

# OPTICORE™ SS-683ETX Small Application Controller

The OEMCtrl OptiCORE™ SS-683ETX is a high-performance, BACnet native expandable direct digital controller (DDC). It provides speed, power, memory, and I/O flexibility in a compact package. The SS-683ETX is targeted for controlling HVAC equipment with small I/O point counts. Made with integration in mind, the SS-683ETX can integrate with building automation systems via BACnet (IP or MSTP) or Modbus (IP or serial). The dual IP ports provide the ability to take advantage of a daisy-chain topology. It also allows for connecting to communicating devices like VFDs via BACnet or Modbus.

## Key Features and Benefits

### Performance / Hardware

- Built-in End of Network switch for easy configuration on a BAS network
- Flexible, color-coded and easy to wire I/O
- Program and historical data stored in non-volatile memory, eliminating the need for batteries

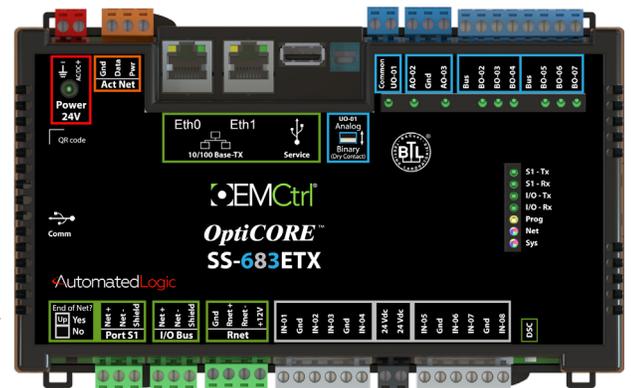
### Communication Features:

- 3 Configurable Communication Ports
  - Eth0 & Eth1: Daisy Chain 10/100 Base T Ethernet Ports for BACnet or Modbus communication, includes DHCP addressing
  - Port S1: EIA-485 for serial BACnet or Modbus BAS connection or for Modbus to a 3rd-party device (up to 300 points)
- 4 Dedicated Communication Ports
  - I/O Bus Port: EIA-485 dedicated for I/O Bus protocol
  - Service Port: USB-A for technician access or EQT2 touchscreen connection
  - Rnet: For the ZS communicating sensors or EQT2 touchscreen connection
  - USB Comm Expansion Edge Connector Port: For comm expansion

### Service & Usability Features:

- Fully programmable using our powerful EIKON® graphical programming tool
- Flexible site-specific archiving supported allowing for restore points to be created with a variety of ways to trigger the restore point and recover to that archive
- Unique permissions framework provides protection for intellectual property (IP) while allowing for seamless connection of controllers to the WebCTRL® (Automated Logic) or i-Vu® (Carrier) building automation systems
- Existing control programs are easily converted and supported in the new hardware

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## Modbus

Support for EQT2 touchscreens



## EQT2-7

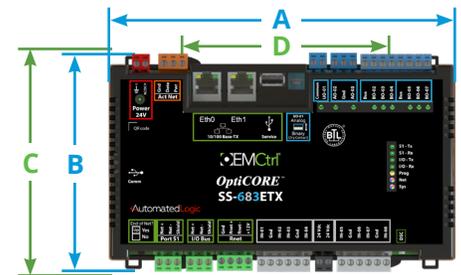
I/O Expander (future)

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# Specifications

Power	24 Vac / 24 Vdc $\pm$ 10%, 50-60 Hz, 55 VA / 20 W, single Class 2 source only
Operating Range	-40° to 158° F (-40° to 70° C); 10 to 95% relative humidity, non-condensing
Universal Inputs (8) (Software selectable)	8 Universal Inputs electronically configurable to any of the following types: Dry   Pulse Counting   Thermistor   0-10 Vdc @ 20mA  <b>24VDC auxiliary sensor power (2):</b> 24Vdc @ 100mA total current capacity
Outputs (9)	<b>1 Universal Output</b> selectable to 0-10 Vdc (5 mA max), PWM, or Dry Contact Rated @24VAC 1Amp <b>2 Analog Outputs</b> 10Vdc @ 20mA max ( D/A Resolution 12 bits ) <b>6 Digital Outputs</b> (Dry Contact) Rated @24VAC 1 Amp. Configured normally open Status LED for all outputs
Communication Ports	<b>Eth0 &amp; Eth1:</b> Dual 10/100 BaseT Ethernet ports for BACnet/IP or Modbus IP communications. Includes built-in fail safe and supports direct connection or daisy chain topology natively using BACnet/IP <b>Port S1:</b> High-speed EIA-485 port with End of Net switch. Configurable through browser as BAS connection or for 3rd-party device connection (Modbus only, up to 300 points). • BACnet MS/TP or Modbus RTU network at 9.6, 19.2, 38.4, 57.6, 76.8, or 115.2 kbps (supports automatic baud-rate configuration for BAS) <b>I/O Bus Port:</b> Electrically isolated EIA-485 port dedicated for I/O Bus protocol <b>USB Service port:</b> USB-A port for technician use and local EQT displays. Also supports connection of USB Flash drive for device recovery and USB Wireless Service Adapter <b>Rnet port:</b> Communicate with ZS communicating sensors and local EQT displays <b>USB Expansion port:</b> For communication expansion modules
Real Time Clock	Real-time clock keeps track of time in the event of a power failure for up to 3 days
Protection	Fast acting, 3A, 250VAC, 5mm x 20mm glass fuse to protect controller power input
Microprocessor / Memory	32-bit ARM Cortex-A8, 600MHz, processor with multi-level cache memory / 16 GBs eMMC Flash memory and 256 MB DDR3 DRAM
Compliance/Listing	<b>BACnet:</b> Conforms to the BACnet Advanced Application Controller (B-AAC) Standard Device, as defined in BACnet 135-2001 2012 Annex L and tested to Protocol Revision 14 <b>United States:</b> FCC compliant to Title CFR47, Part 15, Subpart B, Class A; UL Listed, File E143900; CCN PAZX, UL 916, Energy Management Equipment; <b>ANZ:</b> RCM Mark AS/NZS 61000-6-3; <b>Canada:</b> UL Listed File E143900, CCN PAZX7, CAN/CSA C22.2 No. 205 Signal Equip., Industry Canada Compliant ICES-003, Class A; <b>CE Mark</b> Compliant with 2014/30/EU, and <b>RoHS</b> Compliant: 2015/863/EU; <b>UKCA Mark</b> compliant with Electromagnetic Compatibility Regulations 2016 – Gov.UK and RoHS for Electrical and Electronic Equipment 2012.
Physical	DIN rail or Screw mounting Minimum panel depth: 2.75 in. (7 cm) QR code on label to provide technician with access to MAC address, serial number and technical documentation  <b>Dimensions Overall</b> <b>A:</b> 7.785 in. (19.77 cm) <b>B:</b> 4.89 in. (12.43 cm) <b>Depth:</b> 2.00 in. (5.09 cm) <b>Weight:</b> 1.6 lb. (0.82 kg)  <b>Screw Mounting</b> <b>C:</b> 6.45 in (16.38 cm) (fully extended) <b>D:</b> 4.5 in. (11.43 cm)



Fire-retardant plastic ABS, UL94-5VA

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