Fronnix controller – IDC702 PICS

(BACnet Protocol Implementation Conformance Statement)

Date: __**April 20, 2012**_____
Vendor Name: **I-CONTROLS, Inc**
Product Name: **Fronnix controller – IDC702**
Product Model Number: **IDC702**
Applications Software Version: **1.0** Firmware Revision: V**1.08**
BACnet Protocol Revision: **4 (Standard 135-2004)**

Product Description:

IDC702, a general purposed building controller, is a compact, modular type embedded controller that provides a lot of building control functionality.

This model is physically composed of power module, processor module, and several IO modules, and each IO module has 16 physical input/output points. Universal input point allows different signal types (thermister, voltage, current, dry contact, pulse) via a single input point without hardware modification.

IDC702 is a general purposed building controller and especially optimized for HVAC application. IDC702 contains standard BACnet B-BC functionalities for data logging, alarming, scheduling, and network management. In addition, it presents embedded measurement/control algorithms for valve control, temperature/humidity measurement, and so on. And allow executing user programmed control algorithms.

IDC702 allows reliable direct Ethernet connections using BACnet/IP.

BACnet Standardized Device Profile (see Annex L in BACnet 2004):

☐ 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 (see Annex K in BACnet 2004):

Data Sharing	Alarm & Event Management	Device & Network Management
DS-RP-A,B DS-RPM-A,B DS-WP-A,B DS-WPM-B	AE-N-I-B AE-ACK-B AE-INFO-B AE-ESUM-B	DM-DDB-A,B DM-DOB-B DM-DCC-B DM-TS-B DM-RD-B DM-BR-B NM-CE-A
Scheduling	**Trending**	
SCHED-E-B SCHED-I-B	T-VMT-I-B T-ATR-B	

Which of the following device binding methods does the product support?

■ Send Who-Is, receive I-Am (BIBB DM-DDB-A)
■ Receive Who-Is, send I-Am (BIBB DM-DDB-B)
☐ Send Who-Has, receive I-Have (BIBB DM-DOB-A)
■ Receive Who-Has, send I-Have (BIBB DM-DOB-B)

Standard Object Types Supported:

Dynamically Creatable Objects : None
Dynamically Deletable Objects : None

List BACnet Object Types suppored

Object Type	Object Type
Accumulator	Binary Input
Analog Input	Binary Output
Analog Output	Binary Value
Analog Value	Calendar
Device	File
Loop	Notification Class
Program	Schedule
Trend Log	

Accumulator

Property	C-Code	Writable	P_ID
Object_Identifier	R		
Object_Name	R	O	
Object_Type	R		
Present_Value	R	O	
Description	O	O	
Status_Flags	R		
Event_State	R		
Out_Of_Service	R	O	
Scale	R	O	
Units	R	O	
Max_Pres_Value	R	O	

Analog Input

Property	C-Code	Writable	P_ID
Object_Identifier	R		
Object_Name	R	O	
Object_Type	R		
Present_Value	R	O	
Description	O	O	
Status_Flags	R		
Event_State	R		
Out_Of_Service	R	O	
Units	R	O	
Min_Pres_Value	O	O	
Max_Pres_Value	O	O	
Scale_factor	O	O	
Adjust_Value	O	O	
Input_Type (Enum Type)	O	O	1737
Time_Delay	O	O	
Notification_Class	O	O	
High_Limit	O	O	
Low_Limit	O	O	
Deadband	O	O	
Limit_Enable	O	O	
Event_Enable	O	O	
Acked_Transitions	O		
Notify_Type	O	O	
Event_Time_Stamps	O		

Analog Output

Property	C-Code	Writable	P_ID
Object_Identifier	R		
Object_Name	R	O	
Object_Type	R		
Present_Value	W	O	
Description	O	O	
Status_Flags	R		
Event_State	R		
Out_Of_Service	R	O	
Units	R	O	
Min_Pres_Value	O	O	
Max_Pres_Value	O	O	
Priority_Array	R		
Relinquish_Default	R	O	
Low_Pres_Scale (Real)	O	O	1739
High_Pres_Scale (Real)	O	O	1740
Time_Delay	O	O	
Notification_Class	O	O	
High_Limit	O	O	
Low_Limit	O	O	
Deadband	O	O	
Limit_Enable	O	O	
Event_Enable	O	O	
Acked_Transitions	O		
Notify_Type	O	O	
Event_Time_Stamps	O		

