# Tile Builder
# Thermostat Help

Revised 6/18/24

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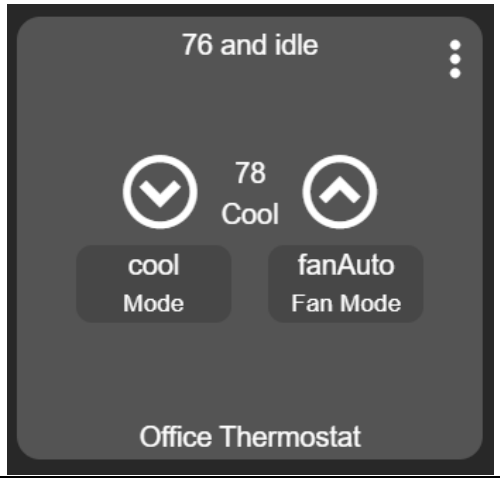
## Introduction

The classic Hubitat Dashboard is functional and customizable, but rather dated in appearance. Tile Builder Thermostat allows you to add an attractive face to the classic Thermostat tile and maintain all of the same functionality.

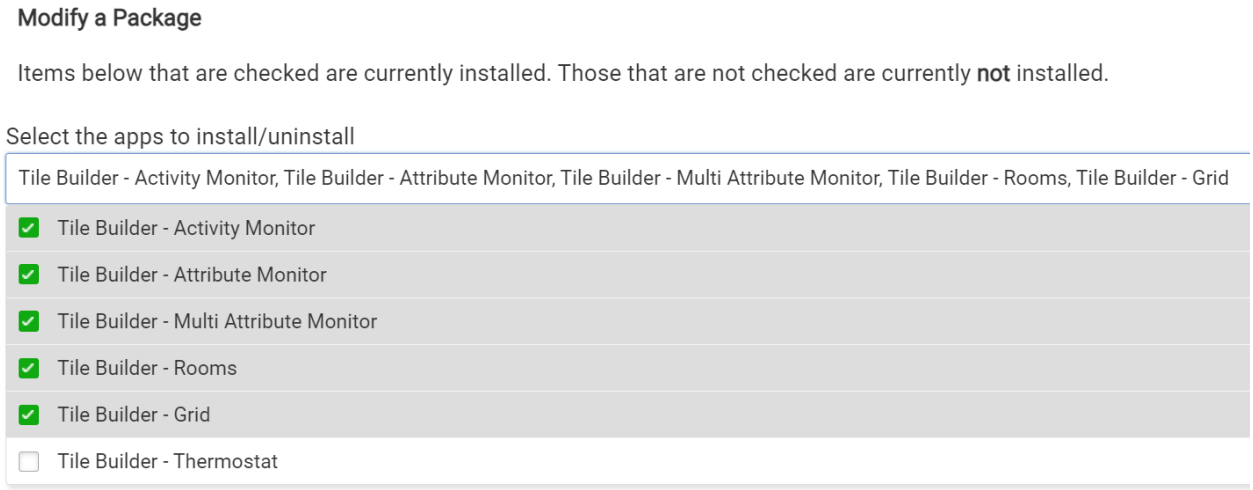
| Classic Thermostat Tile | TB Enhanced Thermostat Tile |
|---|---|
|  |  |





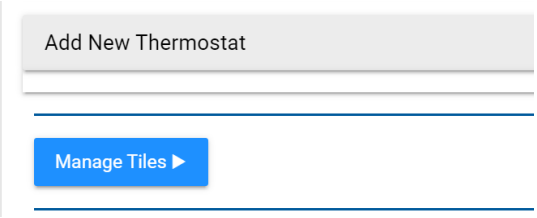
## Requirements

You must have the Tile Builder Parent version 1.5.1 or later installed. Thermostat is an optional module and you must choose to **Modify** the Tile Builder installation to have the code added as shown below.

