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BACnet RIB

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Protocol Implementation Conformance Statement

Vendor Name:	**Functional Devices, Inc.**
Product Name:	**BACnet RIB with Accumulator**
Product Model Number:	**RIBMNWD12-BC**
Applications Software Version:	**2.15**
Firmware Revision:	**2.04**
BACnet Protocol Revision:	**12**

1. Product Description

The BACnet RIB provides a software-implemented network interface between BACnet client devices and RIB control and monitoring points.

2. BACnet Standardized Device Profile (Annex L)

The BACdoor OEM Client-Server supports the B-ASC profile.

3. BACnet Interoperability Building Blocks Supported (Annex K)

DS-RP-B, DS-RPM-B, DS-WP-B, DS-WPM-B, DM-DDB-B, DM-DOB-B, DM-DCC-B, DB-RD-B

4. Segmentation Capability

Segmentation is not supported.

5. Standard Object Types (See Specification for product to see which are supported on the product)

No dynamic Creation or Deletion supported
No proprietary object types supported

Standard Object Types Supported:

- **Binary Input**
- **Accumulator**

Optional Properties Supported:

- **Binary Input**
  - Inactive_Text
  - Active_Text
- **Device**
  - Description
  - Max_Master
  - Max_Info_Frames
- **Accumulator**

Prescale

Writable Properties:

- **Binary Input**
  - Object_Name (4 characters max)
  - Inactive_Text (3 characters max)
  - Active_Text (2 characters max)
  - Polarity
- **Device**
  - Object_Identifier
  - Description (64 characters max)
  - APDU_Timeout
  - Number_Of_APDU_Retries
  - Max_Master
  - Object_Name
- **Accumulator**
  - Object_Name (4 characters max)
  - Out_Of_Service
  - Scale
  - Units
  - Prescale

Object Details

DEVx	Object_Identifier	default to DEV277000	W
	Object_Name	Up to 32 characters	W
	Object_Type	DEVICE	R
	System_Status	OPERATIONAL or NON_OPERATIONAL	R
	Vendor_Name	“Functional Devices, Inc”	R
	Vendor_Identifier	277	R
	Model_Name	“RIBMNWD12-BC” (or similar)	R
	Firmware_Revision	“2.04” (or similar)	R
	Application_Software_Version	“2.15” (or similar)	R
	Description	Up to 64 characters	W
	Protocol_Version	1	R
	Protocol_Revision	12	R
	Protocol_Services_Supported	{readProperty,readPropertyMultiple,writeProperty,writePropertyMultiple deviceCommunicationControl, who-Has, who-Is, reinitializeDevice }	R
	Protocol_Object_Types_Supported	{ Binary_Input, Device, Accumulator }	R
	Object_List	DEV277xxx, BI1, BI2, BI3, BI4, BI5, BI6, BI7, BI8, BI9, BI10, BI11, BI12,ACC1,ACC2	R
	Max_APDU_Length_Accepted	480	R
	Segmentation_Supported	NONE	R
	APDU_Timeout	3000 default	W
	Number_Of_APDU_Retries	1 default	W
	Max_Master	127 default	W
	Max_Info_Frames	1	R
	Device_Address_Binding	always empty	R
	Database_Revision		R

BI1	Object_Identifier	BI1	R
	Object_Name	Up to 4 characters	W
	Object_Type	Binary_Input	R

	Present_Value	0 or 1	R
	Status_Flags	Always { 0,0,0,0 }	R
	Event_State	Always NORMAL	R
	Reliability	Always NO_FAULT_DETECTED	R
	Out_Of_Service	Always FALSE	R
	Polarity	NORMAL or REVERSE	W
	Inactive_Text	Up to 3 characters (OFF)	W
	Active_Text	Up to 2 characters (ON)	W

