

# BACnet RIB®

September 2, 2021

## Protocol Implementation Conformance Statement

Vendor Name: **Functional Devices, Inc.**  
Product Name: **BACnet RIB**  
Product Model Number: **AiriusBAC24**  
Applications Software Version: **v1.0**  
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**
- **Device**

Optional Properties Supported:

- **Analog Input**
  - Description
  - Reliability
  - Min-Pres-Value
  - Max-Pres-Value
  - Device-Type
  - Resolution
- **Analog Value**
  - Description

- **Device**  
Description  
Max-Master  
Max-Info-Frames

Writable Properties:

- **Analog Input**  
Object-Name (32 characters max)  
Description (32 characters max)  
Device-Type (32 characters max)
- **Analog Value**  
Present-Value  
Object-Name (32 characters max)  
Description (32 characters max)  
Device-Type (32 characters max)
- **Device**  
Object-Identifier  
Object-Name (32 characters max)  
Description (33 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	AiriusBAC24	R
	Firmware_Revision	"2.04"	R
	Application_Software_Version	"1.0" (or similar)	R
	Description	Up to 32 characters	W
	Protocol_Version	1	R
	Protocol_Revision	12	R
	Protocol_Services_Supported	{readProperty, readPropertyMultiple, writeProperty, writePropertyMultiple, deviceCommunicationControl, reinitializeDevice, who-Has,who-Is }	R
	Protocol_Object_Types_Supported	{ AnalogInput, AnalogValue, Device }	R
	Object_List	DEx, AI1, 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	Analog Input	R
	Object Name	"AI1" Up to 32 Characters	W
	Object Type	Analog Input	R
	Present Value	REAL	R
	Description	"Analog 0-10Vdc Feedback" Up to 32 characters	W
	Device Type	"0-10Vdc" Up to 32 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
	Units	{5} Volts	R
	Min Pres Value	"0" REAL	R
	Max Pres Value	"10" REAL	R
	Resolution	REAL	R

AV1	Object Identifier	Analog Value	R
	Object Name	"AV1" Up to 32 Characters	W
	Object Type	Analog Value	R
	Present Value	REAL	W
	Description	"PWM 0-10Vdc Out" Up to 32 Characters	W
	Status Flags	Always {0,0,0,0}	R
	Event State	Always NORMAL	R
	Out Of Service	Always FALSE	R
	Units	{5} Volts	R

AV2	Object Identifier	Analog Value	R
	Object Name	"AV2" Up to 32 Characters	W
	Object Type	Analog Value	R
	Present Value	Unsigned (default = 0)	R
	Description	"RPM" Up to 32 Characters	W
	Status Flags	Always {0,0,0,0}	R
	Event State	Always NORMAL	R
	Out Of Service	Always FALSE	R
	Units	{26} Cycles-Per-Minute	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, 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(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