Ecowitt Local Tile For Crestron Home

Revision: 1.01
Date: 16 October 2026

Supported Installation

This is a Crestron Home driver for Crestron Home processors.

Description

The Ecowitt Local Tile driver is designed to display weather data from an Ecowitt-compatible weather station by configuring the weather station's web interface to use the Ecowitt Protocol at a specified port to read in data over the local network.

The driver retrieves telemetry data from the Ecowitt-friendly device and presents it within the Crestron Home Client, allowing users to view a range of live environmental readings and station data reported by their weather station. This includes values such as temperature, pressure, rainfall, UV index, and wind conditions.

The properties are exposed, allowing you to apply logic on them however you want. An example of this is sending Notice Messages with property changes.

In addition to displaying weather data, the driver supports configurable notifications for selected telemetry values. This functionality requires the Ultamation Notice Tile, which is a separate product that can be purchased from the shop page. When integrated, the installer can set user-defined thresholds, and when a condition is met, notifications can be delivered to the Crestron Home client app or sent as mobile push notifications. Notifications include a custom title, message, and priority level via the Ultamation Notice Tile.

If the Ultamation Notice Tile is not installed, notification functionality will not be available.

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Features include:

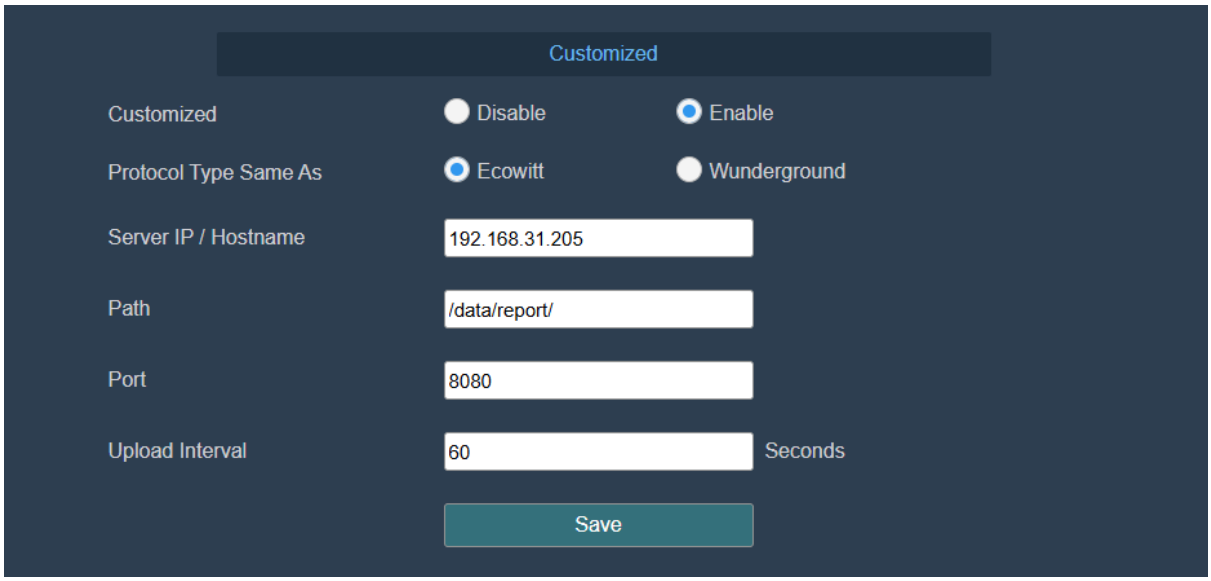
- Displaying weather data from an Ecowitt-compatible device.
- Providing up-to-date readings such as temperature, pressure, raining telemetry, UV, humidity, solar radiation, updated on a period of your choosing.
- Displaying wind information including wind speed, wind gust, and wind direction.
- Exposed telemetry properties that allow for logic to be performed on them.
- Installer-defined thresholds for telemetry-based alerts when used with the **Ultamation Notice Tile.**

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Weather Station Preparation

Web Interface Setup

First, you must set up the Ecowitt Protocol and configure the endpoint.



Navigate to the weather station's web interface shown above:

- Set "Customized" to "Enable" option.
- Set "Protocol" to "Ecowitt".
- Set "Server IP / Hostname" to the IP address of the processor that you are loading the driver on to.
- The "path" option is irrelevant: The driver is configured to take in any data coming in on your chosen port.
- Enter any valid port number for "Port".

Press save and continue with the installation below.

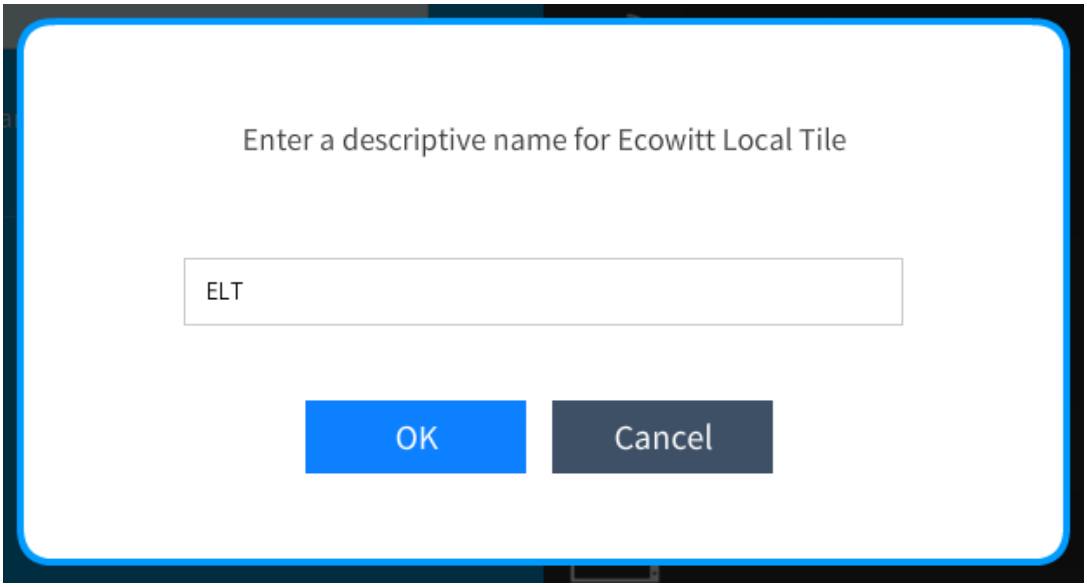
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Installation

The driver can be found under:
Drivers > Weather Station > Ecowitt > **Ecowitt Local Tile**

