



# CETCI BACnet® Module for the FCS-B Flexible Control System Controller QCC-B Quad Channel Controller LPT-B BACnet® Transmitter

2017.08

[www.critical-environment.com](http://www.critical-environment.com)



Critical Environment Technologies Canada Inc. (CETCI) has been granted the BACnet® Testing Laboratories (BTL) certification for the CETCI BACnet® Module upon passing the BTL requirements for the BACnet® Smart Actuator (B-SA) designation.

This document contains the BACnet® Protocol Implementation Conformance Statement (PICS) information that can also be found on the BACnet® International website at <http://www.bacnetinternational.org>

If you have any questions or required assistance, please do not hesitate to contact our service department for technical support.

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**Date:** June 2016

**Vendor Name:** Critical Environment Technologies Canada Inc.

**Product Name:** CETCI BACnet® Module for QCC-B, FCS-B, LPT-P-B and LPT-B

**Product Model Numbers:** QCC-B, FCS-B, LPT-P-B, LPT-B

**Application Software Version:** 1.12

**Firmware Revision:** 1.00.81

**BACnet® Protocol Version/Revision:** 14

### Product Description:

The CETCI BACnet® Module is a microprocessor intended to plug into CETCI's FCS Flexible Control System Controller, QCC Quad Channel Controller and the LPT-B BACnet® Transmitter to facilitate BACnet® communications protocol between the device and a building automation system commonly used in HVACr applications.

### BACnet® Standardized Device Profile (Annex L):

- 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)

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### List all BACnet® Interoperability Building Blocks Supported (Annex K):

| BIBB     | Service                         | Responds to |
|----------|---------------------------------|-------------|
| DS-RP-B  | ReadProperty-B                  | X           |
| DS-WP-B  | WriteProperty-B                 | X           |
| DM-DDB-B | Dynamic Object Device Binding-B | X           |
| DM-DOB-B | Dynamic Object Binding-B        | X           |
| DM-DCC-B | DeviceCommunicationControl-B    | X           |
| DM-RD-B  | ReinitializeDevice-B            | X           |

### Segment Capability:

Segment requests supported

Window Size 480

Segment requests supported

Window Size 480

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### Standard Object Types Supported:

An object type is supported if it may be present in the device. For each standard Object Type supported provide the following data:

- Whether objects of this type are dynamically creatable using the CreateObject service
- Whether objects of this type are dynamically deletable using the DeleteObject service
- List of the optional properties supported
- List of all properties that are writable where not otherwise required by this standard
- List of proprietary properties and for each its property identifier, datatype, and meaning
- List of any property range restrictions

Note: none of the object types listed in this section is dynamically creatable or dynamically deletable.

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Note: the BACnet conformance codes are as follows:

O - Optional (may be required under some conditions)

R - Required, but not required to be writable (may be required to be writable under some conditions)

W - Not only required, but also required to be writable

The following codes are used in this document to describe how the properties are implemented:

R/W Read/write

R/O Read-only

R/O=value Implemented as a read-only with the indicated value

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### Device Object

| Property                        | BACnet®<br>Conf Code | Implementation    |
|---------------------------------|----------------------|-------------------|
| Object_Identifier               | R                    | R/W               |
| Object_Name                     | R                    | R/W               |
| Object_Type                     | R                    | R/O="device"      |
| System_Status                   | R                    | R/O="operational" |
| Vendor_Name                     | R                    | R/O               |
| Vendor_Identifier               | R                    | R/O               |
| Model_Name                      | R                    | R/O               |
| Firmware_Revision               | R                    | R/O               |
| Application_Software_Version    | R                    | R/O               |
| Location                        | O                    | R/W               |
| Description                     | O                    | R/W               |
| Protocol_Version                | R                    | R/O=1             |
| Protocol_Revision               | R                    | R/O=14            |
| Protocol_Services_Supported     | R                    | R/O               |
| Protocol_Object_Types_Supported | R                    | R/O               |
| Object_List                     | R                    | R/O               |

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|                          |   |                |
|--------------------------|---|----------------|
| Max_APDU_Length_Accepted | R | R/O=480        |
| Segmentation_Supported   | R | R/O="none"     |
| Local_Time               | O | R/O            |
| Local_Date               | O | R/O            |
| UTC_Offset               | O | R/W            |
| Daylight_Savings_Status  | O | R/O            |
| APDU_Timeout             | R | R/W=7000       |
| Number_Of_APDU_Retries   | R | R/W=1          |
| Max_Master               | O | R/O=127        |
| Device_Address_Binding   | R | R/O=empty list |
| Data_Base_Revision       | R | R/O            |
| Max-Info-Frames          | O | R/O=1          |

