

# BACnet Protocol Implementation Conformance Statement

## General

<b>Date:</b>	22-Feb-18
<b>Range name:</b>	SUMX
<b>Product Name:</b>	Network Management Card
<b>Product Model Number:</b>	AP9630, AP9631, AP9635
<b>Vendor Name:</b>	Schneider Electric
<b>BACnet Vendor ID:</b>	10
<b>Application software version:</b>	<v6.5.X>
<b>Firmware revision:</b>	<v6.5.X>
<b>Base ASHRAE Protocol Version:</b>	1
<b>Base ASHARE Protocol Revision:</b>	14
<b>BACnet Device Profile:</b>	B-ASC

## Product description:

Network Management Card 2 allows users to monitor and control their devices via secure network browsers or external command line interfaces. The card provides multiple-user access and multiple-language support, notifies users when problems occur, and includes individual password protection. The card can operate on a network using either the IPv4 or IPv6 protocols, and features device encryption to securely connect via HTTPS/SSL, SSH (up to 2048-bit encryption), and SNMPv3. Through data and event logging, the card helps users identify and pinpoint problematic issues and trends.

## Device Profile Support

### Controller Profile:

BACnet Building Controller (B-BC)	
BACnet Advanced Application Controller (B-AAC)	
BACnet Application Specific Controller (B-ASC)	X
BACnet Smart Actuator (B-SA)	
BACnet Smart Sensor (B-SS)	

### Operator Profile:

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

## Segmentation Capability

Segmentation	Supported	Window Size
Able to transmit segmented messages		
Able to receive segmented messages		

## Data Link Layer and Routing Options

Data Link	Supported	Data
BACnet/IP	X	10/100 MBPS
Ethernet - ISO 8802_3		
MS/TP master		
MS/TP slave		
Zigbee		
ARCnet - ANSI/ATA 878.1		
RS-485 - ANSI/ATA 878.1		
LonTalk TP/FT-10		
LonTalk/IP		
Point-to-Point - EIA 232		
Point-to-Point - modem		

## Other Networking Options

Networking Option	Supported
Static Device Binding Supported	
Annex H, BACnet Tunneling Router over IP	
BACnet Broadcast Management Device (BBMD)	
BBMD supports registration by foreign device	
Device support registration as a foreign device	X

## Character Sets Supported

Character Sets	Supported
ISO 10646 (UTF-8)	X
IBM / Microsoft DBCS	
JIS X 0208	
ISO 8859-1	
ISO 10646 (USC-2)	
ISO 10646 (UCS-4)	

## List of BACnet Interoperability Building Blocks supported Annex K

Data Sharing	
ReadProperty-B	DS-RP-B
ReadPropertyMultiple-B	DS-RPM-B
WriteProperty-B	DW-WP-B
WritePropertyMultiple-B	DW-WPM-B
COV-B	DS-COV-B

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

Device and Network Management	
Dynamic Device Binding-A	DM-DDB-A
Dynamic Device Binding-B	DM-DDB-B
Dynamic Object Binding-B	DM-DOB-B
DeviceCommunicationControl-B	DM-DCC-B

## Object Types Supported

Object Type Supported
Device
Analog Value
Binary Value
Multi-state Value
Notification Class
CharacterString Value

## Device Object

Property	Required by Standard R - required O - optional	Implemented	Access RW - read/write RO - read only C – configurable, but not through BACnet
Object_Identifier	R	X	RO
Object_Name	R	X	C
Object_Type	R	X	RO
System_Status	R	X	RO
Vendor_Name	R	X	RO
Vendor-Identifier	R	X	RO
Model_Name	R	X	RO
Firmware-Revision	R	X	RO
Application_Software_Version	R	X	RO
Location	O	X	RW
Description	O	X	C
Protocol-Version	R	X	RO
Protocol-Revision	R	X	RO
Protocol-Services-Supported	R	X	RO
Protocol_Object_Types_Supported	R	X	RO
Object-List	R	X	RO
Structured_Object_List	O		
Max_APDU_Length_Accepted	R	X	RO
Segmentation_Supported	R	X	RO
Max_Segment_Accepted	O		
VT-Classes-Supported	O		
Active-VT-Sessions	O		
Local_Time	O	X	RO
Local_Date	O	X	RO
UTC_Offset	O	X	RO
Daylight_Savings_Status	O	X	RO
APDU_Segment_Timeout	O		
APDU_Timeout	R	X	RW
Number_Of_APDU_Retries	R	X	C
Time_Synchronization_Recipients	O		
Max_Master	O		
Max_Info_Frames	O		
Device_Address_Binding	R	X	RO
Database_Revision	R	X	RO
Configuration_Files	O		
Last_Restore_Time	O		
Backup_Failure_Timeout	O		
Backup_Preparation_Time	O		
Restore_Preparation_Time	O		
Backup_And_Restore_State	O		

Active_COV_Subscriptions	O	X	RO
Slave_Proxy_Enable	O		
Manual-Slave-Address-Binding	O		
Auto-Slave-Discovery	O		
Slave-Address-Binding	O		
Last_Restart_Reason	O		
Time_Of_Device_Restart	O		
Restart-Notification-Recipients	O		
UTC_Time_Synchronization_Recipients	O		
Time_Synchronization_Interval	O		
Align_Intervals	O		
Interval_Offset	O		
Serial_Number	O	X	RO
Property-List	R	X	RO
Profile-Name	O	X	RO