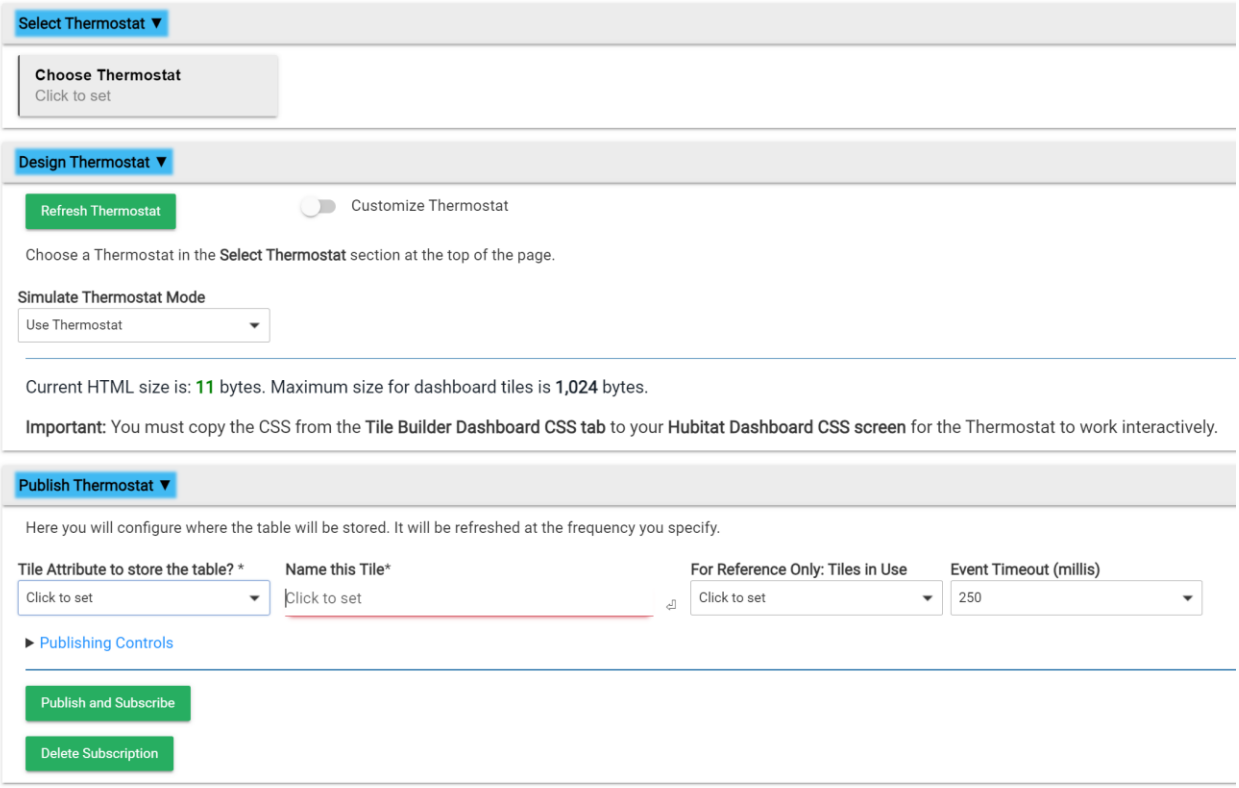


## Creating a Tile Builder Thermostat

To create a new Thermostat launch Tile Builder and select **Add New Thermostat**

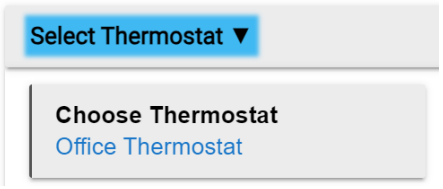



The main screen will launch and look like this.

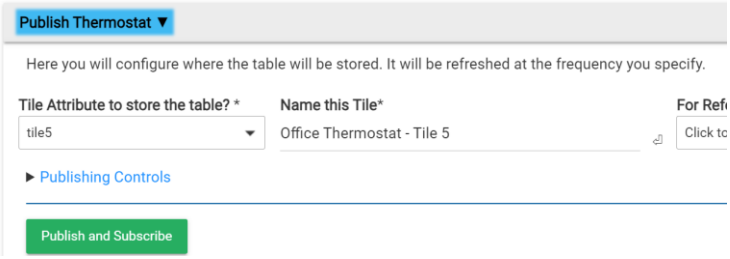


The configuration process is quite straightforward.

