.38 cm) Width: 6.95 in. (17.68 cm) Depth: 2.09 in. (5.31 cm) Mounting: DIN rail or screw Weight: 2.80 lbs (1.3 kg)

