



Protocol Implementation Conformance Statement

Cylon BACnet Unitary Controller

Date	June 2009
Vendor Name	Cylon Controls
Product Name:	Cylon BACnet Unitary Controller
Product Model Number:	CBTxx, CBT12iVAV, UCU10FC BACnet, UCU10FC BACnet 10k, UCU10VAV BACnet, UCU10VAV BACnet 10k, UCU12 BACnet, UCU12 BACnet 10k, UCU8 BACnet, UCU8 BACnet 10k, UCU8FC BACnet, UCU8FC BACnet 10k, UCU10FC/K BACnet, UCU10FC/K BACnet 10k
Firmware Revision:	4.1.6
BACnet Protocol Revision:	4

Product Description

The CBT BACnet Unitary Controller is part of the Cylon BACnet system. The Controller can operate stand-alone or can be networked to perform complex Unitary HVAC control, monitoring and energy management functions via BACnet MS/TP.

BACnet Standardised Device Profile (Annex L)

- BACnet Operator Workstation (B-AWS)
- BACnet Operator Workstation (B-OWS)
- BACnet Building Controller (B-BC)
- BACnet Advanced Application Controller (B-AAC)
- BACnet Application Specific Controller (B-ASC)
- BACnet Smart Sensor (B-SS)
- BACnet Smart Actuator (B-SA)
- BACnet Other (B-OTHER)

BACnet Interoperability Building Blocks Supported (Annex K)

ID	BIBB	Application Service
K.1.2	DS-RP-B	Data Sharing – ReadProperty-B
K.1.4	DS-RPM-B	Data Sharing – ReadPropertyMultiple-B
K.1.8	DS-WP-B	Data Sharing – WriteProperty-B
K.1.10	DS-WPM-B	Data Sharing – WritePropertyMultiple-B
K.5.2	DM-DDB-B	Device Management – Dynamic Device Binding-B
K.5.4	DM-DOB-B	Device Management – Dynamic Object Binding-B
K.5.6	DM-DCC-B	Device Management – Device Communication Control-B



Segmentation Capability

- Able to transmit segmented messages
- Able to receive segmented messages

Window Size: N/A

Window Size: N/A

Standard Object Types Supported

- access-door
- accumulator
- analog-input
- analog-output
- analog-value
- averaging
- binary-input
- binary-output
- binary-value
- calendar
- command
- device
- event-enrollment
- event-log
- file
- group
- life-safety-point
- life-safety-zone
- load-control
- loop
- multi-state-input
- multi-state-output
- multi-state-value
- notification-class
- program
- pulse-converter
- schedule
- structured-view
- trend-log
- trend-log-multiple

For all of these objects the following apply:

1. The `CreateObject` and `DeleteObject` services are not supported, so no objects are dynamically creatable or deletable through BACnet service requests, although these objects are dynamically creatable and deletable through Cylon's Engineering Center Software.
2. Unitron Outputs are presented as BACnet Value Objects - Analog or Binary depending on how the output is set up. These are read only.
3. Unitron Virtual Points (analog and digital) are read-only on the BACnet side. Unitron setpoints (analog and digital) can be read and written to on the BACnet side.
4. Unitron Analog Values (points) use IEEE 32-bit Floats.
5. No general range restrictions exist.
6. Not all instances support optional properties (see tables below).

For each of these objects, the supported properties are listed below:

analog-input

Dynamically Creatable

Dynamically Deletable

Property	Read	Write	optional
object-identifier	<input checked="" type="checkbox"/>		
object-name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
object-type	<input checked="" type="checkbox"/>		
present-value	<input checked="" type="checkbox"/>		
status-flags	<input checked="" type="checkbox"/>		
event-state	<input checked="" type="checkbox"/>		
out-of-service	<input checked="" type="checkbox"/>		
units	<input checked="" type="checkbox"/>		

analog-value

Dynamically Creatable

Dynamically Deletable

Property	Read	Write	optional
object-identifier	<input checked="" type="checkbox"/>		
object-name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
object-type	<input checked="" type="checkbox"/>		
present-value	<input checked="" type="checkbox"/>		
status-flags	<input checked="" type="checkbox"/>		
event-state	<input checked="" type="checkbox"/>		
out-of-service	<input checked="" type="checkbox"/>		
units	<input checked="" type="checkbox"/>		

