



## Automation Engine: Controller (eBCON)

### Description

The enteliBUS Controller (eBCON) is a fully programmable native BACnet® Building Controller. The Controller supports multiple communications methods including, as standard, BACnet/IP, BACnet over Ethernet, BACnet MS/TP and Delta LINKnet.

The Controller integrates the functions of the enteliBUS Manager and the enteliBUS Expander into a single compact module. This single module contains the primary CPU, memory storage, external communication ports, and direct I/O control for up to 4 enteliBUS I/O Modules.

The eBCON comes bundled with a backplane that holds up to 4 I/O modules. A connector on the backplane allows you to connect up to 8 backplanes (and associated I/O modules), all of which can be controlled from a single eBCON.



### Application

Used together with enteliBUS I/O modules, the eBCON is a small footprint controller perfect for applications with limited mounting space. It can be expanded with additional backplanes/modules for high density I/O applications.

The eBCON can also be used as an intelligent controller for a Delta access control system. The eBCON contains enough memory to hold 50,000 card user database, and can manage up to 24 single- direction doors when used with 12 ADM-2W704 controllers.

### Features

- ▶ Native BACnet firmware
- ▶ Fully programmable in GCL+
- ▶ BACnet Ethernet, BACnet/IP, and BACnet MS/TP communication ports
- ▶ Modular, expandable I/O
- ▶ Advanced fault detection & diagnostics
- ▶ SD card memory expansion
- ▶ Firmware upgrade & database load/save over the network
- ▶ LED status indications of power/scan and communication ports
- ▶ Small footprint, DIN rail mountable
- ▶ Modular design provides flexibility, ease of service, and reduced cost for future upgrades

### Specifications

#### BACnet Device Profile

BACnet Building Controller (B-BC)

#### Mounting

Backplane: Snap mounts to standard 35mm DIN rail  
eBCON: Snap mounts to Backplane & DIN rail assembly

#### Device Type/Addressing

Software addressed

#### Connectors

Removable screw-type terminal connectors

#### Wiring Class

Class 2 / SELV

#### Power

24 VAC 50/60 Hz @ 6 VA, 100 VA max with fully loaded I/O modules\*

\*eBCON supplies power for up to 4 I/O modules via the Controller backplane

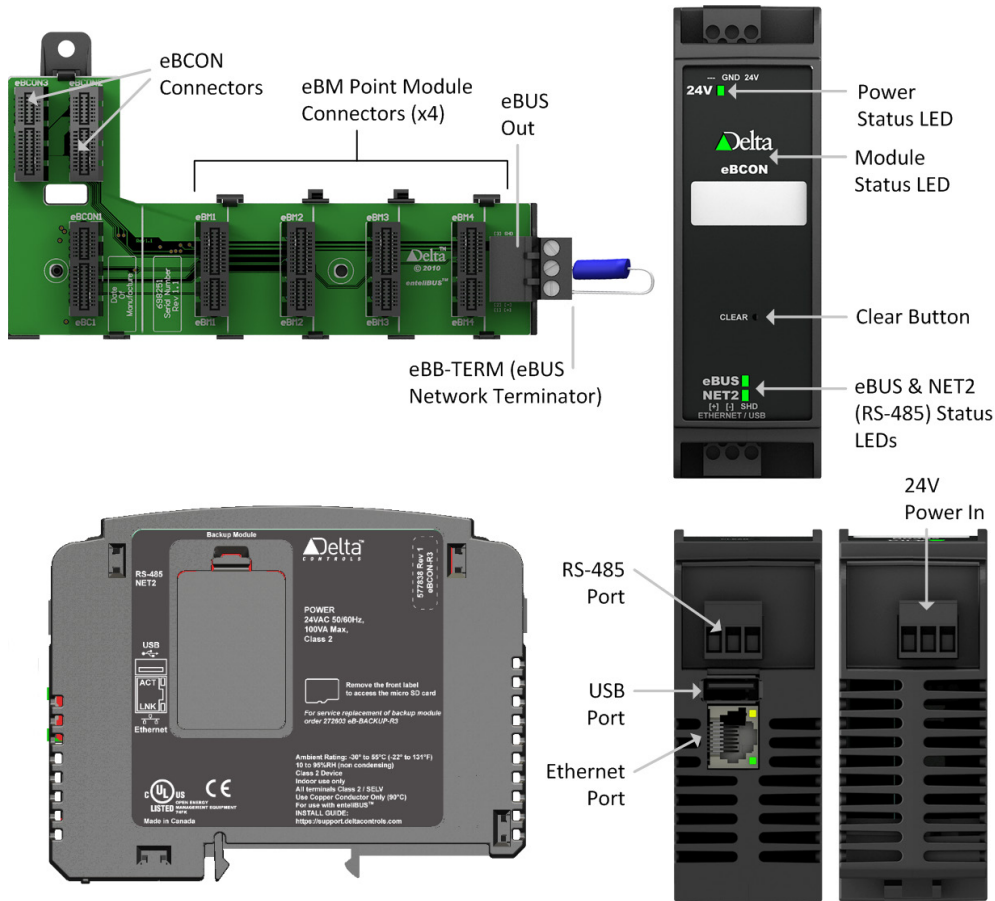
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# enteliBUS®

