UbiquiSTAT™

Commercial BACnet Thermostat

The UbiquiSTAT™ is a feature rich, multi-purpose touchscreen thermostat for a wide variety of applications. This series of thermostats can be configured for a variety of conventional, heat pump, and modulating control applications.

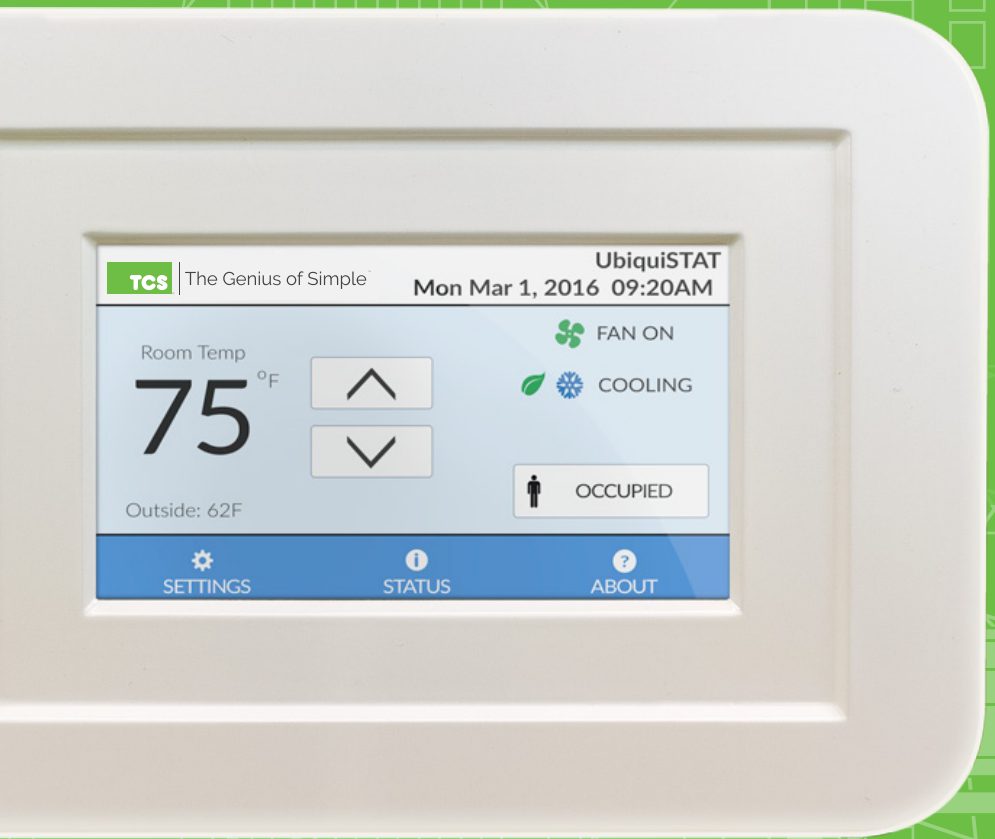
Models:

US4010 - Single-Stage RTU / Zoning Thermostat

US4020 - Multi-Stage RTU Thermostat

US4040 - Advanced RTU Thermostat

US4050 - Advanced Application Thermostat



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BACnet Protocol Implementation Conformance Statement

Date:	**February 1st, 2017**
Vendor Name:	**TCS**
Product Name:	**UbiquiSTAT™**
Product Model Number:	**US4050, US4040, US42020, US4010**
Application Software Version:	**1.00.2 (Tested 1.00.0)**
Firmware Revision:	**1.00.2 (Tested 1.00.0)**
BACnet Protocol Revision:	**1.14**

Product Description

The UbiquiSTAT™ product family is a feature rich, multi-purpose BACnet thermostat with a touchscreen interface. It can be configured for conventional heating and cooling, heat pump, or modulating control applications, and has a number of heat/cool setpoint groups, and a number of output stages (specific to UbiquiSTAT model). It contains many standard features from the TCS series thermostats, as well as enhancements and new features. The UbiquiSTAT™ provides two networking options: TCSbus and BACnet.