BI2	Object_Identifier	BI2	R
	Object_Name	Up to 4 characters	W
	Object_Type	Binary_Input	R
	Present_Value	0 or 1	R
	Status_Flags	Always { 0,0,0,0 }	R
	Event_State	Always NORMAL	R
	Reliability	Always NO_FAULT_DETECTED	R
	Out_Of_Service	Always FALSE	R
	Polarity	NORMAL or REVERSE	W
	Inactive_Text	Up to 3 characters (OFF)	W
	Active_Text	Up to 2 characters (ON)	W

BI3	Object_Identifier	BI3	R
	Object_Name	Up to 4 characters	W
	Object_Type	Binary_Input	R
	Present_Value	0 or 1	R
	Status_Flags	Always { 0,0,0,0 }	R
	Event_State	Always NORMAL	R
	Reliability	Always NO_FAULT_DETECTED	R
	Out_Of_Service	Always FALSE	R
	Polarity	NORMAL or REVERSE	W
	Inactive_Text	Up to 3 characters (OFF)	W
	Active_Text	Up to 2 characters (ON)	W

BI4	Object_Identifier	BI4	R
	Object_Name	Up to 4 characters	W
	Object_Type	Binary_Input	R
	Present_Value	0 or 1	R
	Status_Flags	Always { 0,0,0,0 }	R
	Event_State	Always NORMAL	R
	Reliability	Always NO_FAULT_DETECTED	R
	Out_Of_Service	Always FALSE	R
	Polarity	NORMAL or REVERSE	W
	Inactive_Text	Up to 3 characters (OFF)	W
	Active_Text	Up to 2 characters (ON)	W

BI5	Object_Identifier	BI5	R
	Object_Name	Up to 4 characters	W
	Object_Type	Binary_Input	R
	Present_Value	0 or 1	R
	Status_Flags	Always { 0,0,0,0 }	R
	Event_State	Always NORMAL	R
	Reliability	Always NO_FAULT_DETECTED	R
	Out_Of_Service	Always FALSE	R

	Polarity	NORMAL or REVERSE	W
	Inactive_Text	Up to 3 characters (OFF)	W
	Active_Text	Up to 2 characters (ON)	W

BI6	Object_Identifier	BI6	R
	Object_Name	Up to 4 characters	W
	Object_Type	Binary_Input	R
	Present_Value	0 or 1	R
	Status_Flags	Always { 0,0,0,0 }	R
	Event_State	Always NORMAL	R
	Reliability	Always NO_FAULT_DETECTED	R
	Out_Of_Service	Always FALSE	R
	Polarity	NORMAL or REVERSE	W
	Inactive_Text	Up to 3 characters (OFF)	W
	Active_Text	Up to 2 characters (ON)	W

BI7	Object_Identifier	BI7	R
	Object_Name	Up to 4 characters	W
	Object_Type	Binary_Input	R
	Present_Value	0 or 1	R
	Status_Flags	Always { 0,0,0,0 }	R
	Event_State	Always NORMAL	R
	Reliability	Always NO_FAULT_DETECTED	R
	Out_Of_Service	Always FALSE	R
	Polarity	NORMAL or REVERSE	W
	Inactive_Text	Up to 3 characters (OFF)	W
	Active_Text	Up to 2 characters (ON)	W

BI8	Object_Identifier	BI8	R
	Object_Name	Up to 4 characters	W
	Object_Type	Binary_Input	R
	Present_Value	0 or 1	R
	Status_Flags	Always { 0,0,0,0 }	R
	Event_State	Always NORMAL	R
	Reliability	Always NO_FAULT_DETECTED	R
	Out_Of_Service	Always FALSE	R
	Polarity	NORMAL or REVERSE	W
	Inactive_Text	Up to 3 characters (OFF)	W
	Active_Text	Up to 2 characters (ON)	W