## eBCON: Layout



## Specifications (Continued)

### Technology

ARM9 32-bit RISC CPU  
 64 MB Flash memory  
 32 MB SDRAM memory  
 SD/SDIO card slot for memory expansion  
 Real-time clock (temperature compensated)  
 Ultracap power backup for RTC and memory

### Communication Ports

Ethernet (10/100-BaseT)  
 BACnet/IP, BACnet over Ethernet

### RS-485 Port supporting:

BACnet MS/TP up to 76800 bps, max 99 devices per port

Delta LINKnet up to 76800 bps, max 12 devices on LINKnet with no more than 2 DFM devices

### USB Host Port

### Ambient

-30° to 55°C (-22° to 131°F)  
 0° to 55°C (32° to 131°F) for UL 864 product numbers  
 10 to 95% RH (non-condensing)

### Dimensions

12.6 x 14.5 x 10.0 cm  
 (5.0 x 5.7 x 4.0 in.)\*\*

\*\*Dimensions given are for eBCON package with Controller backplane

### Weight

372 g (0.820 lb)

### Enclosure Protection Rating

IP30

### Compliance

CE  
 FCC  
 EAC

### Listings

UL 916 Listed  
 UL 864 Listed for UL 864 product numbers  
 BTL Listed



Subject to change without notice.

## Ordering

Order the eBCON according the following product number:

eBCON	enteliBUS Controller w/ 4-slot Controller backplane
eBCON-UL864-340	enteliBUS Controller w/ 4-slot Controller backplane, UL 864 Listed

## Accessories

See online ordering for a complete list of all enteliBUS modules and accessories.

eBX-04	enteliBUS expander—I/O expander with 4-slot expander backplane†
eBX-08	enteliBUS expander—I/O expander with 8-slot expander backplane†
eBM-D400R4	enteliBUS I/O module with 4 digital inputs and 4 relay outputs
eBM-D800	enteliBUS I/O module with 8 digital inputs†
eBM-404	enteliBUS I/O Module with 4 universal inputs and 4 24 VAC TRIAC outputs†
eBM-440	enteliBUS I/O module with 4 universal inputs and 4 0-10 VDC outputs†
eBM-440-M	enteliBUS I/O module with 4 universal inputs, 4 0-10 VDC outputs with 3 position (HAO) override switches and 0 to 100% override adjust levers†
eBM-800	enteliBUS I/O module with 8 universal inputs†



† UL 864 versions available

## Complementary System Components Ordering


Delta Controls carries a full suite of complementary products utilizing our bulk buying power to give you one stop shopping convenience at lower costs. Below are some popular peripheral components related to enteliBUS applications.

See the Delta Controls Online Ordering web site for a complete list of Delta's IT, electrical, HVAC, access and lighting accessories.