Analog Value

Property	C-Code	Writable	P_ID
Object_Identifier	R		
Object_Name	R	O	
Object_Type	R		
Present_Value	R	O	
Description	O	O	
Status_Flags	R		
Event_State	R		
Out_Of_Service	R	O	
Units	R	O	
Time_Delay	O	O	
Notification_Class	O	O	
High_Limit	O	O	
Low_Limit	O	O	
Deadband	O	O	
Limit_Enable	O	O	
Event_Enable	O	O	
Acked_Transitions	O		
Notify_Type	O	O	
Event_Time_Stamps	O		

Binary Input

Property	C-Code	Writable	P_ID
Object_Identifier	R		
Object_Name	R	O	
Object_Type	R		
Present_Value	R	O	
Description	O	O	
Status_Flags	R		
Event_State	R		
Out_Of_Service	R	O	
Polarity	R	O	
Change_Of_State_Time	O		
Change_Of_State_Count	O	O	
Time_Of_State_Count_Reset	O		
Elapsed_Active_Time	O	O	
Time_Of_Active_Time_Reset	O		
Time_Delay	O	O	
Notification_Class	O	O	
Alarm_Value	O	O	
Event_Enable	O	O	
Acked_Transitions	O		
Notify_Type	O	O	
Event_Time_Stamps	O		

Binary Output

Property	C-Code	Writable	P_ID
Object_Identifier	R		
Object_Name	R	O	
Object_Type	R		
Present_Value	R	O	
Description	O	O	
Status_Flags	R		
Event_State	R		
Out_Of_Service	R	O	
Polarity	R	O	
Change_Of_State_Time	O		
Change_Of_State_Count	O	O	
Time_Of_State_Count_Reset	O		
Elapsed_Active_Time	O	O	
Time_Of_Active_Time_Reset	O		
Minimum_Off_Time	O	O	
Minimum_On_Time	O	O	
Priority_Array	R		
Relinquish_Default	R	O	
Time_Delay	O	O	
Notification_Class	O	O	
Feedback_Value	O	O	
Event_Enable	O	O	
Acked_Transitions	O		
Notify_Type	O	O	
Event_Time_Stamps	O		

Binary Value

Property	C-Code	Writable	P_ID
Object_Identifier	R		
Object_Name	R	O	
Object_Type	R		
Present_Value	R	O	
Description	O	O	
Status_Flags	R		
Event_State	R		
Out_Of_Service	R	O	
Time_Delay	O	O	
Notification_Class	O	O	
Alarm_Value	O	O	
Event_Enable	O	O	
Acked_Transitions	O		
Notify_Type	O	O	
Event_Time_Stamps	O		

Calendar

Property	C-Code	Writable	P_ID
Object_Identifier	R		
Object_Name	R	O	
Object_Type	R		
Present_Value	R		
Description	O	O	
Date_List	R	O	

Device

Property	C-Code	Writable	P_ID
Object_Identifier	R		
Object_Name	R	O	
Object_Type	R		
System_Status	R		
Vendor_Name	R		
Vendor_Identifier	R		
Model_Name	R		
Firmware_Revision	R		
Application_Software_Version	R		
Description	O	O	
Protocol_Version	R		
Protocol_Revision	R		
Protocol_Service_Supported	R		
Protocol_Object_Type_Supported	R		
Object_List	R		
Max_APDU_Length_Accepted	R		
Segmentation_Supported	R		
Max_Segments_Accepted	O		
Local_Time	O		
Local_Date	O		
APDU_Segment_Timeout	O	O	
APDU_Timeout	R	O	
Number_Of_APDU_Retries	R	O	
Max_Master	O	O	
Max_Info_Frames	O		
Device_Address_Binding	R		
Database_Revision	R		
Configuration_Files	O		
Last_Restore_Time	O		
Backup_Failure_Timeout	O	O	
Active_COV_Subscriptions	O		

