

Product Implementation Conformance Statement

Date : April, 2017

Vendor Name : Shina System Co. Ltd

Product Name : Field Control Unit 2200 series

Product Model Name : FCU-2200B

BACnet Device Profile : B-AAC

BACnet Vendor ID : 578

BACnet Protocol Version : 1

BACnet Protocol Revision : 12

BACnet Application Software Revision : 2.17

BACnet Firmware Revision : 2.0

Product	Model Number	Version
Field Control Unit 2200 series	FCU-2200B, FCU-2200	2.0
Peak-demand Control Unit series	PCU-2200B , PCU-2200	2.0
Lighting Control Unit series	LCU-2200B, LCU-3000B, LCU-2200, LCU-3000	2.0

Product Description

ShinaSystem's FCU(Field Control Unit) 2200 series is a new BACnet Building Controller of SiBAS-6000/5000/2000 System have monitoring and control functions with 32 physical points available(AI:8, BI:8, AO:8, BO:8). Input/output physical points can be expanded up to maximum 160 points(32[basic] + 16[XIM]*8) by connecting expansion modules(XIM Series).

PCU (Peak Demand Control Unit) is a device that controls the load of the consumer so that the power consumption of each consumer is maintained within the target wattage.

LCU (Lighting Control Unit series) is made possible to manage lighting subdividing it by load using a 20A latch relay, and the system is designed using powerful circuits to prevent unnecessary operations and malfunctions.

BACnet Standardized Device Profile (Annex L)

- BACnet Operator Workstation (B-OWS)
- BACnet Advanced Operator Workstation (B-AWS)
- BACnet Operator Display (B-OD)
- 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):

BIBB	Name	Supported
DS-RP-B	Data Sharing – ReadProperty-B	X
DS-RPM-B	Data Sharing – ReadPropertyMultiple-B	X
DS-WP-B	Data Sharing – WriteProperty-B	X
DS-WPM-B	Data Sharing – WritePropertyMultiple-B	X
DS-COV-B	Data Sharing – COV-B	X
AE-NI-B	Alarm and Event – Notification-Internal-B	X
AE-ACK-B	Alarm and Event – ACK-B	X
AE-ASUM-B	Alarm and Event – Alarm Summary-B	X
AE-ESUM-B	Alarm and Event – Enrollment Summary-B	X
AE-INFO-B	Alarm and Event – Information-B	X
SCHED-I-B	Scheduling – Internal-B	X
DM-DDB-B	Device Management – Dynamic Device Binding-B	X
DM-DOB-B	Device Management – Dynamic Object Binding-B	X
DM-TS-B	Device Management – Time Synchronization-B	X
DM-UTC-B	Device Management – UTC Time Synchronization-B	X
DM-DCC-B	Device Management – Device Communication Control-B	X
DM-RD-B	Device Management – Reinitialize Device-B	X

Segmentation Capability:

- Able to transmit segmented messages Window Size : 32
- Able to receive segmented messages Window Size : 32

Standard Object Types Supported:

Object Type	Supported	Creatable	Deletable
Analog Input	X		
Analog Output	X		
Analog Value	X		
Binary Input	X		
Binary Output	X		
Binary Value	X		
Calendar	X		
Device	X		
Multi-state Input	X		
Multi-state Output	X		
Multi-state Value	X		
Notification Class	X		
Schedule	X		

Properties that are Supported(S), Writable(W), Optional(O) are indicated.

Property (Analog Input)	S	W	O
Object_Identifier	X		
Object_Name	X	X	
Object_Type	X		
Present_Value	X	X	
Description	X	X	X
Device_Type	X		X
Status_Flags	X		
Event_State	X		
Reliability	X		X
Out_Of_Service	X	X	
Units	X	X	
Min_Pres_Value	X	X	X
Max_Pres_Value	X	X	X
COV_Increment	X	X	X
Time_Delay	X	X	X
Notification_Class	X	X	X
High_Limit	X	X	X
Low_Limit	X	X	X
Deadband	X	X	X
Limit_Enable	X	X	X
Event_Enable	X	X	X
Acked_Transitions	X		X
Notify_Type	X	X	X
Event_Time_Stamps	X		X

Property (Analog Output)	S	W	O
Object_Identifier	X		
Object_Name	X	X	
Object_Type	X		
Present_Value	X	X	
Description	X	X	X
Device_Type	X		X
Status_Flags	X		
Event_State	X		
Reliability	X		X
Out_Of_Service	X	X	
Units	X	X	
Min_Pres_Value	X		X
Max_Pres_Value	X		X
Priority_Array	X		
Relinquish_Default	X	X	
COV_Increment	X	X	X
Time_Delay	X	X	X
Notification_Class	X	X	X
High_Limit	X	X	X
Low_Limit	X	X	X
Deadband	X	X	X
Limit_Enable	X	X	X
Event_Enable	X	X	X
Acked_Transitions	X		X
Notify_Type	X	X	X
Event_Time_Stamps	X		X

