DATASHEET

Crestron to Heatmiser Wi-Fi V3 Interface

Revision: 1.01
Date: 22 April 2013

Summary

This datasheet relates to Ultamation's Heatmiser Wi-Fi V3 interface module for Crestron control systems. It provides the essential information for integration between the Heatmiser system and the Crestron control processor, and for programming of the module with a host Crestron program.

Installation Notes

The Crestron system is connected to a normal, standalone, Heatmiser Wi-Fi installation. A Heatmiser Multi-Link device is not required.

The module has been tested in conjunction with the Heatmiser IPhone/Android App. Unfortunately the Heatmiser thermostats can only accept one concurrent connection and therefore the Crestron system will be unable to talk to the thermostat if the IPhone app is being used. This module only creates a connection for a very short time whilst communicating so should have little effect on other devices connecting and disconnecting.

There are no hard limitations on how many thermostats can exist in one system but please be aware of Crestron's recommended IP devices limits per processor during system design.

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Programming Notes

Each of the module files should be placed either in the host program's project folder, or to make the Heatmiser interface available to all Crestron programs, in the SIMPL Windows installation's User Macro (for .umc files) and User SIMPL+ (for .usp and .ush files) directories. This pdf should be placed in both directories for SIMPL's F1 help function to work properly.

The TSTAT Module

This module uses direct sockets and only requires three parameters setting to function.

1. There should be an instance of the module for each thermostat in the system.
2. Fill in the IP Address and PIN parameters. These can be found using the USB Wi-Fi Utility provided by Heatmiser during the thermostat commissioning.

Troubleshooting

If you are having difficulty communicating with the thermostats and you're sure that the wiring is correct, please ensure the following have been checked:

1. Ensure you're reading the correct temperature value, and the thermostat is configured to use the correct temperature sensor. An incorrect configuration her will result in a reading of 6553.5 degress.
2. Do not configure thermostats in the SIMPL program that have not been commissioned in Heatmiser system. This may lead to excessive IP connection attempts and associated errors in the processor error log.

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The Thermostat Module

Poll	Performs a manual poll of the Thermostat. This shouldn't be needed in a normal setup as the thermostat is polled by the module on the intervals set in the parameters.
Poll_Frequently	Increases the poll frequency to the value set in the Frequent_Poll_Period parameter. This signal should be held high whilst the touchpanel is showing the thermostat information.
Update_Clock	On a rising edge sets the Heatmiser unit's internal clock to the same as the Crestron processor.
Run_Mode_Normal	Instruct the thermostat to use the "normal" run mode and modify heating based on the thermostats clock settings. The current state is shown in the corresponding feedback output signal. Edge triggered.
Run_Mode_Frost_Protect	Instruct the thermostat to use the "frost protect mode" run mode and maintain the frost protect temperature. The current state is shown in the corresponding feedback output signal. Edge triggered.
HotWater_Request_Use_Timer	On a rising edge, the thermostat will use its internal time clock to request Hot Water
HotWater_Request_On	On a rising edge, the thermostat will request Hot Water, overriding the internal time clock.
Set_Point_x10#	Set the current set-point temperature. The temperature should be expressed as an analogue value representing the current temperature scale, multiplied by 10. Therefore for a thermostat set to the centigrade scale, 18°C should be expressed (using Crestron decimal notation) as 180d. Simply passing a value to this signal will communicate the new set point to the thermostat. As such, it would be unwise to connect this to a rapidly ramping symbol which would generate large amounts of traffic on the Heatmiser data bus. Using an analog increment, with an increment of 10d, is suitable.
Set_Point_Raise	Press and Hold to increase set point. The set point is sent to the Heatmiser unit when no further

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	change has been made for 5 seconds.
Set_Point_Lower	Press and Hold to decrease set point. The set point is sent to the Heatmiser unit when no further change has been made for 5 seconds.
Hold_Temp_Duration#	Send an analogue value to set the thermostat's hold temp mode. The value is in minutes. Send 0 to cancel the mode.
Holiday_Set	Sets the Holiday timer which puts the thermostat into frost protect for the length of a holiday. Set the Holiday_Return_*# values before triggering this signal.
Holiday_Cancel	Cancels an active Holiday setting.
Holiday_Return_Year#	Used in conjunction with Holiday_Set. Value Range 01-99. Associated _Fb signal whilst active shows the current holiday end, whilst inactive shows the current time.
Holiday_Return_Month#	Used in conjunction with Holiday_Set. Value Range 01-12. Associated _Fb signal whilst active shows the current holiday end, whilst inactive shows the current time.
Holiday_Return_Day#	Used in conjunction with Holiday_Set. Value Range 01-31. Associated _Fb signal whilst active shows the current holiday end, whilst inactive shows the current time.
Holiday_Return_Hour#	Used in conjunction with Holiday_Set. Value Range 00-23. Associated _Fb signal whilst active shows the current holiday end, whilst inactive shows the current time.
Holiday_Return_Minute#	Used in conjunction with Holiday_Set. Value Range 00-59. Associated _Fb signal whilst active shows the current holiday end, whilst inactive shows the current time.
Holiday_Enabled_Fb	Reports the status of the Holiday Setting.
Error_Incorrect_Pin	Optional. Held high if the PIN entered in the parameters doesn't match the PIN set on the Heatmiser unit.
Power_On_Fb	High if the thermostat is Powered and On. In normal usage this signal should be high at all times.
Power_Off_Fb	High if the thermostat is Off. The Heatmiser will still report values if physically turned off but it is

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	advisable that no Heatmiser unit should be in this state.
Heating_Demand_Fb	High if the thermostat is showing a demand for Heat.
HotWater_Demand_Fb	High if the thermostat is showing a demand for Hot Water. Available on supported products only.
BuiltIn_Air_Temp_x10_Fb#	Provides the thermostat's current built-in temperature sensor reading (when available) as an analogue value. Again, this value is 10x the current degree (i.e. 225 would represent 22.5°C).
Remote_Air_Temp_x10_Fb#	Provides the thermostat's current remote temperature sensor reading (when available) as an analogue value. Again, this value is 10x the current degree (i.e. 140 would represent 14.0°C).
Floor_Temp_x10_Fb#	Provides the thermostat's current floor slab temperature reading (when available). The value is 10x the current degree.
SetPoint_x10_Fb#	Provides the thermostat's current set-point as an analogue value. Again, this value is 10x the current degree (i.e. 170 would represent 17.0°C).
Temp_Format_Fb#	Optional. Low = Celsius, High = Fahrenheit
Calibration_Offset_Fb#	Provides the thermostat's current calibration offset as an analogue value. The representation of this value is undocumented.
Err_Comms_ErrorNo#	Optional. Reports the internal Direct Sockets error number so that IP communications troubleshooting can be made easier.
Model_*	High signal depicts product type.
(Parameter) IP_Address	IP Address of the Heatmiser unit as defined during commissioning using the Heatmiser Wi-Fi USB Utility.
(Parameter) PIN	PIN for the Heatmiser unit as defined during commissioning using the Heatmiser Wi-Fi USB Utility.
(Parameter) Idle_Poll_Period	Time in seconds. Sets the interval that the module will automatically connect and read values from the Heatmiser unit whilst the Poll_Frequently signal is low,
(Parameter) Frequent_Poll_Period	Time in seconds. Sets the interval that the module will automatically connect and read values from the

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Heatmiser unit whilst the Poll_Frequently signal is high,

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