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BACnet Protocol Implementation Conformance Statement

Date: April 2019

Vendor Name: Critical Environment Technologies Canada Inc.

Product Name: CGAS Gas Detector Family

Product Model Numbers: CGAS-D, CGAS-DP, CGAS-SC

Application Software Version: 1.1 **Firmware Revision:** 3.7.12.0 **BACnet Protocol Version/Revision:** 14

Product Description:

The CGAS Detector product line is a group of customizable two channel gas detectors featuring a range a possible gases and options. The various gases are added to the device using plug and play “smart sensor” boards, which attach to the main board within the enclosure. The main board handles communication back to a controller or building management system via field configurable MODBUS RTU or BACnet MS/TP.

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)

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

BIBB	Service	Initiates	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

Segmentation Capability:

Segmented requests supported Window Size 480

Segmented responses supported Window Size 480



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:

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

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

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

Device Object

Property	BACnet Conf Code	Implementation
Object_Identifier	R	R/O
Object_Name	R	R/O
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
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
Max_APDU_Length_Accepted	R	R/O=480
Segmentation_Supported	R	R/O="none"
APDU_Timeout	R	R/O=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

Analog Input

Property	BACnet 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
Description	O	R/W

Analog Output

Property	BACnet 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
Description	O	R/W

Binary Output

Property	BACnet 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/W
Priority_Array	R	R/O
Relinquish_Default	R	R/O
Description	O	R/W

Data Link Layer Options:



- Checkboxes for network protocols: BACnet IP, ISO 8802-3, ANSI/ATA 878.1, MS/TP Master Node, MS/TP Slave, Point-To-Point, LonTalk, etc.

Device Address Binding:

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

Networking Options:

- Checkboxes for networking options: Router, Annex H, BACnet/IP Broadcast Management Device (BBMD), and BBMD support for Foreign Devices.

Character Sets Supported:

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

- Grid of checkboxes for character sets: ANSI X3.4, IBM/Microsoft DBCS, ISO 8859-1, ISO 10646 (UTF-8), ISO 10646 (UCS-2), ISO 10646 (UCS-4), JIS C 6226.

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

Three horizontal lines for describing supported non-BACnet equipment/networks.

Network Security Options:

- [X] Non-secure Device - is capable of operating without BACnet Network Security