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)

- Data Sharing-ReadProperty-B (DS-RP-B)
- Data Sharing-ReadPropertyMultiple-B (DS-RPM-B)
- Data Sharing-WriteProperty-B (DS-WP-B)
- Data Sharing-WritePropertyMultiple-B (DS-WPM-B)
- Scheduling-Internal-B (SCHED-I-B)
- Device Management-Dynamic Device Binding-B (DM-DDB-B)
- Device Management-Dynamic Object Binding-B (DM-DOB-B)
- Device Management-DeviceCommunicationControl-B (DM-DCC-B)
- Device Management-TimeSynchronization-B (DM-TS-B)
- Device Management-UTCTimeSynchronization-B (DM-UTC-B)
- Device Management-ReinitializeDevice-B (DM-RD-B)
- Device Management-Backup and Restore-B (DM-BR-B)

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Segmentation Capability

☐ Able to transmit segmented messages Window Size _____
☐ Able to receive segmented messages Window Size _____

Standard Object Types Supported

- Properties that support Max_Pres_Value and Min_Pres_Value properties use those values as range restrictions when writing.
- No objects are creatable or deletable using the CreateObject or DeleteObject service.
- Properties with "(W)" after the name are writable.

Object Type	Profile	Required Properties	Optional Properties	Proprietary Properties
Device	496-8-1 (Basic)	Object_Identifier (W) Object_Name (W) Object_Type System_Status (W) Vendor_Name Vendor_Identifier Model_Name Firmware_Revision Application_Software_Version Protocol_Version Protocol_Revision Protocol_Services_Supported Protocol_Object_Types_Supported Object_List Max_APDU_Length_Accepted Segmentation_Supported APDU_Timeout (W) Number_Of_APDU_Retries (W) Device_Address_Binding Database_Revision Property_List	Location (W) Description Local_Time Local_Date UTC_Offset (W) Daylight_Savings_Status Max_Master (W) Max_Info_Frames (W) Configuration_Files Last_Restore_Time Backup_Failure_Timeout Backup_Preparation_Time Restore_Preparation_Time Restore_Completion_Time Backup_And_Restore_State Last_Restart_Reason Time_Of_Device_Restart Backup_Preparation_Time Restore_Preparation_Time Restore_Completion_Time Backup_And_Restore_State Serial_Number Profile_Name	DST_Start (602) (W) DST_End (603) (W) Manufacture_Date (604) Hardware_Version (605) Bootloader_Version (608)
Analog Input	496-0-1 (Digital Temperature Input)	Object_Identifier Object_Name Object_Type Present_Value Status_Flags Event_State Out_Of_Service (W) Units Property_List	Description Reliability Min_Pres_Value Max_Pres_Value Resolution Profile_Name Update_Interval	

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Object Type	Profile	Required Properties	Optional Properties	Proprietary Properties
Analog Input	496-0-2 (RTD Temperature Input)	Object_Identifier Object_Name Object_Type Present_Value Status_Flags Event_State Out_Of_Service (W) Units Property_List	Description Reliability Min_Pres_Value Max_Pres_Value Resolution Update_Interval Profile_Name	
Analog Input	496-0-3 (Ammeter Input)	Object_Identifier Object_Name Object_Type Present_Value Status_Flags Event_State Out_Of_Service (W) Units Property_List	Description Reliability Min_Pres_Value Max_Pres_Value Resolution Profile_Name Update_Interval	
Analog_ Value	496-2-1 (Basic)	Object_Identifier Object_Name Object_Type Present_Value (W) Status_Flags Event_State Out_Of_Service (W) Units Property_List	Description Min_Pres_Value Max_Pres_Value Profile_Name	
Analog_ Value	496-2-2 (Commandable)	Object_Identifier Object_Name Object_Type Present_Value (W) Status_Flags Event_State Out_Of_Service (W) Units Property_List	Description Priority_Array Relinquish_Default Min_Pres_Value Max_Pres_Value Profile_Name	
Analog_ Value	496-2-3 (Ammeter Scaled)	Object_Identifier Object_Name Object_Type Present_Value (W) Status_Flags Event_State Out_Of_Service (W) Units (W) Property_List	Description Priority_Array Relinquish_Default Min_Pres_Value Max_Pres_Value Profile_Name	