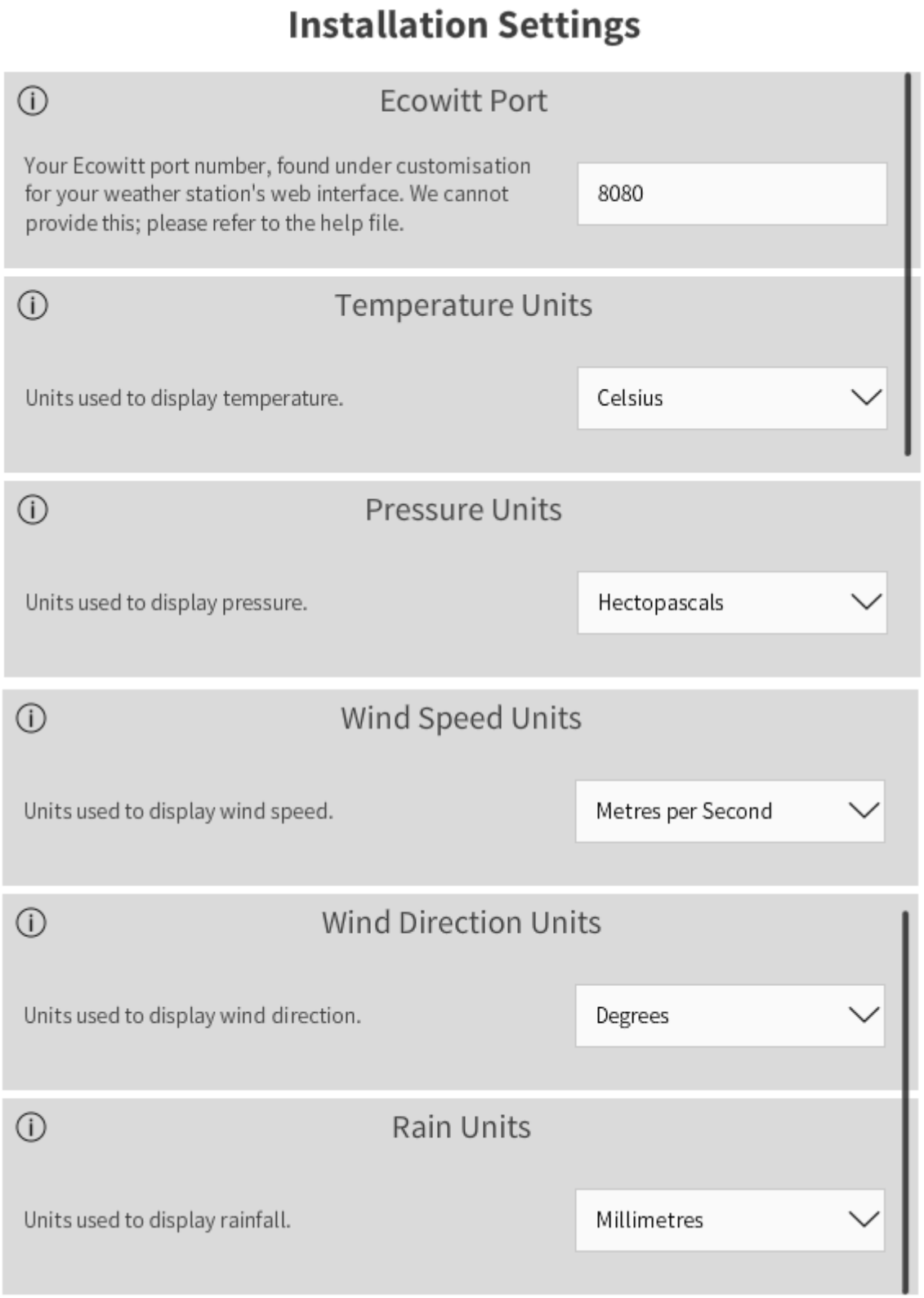
Adding the Driver

Ensure a room is selected, and then click on the '+' against the appropriate device. You will be asked to provide a descriptive name – this can be anything you wish.



The driver is licensed via the cloud, please first refer to the "Licensing" section below. If you do not have a cloud licence the system will function for **one hour** and then control will be suspended.

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It is very important that you match the same port number that you entered into the station's web interface. If it is wrong, you won't see your data come through. We cannot provide this; this is the port you chose in the station's web interface.

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Each unit setting is chosen from a drop-down list, which sets how the tile displays that measurement. **On the PC4-R, and on v1 of the CP4-R and MC4-R, firmware updates have been discontinued, so the setting appears as a text box instead and the unit must be typed in.** Entries are case-sensitive and must match exactly, including spaces and hyphens, so we recommend copying them from the tables below. The values in bold are the default display units.

Display Units

Value	Shown as
Fahrenheit	ºF
Celsius	ºC

Value	Shown as
Inches of Mercury	inHg
Millibars	mb
Millimetres of Mercury	mmHg
Hectopascals	hPa
Kilopascals	kPa

Value	Shown as
Miles per Hour	mph
Kilometres per Hour	km/h
Knots	kts
Metres per Second	m/s
Beaufort	bft
Linear Feet per Minute	lfm

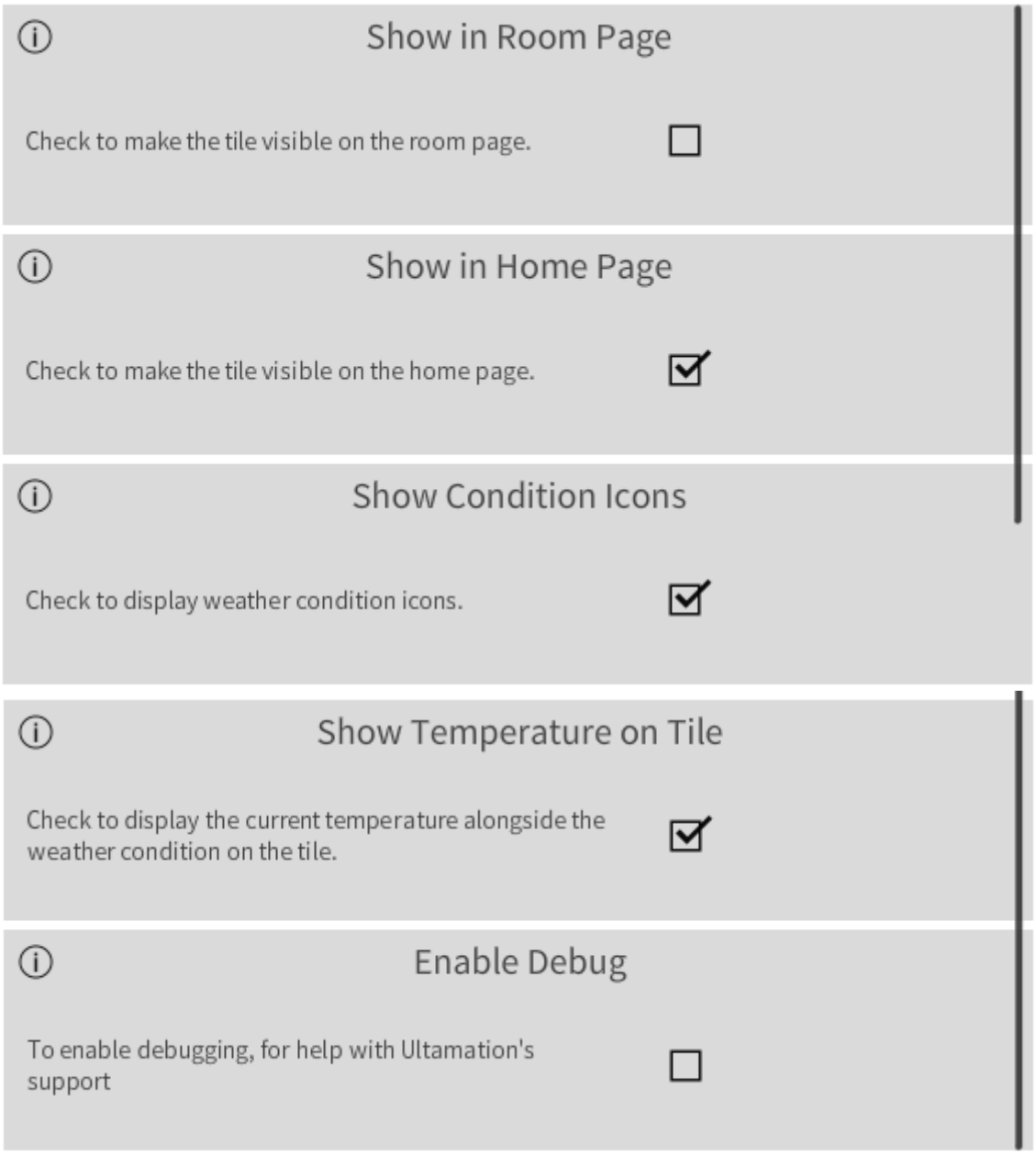
Value	Shown as
Cardinal	Compass points, e.g. N, NE, E
Degrees	0–360º

Value	Shown as
Inches	in
Millimetres	mm
Centimetres	cm

Rain rate is shown per hour, e.g. mm/h. Solar Radiation is always shown in W/m² and has no unit setting.

