

BACnet Protocol Implementation Conformance Statement

Date: February 2017
Vendor Name: Titan Products Ltd.
Product Name: FCU4
Product Model Number: FCU402 TP1193E
FCU403 TP1193E
FCU404 TP1193E
Firmware Revision: 4.9
BACnet Protocol Revision: 14
Applications Software Version: FCU402 2.14 (and derivatives)
FCU403 2.14 (and derivatives)
FCU404 2.14 (and derivatives)

BACnet Standardized Device Profile (Annex L):

- BACnet Operator Workstation (B-OWS)
- 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)

List all BACnet Interoperability Building Blocks Supported (Annex K):

DM-DDB-A/B Device Management – Dynamic Device Binding – A/B
DM-DOB-B Device Management – Dynamic Object Binding – B
DM-DCC-B Device Management – Device Communications Control – B
DM-TS-B Device Management – Time Synchronization – B
DM-RD-B Device Management – Reinitialize Device – B
DM-BR-B Device Management – Backup and Restore – B

DS-RP-B Data Sharing – Read Property – B
DS-RPM-B Data Sharing – Read Property Multiple – B
DS-WP-B Data Sharing – Write Property – B
DS-WPM-B Data Sharing – Write Property Multiple – B
DS-COV-B Data Sharing – Change of Value – B

AE-N-I-B Alarm and Event Notification Internal – B
AE-ACK-B Alarm and Event ACK – B
AE-INFO-B Alarm and Event Information – B

Segmentation Capability:

- Segmented requests supported Window Size _____
- Segmented responses supported Window Size _____

Standard Object Types Supported:

Object Type	Property	Optional	Writable	Range Restriction	
Device	Object_Identifier				
	Object_Name				
	Object_Type				
	System_Status				
	Vendor_Name				
	Vendor_Identifier				
	Model_Name				
	Firmware_Revision				
	Application_Software_Version				
	Location	✓	✓	Maximum of 15 characters	
	Description	✓			
	Protocol_Version				
	Protocol_Revision				
	Protocol_Services_Supported				
	Protocol_Object_Types_Supported				
	Object_List				
	Max_APDU_Length_Accepted				
	Segmentation_Supported				
	Local_Time	✓			
	Local_Date	✓			
	APDU_Timeout			✓	100 to 60000ms
	Number_Of_APDU_Retries			✓	1 to 10
	Max_Masters	✓			
	Max_Info_Frames	✓			
	Device_Address_Binding				
	Database_Revision				
	Configuration_Files	✓			
	Last_Restore_Time	✓			
	Backup_Failure_Timeout	✓		✓	0 to 1800s
	Backup_Preparation_Time	✓			
	Restore_Preparation_Time	✓			
	Restore_Completion_Time	✓			
Backup_And_Restore_State	✓				
Active_COV_Subscriptions	✓				
Property_List					

Object Type	Property	Optional	Writable	Range Restriction
Analog Input	Object_Identifier			
	Object_Name			
	Object_Type			
	Present_Value		✓ ¹	✓ (Instance dependent)
	Description	✓		
	Device_Type	✓		
	Status_Flags			
	Event_State			
	Reliability	✓		
	Out_Of_Service		✓	
	Units			
	Min_Pres_Value	✓		
	Max_Pres_Value	✓		
	Resolution	✓		
	COV_Increment	✓	✓	
	Time_Delay	✓	✓	0 to 65535 seconds
	Notification_Class	✓	✓	NC1, NC2
	High_Limit	✓	✓	
	Low_Limit	✓	✓	
	Deadband	✓	✓	
	Limit_Enable	✓	✓	
	Event_Enable	✓	✓	
	Acked_Transitions	✓		
	Notify_Type	✓	✓	
	Event_Time_Stamps	✓		
	Event_Detection_Enable	✓	✓	
	Property_List			
Analog Value	Object_Identifier			
	Object_Name			
	Object_Type			
	Present_Value		✓	✓ (Instance dependent)
	Description	✓		
	Status_Flags			
	Event_State			
	Out_Of_Service			
	Units			
	COV_Increment	✓	✓	
	Time_Delay	✓	✓	0 to 65535 seconds
	Notification_Class	✓	✓	NC1, NC2
	High_Limit	✓	✓	
	Low_Limit	✓	✓	
	Deadband	✓	✓	
	Limit_Enable	✓	✓	
	Event_Enable	✓	✓	
	Acked_Transitions	✓		
	Notify_Type	✓	✓	
	Event_Time_Stamps	✓		
	Event_Detection_Enable	✓	✓	
	Property_List			