BI9	Object_Identifier	BI9	R
	Object_Name	Up to 4 characters	W
	Object_Type	Binary_Input	R
	Present_Value	0 or 1	R
	Status_Flags	Always { 0,0,0,0 }	R
	Event_State	Always NORMAL	R
	Reliability	Always NO_FAULT_DETECTED	R
	Out_Of_Service	Always FALSE	R
	Polarity	NORMAL or REVERSE	W
	Inactive_Text	Up to 3 characters (OFF)	W
	Active_Text	Up to 2 characters (ON)	W

BI10	Object_Identifier	BI10	R

	Object_Name	Up to 4 characters	W
	Object_Type	Binary_Input	R
	Present_Value	0 or 1	R
	Status_Flags	Always { 0,0,0,0 }	R
	Event_State	Always NORMAL	R
	Reliability	Always NO_FAULT_DETECTED	R
	Out_Of_Service	Always FALSE	R
	Polarity	NORMAL or REVERSE	W
	Inactive_Text	Up to 3 characters (OFF)	W
	Active_Text	Up to 2 characters (ON)	W

BI11	Object_Identifier	BI11	R
	Object_Name	Up to 4 characters	W
	Object_Type	Binary_Input	R
	Present_Value	0 or 1	R
	Status_Flags	Always { 0,0,0,0 }	R
	Event_State	Always NORMAL	R
	Reliability	Always NO_FAULT_DETECTED	R
	Out_Of_Service	Always FALSE	R
	Polarity	NORMAL or REVERSE	W
	Inactive_Text	Up to 3 characters (OFF)	W
	Active_Text	Up to 2 characters (ON)	W

BI12	Object_Identifier	BI12	R
	Object_Name	Up to 4 characters	W
	Object_Type	Binary_Input	R
	Present_Value	0 or 1	R
	Status_Flags	Always { 0,0,0,0 }	R
	Event_State	Always NORMAL	R
	Reliability	Always NO_FAULT_DETECTED	R
	Out_Of_Service	Always FALSE	R
	Polarity	NORMAL or REVERSE	W
	Inactive_Text	Up to 3 characters (OFF)	W
	Active_Text	Up to 2 characters (ON)	W

ACC1	Object_Identifier	ACC1	R
	Object_Name	Up to 4 characters	W
	Object_Type	Accumulator	R
	Present_Value	Unsigned	R
	Status_Flags	{0,0,0,0} Normal or {0,0,0,1} Out_Of_Service	R
	Event_State	Always NORMAL	R
	Out_Of_Service	TRUE or FALSE	W
	Scale	0-65535 (Integer)	W
	Units	Any BACnetEngineeringUnits	W
	Prescale	multiplier,moduloDivide(Unsigned,Unsigned)	W
	Max_Pres_Value	65535	R

ACC2	Object_Identifier	ACC2	R
	Object_Name	Up to 4 characters	W
	Object_Type	Accumulator	R
	Present_Value	Unsigned	R
	Status_Flags	{0,0,0,0} Normal or {0,0,0,1} Out_Of_Service	R
	Event_State	Always NORMAL	R

	Out_Of_Service	TRUE or FALSE	W
	Scale	0-65535 (Integer)	W
	Units	Any BACnetEngineeringUnits	W
	Prescale	multiplier,moduloDivide(Unsigned,Unsigned)	W
	Max_Pres_Value	65535	R

6. Data Link Layer Options

☐ BACnet/IP, (Annex J)
☐ 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), configurable baud rate to 156K
☑ MS/TP master (Clause 9): 9600, 19200, 38400, 57600, 76800, 115200 baud
☐ PTP (Clause 10)

7. Device Address Binding

Static binding is not supported.

8. Networking Options

The RIB is not a router.
Annex H, BACnet Tunneling Router over IP is not supported
BACnet/IP Broadcast Management Device (BBMD) is not supported

9. Character Sets Supported

☑ISO 10646(UTF8) ☐IBM/Microsoft DBCS ☐ JIS C 6226 ☐ ISO 10646 (UCS4) ☐ ISO 10646 (UCS2)
☐ISO 8859-1

10. Network Security Options

This RIB is a non-secure-device