If you choose to change the units after creating logic on the exposed properties, you will need to adjust the logic accordingly for the new units.

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This page gives you the preferences for how and where you want the tile to appear.

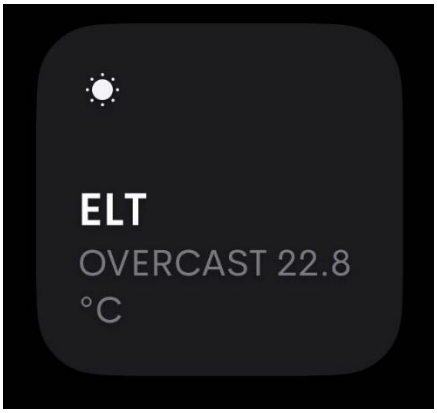
The last option enables debug logging which can be viewed in Toolbox's Text Console.

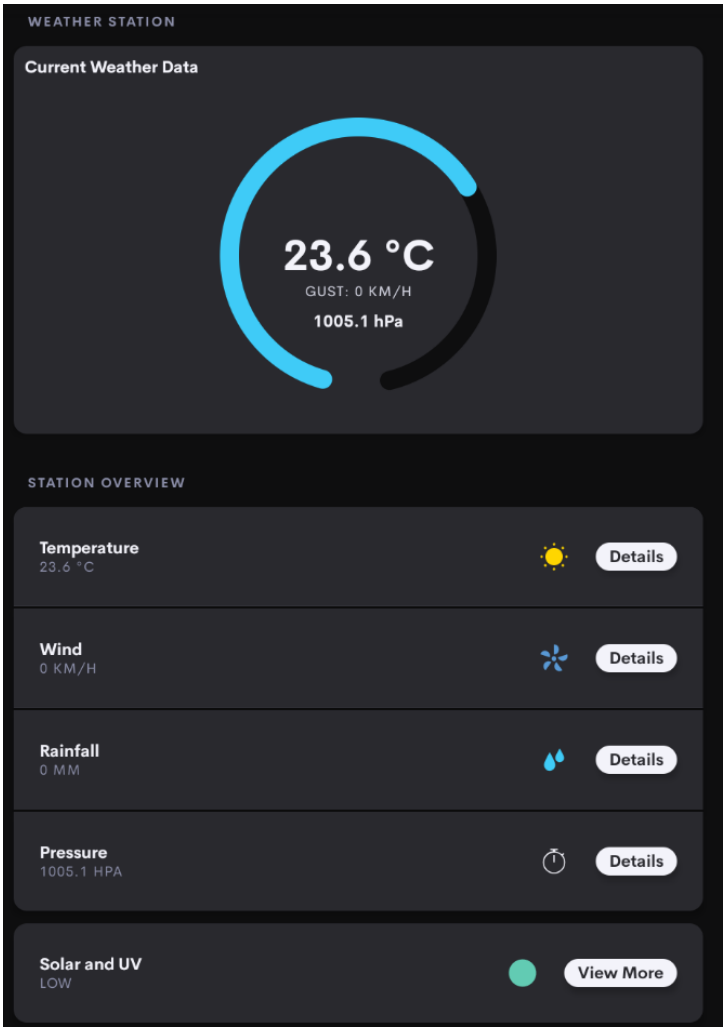
Congratulations, you have now loaded the driver.

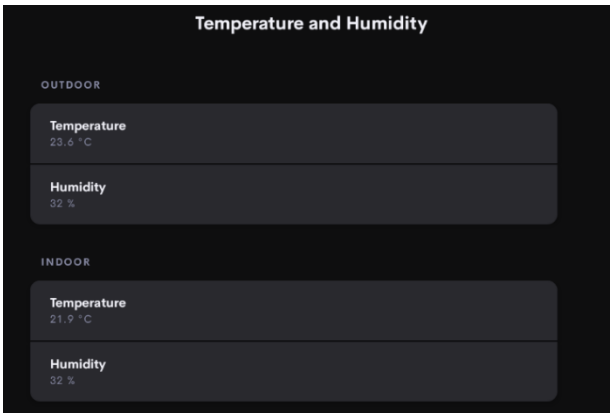
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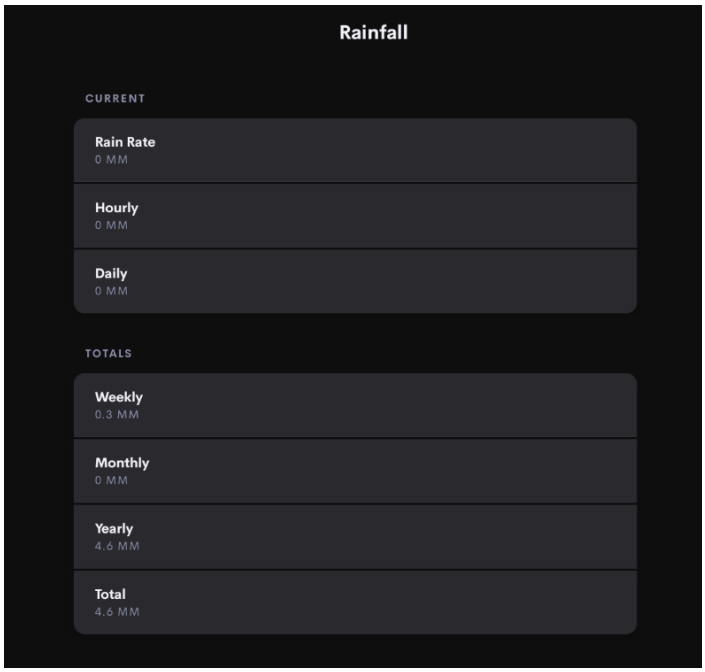
After Configuration

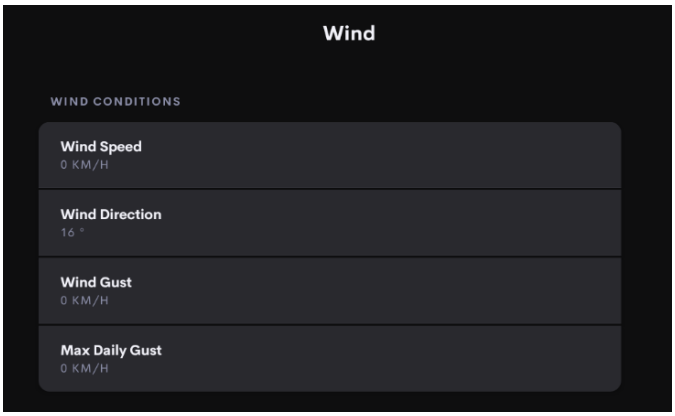
Once the Ecowitt Local Tile has been set up, the current weather conditions are displayed. Below is an example of a loaded tile:



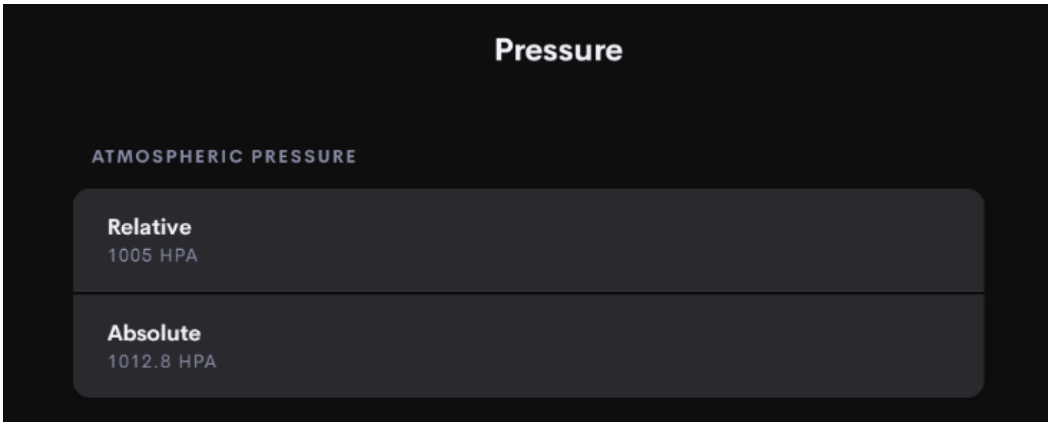


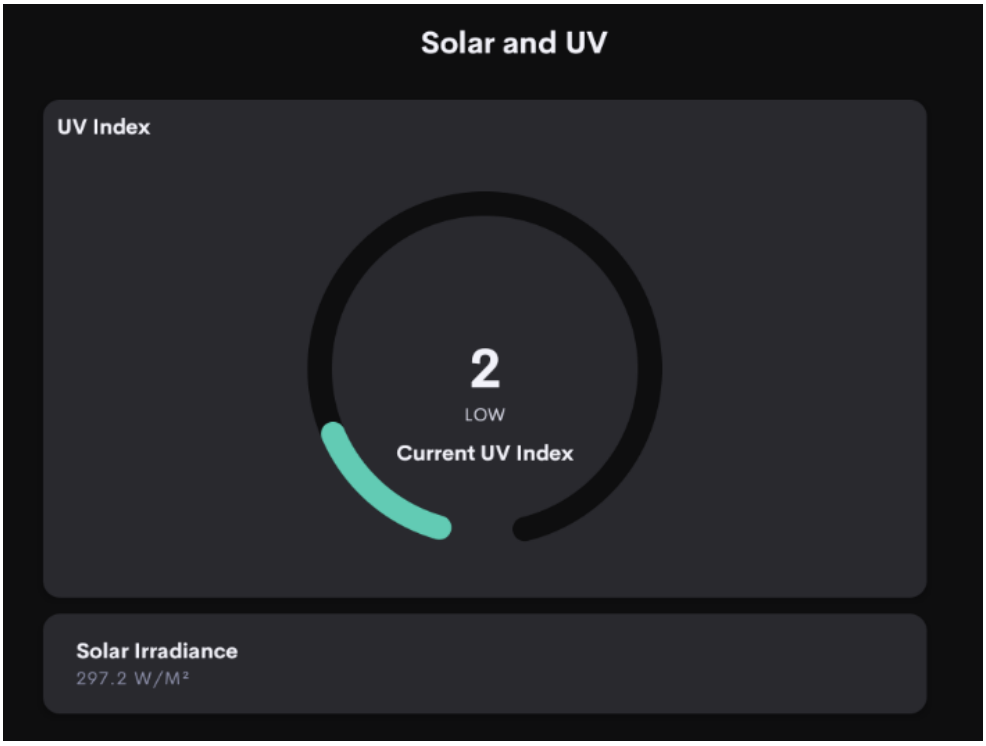






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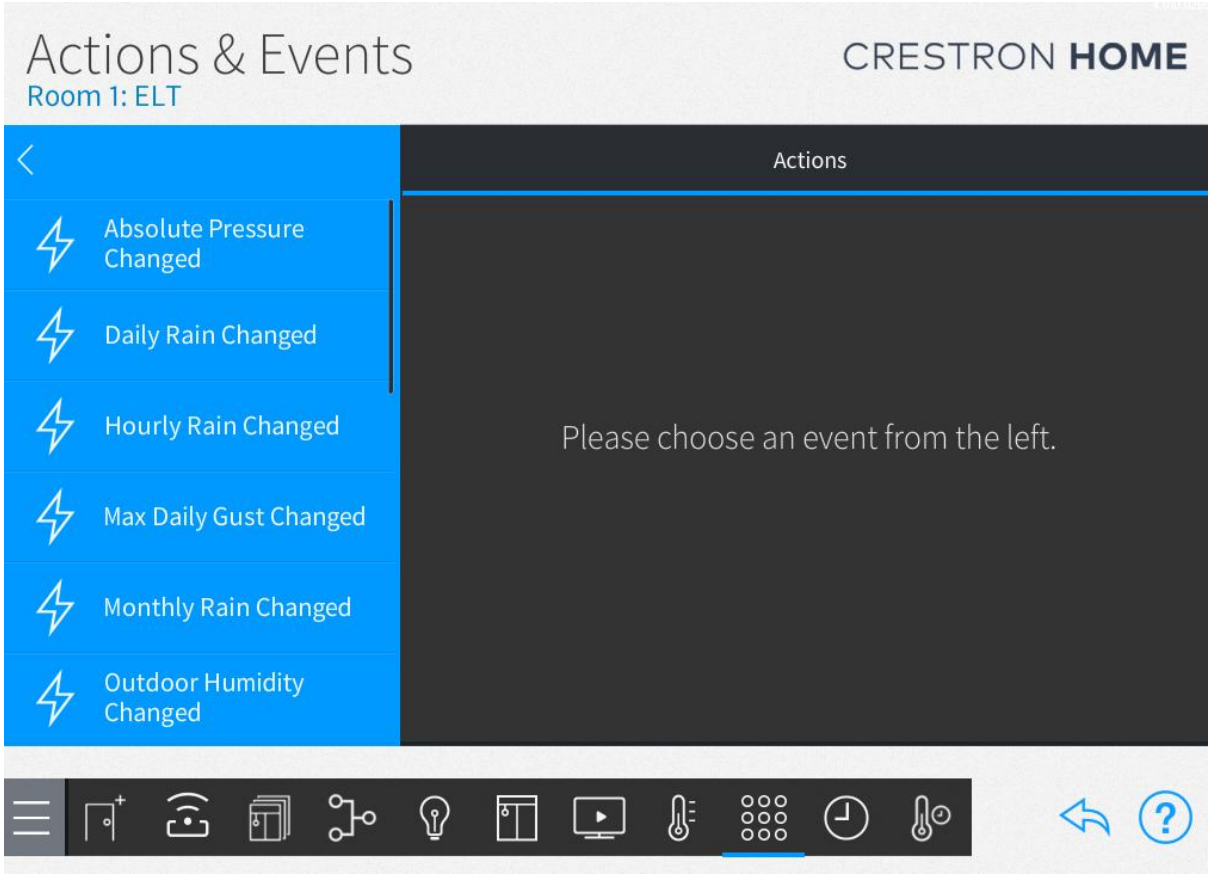


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Exposed Properties

When the driver has been loaded, these properties become exposed and allow for logic to be applied on them.

