

BACnet Protocol Implementation Conformance Statement

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|---------------------------|------------------------|
| Date: | April 1, 2012 |
| Vendor Name: | Azbil Corporation |
| Vendor ID: | 85 |
| Product Name: | System Core Server |
| Product Model Number: | BCY441 |
| Software Version: | 20.31 |
| BACnet Protocol Revision: | Revision 5 (135-2004a) |

Product Description

System Core Server (SCS) is the controller of azbil Building Management System, savic-net FX. The SCS controls and integrates azbil direct digital controllers (DDC) and remote stations into the savic-net FX system. The SCS connects to azbil Client PC, System Management Server (SMS), Data Storage Server (DSS), Management Integration Server (MIS), of the savic-net FX system, and to other manufacturer BACnet devices.

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)

BACnet Interoperability Building Blocks supported

| BIBBs | | | Support |
|-----------------------------|-----------|---|---------|
| Data Sharing | DS-RP-A | ReadProperty-A | ✓ |
| | DS-RP-B | ReadProperty-B | ✓ |
| | DS-RPM-A | ReadPropertyMultipule-A | ✓ |
| | DS-RPM-B | ReadPropertyMultipule-B | ✓ |
| | DS-WP-A | WriteProperty-A | ✓ |
| | DS-WP-B | WriteProperty-B | ✓ |
| | DS-WPM-A | WritePropertyMultipule-A | ✓ |
| | DS-WPM-B | WritePropertyMultipule-B | ✓ |
| | DS-COVU-A | COV-Unsolicited-A | ✓ |
| | DS-COVU-B | COV-Unsolicited-B | ✓ |
| Alarm & Event | AE-N-A | Notification-A | ✓ |
| | AE-N-I-B | Notification Internal-B | ✓ |
| | AE-ACK-B | ACK-B | ✓ |
| | AE-INFO-B | Information-B | ✓ |
| | AE-ESUM-B | Enrollment Summary-B | ✓ |
| Scheduling | SCHED-E-B | Scheduling-External-B | ✓ |
| | SCHED-I-B | Scheduling-Internal-B | ✓ |
| Trending | T-VMT-I-B | Viewing and Modifying Trends Internal-B | ✓ |
| | T-ATR-B | Automated Trend Retrieval-B | ✓ |
| Device & Network Management | DM-DDB-A | Dynamic Device Binding-A | ✓ |
| | DM-DDB-B | Dynamic Device Binding-B | ✓ |
| | DM-DOB-B | Dynamic Object Binding-B | ✓ |
| | DM-DCC-B | DeviceCommunicationControl-B | ✓ |
| | DM-TS-B | TimeSynchronization-B | ✓ |
| | DM-RD-B | ReinitializeDevice-B | ✓ |
| | DM-R-A | Restart-A | ✓ |
| | DM-R-B | Restart-B | ✓ |
| | DM-LM-B | List Manipulation-B | ✓ |
| | DM-OCD-B | Object Creation and Deletion-B | ✓ |

Standard Object Types Supported

■ Accumulator

Dynamically Creatable: No

Dynamically Deletable: No

| Optional Properties Supported | Writable Properties |
|-------------------------------|-----------------------------|
| Description | Object_Name |
| Reliability | Present_Value (conditional) |
| Value_Change_Time | Description |
| Value_Before_Change | Reliability (conditional) |
| Value_Set | Out_Of_Service |
| Pulse_Rate | Value_Set |
| High_Limit | High_Limit |
| Low_Limit | Low_Limit |
| Limit_Monitoring_Interval | Limit_Monitoring_Interval |
| Limit_Enable | Limit_Enable |
| Notification_Class | Notification_Class |
| Time_Delay | Time_Delay |
| Event_Enable | Event_Enable |
| Acked_Transitions | Notify_Type |
| Notify_Type | |
| Event_Time_Stamp | |