binary-input

Dynamically Creatable

Dynamically Deletable

Property	Read	Write	optional
object-identifier	<input checked="" type="checkbox"/>		
object-name	<input checked="" type="checkbox"/>		
object-type	<input checked="" type="checkbox"/>		
present-value	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
status-flags	<input checked="" type="checkbox"/>		
event-state	<input checked="" type="checkbox"/>		
out-of-service	<input checked="" type="checkbox"/>		
polarity	<input checked="" type="checkbox"/>		
inactive-text	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
active-text	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>

binary-value Dynamically Creatable Dynamically Deletable

Property	Read	Write	optional
object-identifier	<input checked="" type="checkbox"/>		
object-name	<input checked="" type="checkbox"/>		
object-type	<input checked="" type="checkbox"/>		
present-value	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
status-flags	<input checked="" type="checkbox"/>		
event-state	<input checked="" type="checkbox"/>		
out-of-service	<input checked="" type="checkbox"/>		
inactive-text	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
active-text	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>

device Dynamically Creatable Dynamically Deletable

Property	Read	Write	optional	Notes
object-identifier	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Set up using Cylon software.
object-name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Set up using Cylon software.
object-type	<input checked="" type="checkbox"/>			
system-status	<input checked="" type="checkbox"/>			OPERATIONAL if strategy is servicing, otherwise NONOPERATIONAL
vendor-name	<input checked="" type="checkbox"/>			Cylon Controls Ltd.
vendor-identifier	<input checked="" type="checkbox"/>			171
model-name	<input checked="" type="checkbox"/>			UCU10FC BACnet
firmware-revision	<input checked="" type="checkbox"/>			
application-software-version	<input checked="" type="checkbox"/>			
protocol-version	<input checked="" type="checkbox"/>			1
protocol-revision	<input checked="" type="checkbox"/>			4
protocol-services-supported	<input checked="" type="checkbox"/>			
protocol-object-types-supported	<input checked="" type="checkbox"/>			
object-list	<input checked="" type="checkbox"/>			Configured using Cylon software.
max-apdu-length-accepted	<input checked="" type="checkbox"/>			480
segmentation-supported	<input checked="" type="checkbox"/>			No
apdu-timeout	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	6000 configured using Cylon software.
number-of-apdu-retries	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		0
max-master	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1-127 set up using Cylon software.
max-info-frames	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1
device-address-binding	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
database-revision	<input checked="" type="checkbox"/>			Auto set up using Cylon software.

Data Link Layer Options:

- BACnet IP, (Annex J)
- BACnet IP, (Annex J), Foreign Device
- ISO 8802-3, Ethernet (Clause 7)
- ATA 878.1, 2.5 Mb. ARCNET (Clause 8)
- ATA 878.1, EIA-485 ARCNET (Clause 8), baud rate(s) : N/A
- MS/TP master (Clause 9)**, baud rate(s): **9600, 19200, 38400**
- MS/TP slave (Clause 9), baud rate(s): N/A
- Point-To-Point, EIA 232 (Clause 10), baud rate(s): N/A
- Point-To-Point, modem, (Clause 10), baud rate(s): N/A
- LonTalk, (Clause 11), medium: N/A
- Other: N/A

Device Address Binding:

Is static device binding supported? Yes No

(This is currently necessary for two-way communication with MS/TP slaves and certain other devices.)

Networking Options:

- Router, Clause 6 - IP, MS/TP, Ethernet
- Annex H, BACnet Tunneling Router over IP
- BACnet/IP Broadcast Management Device (BBMD)
 - Does the BBMD support registrations by Foreign Devices? Yes No

Character Sets Supported:

Indicating support for multiple character sets does not imply that they can all be supported simultaneously.

- | | | |
|--|---|-------------------------------------|
| <input checked="" type="checkbox"/> ANSI X3.4. | <input type="checkbox"/> IBM™/Microsoft™ DBCS | <input type="checkbox"/> ISO 8859-1 |
| <input type="checkbox"/> ISO 10646 (UCS-2) | <input type="checkbox"/> ISO 10646 (UCS-4) | <input type="checkbox"/> JIS C 6226 |

If this product is a communication gateway, describe the types of non-BACnet equipment/networks(s) that the gateway supports:

N/A