### Power Supply

24VDC Power Supplies	Model Number (with hyperlinks)	Description
	DRC-24V10W1AZ	10W power supply, 86-265VAC In, 24VDC Out, thermal and overload protection
	DRC-24V30W1AZ	30W power supply, 86-265VAC In, 24VDC Out, thermal and overload protection
	DRC-24V60W1AZ	60W power supply, 86-265VAC In, 24VDC Out, thermal and overload protection
	DRC-24V100W1AZ	100W power supply, 86-265VAC In, 24VDC Out, thermal and overload protection
24VAC Transformers	Model Number (with hyperlinks)	Description
	TR50VA004	50VA transformer 480/277/240/120 to 24VAC dual hub, circuit breaker
	TR50VA005	50VA transformer, 120-24V, single hub, circuit breaker
	TR100VA002	100VA transformer, 120-24V, dual hub, circuit breaker
	PSH500A	Enclosed 5x100VA 120/240 to 24VAC UL Class II power supply


### Networking

Unmanaged Industrial Ethernet Switches	Model Number (with hyperlinks)	Description
	DVS-005I00	5 port fast ethernet switch
	DVS-005W01-MC01	4 port fast ethernet switch, + 1 SC Fiber Port (for long distance runs)
	DVS-008I00	8 port fast ethernet switch
	DVS-008W01-MC01	7 port fast ethernet switch, + 1 SC Fiber Port (for long distance runs)


### Variable-Frequency Drives (VFDs)


Variable-Frequency Drives	Model Number (with hyperlink)	Description
	CP2000 Series	<p>CP2000 Fan/Pump Series VFDs are available in multiple sizes and voltages with built-in EMC filtering and bypass/disconnect option to fit a wide range of application needs.</p> <p>BACnet MS/TP and Modbus RTU communications are standard features, with optional upgrade to a built-in Delta dual port Ethernet, fully programmable BACnet controller.</p> <p>Build and price your VFD at <a href="http://vfd.deltacontrols.com">vfd.deltacontrols.com</a>.</p>

## Relays


Relays	Model Number (with hyperlinks)	Description
	<a href="#">34.244.0011.0</a>	SPDT Relay 12VDC coil, 10A @ 240VAC contact (replaces 430200/M15)
	<a href="#">34.244.0012.0</a>	SPDT Relay 24VAC coil, 10A @ 240VAC contact (replaces 430210)
	<a href="#">RIBU1C</a>	SPDT Enclosed Relay 10-30VAC/DC/120VAC coil, 10A @ 277VAC contact
	<a href="#">FKIT-VMD1B-F24A</a>	SPDT Relay 24VAC coil, 15A @ 277VAC contact

## Sensors


Current Sensors and Switches	Model Number (with hyperlinks)	Description
	<a href="#">H608</a>	1.25-50A Current Switch, Adjustable Trip Point, Standard Output, Split Core, N.O
	<a href="#">H600</a>	0.15-200A Current Switch, Fixed Trip Point, Split Core, N.O
	<a href="#">RIBXKTV5-10</a>	0-10A Enclosed solid-core current to voltage transducer
	<a href="#">RIBXKTV5-20</a>	0-20A Enclosed solid-core current to voltage transducer

Temperature Sensors	Model Number (with hyperlinks)	Description
	<a href="#">BA/10K-3-D-4-NB-5</a>	4" Duct temp sensor, stainless steel probe, no junction box, 5' lead length
	<a href="#">BA/10K-3-D-8-BBX</a>	8" Duct temp sensor, stainless steel probe, BBX enclosure
	<a href="#">BA/10K-2-A-24</a>	24' Duct averaging temp sensor, steel J-Box enclosure
	<a href="#">BA/10K-3-I-4-BB4-MB</a>	Immersion temp sensor, w/machined brass well, 4" SS probe, BB4 encl
	<a href="#">BA/10K-3-SP</a>	Wall plate temp sensor, plain, stainless steel, single gang

## Wire

Wire	Model Number (with hyperlinks)	Description
	<a href="#">002360</a>	18 AWG-2C non-shielded plenum wire
	<a href="#">002380</a>	18 AWG-4C non-shielded plenum wire
	<a href="#">043260</a>	22 AWG-2C non-shielded plenum wire
	<a href="#">042002</a>	24 AWG-1P RS-485 low cap shielded plenum wire

## Valves and Actuators

Valves and Actuators	Description
	Delta Controls carries a full line of valves, actuators and associated accessories. Available products cover a variety of applications, from small zone valves to large central plants. See the Delta Controls Online Ordering web site for more details.