Proprietary Properties: n/a

■ Analog Input

Dynamically Creatable: No

Dynamically Deletable: No

| Optional Properties Supported | Writable Properties |
|-------------------------------|-----------------------------|
| Description | Object_Name |
| Reliability | Description |
| Resolution | Out_Of_Service |
| High_Limit | Present_Value (conditional) |
| Low_Limit | Reliability (conditional) |
| Deadband | High_Limit |
| Limit_Enable | Low_Limit |
| Notification_Class | Deadband |
| Time_Delay | Limit_Enable |
| Event_Enable | Notification_Class |
| Acked_Transitions | Event_Enable |
| Notify_Type | Notify_Type |
| Event_Time_Stamp | |

Proprietary Properties: n/a

■ Analog Output

Dynamically Creatable: No
Dynamically Deletable: No

| Optional Properties Supported | Writable Properties |
|---|---|
| Description Reliability Max_Pres_Value Min_Pres_Value Resolution High_Limit Low_Limit Deadband Limit_Enable Notification_Class Time_Delay Event_Enable Acked_Transitions Notify_Type Event_Time_Stamp | Object_Name Present_Value Reliability (conditional) Description Out_Of_Service Notification_Class Event_Enable Notify_Type |

Proprietary Properties: n/a

■ Binary Input (: Point Status)

Dynamically Creatable: No
Dynamically Deletable: No

| Optional Properties Supported | Writable Properties |
|---|--|
| Description Reliability Change_Of_State_Time Change_Of_State_Count Time_Of_State_Count_Reset Erapsed_Active_Time Time_Of_Active_Time_Reset Notification_Class Time_Delay Alarm_Value Event_Enable Acked_Transitions Notify_Type Event_Time_Stamp | Object Name Description Out_Of_Service Present_Value (conditional) Reliability (conditional) Change_Of_State_Count Erapsed_Active_Time Notification_Class Alarm_Value Event_Enable Notify_Type |

Proprietary Properties: n/a

■ Binary Input (: Remote Unit Status)

Dynamically Creatable: No
Dynamically Deletable: No

| Optional Properties Supported | Writable Properties |
|--|--|
| Description Notification_Class Time_Delay Alarm_Value Event_Enable Acked_Transitions Notify_Type Event_Time_Stamp | Object_Name Description Notification_Class Alarm_Value Event_Enable Notify_Type |

Proprietary Properties: n/a

■ Binary Output

Dynamically Creatable: No
Dynamically Deletable: No

| Optional Properties Supported | Writable Properties |
|--|---|
| Description Reliability Change_Of_State_Time Change_Of_State_Count Time_Of_State_Count_Reset Erapsed_Active_Time Time_Of_Active_Time_Reset Notification_Class Feedback_Value Time_Delay Event_Enable Acked_Transitions Notify_Type Event_Time_Stamp | Object_Name Description Out_Of_Service Present_Value Reliability (conditional) Change_Of_State_Count Erapsed_Active_Time Time_Delay Notification_Class Event_Enable Notify_Type |

Proprietary Properties: n/a

■ Calendar

Dynamically Creatable: No
Dynamically Deletable: No

| Optional Properties Supported | Writable Properties |
|-------------------------------|---|
| Description | Object_Name Description Date_List |

Proprietary Properties: n/a

■ Device

Dynamically Creatable: No
Dynamically Deletable: No

| Optional Properties Supported | Writable Properties |
|--|---|
| Location Description Max_Segments_Accepted Local_Time Local_Date APDU_Segment_Timeout Configuration_Files Last_Restore_Time Backup_Failure_Timeout Time_Of_Device_Restart Last_Restart_Reason Restart_Notification_Recipients | Object_Name Location Description Backup_Failure_Timeout Restart_Notification_Recipients |

Proprietary Properties: n/a

■ Multi-state Input

Dynamically Creatable: No
Dynamically Deletable: No

| Optional Properties Supported | Writable Properties |
|--|---|
| Description Reliability State_Text Notification_Class Time_Delay Alarm_Values Fault_Values Event_Enable Acked_Transitions Notify_Type Event_Time_Stamp | Object_Name Present_Value (conditional) Reliability (conditional) Description Out_Of_Service Notification_Class Alarm_Values Event_Enable Notify_Type |

