

BACnet Protocol Implementation Conformance Statement

Date: August 27, 2013
Vendor Name: Delta Controls Inc.
Product Name: enteliZONE
Product Model Number: eZFC-424R4
Product Version: 3.40
BACnet Protocol Revision: 9

Product Description

enteliZONE is a family of Delta controllers for HVAC zone applications. While there are multiple models in the enteliZONE family they all share a common firmware and feature set. They typically differ only in the types and amount of IO supported.

Unless otherwise noted all models support all the BACnet capabilities indicated.

BACnet Standardized Device Profile (Annex L)

| Product Model Name | Product Model Number | BACnet Device Profile |
|--------------------|----------------------|---|
| enteliZONE FanCoil | eZFC-424R4 | B-ASC BACnet Application Specific Controller |

BACnet Interoperability Building Blocks (Annex K)

| | | |
|--------------|-----------|-------------------------------------|
| Data Sharing | DS-RP-A | Data Sharing-ReadProperty-A |
| | DS-RP-B | Data Sharing-ReadProperty-B |
| | DS-RPM-B | Data Sharing-ReadPropertyMultiple-B |
| | DS-WP-A | Data Sharing-WriteProperty-A |
| | DS-WP-B | Data Sharing-WriteProperty-B |
| | DS-COV-B | Data Sharing-COV-B |
| | DS-COVU-B | Data Sharing-COV-Unsolicited-B |

| | | |
|----------------------------|-----------|---|
| Alarm and Event Management | AE-N-I-B | Alarm and Event-Notification Internal-B |
| | AE-INFO-B | Alarm and Event-Information-B |

| | | |
|------------|--------------|---------------------------------------|
| Scheduling | SCHED-WS-I-B | Scheduling-Weekly Schedule-Internal-B |
|------------|--------------|---------------------------------------|

| | | |
|----------|-----------|--|
| Trending | T-VMT-I-B | Trending-Viewing and Modifying Trends-Internal-B |
|----------|-----------|--|

| | | |
|-------------------------------|----------|--|
| Device and Network Management | DM-DDB-A | Device Management-Dynamic Device Binding-A |
| | DM-DDB-B | Device Management-Dynamic Device Binding-B |
| | DM-DOB-B | Device Management-Dynamic Object Binding-B |
| | DM-DCC-B | Device Management-DeviceCommunicationControl-B |
| | DM-PT-A | Device Management-Private Transfer-A |
| | DM-PT-B | Device Management-Private Transfer-B |
| | DM-TS-B | Device Management-TimeSynchronization-B |
| | DM-RD-B | Device Management-ReinitializeDevice-B |
| | DM-BR-B | Device Management-Backup and Restore-B |
| | DM-OCD-B | Device Management-Object Creation and Deletion-B |

Segmentation Capability

- Able to transmit segmented message Window Size = 1
- Able to receive segmented message Window Size = 1

Standard Object Types Supported

- Dynamically creatable using the CreateObject service.
- Dynamically deletable using the DeleteObject service.

Standard Properties Summary

| Object Type | Property Identifier | Writable C-Conditional | Optional | Property Range Restriction |
|---------------------|---------------------|-------------------------------------|-------------------------------------|-------------------------------|
| Analog Input Object | Acked_Transitions | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | COV_Increment | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Deadband | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Description | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0-64 characters |
| | Event_Time_Stamps | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

| Object Type | Property Identifier | Writable C-Conditional | Optional | Property Range Restriction |
|---|---------------------|---------------------------------------|-------------------------------------|-------------------------------|
| | High_Limit | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Low_Limit | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Max_Pres_Value | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Min_Pres_Value | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Notification_Class | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Notify_Type | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Object_Name | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1-36 characters |
| | Out_Of_Service | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Present_Value | <input checked="" type="checkbox"/> C | <input type="checkbox"/> | |
| | Reliability | <input checked="" type="checkbox"/> C | <input checked="" type="checkbox"/> | |
| | Resolution | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Time_Delay | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| <hr style="border-top: 1px dashed black;"/> | | | | |
| Analog Output Object | Acked_Transitions | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | COV_Increment | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Deadband | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Description | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0-64 characters |
| | Device_Type | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Event_Time_Stamps | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | High_Limit | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Low_Limit | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Max_Pres_Value | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Min_Pres_Value | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Notification_Class | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Notify_Type | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Object_Name | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1-36 characters |
| | Out_Of_Service | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Present_Value | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Reliability | <input checked="" type="checkbox"/> C | <input checked="" type="checkbox"/> | |
| | Relinquish_Default | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Resolution | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Time_Delay | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| <hr style="border-top: 1px dashed black;"/> | | | | |
| Analog Value Object | COV_Increment | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Description | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0-64 characters |
| | Object_Name | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1-36 characters |
| | Out_Of_Service | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Present_Value | <input checked="" type="checkbox"/> C | <input type="checkbox"/> | |
| | Reliability | <input checked="" type="checkbox"/> C | <input checked="" type="checkbox"/> | |
| | Units | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |

| Object Type | Property Identifier | Writable C-Conditional | Optional | Property Range Restriction |
|---------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---|
| Binary Input Object | Acked_Transitions | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Active_Text | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Alarm_Value | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Change_Of_State_Count | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Accepts writes of value of zero only |
| | Change_Of_State_Time | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Description | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0-64 characters |
| | Device_Type | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Event_Time_Stamps | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Inactive_Text | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Notification_Class | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Notify_Type | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Object_Name | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1-36 characters |
| | Out_Of_Service | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Present_Value | <input checked="" type="checkbox"/> C | <input type="checkbox"/> | |
| | Polarity | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Reliability | <input checked="" type="checkbox"/> C | <input checked="" type="checkbox"/> | |
| | Time_Delay | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Time_Of_State_Count_Reset | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| Binary Output Object | Acked_Transitions | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Active_Text | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Change_Of_State_Count | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Accepts writes of value of zero only |
| | Change_Of_State_Time | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Description | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0-64 characters |
| | Device_Type | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Event_Time_Stamps | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Feedback_Value | <input checked="" type="checkbox"/> C | <input type="checkbox"/> | |
| | Inactive_Text | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Minimum_Off_Time | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Minimum_On_Time | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Notification_Class | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Notify_Type | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Object_Name | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1-36 characters |
| | Out_Of_Service | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Present_Value | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Polarity | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Reliability | <input checked="" type="checkbox"/> C | <input checked="" type="checkbox"/> | | |
| Relinquish_Default | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | |
| Time_Delay | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | |
| Time_Of_State_Count_Reset | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | |

| Object Type | Property Identifier | Writable C-Conditional | Optional | Property Range Restriction |
|--------------------------------|-------------------------------------|---------------------------------------|-------------------------------------|-------------------------------|
| Binary Value Object | Active_Text | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Description | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0-64 characters |
| | Inactive_Text | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Object_Name | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1-36 characters |
| | Out_Of_Service | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Present_Value | <input checked="" type="checkbox"/> C | <input type="checkbox"/> | |
| Device Object | APDU_Segment_Timeout | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Backup_Failure_Timeout | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Configuration_Files | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Description | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0-64 characters |
| | Last_Restore_Time | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Local_Date | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Local_Time | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Location | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Max_Info_Frames | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Max_Master | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Max_Segments_Accepted | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Number_Of_APDU_Retries | <input type="checkbox"/> | <input type="checkbox"/> | |
| | Object_Name | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1-36 characters |
| Event Enrollment Object | Description | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0-64 characters |
| | Event_Parameters | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Notification_Class | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Object_Name | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1-36 characters |
| | Object_Property_Reference | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| File Object | Archive | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Description | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0-64 characters |
| | Object_Name | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1-36 characters |
| Loop Object | Action | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Bias | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Range is 0.0 to 100.0 |
| | Controlled_Variable_Reference | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Controlled_Variable_Units | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Controlled_Variable_Value | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | COV_Increment | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Derivative_Constant | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Derivative_Constant_Units | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Description | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0-64 characters |
| | Integral_Constant | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Integral_Constant_Units | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Manipulated_Variable_Reference | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | |

| Object Type | Property Identifier | Writable C-Conditional | Optional | Property Range Restriction |
|------------------------------|------------------------------------|---------------------------------------|-------------------------------------|--|
| | Object_Name | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1-36 characters |
| | Out_Of_Service | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Output_Units | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Present_Value | <input checked="" type="checkbox"/> C | <input type="checkbox"/> | |
| | Priority_For_Writing | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Proportional_Constant | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Proportional_Constant_Units | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Reliability | <input checked="" type="checkbox"/> C | <input checked="" type="checkbox"/> | |
| | Setpoint | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Setpoint_Reference | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Multi-State Value Object | Description | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0-64 characters |
| | Object_Name | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1-36 characters |
| | Out_Of_Service | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Present_Value | <input checked="" type="checkbox"/> C | <input type="checkbox"/> | |
| | State_Text | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Notification Class Object | Description | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0-64 characters |
| | Object_Name | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1-36 characters |
| | Priority | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Recipient_List | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Schedule Object | Description | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0-64 characters |
| | Effective_Period | <input checked="" type="checkbox"/> | <input type="checkbox"/> | endDate must be later than the startDate |
| | List_Of_Object_Property_References | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Object_Name | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1-36 characters |
| | Out_Of_Service | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Priority_For_Writing | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Schedule_Default | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Weekly_Schedule | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Trend Log Object | Description | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 0-64 characters |
| | Log_DeviceObjectProperty | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Log_Enable | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Log_Interval | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Object_Name | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1-36 characters |
| | Record_Count | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Start_Time | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Stop_Time | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Stop_When_Full | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |

Proprietary Properties Summary

Proprietary properties are supported.

Data Link Layer Options

MS/TP master (Clause 9), baud rate(s): 9600, 19200, 38400, 76800

Device Address Binding

Is static device binding supported? Yes No

Networking Options

Router, Clause 6

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

Character Set Supported

ISO 10646 (UTF-8) / ANSI X3.4

Communication Gateway

enteliWEB is not a communications gateway.

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)