



WeatherFlow Tempest API & Developer Platform

Reference: <https://weatherflow.github.io/Tempest/api/>

1.1 DISCLAIMER

The WeatherFlow TempestOne Hardware integrates with Crestron Home, allowing users to monitor various weather parameters, including temperature, humidity, wind, precipitation, solar radiation, UV index, lightning, and pressure, all within the Crestron Home App.

1.2 SUPPORTED FEATURES IN THIS VERSION

This integration supports viewing all weather readings from your WeatherFlow TempestOne device. Users can access real-time data for various weather parameters and set alerts based on specific conditions. Integrators can assign event triggers to automate home settings according to weather conditions.

1.3 HARDWARE REQUIRED

Crestron series 4 family home processor: MC4-R / CP4-R / DIN-AP4-R

1.4 SOFTWARE REQUIRED

Crestron Home OS 3 / OS 4 or later with accessibility to the WeatherFlow TempestOne Device the API is running on.

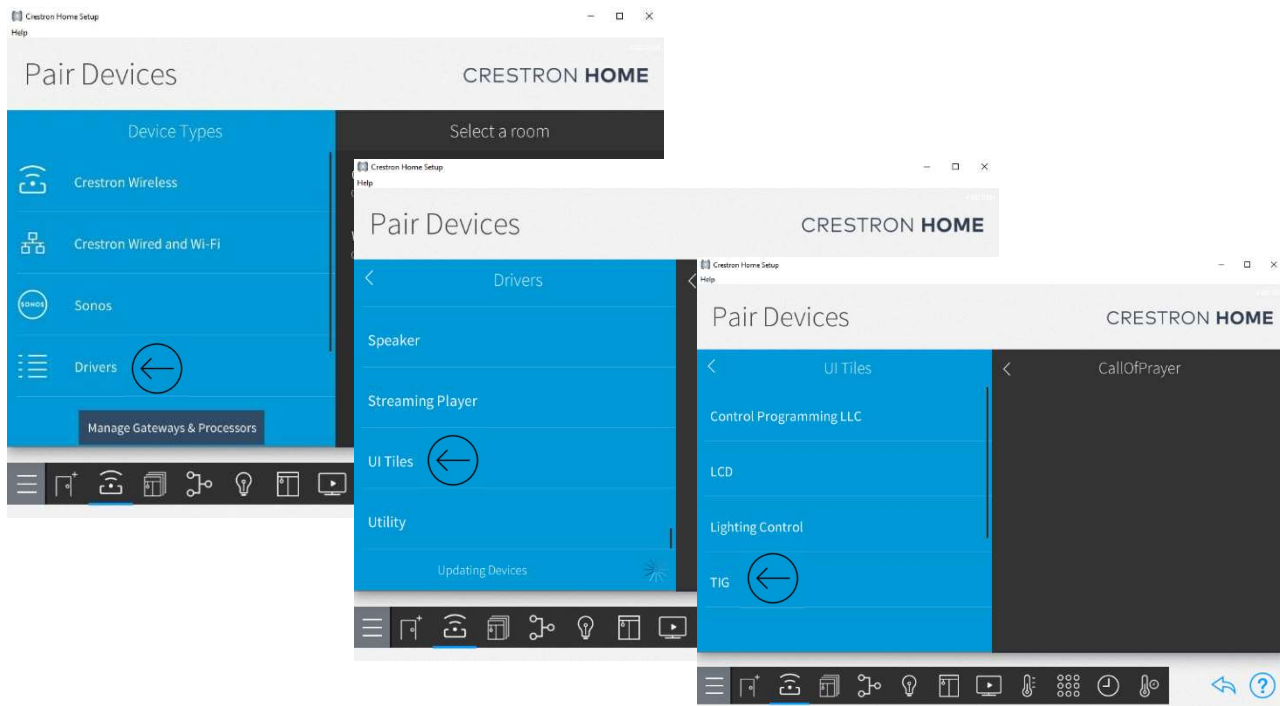
1.1 - NETWORK TOPOLOGY:

Ensure that port 80 is accessible from the Processor to facilitate necessary standard communications.

2.0 - ADDING THE TIG TEMPESTONE EXTENSION TO CH

The TempestOne API extension can be found under the following location on the CH configurator software:

Device Types > Drivers > UI Tiles > TIG



2.1 - CONFIGURING TIG TEMPESTONE EXTENSION

Upon installing the driver, you will be prompted to enter the Device ID and Access Token.