You can find them by clicking into Actions & Events, clicking into the room with the driver and choosing the Ecowitt Local Tile folder.



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The properties that are exposed are:

- Absolute Pressure – available in inHg, mb, mmHg, hPa, kPa
- Daily Rain – available in in, mm, cm
- Hourly Rain – available in in, mm, cm
- Indoor Humidity – available in %
- Indoor Temperature – available in °C, °F
- Max Daily Gust – available in mph, km/h, kts, m/s, bft, lfm
- Monthly Rain – available in in, mm, cm
- Outdoor Humidity – available in %
- Outdoor Temperature – available in °C, °F
- Rain Rate – available in in, mm, cm per hour
- Relative Pressure – available in inHg, mb, mmHg, hPa, kPa
- Solar Radiation – available in W/m²
- Total Rain – available in in, mm, cm
- UV Index – available as an index value
- Weekly Rain – available in in, mm, cm
- Wind Direction – available in degrees
- Wind Gust – available in mph, km/h, kts, m/s, bft, lfm
- Wind Speed – available in mph, km/h, kts, m/s, bft, lfm
- Yearly Rain – available in in, mm, cm

Please note that you might not have all these properties, as these depend on the sensors your weather station has and the data it sends.

These properties update each time your weather station sends new data, at the upload interval set in the station's web interface. Logic that depends on a faster response than this will not behave as expected.

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It's important to note that:

Changing a unit also changes the values reported to programming. Wind speed switched from miles per hour to kilometres per hour will report about 48 where it previously reported 30 for the same wind, so any thresholds already set will need adjusting. Beaufort needs particular care, as it reports a force between 0 and 12 rather than a speed. A threshold set above 12 can never be met, and the action will not fire again.

Properties always return a value, even when the reading is not available. If your station does not send the reading a property relies on, that property returns 0. This is worth allowing for in any logic you write: on a station without a wind sensor, Wind Speed returns 0, so an action set to trigger below 5 would remain true permanently. The panel shows "Unknown" or "N/A" instead of a value, except the UV gauge, which shows 0.

If the weather station stops sending data, the properties keep reporting the last values they received. Logic will continue to act on those values until the station sends data again, so a reading that has not changed for some time may be a sign that the station has stopped sending.

If one of these properties is reporting 0 when you expect a value, check that your station has the sensor for that reading. If no data is coming through at all, check the station's web interface: Customized must be enabled, the Protocol set to Ecowitt, the Server IP set to the processor's IP address, and the Port must match the port entered in the driver. Enabling debug logging shows each request the station sends in Toolbox's Text Console.

Relative Pressure is adjusted to sea level, while Absolute Pressure is the pressure measured at the station.

Wind Direction is always reported in degrees. The Cardinal setting changes how the direction appears on the panel but does not affect the property.

Solar Radiation is always reported in W/m², as it has no unit setting.

Rain readings come from whichever rain gauge your station reports. Both traditional rain gauges and piezoelectric rain sensors, such as the one on the WS90, are supported. If a station reports both, the traditional gauge is used. Total Rain is only sent by traditional gauges, so on a station with only a piezoelectric sensor it returns 0 and the Total row is hidden on the panel. The panel also shows a

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Last 24 Hours reading when a piezoelectric sensor sends one, but this is not exposed as a property.

Max Daily Gust is calculated by the weather station, not the driver. It is the highest gust the station has recorded that day and resets on the station's own daily schedule.

An example of using these exposed properties can be seen below.

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Threshold Notifications with the Notice Tile

The driver notifications are generated based on changes in the weather station telemetry, with messages sent from the **Ultamation Notice Tile** (which can be found on the Ultamation Shop Front). If configured, notifications can also be delivered as mobile push notifications through **Pushover.** If you do not own or wish to use the Notice Tile integration, you can skip this section.

For example, a temperature threshold of 30°C may be configured. If the weather station reports a value above this threshold, your logic will send a Notice message via the Notice Tile. Readings update **each time the weather station sends data,** at the upload interval set in the station's web interface, so a condition that stays true will repeat at that rate unless further logic is added to prevent it.

The general message schema for notice messages is as follows:

Field	Description	Requirement
Title	Title of the notice	1-30 characters
Message	Main body of the notice	1-60 characters
Priority	To determine importance	Low/Medium/High

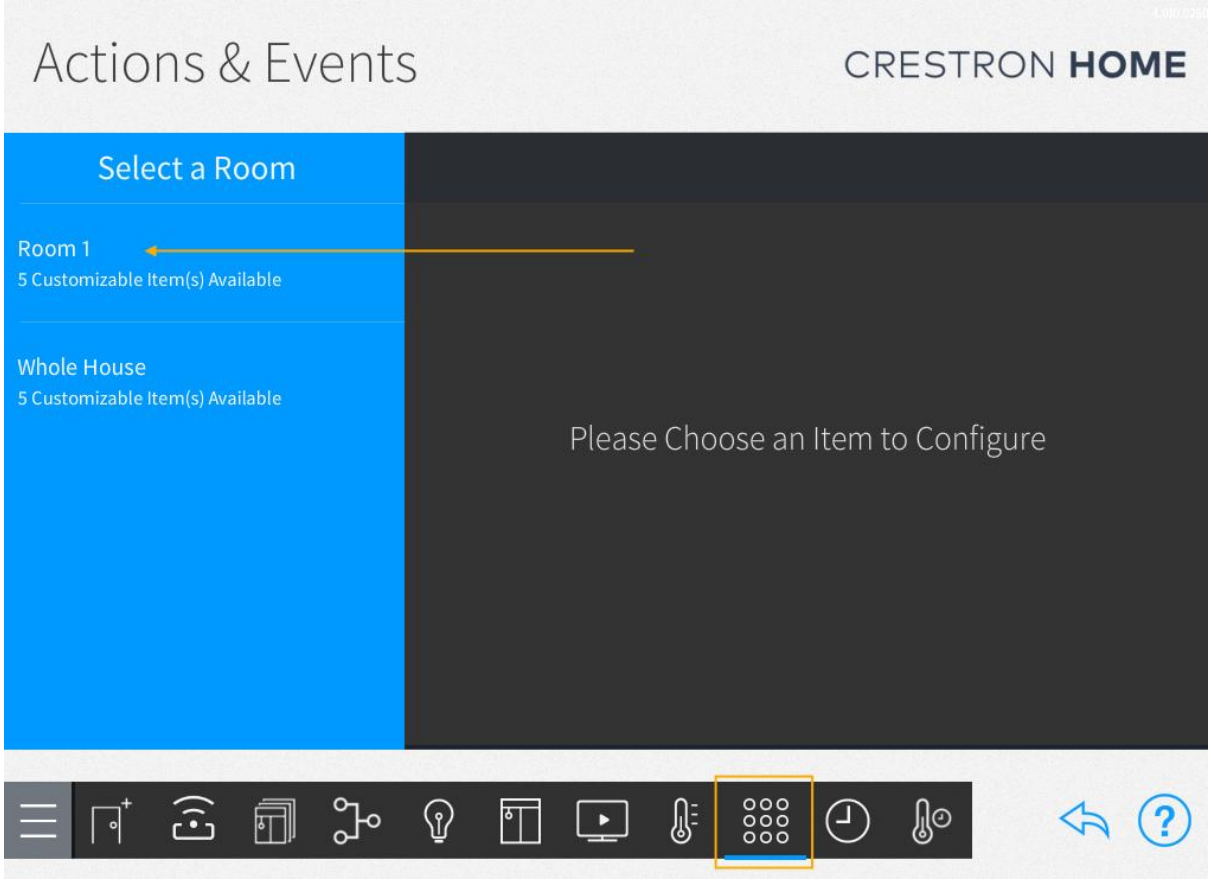
Refer to the Notice Tile help file for more information on how the Notice Tile is setup and its capabilities.