Object Type	Profile	Required Properties	Optional Properties	Proprietary Properties
Analog_ Value	496-2-4 (Control Error)	Object_Identifier Object_Name Object_Type Present_Value Status_Flags Event_State Out_Of_Service (W) Units Property_List	Description Min_Pres_Value Max_Pres_Value Profile_Name	
Analog Output	496-1-1 (Current Generator)	Object_Identifier Object_Name Object_Type Present_Value (W) Status_Flags Event_State Out_Of_Service (W) Units Priority_Array Relinquish_Default	Description Reliability Min_Pres_Value Max_Pres_Value Resolution Profile_Name Resolution	
Binary Input	496-3-1 (Digital Input)	Object_Identifier Object_Name Object_Type Present_Value Status_Flags Event_State Out_Of_Service (W) Polarity (W) Property_List	Description Active_Text Inactive_Text Profile_Name	
Binary Output	496-4-1 (Relay)	Object_Identifier Object_Name Object_Type Present_Value (W) Status_Flags Event_State Out_Of_Service (W) Polarity (W) Property_List Priority_Array Relinquish_Default	Description Inactive_Text Active_Text Change_Of_State_Time Change_Of_State_Count (W) Time_Of_State_Count_Reset Elapsed_Active_Time (W) Time_Of_Active_Time_Reset Minimum_Off_Time Minimum_On_Time Profile_Name	
Binary Value	496-5-1 (Basic)	Object_Identifier Object_Name Object_Type Present_Value (W) Status_Flags Event_State Out_Of_Service (W) Property_List	Description Active_Text Inactive_Text Profile_Name	

Object Type	Profile	Required Properties	Optional Properties	Proprietary Properties
Binary Value	496-5-2 (Commandable)	Object_Identifier Object_Name Object_Type Present_Value (W) Status_Flags Event_State Out_Of_Service (W) Property_List	Description Inactive_Text Active_Text Priority_Array Relinquish_Default Profile_Name	
Positive Integer Value	496-48-1 (Basic)	Object_Identifier Object_Name Object_Type Present_Value (W) Status_Flags Event_State Out_Of_Service (W) Property_List Units	Description Min_Pres_Value Max_Pres_Value Profile_Name	
Positive Integer Value	496-48-2 (Commandable)	Object_Identifier Object_Name Object_Type Present_Value (W) Status_Flags Event_State Out_Of_Service (W) P roperty_List Units	Description Min_Pres_Value Max_Pres_Value Priority_Array Relinquish_Default Profile_Name	
Integer Value	496-45-2 (Commandable)	Object_Identifier Object_Name Object_Type Present_Value (W) Status_Flags Event_State Out_Of_Service (W) Units Property_List	Description Priority_Array Relinquish_Default Min_Pres_Value Max_Pres_Value Profile_Name	
Multi State Value	496-19-1 (Basic)	Object_Identifier Object_Name Object_Type Present_Value (W) Status_Flags Event_State Number_Of_States Out_Of_Service (W) Property_List	Description State_Text Profile_Name	

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Object Type	Profile	Required Properties	Optional Properties	Proprietary Properties
Multi State Value	496-19-2 (Commandable)	Object_Identifier Object_Name Object_Type Present_Value (W) Status_Flags Event_State Number_Of_States Out_Of_Service (W) Property_List	Description Priority_Array Relinquish_Default State_Text Profile_Name	
BitString Value	496-39-1 (Basic)	Object_Identifier Object_Name Object_Type Present_Value (W) Status_Flags Property_List	Description Event_State Bit_Text Out_Of_Service (W) Profile_Name	
CharacterString Value	496-40-1 (Basic)	Object_Identifier Object_Name Object_Type Present_Value (W) Status_Flags Property_List	Description Profile_Name	
Schedule	496-17-1 (Basic)	Object_Identifier Object_Name Object_Type Present_Value Effective_Period Schedule_Default List_Of_Object_Property_References Priority_For_Writing Status_Flags Out_Of_Service (W) Property_List	Description Weekly_Schedule (W) Exception_Schedule (W) Reliability Profile_Name	
Calendar	496-6-1 (Basic)	Object_Identifier Object_Name Object_Type Present_Value Date_List (W) Status_Flags Event_State Out_Of_Service (W) Property_List	Description Profile_Name	

Object Type	Profile	Required Properties	Optional Properties	Proprietary Properties
File	496-10-1 (Data-flash File),	Object_Identifier Object_Name Object_Type File_Type File_Size Modification_Date Archive (W) Read_Only File_Access_Method Property_List	Description Profile_Name	
File	496-10-2 (Configuration)	Object_Identifier Object_Name Object_Type File_Type File_Size Modification_Date Archive (W) Read_Only File_Access_Method Property_List	Description Profile_Name	
File	496-10-3 (Diagnostic Log File)	Object_Identifier Object_Name Object_Type File_Type File_Size Modification_Date Archive (W) Read_Only File_Access_Method Property_List	Description Profile_Name	

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):9600,19200,38400,57600,76800,115200
☐ 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: _____

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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

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)

Character Sets Supported

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

☑ ISO 10646 (UTF-8)
☐ ISO 10646 (UCS-2)
☐ IBM™/Microsoft™ DBCS
☐ ISO 10646 (UCS-4)
☐ ISO 8859-1
☐ JIS X 0208

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