

# BACnet Protocol Implementation Conformance Statement for BACnet Driver

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## About This Publication

This publication provides the BACnet Protocol Implementation Conformance Statement for the BACnet driver that is used by 2711P PanelView Plus 400, 600, and 700-1500 devices. This driver can be used successfully with devices that use the BACnet/IP (Annex J) protocol, are visible on or from an Ethernet network, and support the objects, properties, and services supported by this driver.

## General Protocol Information

Date: August 22, 2008

Vendor Name: Kepware, Inc.

Product Name: BACnet Driver

Product Model Number: N/A

Applications Software Version: 4.64.45.0

Firmware Revision: N/A

BACnet Protocol Version: 1

BACnet Protocol Revision: 2

## Product Description

The BACnet Driver is an OPC Server communications driver plug-in that provides data access to BACnet devices over BACnet/IP.

## BACnet Standardized Device Profile (Annex L)

The BACnet standardized device profile protocol (Annex L) includes:

- ☐ 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 (Annex K)

The table lists the interoperability building blocks that are supported by Annex K.

BIBB	Name	BACnet Service	Init	Exec
DS-RP-A	Data Sharing - ReadProperty-A	ReadProperty	X	
DS-RPM-A	Data Sharing - ReadPropertyMultiple-A	ReadPropertyMultiple	X	
DS-WP-A	Data Sharing - WriteProperty-A	WriteProperty	X	
DS-WPM-A	Data Sharing - WritePropertyMultiple-A	WritePropertyMultiple	X	
DS-COV-A	Data Sharing - COV-A	SubscribeCOV	X	
		ConfirmedCOVNotification		X
		UnconfirmedCOVNotification		X
DS-COVP-A	Data Sharing - COVP-A	SubscribeCOVProperty	X	
		ConfirmedCOVNotification		X
		UnconfirmedCOVNotification		X
DM-DDB-A	Device Management - DynamicDeviceBinding-A	Who-Is	X	
		I-Am		X

## Segmentation Capability

The table lists the segmentation capability.

Segmented requests supported - Yes	Window Size: 127
Segmented responses supported - Yes	Window Size: 127

## Standard Object Types Supported

The BACnet driver does not expose BACnet objects and properties. The tables in this section list object types and properties the driver may access in network visible devices and software applications. The driver will not issue create or delete BACnet object requests.

## Analog Input Properties Supported

The table lists supported analog input properties and access rights.

Property	Access
AckedTransitions	Read Only
COVIncrement	Read/Write
Deadband	Read/Write
Description	Read Only
DeviceType	Read Only
EventEnable	Read/Write
EventState	Read Only
HighLimit	Read Only
LimitEnable	Read/Write
LowLimit	Read Only
MaxPresValue	Read Only
MinPresValue	Read Only
NotificationClass	Read Only
NotifyType	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
OutOfService	Read/Write
PresentValue	Read/Write
ProfileName	Read Only
Reliability	Read Only
Resolution	Read Only
StatusFlags	Read Only
TimeDelay	Read/Write
Units	Read Only
UpdateInterval	Read/Write

## Analog Output Properties Supported

The table lists supported analog output properties and access rights.

Property	Access
AckedTransitions	Read Only
COVIncrement	Read/Write
Deadband	Read/Write
Description	Read Only
DeviceType	Read Only
EventEnable	Read/Write
EventState	Read Only
HighLimit	Read Only
LimitEnable	Read/Write
LowLimit	Read Only
MaxPresValue	Read Only
MinPresValue	Read Only
NotificationClass	Read Only
NotifyType	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
OutOfService	Read/Write
PresentValue	Read/Write
PriorityArray	Read Only
ProfileName	Read Only
Reliability	Read Only
RelinquishDefault	Read/Write
Resolution	Read Only
StatusFlags	Read Only
TimeDelay	Read/Write
Units	Read Only

## Analog Value Properties Supported

The table lists supported analog value properties and access rights.

