

BACnet Protocol Implementation Conformance Statement

Date: 02/08/2011

Vendor Name: GLAS Energy Technology

Product Name: GET-1032MM

Product Model Number: GET-1032MM

Application Software Version: 1.0 Firmware Revision: 1.0 BACnet Protocol Revision: 10

Product Description:

The GET 1032MM is a BACnet/IP based device for metering applications and general data logging applications. It provides BACnet accessible analog and binary I/O. In addition to the wired point I/O, the GET-1032MM provides a gateway between Modbus slave devices and BACnet.

BACnet Standardized Device Profile (Annex L):

- BACnet Operator Workstation (B-OWS)
- BACnet Advanced Operator Workstation (B-AWS)
- BACnet Operator Display (B-OD)
- 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):

- K.1.2 BIBB – Data Sharing –ReadProperty-B (DS-RP-B)
- K.1.4 BIBB – Data Sharing –ReadPropertyMultiple-B (DS-RPM-B)
- K.1.8 BIBB – Data Sharing –WriteProperty-B (DS-WP-B)
- K.4.2 BIBB – Trending-Viewing and Modifying Trends Internal-B (T-VMT-I-B)
- K.5.2 BIBB – Device Management-Dynamic Device Binding-B (DM-DDB-B)
- K.5.4 BIBB – Device Management-Dynamic Object Binding-B (DM-DOB-B)
- K.5.6 BIBB – Device Management-DeviceCommunicationControl-B (DM-DCC-B)
- K.5.12 BIBB – Device Management-TimeSynchronization-B (DM-TS-B)
- K.5.14 BIBB – Device Management-UTCTimeSynchronization-B (DM-UTC-B)
- K.5.16 BIBB – Device Management-ReinitializeDevice-B (DM-RD-B)

Segmentation Capability:

- Able to transmit segmented messages Window Size _____
- Able to receive segmented messages Window Size _____

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 all properties that are conditionally writable where not otherwise required by this standard

- 6) List of proprietary properties and for each its property identifier, datatype, and meaning
- 7) List of any property range restrictions

Accumulator:

Optional Properties Supported: Description, Device Type, Prescale, Value Change Time, Value Before Change
 In addition to required writable properties, the following properties are writable: Object_Name, Description, Device Type, Scale, Units, Prescale and Value_Set.
 The Device Type property is restricted to 32 bytes of storage.

Analog Input:

Optional Properties Supported: Description.
 In addition to required writable properties, the following properties are writable: Object_Name and Description

Analog Output

Optional Properties Supported: Description.
 In addition to required writable properties, the following properties are writable: Object_Name and Description

Analog Value

Optional Properties Supported: Description.
 In addition to required writable properties, the following properties are writable: Object_Name and Description

Binary Input

Optional Properties Supported: Description.
 In addition to required writable properties, the following properties are writable: Object_Name and Description

Binary Output

Optional Properties Supported: Description.
 In addition to required writable properties, the following properties are writable: Object_Name and Description

Binary Value

Optional Properties Supported: Description.
 In addition to required writable properties, the following properties are writable: Object_Name and Description

Device

Optional Properties Supported: Description, Local_Time, UTC_Offset, Local_Date, Daylight_Savings_Status, Location
 In addition to required writable properties, the following properties are writable: Object_Identifier, Object_Name, Description, Number_Of_APDU_Retries, APDU_TIMEOUT, UTC_Offset and Location

The Location and Description properties are restricted to 64 bytes of storage.

Schedule

Optional Properties Supported: Description, Weekly_Schedule
 In addition to required writable properties, the following properties are writable: Object_Name, Description, Out_Of_Service, Effective_Period, Schedule_Default, List_Of_Object_Property_Reference, Priority_For_Writing and Weekly_Schedule.

The Schedule Object supports writing to internal objects only. Writing to NULL, BOOLEAN, Unsigned, Signed, Real and Enumerated types is supported.

The Schedule Object supports up to 10 Object_Property_References and up to 10 BACnetTimeValues per day.