File

Property	C-Code	Writable	P_ID
Object_Identifier	R		
Object_Name	R	O	
Object_Type	R		
Description	O	O	
File_Type	R		
File_Size	R		
Modification_Date	R		
Archive	W	O	
Read_Only	R		
File_Access_Method	R		

Loop

Property	C-Code	Writable	P_ID
Object_Identifier	R		
Object_Name	R	O	
Object_Type	R		
Present_Value	R		
Description	O	O	
Status_Flags	R		
Event_State	R		
Out_Of_Service	R	O	
Output_Units	R	O	
Manipulated_Variable_Ref	R	O	
Controlled_Variable_Ref	R	O	
Controlled_Variable_Value	R		
Controlled_Variable_Units	R		
Setpoint_Reference	R	O	
Setpoint	R		
Action	R	O	
Proportional_Constant	O	O	
Proportional_Constant_Units	O	O	
Integral_Constant	O	O	
Integral_Constant_Units	O	O	
Derivative_Constant	O	O	
Derivative_Constant_Units	O	O	
DeadBand	O	O	
Maximum_Output	O	O	
Minimum_Output	O	O	
Priority_For_Writing	R	O	
Time_Delay	O	O	
Notification_Class	O	O	
Error_Limit	O	O	
Event_Enable	O	O	
Acked_Transitions	O		
Notifiy_Type	O	O	
Event_Time_Stamps	O		

Notification Class

Property	C-Code	Writable	P_ID
Object_Identifier	R		
Object_Name	R	O	
Object_Type	R		
Description	O	O	
Notification_Class	R		
Priority	R	O	
Ack_Required	R	O	
Recipient_List	R	O	

Program

Property	C-Code	Writable	P_ID
Object_Identifier	R		
Object_Name	R	O	
Object_Type	R		
Program_State	R		
Program_Change	W	O	
Reason_For_Halt	O		
Description_Of_Halt	O		
Program_Location	O	O	
Description	O	O	
Instance_Of	O	O	
Status_Flags	R		
Out_Of_Service	R	O	

Schedule

Property	C-Code	Writable	P_ID
Object_Identifier	R		
Object_Name	R	O	
Object_Type	R		
Present_Value	R		
Description	O	O	
Effective_Period	R	O	
Weekly_Schedule	O	O	
Exception_Schedule	O	O	
Schedule_Default	R	O	
List_Of_Object_Property_Ref	R	O	
Priority_For_Writing	R	O	
Status_Flags	R		
Reliability	R		
Out_Of_Service	R	O	

Trend Log

Property	C-Code	Writable	P_ID
Object_Identifier	R		
Object_Name	R	O	
Object_Type	R		
Description	O	O	
Log_Enable	W	O	
Start_Time	O	O	
Stop_Time	O	O	
Log_DeviceObjectProperty	O	O	
Log_Interval	O	O	
Stop_When_Full	R	O	
Buffer_Size	R		
Log_Buffer	R		
Record_Count	W	O	
Total_Record_Count	R		
Notification_Threshold	O	O	
Records_Since_Notification	O		
Last_Notify_Record	O		
Event_State	R		
Notification_Class	O	O	
Event_Enable	O	O	
Acked_Transitions	O		
Notify_Type	O	O	
Event_Time_Stamps	O		

Data Link Layer Options:

■BACnet IP, (Annex J)
    ■Able to register as a 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): _____
☐ 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: _____

Networking Options:

☐ Router, Clause 6 - List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.:
__ _____
☐ Annex H.3, BACnet Tunneling Router over UDP/IP
☐ BACnet/IP Broadcast Management Device (BBMD)
    Does the BBMD support registrations by Foreign Devices? ☐ Yes ☐ No
☐ MS/TP Slave Proxy

Character Sets Supported:

Indicating support for multiple character sets does not imply that they can all be supported simultaneously.

■ANSI X3.4	☐ IBM™/Microsoft™ DBCS	☐ ISO 8859-1
☐ ISO 10646 (UCS-2)	☐ ISO 10646 (ICS-4)	☐ JIS C 6226