

OPTIFLEX™ OFBBC-A

BACNET BUILDING CONTROLLER AND ROUTER



BACNET BUILDING CONTROLLER AND ROUTER

The OFBBC provides the speed, power, memory, and I/O flexibility needed for the most demanding control applications in the industry. Capable of controlling multiple pieces of HVAC equipment simultaneously, this robust BACnet controller can support complex control strategies.

KEY FEATURES AND BENEFITS

Application Features

- Designed to address HVAC applications including complex central plants
- Graphically programmed through the EIKON® programming software, an object oriented tool that provides complete flexibility for any custom control sequence
- Supports Automated Logic's ZS communicating sensors, available in a variety of zone and equipment sensing options
- Enables live, visual displays of control logic, which uses real time operational data and aids in optimizing and troubleshooting system operations

BACnet Features

- Conforms to the following device profiles: BACnet Building Controller (B-BC); BACnet BBMD (B-BBMD); BACnet Router (B-RTR)
- Supports BACnet Foreign Device Registration (FDR)
- Supports BACnet interoperability and routing with and between BACnet IP, BACnet MS/TP and BACnet over ARC156

System Benefits

- Connects seamlessly to the [WebCTRL® building automation system](#)
- Multiple serial communication ports to simultaneously route and share data across a wide range of building subsystems

Hardware Features

- Supports Gig-E, 1000 Mbps, BACnet IP and DHCP IP addressing
- Local Access Ethernet port at 100 Mbps for system start-up and troubleshooting
- Supports up to 9 FIO expanders in panel configuration or remotely mounted for scalable solutions (180 I/O total)
- Provides direct connect for power and communication for up to 7 FIO expansion modules when using a DC power supply
- All programs and historical data stored in non-volatile memory, eliminating the need for batteries
- Capacitor-backed real-time clock keeps time in the event of power failure or network interruption for up to three days
- Communications expansion port for future communication option cards
- Supports 200 Modbus points for system integrations
- USB port for local device updates
- DIN rail or screw mounting



The WebCTRL building automation system gives you the ability to understand your building operations and analyze the results. Integrate environmental, energy, security and safety systems into one powerful management tool that helps you reduce energy consumption, increase occupant comfort, and achieve sustainable building operations.

SPECIFICATIONS

Part #	OFBBC-A OptiFlex BACnet Building Controller and Router
BACnet Conformance	Conforms to the BACnet Building Controller (B-BC), BACnet Router (B-RTR), and BACnet Broadcast Management Device (B-BBMD) profiles as defined in Annex L of the BACnet standard. The device is certified to the BACnet standard ISO 16484-5 protocol revision 1.15 and protocol revision 15 (135). The product supports multiple data link layers including BACnet/IP (Annex J), MS/TP, Ethernet, and ARCNET (see BTL listing page https://www.bacnetinternational.net/btl/index.php?m=11 for details).
Control Program Execution	Maximum number of control programs: 999 depending upon available memory.
BACnet Objects	Maximum number of BACnet objects: 12,000 depending upon available memory.
Third-Party Integration	Supports up to 1,500 third-party BACnet points, and 200 Modbus points depending upon available memory.
Power	24 Vac $\pm 10\%$, 50-60 Hz, 50 VA 26 Vdc $\pm 10\%$, 15 W
Communication	
Gig-E Port	10/100/1000 BaseT, full duplex Ethernet port for BACnet/IP and/or BACnet/Ethernet and/or Modbus TCP/IP communication
Serial Port 1	For communication with either of the following: <ul style="list-style-type: none">• A BACnet ARCnet network at 156 kbps• A BACnet MS/TP network at 9,600 to 115,200 bps• A Modbus serial network at 9,600 to 115,200 bps
Serial Port 2	For communication with either of the following: <ul style="list-style-type: none">• A BACnet MS/TP network at 9,600 to 115,200 bps• A Modbus serial network at 9,600 to 115,200 bps
Service Port	Ethernet port at 10 or 100 Mbps for system start-up and troubleshooting
Rnet Port	Supports Up to 15 ZS wireless and/or ZS sensors, and one Equipment Touch or OptiPoint™ interface
XNet Port	Supports up to 6 MEx expanders powered by an external power supply
I/O Bus Port	Supports up to 9 FIO expanders and/or 6 MEx expanders, but no more than 9 expanders total
Microprocessor	32-bit ARM Cortex-A8, 600 MHz, processor with multi-level cache memory, two Ethernet controllers, and USB 2.0 host port
Memory	8 GBs eMMC Flash memory and 512 MB DDR3 DRAM (22 MB available to use). User data is archived to non-volatile Flash memory when parameters are changed, every 90 seconds, and when the firmware is deliberately restarted. NOTE: When you change a parameter, you must wait 30 seconds before turning the power off, in order for the change to be saved.
Environmental Range	-40°F to 158°F (-40 to 70°C), 10-95% relative humidity, non-condensing. Install in a UL listed enclosure only.
Real Time Clock	Real-time clock keeps track of time in the event of a power failure for up to 3 days
Protection	Device is protected by 2 fast acting 2A, 5 mm x 20 mm glass fuses The power and network ports comply with the EMC requirements EN50491-5-2
Compliance	United States: FCC compliant to Title CFR47, Chapter 1, Subchapter A, Part 15, Subpart B, Class A. UL Listed, File E143900; CCN PAZX, UL916, Energy Management Equipment, AS/NZS: RCM Mark IEC 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, REACH compliant
Enclosure	Fire-retardant plastic ABS, UL94-5VA
Mounting	35mm DIN rail mounting or screw mounting

Figure 1: Physical Dimensions