## Analog Value

Property	Required by Standard R - required O - optional	Implemented	Access RW - read/write RW* - read/write (object specific) RO - read only
Object_Identifier	R	X	RO
Object_Name	R	X	RO
Object_Type	R	X	RO
Present_Value	R	X	RW*
Description	O		
Status_Flags	R	X	RO
Event_State	R	X	RO
Reliability	O		
Out_Of_Service	R	X	RO
Units	R	X	RO
Priority_Array	O		
Relinquish_Default	O		
COV_Increment	O	X	RW
Time_Delay	O		
Notification_Class	O		
High_Limit	O		
Low_Limit	O		
Deadband	O		
Limit_Enable	O		
Event_Enable	O		
Acked_Transitions	O		
Notify_Type	O		
Event_Time_Stamps	O		
Event_Message_Texts	O		
Event_Message_Texts_Config	O		
Event_Detection_Enable	O		
Event_Algorithm_Inhibit_Ref	O		
Event_Algorithm_Inhibit	O		
Time_Delay_Normal	O		
Reliability_Evaluation_Inhibit	O		
Min_Pres_Value	O		
Max_Pres_Value	O		
Resolution	O		
Property_List	R	X	RO
Profile_Name	O		

## Binary Value

Property	Required by Standard	Implemented	Access
	R - required O - optional	X – all objects X* - alarm objects only	RW - read/write RW* - read/write (object specific) RO - read only
Object_Identifier	R	X	RO
Object_Name	R	X	RO
Object_Type	R	X	RO
Present_Value	R	X	RW*
Description	O	X	RO
Status_Flags	R	X	RO
Event_State	R	X	RO
Reliability	O		
Out_Of_Service	R	X	RO
Inactive_Text	O	X	RO
Active_Text	O	X	RO
Change_Of_State_Time	O		
Change_Of_State_Count	O		
Time_Of_State_Count_Reset	O		
Elapsed_Active_Time	O		
Time_Of_Active_Time_Reset	O		
Minimum_Off_Time	O		
Minimum_On_Time	O		
Priority_Array	O		
Relinquish_Default	O		
Time_Delay	O	X*	RO
Notification_Class	O	X*	RO
Alarm_Value	O	X*	RO
Event_Enable	O	X*	RW
Acked_transitions	O	X*	RO
Notify_Type	O	X*	RO
Event_Time_Stamps	O	X*	RO
Event_Message_Texts	O	X*	RO
Event_Message_Texts_Config	O		
Event_Detection_Enable	O	X*	RO
Event_Algorithm_Inhibit_Ref	O		
Event_Algorithm_Inhibit	O		
Time_Delay_Normal	O	X*	RO
Reliability_Evaluation_Inhibit	O		
Property_List	R	X	RO
Profile_Name	O		

## Multi-State Value

Property	Required by Standard R - required O - optional	Implemented	Access RW - read/write RW* - read/write (object specific) RO - read only
Object_Identifier	R	X	RO
Object_Name	R	X	RO
Object_Type	R	X	RO
Present_Value	R	X	RW*
Description	O		
Status_Flags	R	X	RO
Event_State	R	X	RO
Reliability	O		
Out_Of_Service	R	X	RO
Number_Of_States	O	X	RO
State_Text	O	X	RO
Priority_Array	O		
Relinquish_Default	O		
Time_Delay	O		
Notification_Class	O		
Alarm_Values	O		
Fault_Values	O		
Event_Enable	O		
Acked_Transitions	O		
Notify_Type	O		
Event_Time_Stamps	O		
Event_Message_Texts	O		
Event_Message_Texts_Config	O		
Event_Detection_Enable	O		
Event_Algorithm_Inhibit_Ref	O		
Event_Algorithm_Inhibit	O		
Time_Delay_Normal	O		
Reliability_Evaluation_Inhibit	O		
Property_List	R	X	RO
Profile_Name	O		

## CharacterString Value

Property	Required by Standard R - required O - optional	Implemented	Access RW - read/write RW* - read/write (object specific) RO - read only
Object_Identifier	R	X	RO
Object_Name	R	X	RO
Object_Type	R	X	RO
Present_Value	R	X	RW*
Description	O		
Status_Flags	R	X	RO
Event_State	R	X	RO
Reliability	O		
Out_Of_Service	O	X	RO
Priority_Array	O		
Relinquish_Default	O		
Time_Delay	O		
Notification_Class	O		
Alarm_Values	O		
Fault_Values	O		
Event_Enable	O		
Acked_Transitions	O		
Notify_Type	O		
Event_Time_Stamps	O		
Event_Message_Texts	O		
Event_Message_Texts_Config	O		
Event_Detection_Enable	O		
Event_Algorithm_Inhibit_Ref	O		
Event_Algorithm_Inhibit	O		
Time_Delay_Normal	O		
Reliability_Evaluation_Inhibit	O		
Property_List	R	X	RO
Profile_Name	O		

## Notification Class

Property	Required by Standard R - required O - optional	Implemented	Access RW - read/write RW* - read/write (object specific) RO - read only
Object_Identifier	R	X	RO
Object_Name	R	X	RO
Object_Type	R	X	RO
Description	O	X	RO
Notification_Class	R	X	RO
Priority	R	X	RW
Ack_Required	R	X	RO
Recipient_List	R	X	RW
Property_List	R	X	RO
Profile_Name	O		