

Ubiqui**STAT**

Commercial BACnet Controller



Description

The UbiquiSTAT is a powerful commercial-grade room controller with a large multipurpose touchscreen display for programming, scheduling, and monitoring. The thermostat is a low-voltage type, 24VAC, with seven-day and holiday scheduling, and full-featured BACnet scheduling capability. The UbiquiSTAT provides RS-485 communication via BACnet MS/TP or TCSbus.

This series of thermostats can be configured for a variety of conventional, heat pump, and modulating control applications. Models are available for both wired and WiFi communication.

The UbiquiSTAT has a temporary setpoint adjustment, a local override feature, and remote override capability. An adjustable delay on power-up is available, as well as a delay for occupancy transitions. The ability to edit operating control parameters is protected via a user-definable security access code. All inputs and outputs can be monitored via the animated color touchscreen display or remotely using the web-based Ubiquity Cloud energy management platform.

The UbiquiSTAT incorporates non-volatile memory, so that in the event of power loss, all programmed operating parameters are unaffected; no need for battery backup.

UbiquiSTAT WiFi thermostats connect easily to a WiFi network and use BACnet IP. This eliminates the need to run communication wires to thermostats that may be difficult to reach. Any location that can supply low-voltage (24VAC) power can support a UbiquiSTAT WiFi thermostat; by integrating UbiquiSTAT WiFi thermostats into their networks, users can save substantial installation costs over other, more complex networking solutions.

All UbiquiSTAT thermostats can utilize the Ubiquity Cloud energy management system, designed for retail, banking, restaurant, education, and other multi-site enterprises that can benefit from remote device management and data collection from any web browser. Ubiquity Cloud provides extensive site management and data collection tools, giving users full control of their energy usage while reducing operation costs. See the [Ubiquity Cloud](#) section on the [TCS website](#) for more information.

Features (All Models)

- **Powerful user interface**
 - Large 4.3" animated color touchscreen, customizable with customer's company logo
 - Quick-start wizard for easy setup
 - Internal BACnet Explorer
 - System test screen for rapid commissioning
 - Highly detailed status reporting and diagnostics
 - Service status display with custom messaging
 - Calibration of temperature inputs for greater accuracy
- **Selectable BACnet or TCSbus communication**
 - BACnet BTL Listed (B-ASC)
 - Backward compatible with existing TCSbus networks
 - All inputs/outputs fully commandable via network
 - WiFi models use BACnet IP over WiFi
- **Full-featured BACnet scheduling (SCHED-I-B)**
 - 5 Heat/Cool setpoint groups
- **Includes all TCS Basys SZ Series thermostat features**
 - Includes many additional features and enhancements
- **4 temperature inputs (1 built-in, 3 remote) for mixed-air applications**
 - Outdoor, discharge, remote room
 - Configurable weighted averaging of built-in and remote room
- **Configurable for conventional heat/cool control or heat pump control**
- **Discharge setpoint reset on modulating heat/cool control**
- **Configurable Smart Recovery™ for preconditioning environments for occupancy**
- **Setpoint setback based on DI**
- **Network upgradeable firmware (included with your Ubiquity Cloud subscription)**
- **Built-in equipment protection delays and sequencing**
- **Programmable fan control**
 - Auto/on/cool/recirculation modes for occupied and unoccupied
 - Adjustable recirculation
 - Fan proving with automatic retries
- **User management controls**
 - Occupancy override enable/disable
 - Setpoint adjust range limit
 - Optional access code locks out on-screen programming
- **Outdoor air heating and cooling lockouts**
- **Discharge air protection limits**
- **Fahrenheit or Celsius temperature display**
- **External time clock input/output**
- **Adjustable delay on power up and occupancy**
- **Stand-alone or network operation**
- **Backup & Restore of all settings (DM-BR-B)**

Model-Specific Features:

Feature / Model	4010/4110	4020/4120	4040/4140	4050/4150
Stage Configuration: Total stages # [Heat # / Cool # / Configurable #]	2 [1/1/*]	6 [2/2/2]	6 [2/2/2]	6 [2/2/2]
Analog Inputs / Outputs (0-20mA or 4-20mA)	0/2	0/0	1/1	2/2
Mixed Air on T1	-	✓	✓	✓
Pre-purge for occupancy ventilation	-	-	✓	✓

* May be configured for one heat stage and one cool stage, two heat stages, or for a heat pump with an auxiliary heat stage

Applications (All Models)

- **Built-in application programming with simple configuration**
- **Advanced fan control**
 - Recirculation mode to meet minimum fresh air requirements
- **Demand response setback**
- **Door status response setback**
- **Pre-purge**

Model-Specific Applications:

Feature / Model	4010/4110	4020/4120	4040/4140	4050/4150
Digital Outputs				
Conventional staging: heat / cool / selectable (heat or cool)	1/-/1	2/2/2	2/2/2	2/2/2
Heat pump control: compressors / aux heat: Emergency heat Cold climate automatic auxiliary heat switch- over w/compressor lockout	1/1	2/2	2/2	2/2
Analog Inputs				
CO ₂ control	-	-	✓	✓
Humidity monitoring	-	-	-	✓
General purpose monitoring	-	-	✓	✓
Analog Outputs				
Hot and chilled water valve control	-	-	-	✓
Zone damper control w/ reheat	✓	-	-	✓
Economizer control and pre-purge control	-	-	✓	✓
Demand ventilation (CO ₂ control)	-	-	✓	✓
Digital or Analog heat/cool changeover based control	✓	-	-	✓
Zone control for hot deck / cold deck systems	✓	-	-	✓
Mixing valve control	✓	-	-	✓

Specifications (All Models)

Communications:

RS-485

Protocol: BACnet MS/TP and/or TCSbus
Baud Rates: 9600, 19200, 38400, 57600, 76800, 115200
Wire: 22 AWG 3-conductor twisted/shielded

WiFi (Models 4110, 4120, 4140, 4150)

Protocol: BACnet/IP
WiFi Standards: 802.11 b/g/n 2.4GHz
Agency Approvals: FCC Part 15.247

Power Requirements:

Input: 24VAC +15%, -5%, 50/60 Hz
Device Consumption: 10 VA max
Wire: 18 AWG 2-conductor

Mechanical:

Exterior Dimensions: 6.7" x 4.9" x 1.4" (171mm x 123mm x 37mm)
Color: Glossy white
Mounting: 1 gang (vertical or horizontal) and 2 gang (4" x 4" [102mm x 102mm]) hole patterns, accepts #6 to #10 screws
Wiring Terminals: De-pluggable blocks with screw connections

User Interface:

Display: 4.3" (109.2mm) animated color touchscreen. Backlight with auto-dimming

Environmental:

Operating temperature: 32°F to 131°F (0°C to 55°C)
Storage temperature: -22°F to 176°F (-30°C to 80°C)
Operating Humidity: 0 to 100% RH (non-condensing)
Air Quality: Non-corrosive (i.e. use remote sensor for applications such as swimming pools)

Model-Specific Specifications

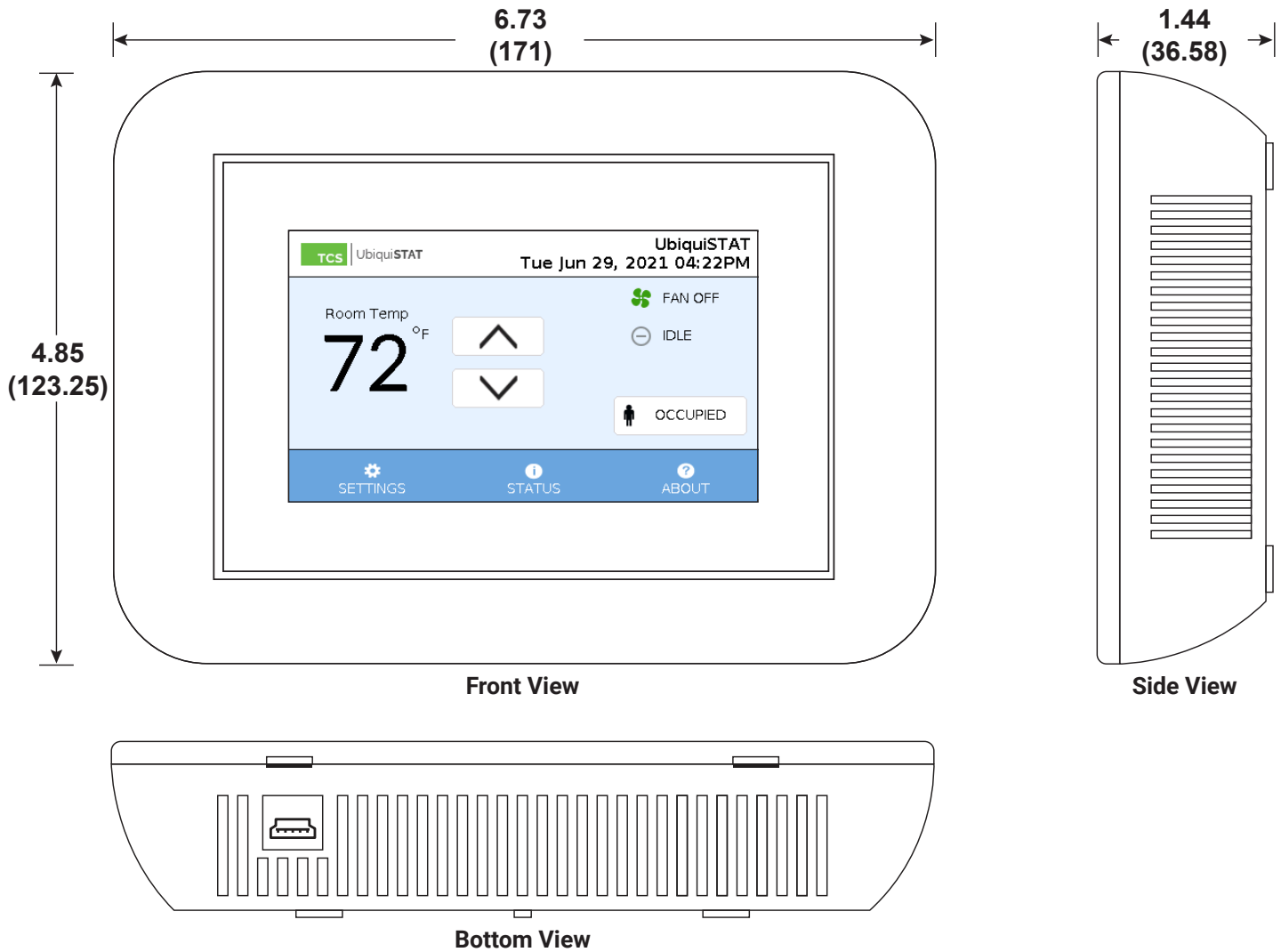
Outputs Feature / Model	4010/4110	4020/4120	4040/4140	4050/4150
Relays:				
Type: SPST mechanical contact				
Contact Rating: 2A max @ 24VAC (50/60Hz)	5	7	7	7
Wire: 18 or 20 AWG multi-connector				
Analog Outputs:				
Range: 0-20mA or 4-20mA (programmable)				
Accuracy: $\pm 0.2\text{mA}$ (1% of full scale)				
Resolution: 0.1mA	2	0	1	2
Max Load: 1000 Ω				
Wire: 18 AWG 2-conductor				
Auxiliary Power: (+P Terminal)				
Output: 24VDC, 100mA max	-	-	✓	✓
Wire: 18 AWG 2-conductor				