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**Analog Input**

| Property          | BACnet®<br>Conf Code | Implementation     |
|-------------------|----------------------|--------------------|
| Object_Identifier | R                    | R/O                |
| Object_Name       | R                    | R/O                |
| Object_Type       | R                    | R/O="analog input" |
| Present_Value     | R                    | R/O                |
| Status_Flags      | R                    | R/O                |
| Event_State       | R                    | R/O="normal"       |
| Out_Of_Service    | R                    | R/O=FALSE          |
| Units             | R                    | R/O                |
| Property_List     | R                    | R/O                |

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**Analog Output**

| Property           | BACnet®<br>Conf Code | Implementation      |
|--------------------|----------------------|---------------------|
| Object_Identifier  | R                    | R/O                 |
| Object_Name        | R                    | R/O                 |
| Object_Type        | R                    | R/O="analog-output" |
| Present_Value      | W                    | R/W                 |
| Status_Flags       | R                    | R/O="all normal"    |
| Event_State        | R                    | R/O="normal"        |
| Out_Of_Service     | R                    | R/O=FALSE           |
| Units              | R                    | R/O                 |
| Priority_Array     | R                    | R/O                 |
| Relinquish_Default | R                    | R/W                 |
| Property_List      | R                    | R/O                 |

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**Binary Input**

| Property          | BACnet®<br>Conf Code | Implementation     |
|-------------------|----------------------|--------------------|
| Object_Identifier | R                    | R/O                |
| Object_Name       | R                    | R/O                |
| Object_Type       | R                    | R/O="binary-input" |
| Present_Value     | R                    | R/O                |
| Status_Flags      | R                    | R/O="all normal"   |
| Event_State       | R                    | R/O="normal"       |
| Out_Of_Service    | R                    | R/O=FALSE          |
| Polarity          | R                    | R/O                |
| Property_List     | R                    | R/O                |

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**Binary Output**

| Property           | BACnet®<br>Conf Code | Implementation      |
|--------------------|----------------------|---------------------|
| Object_Identifier  | R                    | R/O                 |
| Object_Name        | R                    | R/O                 |
| Object_Type        | R                    | R/O="binary-output" |
| Present_Value      | W                    | R/W                 |
| Status_Flags       | R                    | R/O="all normal"    |
| Event_State        | R                    | R/O="normal"        |
| Out_Of_Service     | R                    | R/O=FALSE           |
| Polarity           | R                    | R/O                 |
| Priority_Array     | R                    | R/O                 |
| Relinquish_Default | R                    | R/W                 |

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**Data Link Layer Options:**

- BACnet® IP, (Annex J)
- BACnet® IP, (Annex J), Foreign Device
- ISO 8802-3, Ethernet (Clause 7)
- ANSI/ATA 878.1, 2.5 Mb. ARCNET (Clause 8)
- ANSI/ATA 878.1, RS-485 ARCNET (Clause 8), baud rate(s) \_\_\_\_\_
- MS/TP Master Node (Clause 9), baud rate(s): 9600, 19200, 38400, 57600, 76800, 115200
- MS/TP Slave (Clause 9), baud rate(s): \_\_\_\_\_
- Point-To-Point, EIA 232 (Clause 10), baud rate(s): \_\_\_\_\_
- Point-To-Point, modem, (Clause 10), baud rate(s): \_\_\_\_\_
- LonTalk, (Clause 11), medium: \_\_\_\_\_
- Other: \_\_\_\_\_

**Device Address Binding:**

Is static device binding supported? (This is currently necessary for two-way communication with MS/TP slaves and certain other devices.)  Yes  No

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**Networking Options:**

- Router, Clause 6 - List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.
- 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.

- ANSI X3.4
- ISO 10646 (UTF-8)
- IBM™/Microsoft™ DBCS
- JIS C 6226
- ISO 8859-1
- ISO 10646 (UCS-2)
- ISO 10646 (UCS-4)

**Network Security Options:**

Non-secure Device - is capable of operating without BACnet® Network Security

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**FCS-B, QCC-B and LPT-B WAN BACnet® Communications Defaults:**

- Baud rate = 78,800 (default, configurable)
- Base address = 270 (default, configurable)
- MAC address = 100 (default, configurable)
- Parity = no parity
- Stop bits = 1
- Data bits = 8

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