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Installation

Before proceeding, the Notice Tile must be installed on the same processor.

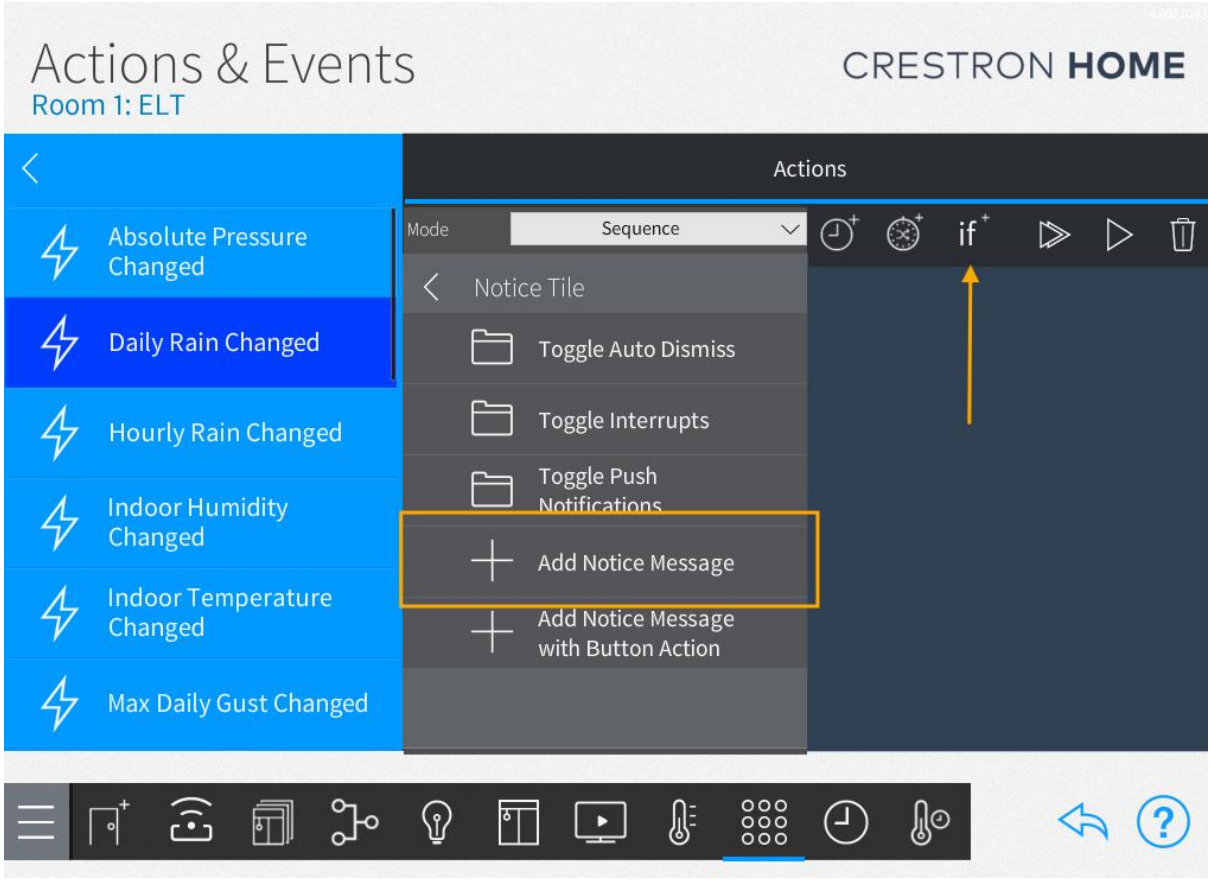
Once the driver and the Notice Tile are loaded, navigate to **Actions & Events** and select the room containing the driver.



Within the driver folder, the available telemetry values for threshold configuration will be displayed.

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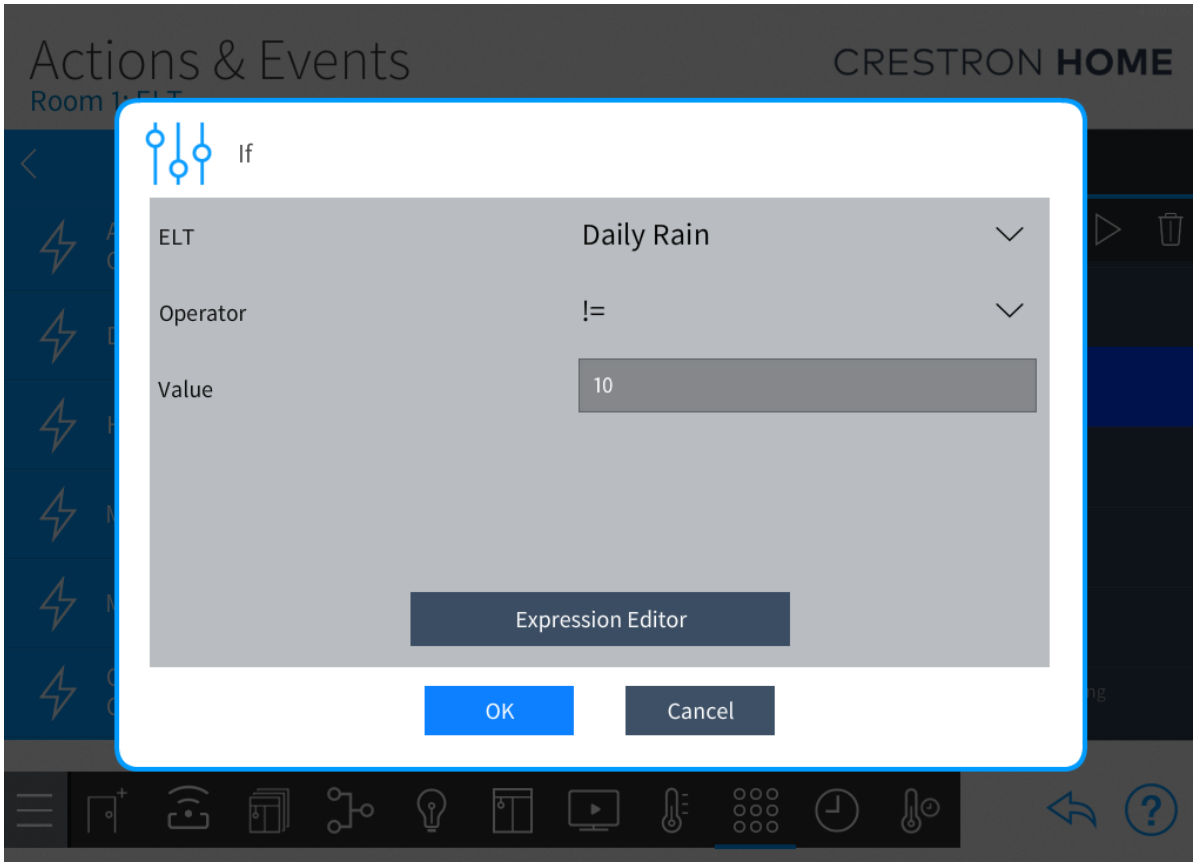
Selecting one of the property changes reveals the actions menu. From here click Mode > Sequence, then select the room and driver folder with the Notice Tile to access the Notice Message.