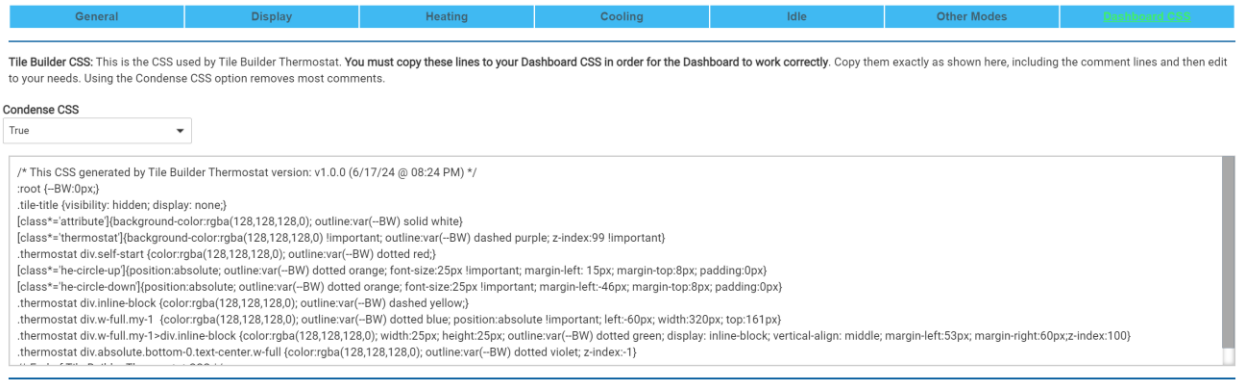
**1) Select a Thermostat**




**2) Publish the Thermostat**




**3) Copy the CSS** from the **Dashboard CSS** tab which becomes visible when you click enable the **Customize Thermostat** control**.**

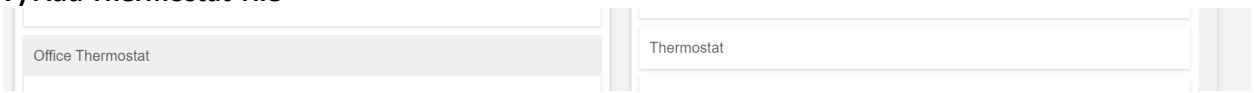



**4) Close the Tile Builder Thermostat** screen by clicking Done.

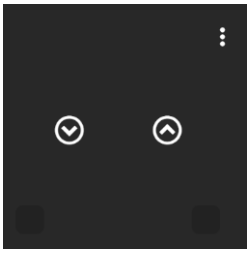
**5) Authorize the Dashboard** to use the Thermostat and the Tile Builder Storage Device.

**6) Add the CSS to the Dashboard** by opening the Dashboard, selecting the **Gear Icon,** click on **Advanced**, then **CSS** and paste the CSS you copied from Tile Builder Thermostat into here. It should look like this.


**7) Add Thermostat Tile**




It will look like this:



**8) Add Tile Builder Thermostat Tile**

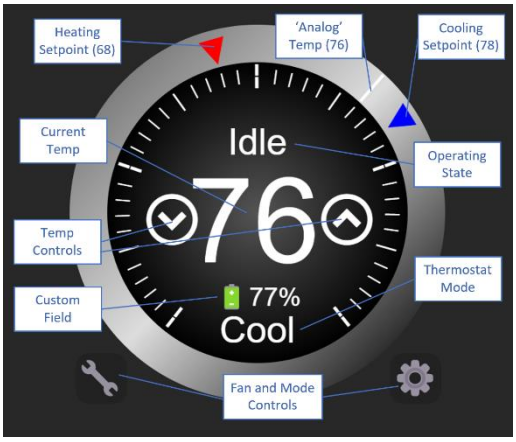

It will look like this:


9) **Relocate the tiles** using the tile positioning menu so they occupy the same space.

10) **Finished**, your result should look something like this.

## Understanding the Display

The diagram below shows the various attributes of the display and their significance.