Inputs Feature / Model	4010/4110	4020/4120	4040/4140	4050/4150
Analog Inputs:				
Range: 0-20mA or 4-20mA (programmable)				
Accuracy: $\pm 0.2\text{mA}$ (1% of full scale)	-	-	1	2
Resolution: 0.1mA				
Wire: 18 AWG 2-conductor twisted/shielded				
Three Remote Temperature Inputs:				
Sensor Type: Pt1000 RTD, Alpha=0.00385 $\Omega/\text{ }^{\circ}\text{C}$				
Resolution: 0.1 $^{\circ}\text{F}$				
Accuracy: $\pm 1^{\circ}\text{F}$ Range: -40 $^{\circ}\text{F}$ to 160 $^{\circ}\text{F}$				
Wire: 18 AWG 2-conductor twisted/shielded				
One Built-In Temperature Sensor:				
Sensor Type: Digital				
Resolution: 0.1 $^{\circ}\text{F}$				
Digital Accuracy: $\pm 1^{\circ}\text{F}$				
Range: -40 $^{\circ}\text{F}$ to 160 $^{\circ}\text{F}$				
Three Digital Inputs:				
Type: Dry contact only (no voltage)				
Wire: 18 AWG 2 conductor				

All specifications subject to change without notice.

Dimensions

Units in inches (mm)



Ordering

Product	Part #	Description
UbiquiSTAT	US4010	Single-Stage RTU / Zoning Thermostat
UbiquiSTAT	US4020	Multi-Stage RTU Thermostat
UbiquiSTAT	US4040	Advanced RTU Thermostat
UbiquiSTAT	US4050	Advanced Application BACnet Thermostat
UbiquiSTAT	US4110	Single-Stage RTU / Zoning BACnet WiFi Thermostat
UbiquiSTAT	US4120	Multi-Stage RTU BACnet WiFi Thermostat
UbiquiSTAT	US4140	Advanced RTU BACnet WiFi Thermostat
UbiquiSTAT	US4150	Advanced Application BACnet WiFi Thermostat

Accessories



PC2002 CO2 Sensor
Indoor Wall Mount



PO1124 Occupancy Sensor
Indoor Wall Mount



T2000 Temperature Sensor
Indoor Wall Mount



TS3000 Temperature Sensor
Indoor Wall Mount



PS2001 Current Switch
Split Core



PHR1000 Humidity Sensor
Indoor Wall Mount



PHO1000 Humidity Sensor
Outdoor Sensor



PHD1000 Humidity Sensor
Indoor Duct Mount



TS1002 Temperature Sensor
Duct Mount



TT2000a Photocell
Outdoor Analog



TS1005 Temperature Sensor
Pipe Strap On