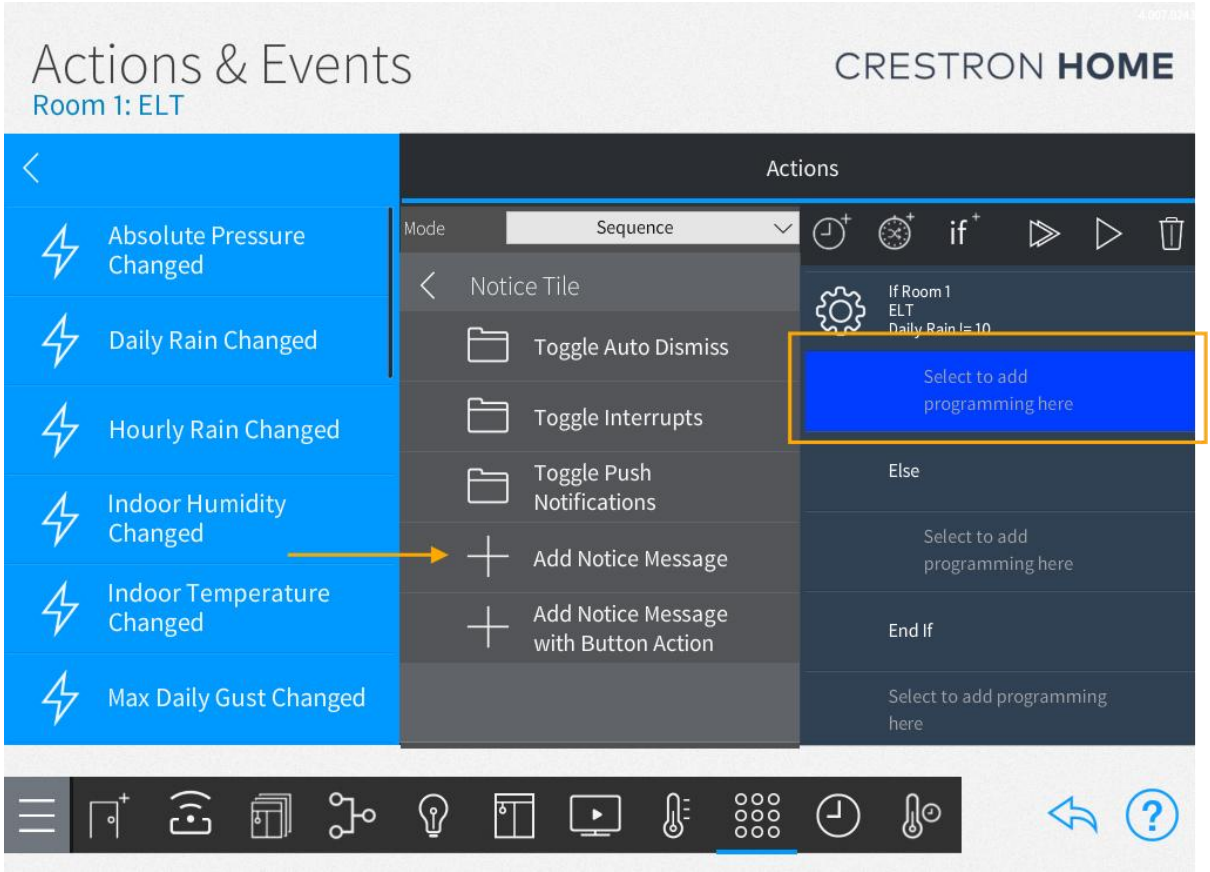
This is where notification logic can be configured.

Selecting the **if** condition provides access to the available telemetry properties for logic configuration. For example, selecting Daily Rain Changed allows conditions to be defined based on that value.

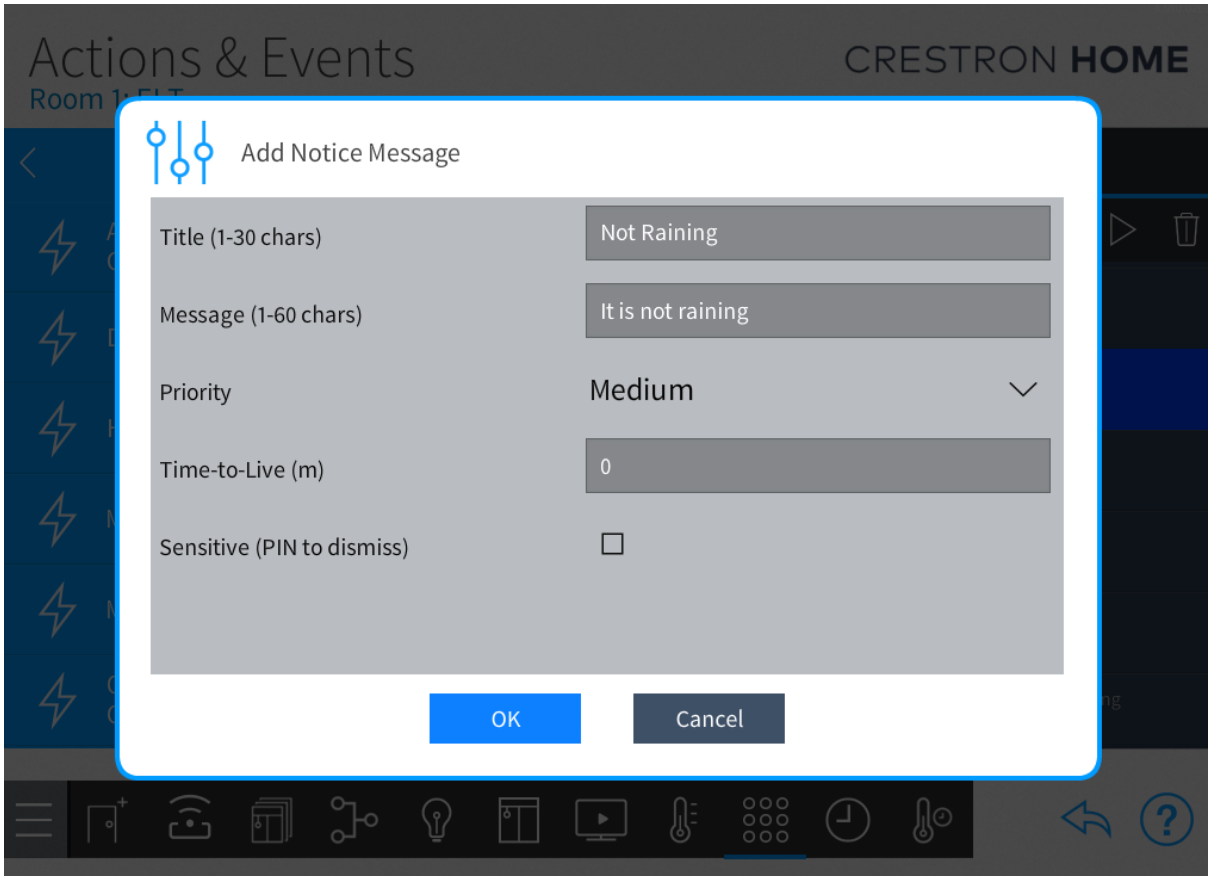
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After confirming the condition, add the “Notice Message” action to the if statement.