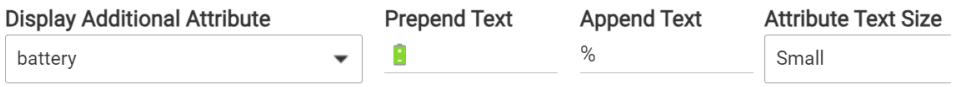
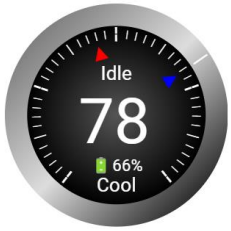
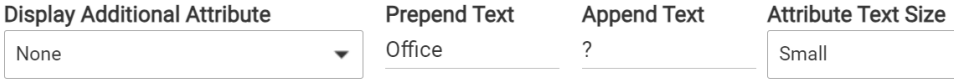



This diagram shows the display in Fahrenheit but Celsius is also supported.

# Customizing Your Thermostat

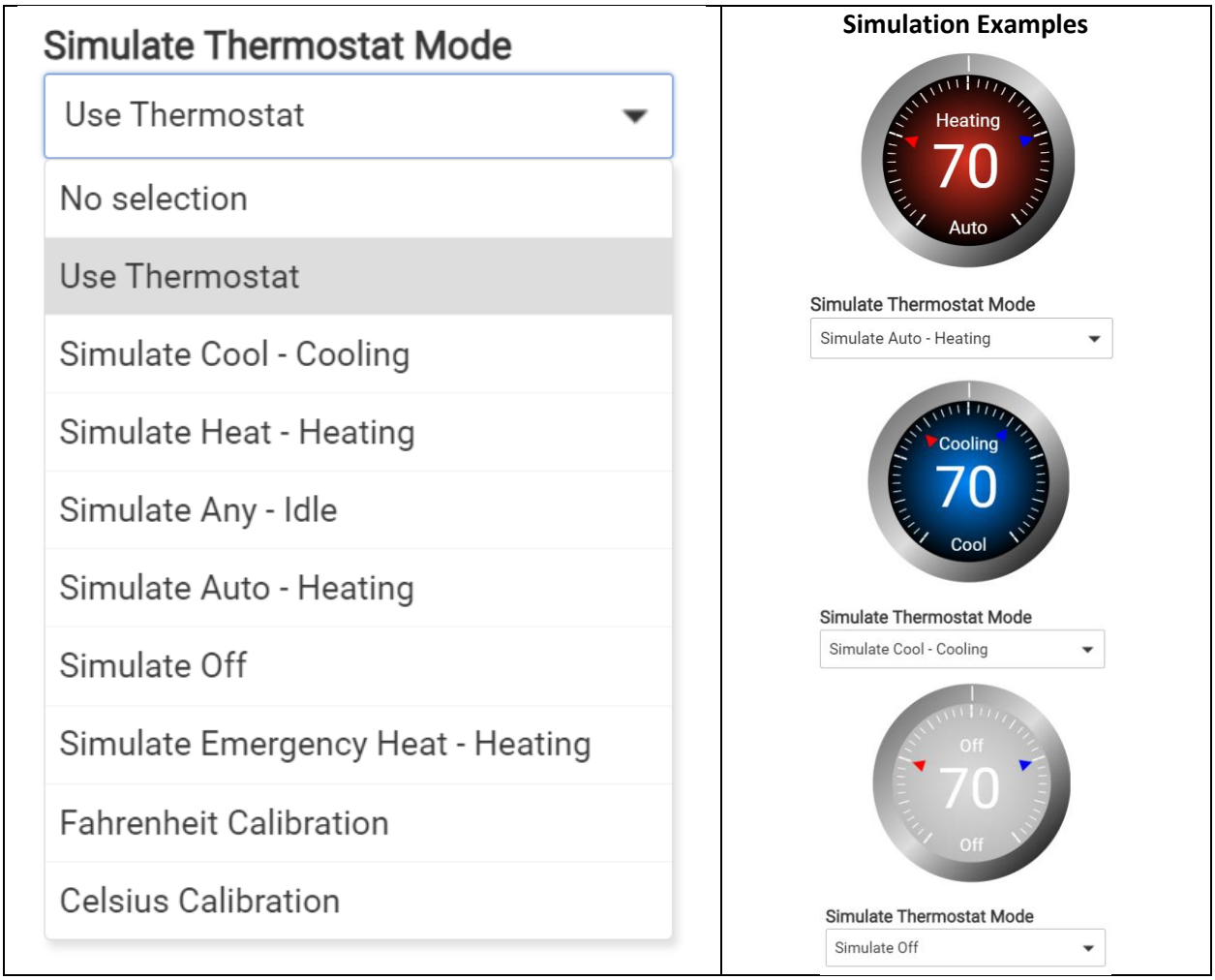
As with all Tile Builder modules there is a significant level of customization available should you choose to do that. In this section I will just focus on the less obvious settings.