Property (Analog Value)	S	W	O
Object_Identifier	X		
Object_Name	X	X	
Object_Type	X		
Present_Value	X	X	
Description	X	X	X
Status_Flags	X		
Event_State	X		
Reliability	X		X
Out_Of_Service	X	X	
Units	X	X	
Priority_Array	X		
Relinquish_Default	X	X	
COV_Increment	X	X	X
Time_Delay	X	X	X
Notification_Class	X	X	X
High_Limit	X	X	X
Low_Limit	X	X	X
Deadband	X	X	X
Limit_Enable	X	X	X
Event_Enable	X	X	X
Acked_Transitions	X		X
Notify_Type	X	X	X
Event_Time_Stamps	X		X

Property (Binary Input)	S	W	O
Object_Identifier	X		
Object_Name	X	X	
Object_Type	X		
Present_Value	X	X	
Description	X	X	X
Status_Flags	X		
Event_State	X		
Reliability	X		X
Out_Of_Service	X	X	
Polarity	X	X	
Inactive_Text	X	X	X
Active_Text	X	X	X
Time_Delay	X	X	X
Notification_Class	X	X	X
Alarm_Value	X	X	X
Event_Enable	X	X	X
Acked_Transitions	X		X
Notify_Type	X	X	X
Event_Time_Stamps	X		X

Property (Binary Output)	S	W	O
Object_Identifier	X		
Object_Name	X	X	
Object_Type	X		
Present_Value	X	X	
Description	X	X	X
Status_Flags	X		
Event_State	X		
Reliability	X		X
Out_Of_Service	X	X	
Polarity	X	X	
Inactive_Text	X	X	X
Active_Text	X	X	X
Priority_Array	X		
Relinquish_Default	X	X	
Time_Delay	X	X	X
Notification_Class	X	X	X
Feedback_Value	X		X
Event_Enable	X	X	X
Acked_Transitions	X		X
Notify_Type	X	X	X
Event_Time_Stamps	X		X

Property (Binary Value)	S	W	O
Object_Identifier	X		
Object_Name	X	X	
Object_Type	X		
Present_Value	X	X	
Description	X	X	X
Status_Flags	X		
Event_State	X		
Reliability	X		X
Out_Of_Service	X	X	
Inactive_Text	X	X	X
Active_Text	X	X	X
Priority_Array	X		X
Relinquish_Default	X	X	X
Time_Delay	X	X	X
Notification_Class	X	X	X
Alarm_Value	X	X	X
Event_Enable	X	X	X
Acked_Transitions	X		X
Notify_Type	X	X	X
Event_Time_Stamps	X		X

Property (Calendar)	S	W	O
Object_Identifier	X		
Object_Name	X	X	
Object_Type	X		
Description	X	X	X
Present_Value	X		
Date_List	X	X	

Property (File)	S	W	O
Object_Identifier	X		
Object_Name	X		
Object_Type	X		
Description	X		X
File_Type	X		
File_Size	X	X	
Modification_Date	X		
Archive	X	X	
Read_Only	X		
File_Access_Method	X		

Property (Device)	S	W	O
Object_Identifier	X	X	
Object_Name	X	X	
Object_Type	X		
System_Status	X		
Vendor_Name	X		
Vendor_Identifier	X		
Model_Name	X		
Firmware_Revision	X		
Application_Software_Version	X		
Location	X	X	X
Description	X	X	X
Protocol_Version	X		
Protocol_Revision	X		
Protocol_Services_Supported	X		
Protocol_Object_Types_Supported	X		
Object_List	X		
Max_APDU_Length_Accepted	X		
Segmentation_Supported	X		
Max_Segments_Accepted	X		X
Local_Time	X	X	X
Local_Date	X	X	X
UTC_Offset	X	X	X
Daylight_Savings_Status	X		
APDU_Segment_Timeout	X		
APDU_Timeout	X	X	
Number_Of_APDU_Retries	X	X	
Device_Address_Binding	X		
Database_Revision	X		
Configuration_Files	X		X
Last_Restore_Time	X		X
Backup_Failure_Timeout	X	X	X
Backup_Preparation_Time	X		X
Restore_Preparation_Time	X		X
Restore_Completion_Time	X		X
Backup_And_Restore_State	X		X
Active_COV_Subscriptions	X		X

