



Delta Ethernet Global Controller

BACnet Protocol Implementation Conformance Statement

Date: Feb 23,2011
Vendor Name: Delta Electronics, Inc.
Manufacturer: Airtek International, Inc.
Product Name: Delta Ethernet Global Controller
Product Model Number: WC8846P, GC8846P, GC8846, WC-RB10, WC-RB11, WC-RB12, GC-DB01, GC-RB01, GC-RB21, GC-RB23
Firmware Revision: V1.08
BACnet Protocol Revision: 7

Product Description:

GC-RB01, GC-RB21 and GC-RB23 are B-BC class BACnet LAN communication integration controllers. They have router function. Operate independently. They have two network communication abilities. For upper level, they link to a 100 Bases-TX BACnet Ethernet with selectable either the BACnet Ethernet (ISO-8802-2) or the BACnet/IP communication method. For lower level, they link to BACnet MS/TP network. Each MS/TP network link up to 16 controllers to GC-RB01, and 32 controllers to either GC-RB21 or GC-RB23. Its communication speed can reach 76,800 BPS. These GC-RB controllers have programmable function and standard BACnet object, such as schedule, calendar and the event enrollment...etc. These devices are in conformity with international BACnet network communication and fully compatible with any BACnet system.

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):

DS-RP-A	DS-WPM-B	AE-ASUM-B	DM-DOB-B	DM-BR-B
DS-RP-B	AE-N-I-B	SCHED-I-B	DM-DCC-B	DM-DDB-A
DS-RPM-A	AE-N-E-B	SCHED-E-B	DM-TS-B	DM-DDB-B
DS-RPM-B	E-ACK-B	T-VMT-I-B	DM-UTC-B	NM-CE-A
DS-WP-A	AE-INFO-B	T-VMT-E-B	DM-RD-B	NM-RC-B
DS-WP-B	AE-ESUM-B	T-ATR-B	DM-OCD-B	

Segmentation Capability:

- Segmented requests supported
 - Segmented responses supported
- Window Size 1



Standard Object Types Supported:

Analog Value	Dynamically Creatable :No	Dynamically Deletable :No
Optional Properties Supported:	Description	
Writable Properties:	Description Present_Value Units	Limit: 128 characters
Binary Value	Dynamically Creatable :No	Dynamically Deletable :No
Optional Properties Supported:	Description Priority_Array Relinquish_Default	
Writable Properties:	Description Present_Value Relinquish_Default	Limit: 128 characters
Calendar	Dynamically Creatable :Yes	Dynamically Deletable : Yes
Optional Properties Supported:	Description	
Writable Properties:	Description Object_Name Date_List	Limit: 128 characters Limit: 128 characters
Device	Dynamically Creatable :No	Dynamically Deletable :No
Optional Properties Supported:	Description Location Max_Segments_Accepted Local_Time Local_Date UTC_Offset Daylight_Savings_Status APDU_Segment_Timeout Max_Master Max_Info_Frames Last_Restore_Time Slave_Proxy_Enable Manual_Slave_Address_Binding Auto_Slave_Discovery Slave_Address_Binding Configuration_Files Backup_Failure_Timeout	
Writable Properties:	Description Object_Name Location Local_Time Local_Date UTC_Offset Daylight_Savings_Status APDU_Segment_Timeout APDU_Timeout Number_Of_APDU_Retries	Limit: 128 characters Limit: 128 characters Limit: 128 characters Range :-780~780 Range : 1000~60000 Range : 1000~60000 Range : 0~16



	Max_Master	Range :1~127
	Max_Info_Frames	Range : 1~200
	Slave_Proxy_Enable	
	Manual_Slave_Address_Binding	
	Auto_Slave_Discovery	
	Backup_Failure_Timeout	Range : 1~60000
Event Enrollment	Dynamically Creatable :Yes	Dynamically Deletable : Yes
Optional Properties Supported:	Description	
Writable Properties:	Description	Limit: 128 characters
	Object_Name	Limit: 128 characters
	Notify_Type	
	Event_Parameters	
	Object_Property_Reference	
	Event_Enable	
	Notification_Class	
File	Dynamically Creatable :No	Dynamically Deletable : No
Optional Properties Supported:	Description	
Writable Properties:	Archive	
	File_Size(File 1024)	Only Program 1024 program-stat != running
Notification Class	Dynamically Creatable :Yes	Dynamically Deletable : Yes
Optional Properties Supported:	Description	
Writable Properties:	Description	Limit: 128 characters
	Object_Name	Limit: 128 characters
	Priority	
	Recipient_List	
	ACK_Required	
Program	Dynamically Creatable :No	Dynamically Deletable : No
Optional Properties Supported:	Description	
	Reson_for_Halt	
	Description_of_Halt	
Writable Properties:	Program_Change	
Schedule	Dynamically Creatable :Yes	Dynamically Deletable : Yes
Optional Properties Supported:	Description	
	Weekly_Schedule	
	Exception_Schedule	
Writable Properties:	Description	Limit: 128 characters
	Object_Name	Limit: 128 characters
	Effective_Period	
	Weekly_Schedule	



Exception_Schedule
 List_of_Object_Prop_Ref
 Priority_for_Writing
 Out_Of_Service
 Schedule_Default

Datatype : Null / Boolean / Unsigned Integer / Signed Integer / Real / Enumerated
 writable when out-of-service
 Datatype : Null / Boolean / Unsigned Integer / Signed Integer / Real / Enumerated

Present_Value

writable when out-of-service
 Datatype : Null / Boolean / Unsigned Integer / Signed Integer / Real / Enumerated

Trendlog

Dynamically Creatable :Yes

Dynamically Deletable : Yes

Optional Properties Supported:

Description
 Start_Time
 Stop_Time
 Log_DeviceObjectProperty
 Log_Interval
 Notification_Threshold
 Records_Since_Notification
 Last_Notify_Record
 Notification_Class
 Event_Enable
 Acked_Transitions
 Notify_Type
 Event_Time_Stamps
 Align_Intervals
 Interval_Offset
 Trigger

Writable Properties:

Description
 Object_Name
 Log_Enable
 Start_Time
 Stop_Time
 Log_DeviceObjectProperty
 Log_Interval
 Stop_When_Full
 Buffer_Size
 Record_Count
 Notification_Threshold
 Notification_Class
 Event_Enable
 Logging_Type
 Align_Intervals
 Interval_Offset
 Trigger

Limit: 128 characters
 Limit: 128 characters



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-485ARCNET (Clause 8), baud rate(s)
- MS/TP master (Clause 9), baud rate(s): 76.8k, 38.4k, 19.2k, 9.6k bps
- 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,
 - BACnet IP (Annex J) - MS/TP
 - Ethernet-MS/TP
 - Ethernet -BACnet IP (Annex J)
 - MS/TP- MS/TP(GC-RB23 Only)
- Annex H, BACnet Tunneling Router over IP
- BACnet/IP Broadcast Management Device (BBMD)

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 C 6226 |