

Mbus2Bacnet

M-Bus to Bacnet converter for PiiGAB 900S/T gateways.

Important

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1 Protocol Implementation Conformance Statement

BACnet Protocol Implementation Conformance Statement

Date: 2025-12-18

Vendor Name: Heklatech AB

Model Name: MBus2BACnet

Product Name: PiiGAB 900 Smart Gateway

Product Description: The MBus2Bacnet application is an M-Bus to Bacnet converter that runs on PiiGAB Pi-900 hardware [1]. The conversions are configured in the web interface on the Pi-900. Only Analog-Input values are supported. The Pi-900 takes care of ethernet settings. [1]

<https://www.piigab.com>

Application Software version: 2.0.0

Firmware Revision: 1.4.1

BACnet Protocol Revision: 24

Bacnet Standardized Device Profile (Annex L):

- BACnet Smart Sensor (B-SS)

Data Link Layer Options:

- BACnet IP, (Annex J)
- BACnet IP, (Annex J), Foreign Device (Two hop mode)

Networking Options

- No router or BBMD service

Character Sets Supported:

- ISO 10646 (UTF-8)

2 BACnet Interoperability Building Blocks (BIBB)

BIBB Type		BACnet Service	Intiate	Execute
DS-RP-B	Data Sharing-ReadProperty-B	ReadProperty		X
DS-RPM-B	Data Sharing-ReadPropertyMultiple-B	ReadPropertyMultiple		X
DS-WP-B	Data Sharing-WriteProperty-B	WriteProperty		X
DM-DDB-B	Device Management-Dynamic Device Binding-B	Who-Is		X
		I-Am	X	
DM-DOB-B	Device Management-Dynamic Object Binding-B	Who-Has		X
		I-Have	X	
DM-DCC-B	Device Management-DeviceCommunicationControl-B	DeviceCommunicationControl		X
DM-RD-B	Device Management-ReinitializeDevice-B	ReinitializeDevice		X
GW-EO-B	Gateway-Embedded Objects-B	Embedded Objects		

3 Objects

Supported Object Types

Object Type	ID
Analog-Input	0
Device	8
Network Port	56

Analog Input Object Type

Property Id	Property Datatype	Value	R/W
Object_Identifier	BACnetObjectIdentifier	0 User Configurable	R
Object_Name	CharacterString	User Configurable	R
Object_Type	BACnetObjectType	Analog-Input (0)	R
Present_Value	REAL	X, writable when Out_Of_Service is True.	R
Status_Flags	BACnetStatusFlags	FALSE, FALSE, FALSE, FALSE	R
Event_State	BACnetEventState	NORMAL	R
Out_Of_Service	BOOLEAN	FALSE	R/W

Units	BACnetEngineeringUnits	User Configurable	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	R

Device Object Type

Property Id	Property Datatype	Value	R/W
Object_Identifier	BACnetObjectIdentifier	250002 User Configurable	R
Object_Name	CharacterString	User Configurable	R
Object_Type	BACnetObjectType	Device (8)	R
System_Status	BACnetDeviceStatus	OPERATIONAL (0)	R
Vendor_Name	CharacterString	Heklatech AB	R
Vendor_Identifier	Unsigned16	1488	R
Model_Name	CharacterString	MBus2BACnet	R
Description	CharacterString	User Configurable	R
Location	CharacterString	User Configurable	R
Firmware_Revision	CharacterString	1.4.1	R
Application_Software_version	CharacterString	2.0.0	R
Protocol_Version	Unsigned	1	R
Protocol_Revision	Unsigned	24	R
Protocol_Services_Supported	BACnetServicesSupported	See section 2	R
Protocol_Object_Types_Supported	BACnetObjectTypesSupported	See section 3	R
Object_List	BACnetARRAY[N] of BACnetObjectIdentifier	Device, Network, All configured objects	R
Max_APDU_Length_Accepted	Unsigned	1476	R
Segmentation_Supported	BACnetSegmentation	None (3)	R
Local_Time	Time		R

Local_Date	Date	Derived from Pi-900	R
UTC_Offset	INTEGER	User Configurable	R
Daylight_Savings_Status	BOOLEAN	User Configurable	R
APDU_Timeout	Unsigned	10000	R
Number_of_APDU_Retries	Unsigned	3	R
Device_Address_Binding	BACnetLIST of BACnetAddressBinding		R
Database_Revision	Unsigned		R
Time_Of_Device_Restart	BACnetTimeStamp		R
Serial_Number	CharacterString	Derived from Pi-900	R
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier		R

Network Port Object Type

Property Id	Property Datatype	Value	R/W
Object_Identifier	BACnetObjectIdentifier	1	R
Object_Name	CharacterString	BACnet/IP Port	R
Object_Type	BACnetObjectType	BACNETWORK_PORT (56)	R
Status_Flags	BACnetStatusFlags	FALSE, FALSE, FALSE, FALSE	R
Reliability	BACnetReliability	NO_FAULT_DETECTED (0)	R
Out_Of_Service	BOOLEAN	FALSE	R
Network_Type	BACnetNetworkType	IPv4 (5)	R
Protocol_Level	BACnetProtocolLevel	Bacnet Application (2)	R
Changes_Pending	BOOLEAN	FALSE	R
MAC_Address	OCTET STRING	Derived from Pi-900	R
BACnet_IP_Mode	BACnetIPMode	Normal (0)	R
IP-Address	OCTET STRING	Derived from Pi-900	R
Bacnet_IP_UDP_Port	Unsigned16	User Configurable	R

IP_Netmask	OCTET STRING	Derived from Pi-900	R
IP_Default_Gateway	OCTET STRING	Derived from Pi-900	R
IP-DNS-Server	OCTET STRING	Derived from Pi-900	R
FD_BBMD_Address	BACnetHostNPort	User Configurable	R
FD_Subscription_Lifetime	Unsigned16	User Configurable	R
APDU_Length	Unsigned	1476	R
Network_Number	Unsigned16	0	R
Network_Number_Quality	BACnetNetworkNumber Quality	Unknown (0)	R
Link_Speed	REAL	1E8	R