Tempest Settings

About
Installer Settings
Advanced



Device ID (xxxxxx)
Open TempestOne App --> Settings --> Stations --> Status --> Paste 6 Digit Device ID

355279



Access Token (xxxxxxxx-xxxx-xxxx-xxxx-xxxxxx...)
Open TempestOne App --> Settings --> Stations --> Public Data --> Enable Share Publicly --> Share Page --> Sign In --> Data Authorization...

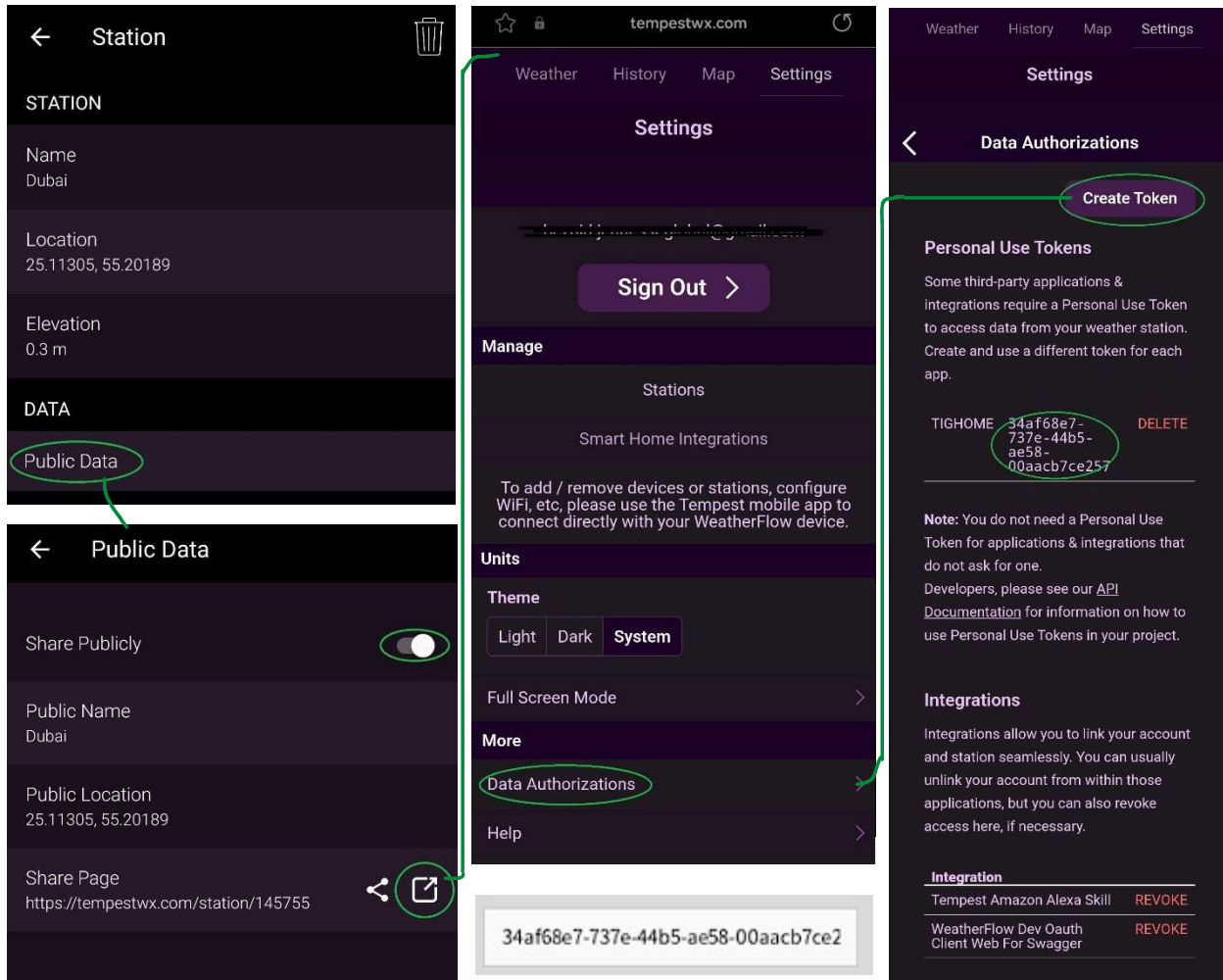
34af68e7-737e-44b5-ae58-00aacb7ce2

Reconfigure
OK
Cancel

ID: Open TempestOne App --> Settings --> Stations --> Status --> Paste 6 Digit Device ID