Proprietary Properties: n/a

■ Multi-state Output

Dynamically Creatable: No
Dynamically Deletable: No

| Optional Properties Supported | Writable Properties |
|--|---|
| Description Reliability State_Text Time_Delay Notification_Class Feedback_Value Event_Enable Acked_Transitions Notify_Type Event_Time_Stamp | Object_Name Present_Value Reliability (conditional) Description Out_Of_Service Time_Delay Notification_Class Event_Enable Notify_Type |

Proprietary Properties: n/a

■ Notification Class

Dynamically Creatable: Yes
Dynamically Deletable: Yes

| Optional Properties Supported | Writable Properties |
|-------------------------------|--|
| Description | Object Name Description Priority Acked_Required Recipient_List |

Proprietary Properties: n/a

■ Schedule

Dynamically Creatable: Yes
Dynamically Deletable: Yes

| Optional Properties Supported | Writable Properties |
|--|--|
| Description Weekly_Schedule Exception_Schedule | Object_Name Present_Value (conditional) Description Effective_Period Weekly_Schedule Exception_Schedule Schedule_Default List_Of_Object_Property_References Priority_For_Writing Out_Of_Service |

Proprietary Properties: n/a

■ Trend Log

Dynamically Creatable: Yes
Dynamically Deletable: Yes

| Optional Properties Supported | Writable Properties |
|--|--|
| Description Start_Time Stop_Time Log_DeviceObjectProperty Log_Inerval Notification_Threshold Records_Since_Notification Last_Notify_Record Notification_Class Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps | Object_Name Description Log_Enable Start_Time Stop_Time Log_DeviceObjectProperty Log_Inerval Stop_When_Full Buffer_Size Record_Count Notification_Threshold Notification_Class Event_Enable Notify_Type |

Proprietary Properties: n/a

Property Range Restrictions

| Object Type | Property | Range Restriction |
|-------------------------------------|--|--|
| All of Object Types | Object_Name | The maximum number of octets in length is 90. (Without Null) |
| All of Object Types | Description | The maximum number of octets in length is 50. (Without Null) |
| Accumulator | High_Limit, Low_Limit Limit_Monitoring_Interval Time_Delay | [0, 65535] [0, 65535] [0, 65535] |
| Analog Input | High_Limit, Low_Limit Dead_Band | [-9999×Resolution, 9999×Resolution] [0, 255×Resolution] *Ex. Resolution=0.1 High_Limit, Low_Limit: [-999.9, 999.9] Dead_Band: [0.0, 25.5] |
| Binary Input, Binary Output | Change_Of_State_Count Erapsed_Active_Time | [0, 1999998] [0, 3599999940] |
| Binary Output Multi-state Output | Time_Delay | [0, 65535] |
| Device | Location | The maximum number of octets in length is 100. (Without Null) |
| | Backup_Failure_Timeout | [10, 65535] |
| Trend Log | Log_Inerval | [0, 4294967295] |
| | Buffer_Size | [0, 3600] |

Data Link Layer Options

- BACnet IP, (Annex J)
- Able to register as a 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 (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: _____
- Other: _____

Networking Options

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

- Annex H.3, BACnet Tunneling Router over UDP/IP

- BACnet/IP Broadcast Management Device (BBMD)

Does the BBMD support registrations by Foreign Devices? Yes No

- MS/TP Slave Proxy

Which of the following device binding methods does the product support?

- Send Who-Is, receive I-Am (BIBB DM-DDB-A)
 Receive Who-Is, send I-Am (BIBB DM-DDB-B)
 Send Who-Has, receive I-Have (BIBB DM-DOB-A)
 Receive Who-Has, send I-Have (BIBB DM-DOB-B)
 Manual configuration of recipient device's network number and MAC address
 None of the above

Segmentation Capability

- Able to transmit segmented messages Window Size 1
 Able to receive segmented messages Window Size 1

Character Sets Supported

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

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

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

Azbil dedicated serial communication.

Include any addition information about the product's BACnet capabilities relevant to interoperability

Not applicable.

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