Property	Access
AckedTransitions	Read Only
COVIncrement	Read/Write
Deadband	Read/Write
Description	Read Only
EventEnable	Read/Write
EventState	Read Only
HighLimit	Read Only
LimitEnable	Read/Write
LowLimit	Read Only
NotificationClass	Read Only
NotifyType	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
OutOfService	Read/Write
PresentValue	Read/Write
PriorityArray	Read Only
ProfileName	Read Only
Reliability	Read Only
RelinquishDefault	Read/Write
StatusFlags	Read Only
TimeDelay	Read/Write
Units	Read Only

## Averaging Properties Supported

The table lists supported averaging properties and access rights.

Property	Access
AttemptedSamples	Read Only
AverageValue	Read Only
Description	Read Only
MaximumValue	Read Only
MaximumValueTimestamp	Read Only
MinimumValue	Read Only
MinimumValueTimestamp	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
ProfileName	Read Only
ValidSamples	Read Only
VarianceValue	Read Only
WindowInterval	Read/Write
WindowSamples	Read/Write

## Binary Input Properties Supported

The table lists supported binary input properties and access rights.

Property	Access
AckedTransitions	Read Only
ActiveText	Read Only
AlarmValue	Read/Write
ChangeOfStateCount	Read/Write
ChangeOfStateTime	Read Only
Description	Read Only
DeviceType	Read Only
ElapsedActiveTime	Read Only
EventEnable	Read/Write
EventState	Read Only
InactiveText	Read Only
NotificationClass	Read Only
NotifyType	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
OutOfService	Read/Write
Polarity	Read/Write
PresentValue	Read/Write
ProfileName	Read Only
Reliability	Read Only
StatusFlags	Read Only
TimeDelay	Read/Write
TimeOfActiveTimeReset	Read Only
TimeOfStateCountReset	Read Only

## Binary Output Properties Supported

The table lists supported binary output properties and access rights.

Property	Access
AckedTransitions	Read Only
ActiveText	Read Only
ChangeOfStateCount	Read/Write
ChangeOfStateTime	Read Only
Description	Read Only
DeviceType	Read Only
ElapsedActiveTime	Read Only
EventEnable	Read/Write
EventState	Read Only
FeedbackValue	Read/Write
Inactive Text	Read Only
MinimumOffTime	Read Only
MinimumOnTime	Read Only
NotificationClass	Read Only
NotifyType	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
OutOfService	Read/Write
Polarity	Read/Write
PresentValue	Read/Write
PriorityArray	Read Only
ProfileName	Read Only
Reliability	Read Only
RelinquishDefault	Read/Write
StatusFlags	Read Only
TimeDelay	Read/Write
TimeOfActiveTimeReset	Read Only
TimeOfStateCountReset	Read Only



## Binary Value Properties Supported

The table lists supported binary value properties and access rights.

Property	Access
AckedTransitions	Read Only
ActiveText	Read Only
AlarmValue	Read/Write
ChangeOfStateCount	Read/Write
ChangeOfStateTime	Read Only
Description	Read Only
ElapsedActiveTime	Read Only
EventEnable	Read/Write
EventState	Read Only
Inactive Text	Read Only
MinimumOffTime	Read Only
MinimumOnTime	Read Only
NotificationClass	Read Only
NotifyType	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
OutOfService	Read/Write
PresentValue	Read/Write
PriorityArray	Read Only
ProfileName	Read Only
Reliability	Read Only
RelinquishDefault	Read/Write
StatusFlags	Read Only
TimeDelay	Read/Write
TimeOfActiveTimeReset	Read Only
TimeOfStateCountReset	Read Only

## Calendar Properties Supported

The table lists supported calendar properties and access rights.

Property	Access
Description	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
Present Value	Read/Write
ProfileName	Read Only

## Command Properties Supported

The table lists supported command properties and access rights.

