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BACnet RIB®

March, 26 2018

Protocol Implementation Conformance Statement

Vendor Name:	**Functional Devices, Inc.**
Product Name:	**BACnet RIB**
Product Model Number:	**RIB[*]24B-BCAI**
Applications Software Version:	**v1.5**
Firmware Revision:	**v2.04**
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, DM-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:

- **Analog Input**
- **Analog Value**
- **Binary Input**
- **Binary Output**
- **Binary Value**
- **Device**

Optional Properties Supported:

- **Analog Input**
  - Description
  - Reliability
  - Min-Pres-Value
  - Max-Pres-Value

Device-Type
Resolution

- **Analog Value**
  Description
- **Binary Input**
  Description
  Reliability
  Inactive-Text
  Active-Text
- **Binary Output**
  Description
  Reliability
  Inactive-Text
  Active-Text
  Minimum-On-Time
  Minimum-Off-Time
- **Binary Value**
  Description
  Inactive-Text
  Active-Text
- **Device**
  Description
  Max-Master
  Max-Info-Frames

Writable Properties:

- **Analog Input**
  Object-Name (32 characters max)
  Description (64 characters max)
  Units
  Device-Type
  Min-Pres-Value
  Max-Pres-Value
- **Analog Value**
  Present-Value
  Units
- **Binary Input**
  Object-Name (32 characters max)
  Description (64 characters max)
  Inactive-Text (32 characters max)
  Active-Text (32 characters max)
  Polarity
- **Binary Output**
  Object-Name (32 characters max)
  Description (64 characters max)
  Inactive-Text (32 characters max)
  Active-Text (32 characters max)
  Polarity
  Present-Value
  Relinquish-Default
  Minimum-On-Time
  Minimum-Off-Time
- **Binary Value**
  Present-Value

- **Device**
  Object-Identifier
  Object-Name (32 characters max)
  Description (64 characters max)
  APDU-Timeout
  Number-Of-APDU-Retries
  Max-Master
  Max-Info-Frames
  Database-Revision

Object Details

DEx	Object_Identifier	default to DE277000	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	“RIB[*]24B-BCAI” (or similar)	R
	Firmware_Revision	“2.04”	R
	Application_Software_Version	“1.5” (or similar)	R
	Description	Up to 64 characters	W
	Protocol_Version	1	R
	Protocol_Revision	12	R
	Protocol_Services_Supported	{readProperty,writeProperty,deviceCommunicationControl, who-Has,who-Is, reinitDevice }	R
	Protocol_Object_Types_Supported	{ AnalogInput, BinaryInput, BinaryOutput, Device, AnalogValue, BinaryValue }	R
	Object_List	DEx, AI1, BI1, BI2, BO1, BV1, BV2, BV3, AV1, AV2	R
	Max_APDU_Length_Accepted	480	R
	Segmentation_Supported	NONE	R
	APDU_Timeout	3000 default	W
	Number_Of_APDU_Retries	0 default	W
	Max_Master	127 default	W
	Max_Info_Frames	1	R
	Device_Address_Binding	always empty	R
	Database_Revision	1	R

AI1	Object_Identifier	AI1	R
	Object_Name	Up to 32 characters	W
	Object_Type	Analog_Input	R
	Present_Value	floating point	R
	Description	Up to 64 characters	W
	Device_Type	“0-5Vdc”, “0-10Vdc”, or “10K T2 or T3 Thermistor”	W
	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
	Units	Any BACnet unit	W
	Min_Pres_Value	REAL	W
	Max_Pres_Value	REAL	W
	Resolution	REAL	R

BI1	Object_Identifier	BI1	R
	Object_Name	Up to 32 characters	W

	Object_Type	Binary_Input	R
	Present_Value	0 or 1	R
	Description	Up to 64 characters	W
	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 32 characters	W
	Active_Text	Up to 32 characters	W

BI2	Object_Identifier	BI2	R
	Object_Name	Up to 32 characters	W
	Object_Type	Binary_Input	R
	Present_Value	0 or 1	R
	Description	Up to 64 characters	W
	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 32 characters	W
	Active_Text	Up to 32 characters	W

BO1	Object_Identifier	BO1	R
	Object_Name	Up to 32 characters	W
	Object_Type	Binary_Output	R
	Present_Value	0 or 1	W
	Description	Up to 64 characters	W
	Status_Flags	{ 0,0,0,0 } Normal or { 0,0,1,0 } Overridden	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 32 characters	W
	Active_Text	Up to 32 characters	W
	Minimum_Off_Time	0-65535 seconds	W
	Minimum_On_Time	0-65535 seconds	W
	Priority_Array	16 slots (0, 1, NULL)	R
	Relinquish_Default	0 or 1	W

BV1	Object_Identifier	BV1	R
	Object_Name	“Set Point Function Enable”	R
	Object_Type	Binary_Value	R
	Present_Value	0 or 1 (default = 0)	W
	Description	“Enables/disables set point function”	R
	Status_Flags	{0,0,0,0}	R
	Event_State	Always NORMAL	R
	Out_Of_Service	Always FALSE	R
	Inactive_Text	“Off”	R
	Active_Text	“On”	R

BV2	Object_Identifier	BV2	R

	Object_Name	“Set Point Mode”	R
	Object_Type	Binary_Value	R
	Present_Value	0 or 1 (default = 0)	W
	Description	“Sets increasing or decreasing mode”	R
	Status_Flags	{0,0,0,0}	R
	Event_State	Always NORMAL	R
	Out_Of_Service	Always FALSE	R
	Inactive_Text	“INC”	R
	Active_Text	“DEC”	R

BV3	Object_Identifier	BV3	R
	Object_Name	“Set Point Function Status”	R
	Object_Type	Binary_Value	R
	Present_Value	0 or 1	R
	Description	“Settings status”	R
	Status_Flags	{0,0,0,0}	R
	Event_State	Always NORMAL	R
	Out_Of_Service	Always FALSE	R
	Inactive_Text	“Invalid”	R
	Active_Text	“Valid”	R

AV1	Object_Identifier	AV1	R
	Object_Name	“Set Point”	R
	Object_Type	Analog_Value	R
	Present_Value	REAL (default = 0.0)	W
	Description	“Set Point for control logic”	R
	Status_Flags	Always {0,0,0,0}	R
	Event_State	Always NORMAL	R
	Out_Of_Service	Always FALSE	R
	Units	Any BACnet unit	W

AV2	Object_Identifier	AV2	R
	Object_Name	“Set Point Differential”	R
	Object_Type	Analog_Value	R
	Present_Value	REAL (default = 0.0)	W
	Description	“Differential for control logic”	R
	Status_Flags	Always {0,0,0,0}	R
	Event_State	Always NORMAL	R
	Out_Of_Service	Always FALSE	R
	Units	Any BACnet unit	W

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, 76800 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(UTF-8) ☐ IBM/Microsoft DBCS ☐ JIS C 6226 ☐ ISO 10646 (UCS4) ☐ ISO 10646 (UCS2)
☐ISO 8859-1

10. Network Security Options

The RIB is a non-secure device