Property (Multi-state Input)	S	W	O
Object_Identifier	X		
Object_Name	X	X	
Object_Type	X		
Present_Value	X	X	
Description	X	X	X
Status_Flags	X		
Event_State	X		
Reliability	X		X
Out_Of_Service	X	X	
Number_Of_States	X	X	
State_Text	X	X	X
Time_Delay	X	X	X
Notification_Class	X	X	X
Alarm_Value	X	X	X
Fault_Value	X	X	X
Event_Enable	X	X	X
Acked_Transitions	X		X
Notify_Type	X	X	X
Event_Time_Stamps	X		X

Property (Multi-state Output)	S	W	O
Object_Identifier	X		
Object_Name	X	X	
Object_Type	X		
Present_Value	X	X	
Description	X	X	X
Status_Flags	X		
Event_State	X		
Reliability	X		X
Out_Of_Service	X	X	
Number_Of_States	X	X	
State_Text	X	X	X
Priority_Array	X		
Relinquish_Default	X	X	
Time_Delay	X	X	X
Notification_Class	X	X	X
Feedback_Value	X		X
Event_Enable	X	X	X
Acked_Transitions	X		X
Notify_Type	X	X	X
Event_Time_Stamps	X		X

Property (Multi-state Value)	S	W	O
Object_Identifier	X		
Object_Name	X	X	
Object_Type	X		
Present_Value	X	X	
Description	X	X	X
Status_Flags	X		
Event_State	X		
Reliability	X		X
Out_Of_Service	X	X	
Number_Of_States	X	X	
State_Text	X	X	X
Priority_Array	X		
Relinquish_Default	X	X	
Time_Delay	X	X	X
Notification_Class	X	X	X
Alarm_Value	X	X	X
Fault_Value	X	X	X
Event_Enable	X	X	X
Acked_Transitions	X		X
Notify_Type	X	X	X
Event_Time_Stamps	X		X

Property (Notification Class)	S	W	O
Object_Identifier	X		
Object_Name	X	X	
Object_Type	X		
Description	X	X	X
Notification_Class	X		
Priority	X	X	
Ack_Required	X	X	
Recipient_List	X	X	

Property (Schedule)	S	W	O
Object_Identifier	X		
Object_Name	X	X	
Object_Type	X		
Present_Value	X	X	
Description	X	X	X
Effective_Period	X	X	
Weekly_Schedule	X	X	X
Exception_Schedule	X	X	X
Schedule_Default	X	X	
List_Of_Object_Property_References	X	X	
Priority_For_Writing	X	X	
Status_Flags	X		
Reliability	X		
Out_Of_Service	X	X	

Range Restrictions

Object-Type	Property	Range Restriction
All Object Types	Object_Name	[1, 64] printable ASCII characters, inclusive
All Object Types		CharacterString & OctetString Value are limited to 32 characters
Analog Output	Min_Pres_Value	Fixed to 0.0
Analog Output	Max_Pres_Value	Fixed to 100.0
Analog Input, Binary Input, Multi-state Input	Present Value	Writable only when Out_Of_Service is True
Calendar	Date_List	Max. number of Data_List : 50
Device	Device_Address_Binding	Max. number of Address_Binding : 255
Device	Active_COV_Subscriptions	Max. number of COV_Subscription : 64 Max. lifetimes : 86,400 second (24hour)
Multi-state Input Multi-state Output Multi-state Value	State_Text	Max. 10 (max. Number_Of_States is 16)
Multi-state Input Multi-state Value	Alarm_Values Fault_Values	Max. 16
Notification Class	Receipient List	Max. number of Receipient_List : 10
Schedule	Exception_Schedule	Max. number of BACnetSpecialEvent : 10
Schedule	List_Of_Object_Property_R eferences	Max. number of List : 10

Data Link Layer Options:

- BACnet IP, (Annex J)
- BACnet IP, (Annex J), Foreign Device
- ISO 8802-3, Ethernet (Clause 7)
- ATA 878.1, 2.5 Mb. ARCNET (Clause 8)
- ATA 878.1, EIA-485 ARCNET (Clause 8), baud rate(s) _____
- MS/TP master (Clause 9), baud rate(s):
- 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: _____
- BACnet/Zigbee (Annex O) _____
- 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

Does the BBMD support network address translation? 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) ANSI X3.4 ISO 8859-1
- ISO 10646 (UCS-2) ISO 10646 (UCS-4) JIS X 0208

If this product is a communication gateway, describe the types of non-BACnet equipment/networks(s) that the gateway supports:

Network Security Options:

- Non-secure Device - is capable of operating without BACnet Network Security
- Secure Device - is capable of using BACnet Network Security (NS-SD BIBB)
 - Multiple Application-Specific Keys
 - Supports encryption (NS-ED BIBB)
 - Key Server (NS-KS BIBB)