← Station	🗑️ DEVICE	
STATION	Show Ongoing Notification ☐	Serial Number ST-00145070
Name Dubai	Manage Devices	Firmware Revision 176
Location 25.11305, 55.20189	WiFi Set Up	Device ID 355279
Elevation 0.3 m	Advanced	Uptime 0d 2h 45m 11s
DATA	Status Online ☒	Battery Eco (2.11v)
Public Data	Messages	

Access Token: Open TempestOne App --> Settings --> Stations --> Public Data --> Enable Share Publicly
 --> Share Page --> Sign In --> Data Authorizations --> Create Token --> Paste Token Here



2.2 - CRESTRON HOME LAYOUT



With the Settings button enabled, options for Unit Measurements can be adjusted.

Temperature Units	Rain Units
Pressure Units	Distance Units
Wind Speed Units	Other Units
Wind Direction Units	

Example for Temperature Units

Fahrenheit	>
Celsius	>

For the default layout Unit can be seen below:

TEMPERATURE AND HUMIDITY

Air Temperature: 21.2 Fahrenheit

Relative Humidity: 59.0 %

WIND

Wind Gust: Not available

Wind Avg: Not available

Wind Direction: Not available

Wind Lull: Not available

PRECIPITATION

Precipitation Type: None

Rain Accumulation: 0.0 Millimeters

Local Day Rain Accumulation: 0.0 Millimeters

NC Rain Accumulation: Not available

Local Day NC Rain Accumulation: Not available

Precipitation Analysis Type: None

SOLAR AND UV

UV Index: 0.0 W/m²

Solar Radiation: 0.0 W/m²

Illuminance: 0.0 lux

LIGHTNING

Strike Count: 0

Average Strike Distance: 0.0 Imperial

HARDWARE AND PRESSURE

Dubai - outdoor Station (ST-00145070)

Pressure: 995.9 Millibar

MISCELLANEOUS

Battery: 2.1 V

Report Interval: 1.0 minutes

Date: 2024-07-23 18:31:17

Settings ☐

Temperature and Humidity

- Air Temperature
- Relative Humidity

Wind

- Wind Gust
- Wind Avg
- Wind Direction
- Wind Lull

Precipitation

- Precipitation Type
- Rain Accumulation
- Local Day Rain Accumulation
- NC Rain Accumulation
- Local Day NC Rain Accumulation
- Precipitation Analysis Type

Solar and UV

- UV Index
- Solar Radiation
- Illuminance

Lightning

- Strike Count
- Average Strike Distance

Hardware and Pressure

- Location
- Pressure

Miscellaneous

- Battery
- Report Interval
- Date and Time

Release Notes

Driver Version: 1.0.0

Release Date: 2024-08-07

New Features:

- **Comprehensive Measurement Reading:** Air Temperature, Relative Humidity, Wind Gust, Wind Average, Wind Direction, Wind Lull, Precipitation Type, Rain Accumulation, Local Day Rain Accumulation, NC Rain Accumulation, Local Day NC Rain Accumulation, Precipitation Analysis Type, UV Index, Solar Radiation, Illuminance, Lightning Strike Count, Average Strike Distance, Pressure, Battery Level, Report Interval, Date and Time.
- **Unit Conversion:**
 - Temperature: Fahrenheit (°F), Celsius (°C)
 - Wind Speed: Miles per hour (mph), Knots (kts), Kilometers per hour (km/h), Meters per second (m/s), Beaufort (bft), Linear feet per minute (lfm)
 - Wind Direction: Degrees, Cardinal
 - Rain: Millimeters (mm), Inches (inches), Centimeters (cm)
 - Distance: Imperial (Mi), Metric (Km)
 - Pressure: Millibar (mb), Inches of mercury (inHg), Millimeters of mercury (mmHg), Hectopascals (hPa)
 - Other Measurements: Imperial (Mi), Metric (Km)

Improvements:

- **Enhanced Accuracy:** Improved the accuracy of all measurements by optimizing sensor calibration algorithms.
- **User Interface:** Updated the interface to display measurement units clearly alongside the readings. Added settings to toggle between different unit systems (metric/imperial).
- **Performance:** Optimized data retrieval processes to reduce latency in displaying real-time data. Improved battery usage efficiency by optimizing sensor polling intervals.

Bug Fixes:

- None reported at this time.

Known Issues:

- None reported at this time.

Compatibility:

- This driver is compatible with TempestOne Weather System – WeatherFlow, model ST-00145070 used for development.