Property	Access
AllWritesSuccessful	Read Only
Description	Read Only
InProcess	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
PresentValue	Read/Write
ProfileName	Read Only

## Device Properties Supported

The table lists supported device properties and access rights.

Property	Access
APDUSegmentTimeout	Read/Write
APDUTimeout	Read/Write
ApplicationSoftwareVersion	Read Only
BackupFailureTimeout	Read Only
DatabaseRevision	Read Only
DaylightSavingsStatus	Read Only
Description	Read Only
FirmwareRevision	Read Only
LastRestoreTime	Read Only
LocalDate	Read Only
LocalTime	Read Only
Location	Read Only
MaxAPDULengthAccepted	Read/Write
MaxInfoFrames	Read Only
MaxMaster	Read Only
MaxSegmentsAccepted	Read Only
ModelName	Read Only
NumberOfAPDURetries	Read/Write
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
ProfileName	Read Only
ProtocolRevision	Read Only
ProtocolVersion	Read Only
SegmentationSupported	Read Only
SystemStatus	Read/Write
UTCOffset	Read Only
VendorIdentifier	Read Only
VendorName	Read Only

## Event Enrollment Properties Supported

The table lists supported event enrollment properties and access rights.

Property	Access
AckedTransitions	Read Only
Description	Read Only
EventEnable	Read/Write
EventState	Read Only
EventType	Read Only
IssueConfirmedNotifications	Read/Write
NotificationClass	Read Only
NotifyType	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
Priority	Read Only
ProcessIdentifier	Read Only
ProfileName	Read Only

## File Properties Supported

The table lists supported file properties and access rights.

Property	Access
Archive	Read Only
Description	Read Only
FileAccessMethod	Read Only
FileSize	Read Only
FileType	Read Only
ModificationDate	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
ProfileName	Read Only
ReadOnly	Read Only
RecordCount	Read/Write

## Group Properties Supported

The table lists supported group properties and access rights.

Property	Access
Description	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
ProfileName	Read Only

## Life Safety Point Properties Supported

The table lists supported life safety point properties and access rights.

Property	Access
AckedTransitions	Read Only
Description	Read Only
DeviceType	Read Only
DirectReading	Read Only
EventEnable	Read/Write
EventState	Read Only
MaintenanceRequired	Read/Write
Mode	Read/Write
NotificationClass	Read Only
NotifyType	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
OperationExpected	Read Only
OutOfService	Read/Write
PresentValue	Read/Write
ProfileName	Read Only
Reliability	Read Only
Setting	Read/Write
Silenced	Read Only
StatusFlags	Read Only

Property	Access
TimeDelay	Read/Write
TrackingValue	Read Only
Units	Read Only

## Life Safety Zone Properties Supported

The table lists supported life safety zone properties and access rights.

Property	Access
AckedTransitions	Read Only
Description	Read Only
DeviceType	Read Only
EventEnable	Read/Write
EventState	Read Only
MaintenanceRequired	Read/Write
Mode	Read/Write
NotificationClass	Read Only
NotifyType	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
OperationExpected	Read Only
OutOfService	Read/Write
PresentValue	Read/Write
ProfileName	Read Only
Reliability	Read Only
Silenced	Read Only
StatusFlags	Read Only
TimeDelay	Read/Write
TrackingValue	Read Only

## Loop Properties Supported

The table lists supported loop properties and access rights.

Property	Access
AckedTransitions	Read Only
Action	Read Only
Bias	Read/Write
ControlledVariableUnits	Read Only
ControlledVariableValue	Read Only
COVIncrement	Read/Write
DerivativeConstant	Read/Write
DerivativeConstantUnits	Read Only
Description	Read Only
ErrorLimit	Read/Write
EventEnable	Read/Write
EventState	Read Only
IntegralConstant	Read/Write
IntegralConstantUnits	Read Only
MaximumOutput	Read/Write
MinimumOutput	Read Only
NotificationClass	Read Only
NotifyType	Read Only
ObjectIdentifier	Read Only
ObjectName	Read/Write
ObjectType	Read Only
OutOfService	Read Only
OutputUnits	Read Only
PresentValue	Read Only
PriorityForWriting	Read/Write
ProfileName	Read Only
ProportionalConstant	Read/Write
ProportionalConstantUnits	Read Only
Reliability	Read Only
Setpoint	Read/Write
StatusFlags	Read Only
TimeDelay	Read/Write
UpdateInterval	Read/Write

## Multi-state Output Properties Supported

The table lists supported multi-state output properties and access rights.