Object Type	Property	Optional	Writable	Range Restriction
Analog Output	Object_Identifier			
	Object_Name			
	Object_Type			
	Present_Value		✓	✓ (Instance dependent)
	Description	✓		
	Device_Type	✓		
	Status_Flags			
	Event_State			
	Out_Of_Service			
	Units			
	Min_Pres_Value	✓		
	Max_Pres_Value	✓		
	Resolution	✓		
	Priority_Array			
	Relinquish_Default			
	COV_Increment	✓	✓	
	Time_Delay	✓	✓	0 to 65535 seconds
	Notification_Class	✓	✓	NC1, NC2
	High_Limit	✓	✓	
	Low_Limit	✓	✓	
	Deadband	✓	✓	
	Limit_Enable	✓	✓	
	Event_Enable	✓	✓	
	Acked_Transitions	✓		
	Notify_Type	✓	✓	
	Event_Time_Stamps	✓		
Event_Detection_Enable	✓	✓		
Property_List				
Binary Input	Object_Identifier			
	Object_Name			
	Object_Type			
	Present_Value		✓ ¹	
	Description	✓		
	Device_Type	✓		
	Status_Flags			
	Event_State			
	Reliability	✓		
	Out_Of_Service		✓	
	Polarity		✓	
	Inactive_Text	✓		
	Active_Text	✓		
	Change_Of_State_Time	✓		
	Change_Of_State_Count	✓	✓	0
	Time_Of_State_Count_Reset	✓		
	Time_Delay	✓	✓	0 to 65535 seconds
	Notification_Class	✓	✓	NC1, NC2
	Alarm_Value	✓	✓	
	Event_Enable	✓	✓	
	Acked_Transitions	✓		
	Notify_Type	✓	✓	
	Event_Time_Stamps	✓		
	Event_Detection_Enable	✓	✓	
	Property_List			

Object Type	Property	Optional	Writable	Range Restriction
Binary Output	Object_Identifier			
	Object_Name			
	Object_Type			
	Present_Value		✓	
	Description	✓		
	Device_Type	✓		
	Status_Flags			
	Event_State			
	Out_Of_Service			
	Polarity			✓
	Inactive_Text	✓		
	Active_Text	✓		
	Change_Of_State_Time	✓		
	Change_Of_State_Count	✓	✓	0
	Time_Of_State_Reset	✓		
	Priority_Array			
	Relinquish_Default			
Property_List				
Binary Value	Object_Identifier			
	Object_Name			
	Object_Type			
	Present_Value		✓	
	Description	✓		
	Status_Flags			
	Event_State			
	Out_Of_Service			
	Inactive_Text	✓		
	Active_Text	✓		
	Time_Delay	✓	✓	0 to 65535 seconds
	Notification_Class	✓	✓	NC1, NC2
	Alarm_Value	✓	✓	
	Event_Enable	✓	✓	
	Acked_Transitions	✓		
	Notify_Type	✓	✓	
	Event_Time_Stamps	✓		
Event_Detection_Enable	✓	✓		
Property_List				
Multi State Output	Object_Identifier			
	Object_Name			
	Object_Type			
	Present_Value		✓	✓ (Instance dependent)
	Description	✓		
	Status_Flags			
	Event_State			
	Out_Of_Service			
	Number_Of_States			
	State_Text	✓		
	Priority_Array			
Relinquish_Default				
Property_List				

Object Type	Property	Optional	Writable	Range Restriction
Multi-state Value	Object_Identifier			
	Object_Name			
	Object_Type			
	Present_Value		✓	✓ (Instance dependent)
	Description	✓		
	Status_Flags			
	Event_State			
	Out_Of_Service			
	Number_Of_States			
	State_Text	✓		
	Property_List			
Notification Class	Object_Identifier			
	Object_Name			
	Object_Type			
	Description	✓		
	Notification_Class			
	Priority		✓	
	Ack_Required		✓	
	Recipient_List		✓	x1 BACnet Recipient ²
	Property_List			
File	Object_Identifier			
	Object_Name			
	Object_Type			
	Description	✓		
	File_Type			
	File_Size		✓	0
	Modification_Date			
	Archive		✓	
	Read_Only			
	File_Access_Method			
Property_List				

¹ Present_Value only writable when Out_Of_Service True

² Dynamic Device Binding when BACnetRecipient ::= CHOICE { device [0] BACnetObjectIdentifier }
 Restricted to Valid Days (all days), From Time (0:00:00.0), To Time (23:59:59.99)

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): 9600, 19200, 38400, 76800
- MS/TP slave (Clause 9), baud rate(s): _____
- 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 - List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.
- 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.

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