| | |
|---|---|
| **General Tab** | **Default Text Color:** Affects the color of ALL text on the display including the gauge tick marks. |
| | **Temperature Units:** The default unit is Fahrenheit, but can be changed to Celsius. When using Fahrenheit, the vertical position marks 70 degrees and the gauge operates in the range 50 - 90 with marks at each of the 1, 5 and 10 degrees. When using Celsius, the vertical position marks 20 degrees and the gauge operates in the range 0 - 40 with marks at each of the 1, 5 and 10 degrees. |
| **Display Tab** | **Thermostat Skin:** This is the color\gradient of the outer circle. Options are: Black, Copper, Gold, Rose and Silver. Shown is **Rose** with **Mark Ring** setpoints**.**<br>  |
| | **Display Heating, Cooling Setpoints:** The location and the display style of the Heating and Cooling Setpoints can be modified. Shown is **Mark and Temp** followed by **Mark.**<br>  <br>  |

| | |
|---|---|
| | **Display Mode and Fan Controls**: By default, these are visible but can be hidden if desired.<br>  |
| | **Display Additional Attribute**: Allows you to display any additional attribute from your Thermostat in the gap below the temperature. For example, my thermostat has a battery backup.<br>  <br>By prepending and appending text, the result looks like this.<br>  <br>You can also just enter some static text by leaving the displayed attribute at None and entering some text into the dialog boxes.<br>  <br>  |
| **Heating, Cooling, Idle, Other Modes** | Allows you to configure the appearance of the Thermostat background when the Thermostat changes modes. |

## Testing Thermostat Modes

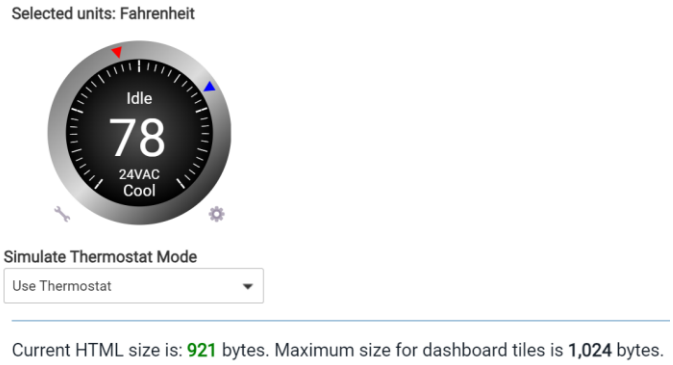
Rather than force your Thermostat mode to change you can preview the various mode settings by selecting a simulated mode.



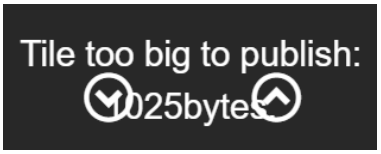

When you are done be sure to set the simulation back to **Use Thermostat** so that you are getting live data.

## Managing Tile Size

Tile Builder Thermostat requires that the size of your configuration is less than 1,024 bytes and always display the current size of your configuration on screen. This ensures that your Thermostat tiles will work within the Hubitat App interface regardless of whether you are connecting locally or via the internet.




If your tile exceeds 1,024 bytes it will appear like this on the dashboard.