Trend Log

Optional Properties Supported: Description, Start_Time, Stop_Time, Log_DeviceObjectProperty, Log_Interval, Align_Intervals, Interval_Offset and Trigger

In addition to required writable properties, the following properties are writable: Object_Name and Description, Stop_When_Full, Logging_Type, Log_DeviceObjectProperty and Trigger. Logging_Type is restricted to POLLED or TRIGGERED.

The Trend Log Object supports logging of internal objects only.

Proprietary Properties:

10000 – Flow trigger.

This property of type BOOLEAN is used to trigger an email by setting it to true. When an email has been sent it is reset to false automatically. It is written to internally by the OOH Alert system (Out Of Hours) but can also be written to by external agents for testing purposes.

10001 – Mail server user name.

This property of type CharacterString is the user name to use when logging into the SMTP server. This CharacterString must be 64 bytes or less in length.

10002 – Mail server password

This property of type CharacterString is the password to use when logging into the SMTP server. This CharacterString must be 16 bytes or less in length.

10003 – From email address

This property of type CharacterString is the email address that the email is to be sent from. This CharacterString must be 64 bytes or less in length.

10004 – To email address

This property of type CharacterString is the email address that the email is to be sent to. Currently only a single email address can be used here. This CharacterString must be 64 bytes or less in length.

10005 – Email server address.

This property of type CharacterString is the of the email server, this can be a URL or a dotted quad IP address. This CharacterString must be 50 bytes or less in length.

10006 – Server type

This property of type Unsigned16 denotes the type of email server. 0 for unset, 1 = gmail, 2 = MSN, 3 = non TLS server.

10007 – Email subject text

This property of type CharacterString is the subject text for the email. This CharacterString must be 64 bytes or less in length.

10008 – Email message text

This property of type CharacterString is the body text for the email. This CharacterString must be 64 bytes or less in length.

10009 – Check mode.

This property of type Unsigned8 denotes the test type. 0 = Trend Log stores consumption for logging period, 1 = Trend Log stores cumulative value.

10010 – Data type

This property of type Unsigned8 denotes the expected data type of the logged data. 0 = BOOLEAN, 1 = Integer, 2 = Unsigned Integer, 3 = Enumerated value, 3 = Real.

10011 – Single event trigger level

The type of this property is determined by property 10010. A single reading logged greater than or equal to this will trigger an email alert.

10012 – Multi event trigger level

The type of this property is determined by property 10010. Multiple readings logged greater than or equal to this will trigger an email alert.

10013 – Sample window size

This property of type Unsigned8 denotes the number of successive samples required to trigger an email alert. It must have a value between 1 and 8 inclusive.

10014 – Alert enable

This property of type BOOLEAN is used to enable the OOH Alert system for this Trend Log when it is true.

Note:

- (1) None of the above object types are dynamically creatable using the CreateObject service
- (2) None of the above object types are dynamically deletable using the DeleteObject service
- (3) Unless otherwise stated the Object_Name and Description properties are restricted to 32 bytes of storage.

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) _____
- MS/TP master (Clause 9), baud rate(s): _____
- 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: _____
- BACnet/ZigBee (ANNEX O)
- 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

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
 - Does the BBMD support network address translation? Yes No

Network Security Options:

- Non-secure Device - is capable of operating without BACnet Network Security
- Secure Device - is capable of using BACnet Network Security (NS-SD BIBB)
 - Multiple Application-Specific Keys:
 - Supports encryption (NS-ED BIBB)
 - Key Server (NS-KS BIBB)

Character Sets Supported:

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

- | | | |
|---|---|-------------------------------------|
| <input checked="" type="checkbox"/> ISO 10646 (UTF-8) | <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 X 0208 |

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

The GET-1032MM provides a gateway between Modbus slave devices and BACnet in addition to its normal physical BACnet I/O. It can provide for mapping of up to 40 values to and from Modbus devices to a variety of BACnet object types. It supports RS485 and RS232 connection to Modbus devices.