Property	Access
AckedTransitions	Read Only
Description	Read Only
DeviceType	Read Only
EventEnable	Read/Write
EventState	Read Only
FeedbackValue	Read/Write
NotificationClass	Read Only
NotifyType	Read Only
NumberOfStates	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
OutOfService	Read/Write
PresentValue	Read/Write
PriorityArray	Read Only
ProfileName	Read Only
Reliability	Read Only
RelinquishDefault	Read/Write
StatusFlags	Read Only
TimeDelay	Read/Write

## Multi-state Value Properties Supported

The table lists supported multi-state value properties and access rights.

Property	Access
AckedTransitions	Read Only
Description	Read Only
EventEnable	Read/Write
EventState	Read Only
NotificationClass	Read Only
NotifyType	Read Only



Property	Access
NumberOfStates	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
OutOfService	Read/Write
PresentValue	Read/Write
ProfileName	Read Only
Reliability	Read Only
RelinquishDefault	Read/Write
StatusFlags	Read Only
TimeDelay	Read/Write

## Notification Class Properties Supported

The table lists supported notification class properties and access rights.

Property	Access
AckedTransitions	Read Only
Description	Read Only
NotificationClass	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
ProfileName	Read Only

## Program Properties Supported

The table lists supported program properties and access rights.

Property	Access
Description	Read Only
DescriptionOfHalt	Read Only
InstanceOf	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only

Property	Access
OutOfService	Read/Write
ProfileName	Read Only
ProgramChange	Read Only
ProgramLocation	Read Only
ProgramState	Read Only
ReasonForHalt	Read Only
Reliability	Read Only
StatusFlags	Read Only

## Schedule Properties Supported

The table lists supported schedule properties and access rights.

Property	Access
Description	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
PresentValue	Read/Write
PriorityForWriting	Read/Write
ProfileName	Read Only

## Trend Log Properties Supported

The table lists supported trend log properties and access rights.

Property	Access
AckedTransitions	Read Only
BufferSize	Read Only
COVResubscriptionInterval	Read/Write
CurrentNotifyTime	Read Only
Description	Read Only
EventEnable	Read/Write
EventState	Read Only
LogEnable	Read/Write
LogInterval	Read/Write
NotificationClass	Read Only

Property	Access
NotificationThreshold	Read Only
NotifyType	Read Only
ObjectIdentifier	Read Only
ObjectName	Read Only
ObjectType	Read Only
PreviousNotifyTime	Read Only
ProfileName	Read Only
RecordCount	Read/Write
RecordsSinceNotification	Read Only
StartTime	Read Only
StopTime	Read Only
StopWhenFull	Read/Write
TotalRecordCount	Read Only

## Data Link Layer Options

The data link layer options include:

- ☒ 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-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: \_\_\_\_\_

## 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

The networking options include:

- ☐ Router
- ☐ Annex H, BACnet Tunneling Router over IP
- ☐ BACnet/IP Broadcast Management Device (BBMD)  
Does the BBMD support registrations by Foreign Devices? ☐ Yes ☐ No

### TIP

The BACnet driver does not act as a BACnet router, or BBMD. It can, however, access non-BACnet/IP devices through a BACnet gateway device. The BACnet driver can discover devices on remote networks by registering with BBMD's as a foreign device.

## Character Sets Supported

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

- |   |   |                                     |
|---|---|-------------------------------------|
| <input checked="" type="checkbox"/> ANSI X3.4 | <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 |

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