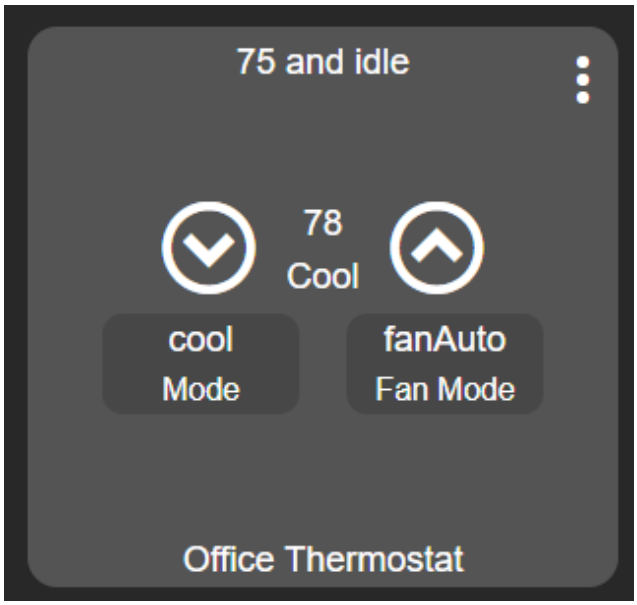


# Troubleshooting

## Slow Response Times

**Issue:** My Thermostat seems slow to respond to temp up\down commands.

With the existing thermostat tile the central part (78.0 Cool) shows the desired state. Pressing the down button 3 times in a row would result in the display going from 78 – 75. Each click of the down arrow sends a setCoolingSetpoint command to the Thermostat.




Depending on the design of your Thermostat one of two things may happen

1) The driver updates the coolingSetpoint attribute in the driver to the new value and then sends the command to the thermostat. This works very smoothly and quickly.
2) The driver sends a request to the thermostat for the new coolingSetpoint and waits for the thermostat to acknowledge the change request and **then** updates the attribute in the driver. This tends to be visually choppy and slow.

Bottom line the existing Thermostat tile shows the aspirational values as soon as a click is received. The Tile Builder only shows the actual value once the desired coolingSetpoint has actually been set.

## Missing Controls

**Issue:** My thermostat control does not have buttons for controlling the Fan and\or thermostat mode.

Your driver is missing information that the Dashboard uses to determine how to display the tile.

To verify this, have a look at the attributes with the driver and make sure that the supportedThermostatFanModes and supportedThermostatModes information is present and is formatted as JSON with quotes and commas separating the values.

Current States

- coolingSetpoint : **75.0**
- heatingSetpoint : **68.0**
- hysteresis : **0.5**
- supportedThermostatFanModes : **["auto","circulate","on"]**
- supportedThermostatModes : **["auto","cool","emergency heat","heat","off"]**
- temperature : **68.0**
- thermostatFanMode : **auto**
- thermostatMode : **off**
- thermostatOperatingState : **idle**
- thermostatSetpoint : **68.0**

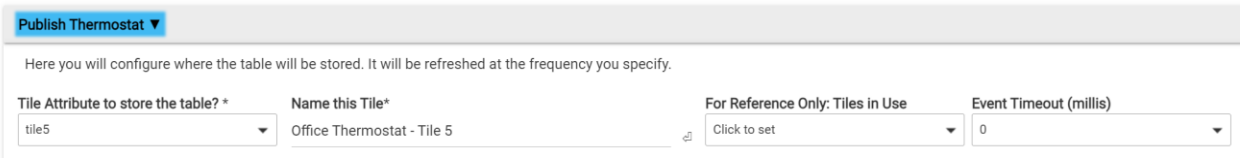
If you have access to the driver code, you can execute these two statements to create these entries.

```
sendEvent(name: "supportedThermostatModes", value: ['"heat"', '"cool"', '"auto"', '"off"', '"emergency heat"'] )
sendEvent(name: "supportedThermostatFanModes", value: ['"auto"', '"circulate"', '"on"'] )
```

If this is a built-in driver you will need to report the issue to Hubitat support services.

## Tweaking Publishing Performance

As with other Tile Builder modules Thermostat has an Event Timeout control. This control sets the minimum amount of time to wait before publishing the tile. In Thermostat the default is 250ms.




If the eventTimeout is set to 0 (as shown) Tile Builder will publish a new Tile immediately on every change. However, if you were to click the down arrow 5 times in 1 second it would still publish the Tile 5 times. If you were to set the Event Timeout to 250ms it would wait until all 5 were received and then publish just once. What is best depends on your own situation and how responsive your thermostat is to temperature change requests.