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Honeywell Novar XIO Remote I/O Protocol Implementation Conformance Statement (PICS)

Topic: BACnet Protocol Implementation Conformance Statement (PICS)
Date: Feb 2015
Version 2.0
Applicable Products XIO Remote I/O - 4 Universal Inputs, 4 Relay Outputs w/HOA
Author: Toni Liu

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Novar XIO Remote I/O Controller

Annex A - Protocol Implementation Conformance Statement

Date: 9th Feb 2015

Vendor ID: 333

Vendor Name: Novar

Product Name: XIO Remote I/O - 4 Universal Inputs, 4 Relay Outputs w/HOA

Product Model Number: xio.44H

Applications Software Version: N/A

Firmware Revision: 1.2.3

BACnet Protocol Revision: 10

Product Description and Intended Use:

While the xio family is intended to meet the needs of Novar's multi-site refrigeration customers, the xio family is in essence general-purpose, I/O modules; therefore, HVAC and lighting control customers that require/demand small-footprint, open-protocol, expandable I/O modules that are hot-swappable and DIN-rail-mountable will be able to take advantage of all of xio's new features. This I/O product has 4 Universal Inputs and 4 Relay Outputs with HOA switches.

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)

BACnet Interoperability Building Blocks Supported (Annex K):

Data Sharing	Read Property-B	DS-RP-B
	Read Property Multiple-B	DS-RPM-B
	Write Property-B	DS-WP-B
Device & Network Management	Dynamic Device Binding-B	DM-DDB-B
	Dynamic Object Binding-B	DM-DOB-B
	Device Communication Control-B	DM-DCC-B
	Reinitialize Device-B	DM-RD-B

Following device binding methods Supported by the controller

- 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 no no Window Size ____
Able to receive segmented messages no no Window Size ____

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-485 ARCNET (Clause 8), baud rate(s)
- MS/TP master (Clause 9), baud rate(s): 9.6k, 19.2k, 38.4k, 57.6k, 76.8k bps
- MS/TP slave (Clause 9), baud rate(s): 9.6k, 19.2k, 38.4k, 57.6k, 76.8k bps
- 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:

- Router, Clause 6 - BACnet IP (Annex J)
- Annex H, BACnet Tunneling Router over IP
- BACnet/IP Broadcast Management Device (BBMD)
Does the BBMD support registrations by Foreign Devices?
- Yes
- No

Character Sets Supported:

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

- UTF-8
- IBM™/Microsoft™ DBCS
- JIS C 6226
- ISO 10646 (UCS-4)
- ISO 10646 (UCS-2)
- ISO 8859-1

Standard Object Types Supported:

	Object supported	Object dynamically creatable	Object dynamically deletable
ANALOG_INPUT	Y	N	N

ANALOG_OUTPUT	Y	N	N
ANALOG_VALUE	Y	N	N
AVERAGING	N	N	N
BINARY_INPUT	Y	N	N
BINARY_OUTPUT	Y	N	N
BINARY_VALUE	Y	N	N
CALENDAR	N	N	N
COMMAND	N	N	N
DEVICE	Y	N	N
EVENT_ENROLLMENT	N	N	N
FILE	Y	N	N
GROUP	N	N	N
LOOP	N	N	N
LIFE_SAFETY_DEVICE	N	N	N
LIFE_SAFETY_ZONE	N	N	N
MULTISTATE_INPUT	Y	N	N
MULTISTATE_OUTPUT	N	N	N
MULTISTATE_VALUE	Y	N	N
NOTIFICATION_CLASS	N	N	N
PROGRAM	Y	N	N
SCHEDULE	N	N	N
TRENDLOG	N	N	N
ACCUMULATOR	Y	N	N
PULSE_CONVERTER	N	N	N

Standard Objects and Properties Supported:

Analog Input Object:

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	OBJECT_NAME
OBJECT_TYPE	
PRESENT_VALUE	PRESENT_VALUE
STATUS_FLAGS	
EVENT_STATE	
OUT_OF_SERVICE	OUT_OF_SERVICE
UNITS	UNITS
DESCRIPTION	

Analog Output Object:

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
PRESENT_VALUE	PRESENT_VALUE
STATUS_FLAGS	
EVENT_STATE	
OUT_OF_SERVICE	OUT_OF_SERVICE
UNITS	
PRIORITY_ARRAY	
RELINQUISH_DEFAULT	

DESCRIPTION	
STATUS COMMUNICATION LOSS(6067)	STATUS COMMUNICATION LOSS(6067)

Analog Value Object:

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
PRESENT_VALUE	PRESENT_VALUE
STATUS_FLAGS	
EVENT_STATE	
OUT_OF_SERVICE	OUT_OF_SERVICE
UNITS	UNITS
DESCRIPTION	
PRIORITY_ARRAY	
RELINQUISH_DEFAULT	RELINQUISH_DEFAULT

Binary Input Object:

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
PRESENT_VALUE	PRESENT_VALUE
STATUS_FLAGS	
EVENT_STATE	
OUT_OF_SERVICE	OUT_OF_SERVICE
POLARITY	POLARITY
DESCRIPTION	

Binary Output Object:

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
PRESENT_VALUE	PRESENT_VALUE
STATUS_FLAGS	
EVENT_STATE	
OUT_OF_SERVICE	OUT_OF_SERVICE
POLARITY	POLARITY
PRIORITY_ARRAY	
RELINQUISH_DEFAULT	
DESCRIPTION	
INACTIVE_TEXT	
ACTIVET_TEXT	
STATUS COMMUNICATION LOSS(6067)	STATUS COMMUNICATION LOSS(6067)

Binary Value Object:

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	

PRESENT_VALUE	PRESENT_VALUE
STATUS_FLAGS	
EVENT_STATE	
OUT_OF_SERVICE	

Device Object:

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	OBJECT_IDENTIFIER
OBJECT_NAME	OBJECT_NAME
OBJECT_TYPE	
SYSTEM_STATUS	
VENDOR_NAME	
VENDOR_IDENTIFIRE	
MODEL_NAME	
FIRMWARE_REVISION	
APPLICATION_SOFTWARE_VERSION	
PROTOCOL_VERSION	
PROTOCOL_REVISION	
PROTOCOL_SERVICES_SUPPORTED	
PROTOCOL_OBJECT_TYPES_SUPPORTED	
OBJECT_LIST	
MAX_APDU_LENGTH_ACCEPTED	
SEGMENTATION_SUPPORTED	
APDU_TIMEOUT	
NUMBER_OF_APDU_RETRIES	
DEVICE_ADDRESS_BINDING	
DATABASE_REVISION	
MAX_MASTERS	MAX_MASTERS
MAX_INFO_FRAMES	
DESCRIPTION	DESCRIPTION
LOCATION	LOCATION
BAUD_RATE(6060)	
HEART_BEAT(6066)	HEART_BEAT(6066)

File Object:

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
FILE_TYPE	
FILE_SIZE	
MODIFICATION_DATE	
ARCHIVE	ARCHIVE
READ_ONLY	
FILE_ACCESS_METHOD	
DESCRIPTION	

Multistate_Input Object:

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	

PRESENT_VALUE	
STATUS_FLAG	
EVENT_STATE	
OUT_OF_SERVICE	
NUMBER_OF_STATES	
DESCRIPTION	
STATE_TEXT	

Multistate Value Object:

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
PRESENT_VALUE	PRESENT_VALUE
STATUS_FLAGS	
EVENT_STATE	
OUT_OF_SERVICE	OUT_OF_SERVICE
NUMBER_OF_STATES	
DESCRIPTION	
PRIORITY_ARRAY	
RELINQUISH_DEFAULT	
STATE_TEXT	

Program Object:

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
PROGARM_STATE	
PROGRAM_CHANGE	PROGRAM_CHANGE
STATUS_FLAGS	
OUT_OF_SERVICE	OUT_OF_SERVICE
REASON_FOR_HALT	
DESCRIPTION_OF_HALT	
DESCRIPTION	

Accumulator Object:

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
PRESENT_VALUE	PRESENT_VALUE
STATUS_FLAGS	
EVENT_STATE	
OUT_OF_SERVICE	OUT_OF_SERVICE
SCALE	
UNITS	UNITS
MAX PRES VALUE	
DESCRIPTION	