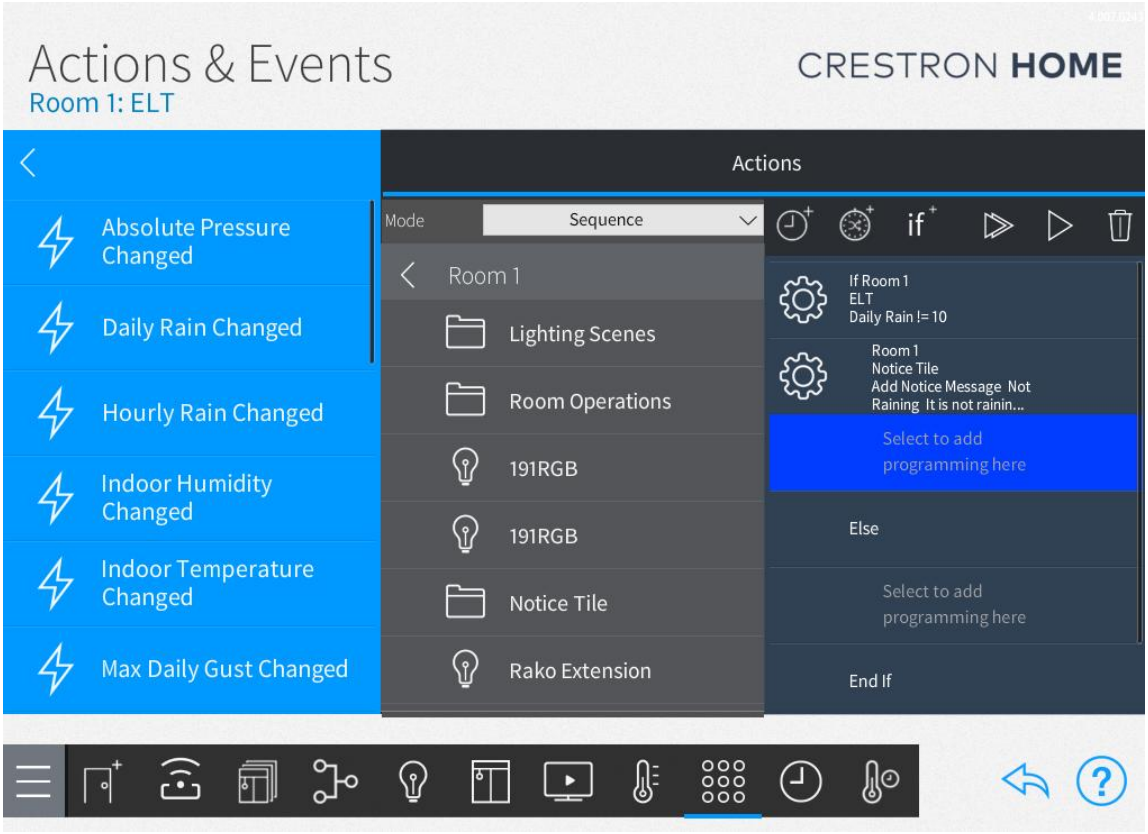


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The notification can then be configured with a Priority, Title, and Message.

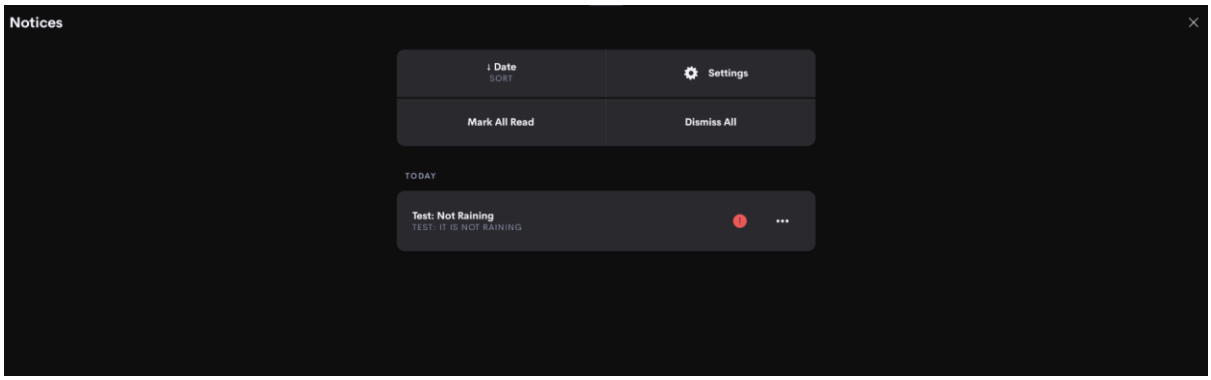
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The polling rate for the notifications **is based on what is configured in the weather station's web interface**. For example, a condition such as Daily Rain Changed != 10 will trigger a notification whenever the condition is met. Further logic can be added with custom variables created in Crestron Home.

More advanced alert logic can be implemented with the additional operators "=", "!=", "<", "<=", ">", ">=".

This is how configured messages will appear within your Notice Tile.



Please note, the units (page 11 of this document) are defined during the driver installation. This means your defined thresholds for property change logic in your Notice tile messages must also be adjusted.

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Support

If you have any issues with an integration solution please let us know by contacting Ultamation support on support@ultamation.com and please include as much detail about your issue as possible, such as a recent processor error log.

Licence verification messages are posted to the error log, so please ensure you have checked this.

Licensing

This integration solution (including software, images and all other associated assets distributed as part of the purchased download package) is licensed on a PER PROCESSOR basis.

A purchase should not be completed without correct information as refunds cannot be issued for errors or changes made to details following purchase.

This is an electronic product and there is no physical delivery.

The integration solution is provided without any warranty with respect to the reliability of the controlled device or changes to device protocol. We will endeavour, through best efforts, to maintain the integration solution's functionality and any bug fixes will be provided free-of-charge. Additional functionality may be released as a variation of this integration solution and this will be a separate, purchasable, product.

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Cloud Licence

This integration solution contacts Ultamation's licensing server at startup. If the server finds a matching licence for the integration solution and processor then the integration solution will be licensed. Otherwise, the integration solution will check the offline licence key. If you purchase a licence **after** you have loaded the integration solution, please reboot the system to see changes take effect.

If you purchased a licence **before** it was migrated to the cloud service, i.e. you have a licence key already, you must enter this into the **Offline Key** user attribute. If you purchased the integration solution **after** it was migrated, and you don't have a licence key, no further action is required.

If no licence exists for the product/processor the integration solution will enter a short trial period (ONE HOUR) to allow for verification of correct control or evaluation.

To request an OFFLINE key, please contact support@ultamation.com with your order details and a brief explanation why you REQUIRE offline activation. Ultamation reserve the right to refuse offline activation.

NOTE: Once an offline key has been issued no further licence changes will be granted. Moving the integration solution to a new processor will require an additional licence purchase.

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