

# HOP WeatherFlow SOFT Tempest Integration

## 1. Overview

WeatherFlow Inc. is a leader in the private sector weather industry, with over three decades of experience in applying the latest in observational, modeling, and forecasting technology to its clients' most challenging problems.

HopSoft WeatherFlow Tempest driver makes all local data from a network of tempest stations available in Control4 in real-time.

Latest driver version 01.00.09 is a major driver update and unfortunately it is not compatible with previous versions. This version no longer contain hub driver, this driver has been replaced with cloud driver.

## 2. Hardware settings

There is no special setting required on Tempest side, just make sure it is online and broadcast UDP traffic is available between Tempest and Control4.

Data are broadcasted UDP to "255.255.255.255" on port 50222, make sure that it is not blocked or filtered on access points or switches.

## 3. Driver Installation

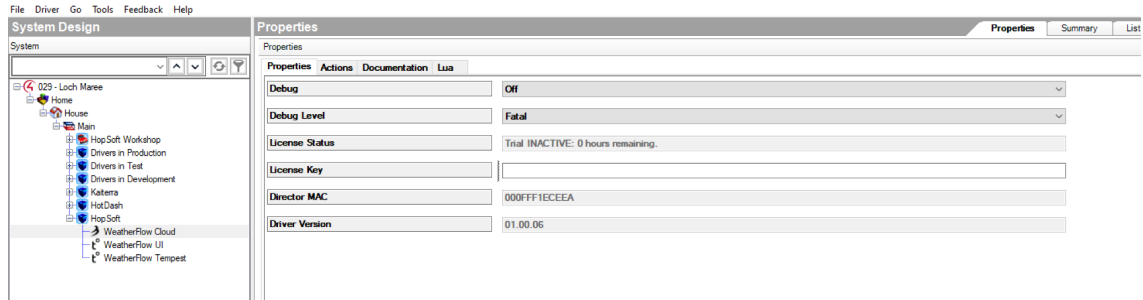
Unpack driver pack downloaded from Blackwire Designs Website and copy all .c4z files to your Composer driver folder.

Default path is documents\control4\drivers

**NOTE:** Copy license key and than remove HUB (**weatherflow\_hub.c4z**) driver from project if you are updating driver from previous version.

## Add Drivers

Add WeatherFlow Cloud Driver **weatherflow\_cloud.c4z**



Cloud driver will immediately start receiving UDP data from hub, that's right as long as license is valid.

Add WeatherFlow Tempest Driver **weatherflow\_tempest.c4z** or **weatherflow\_button.c4z**

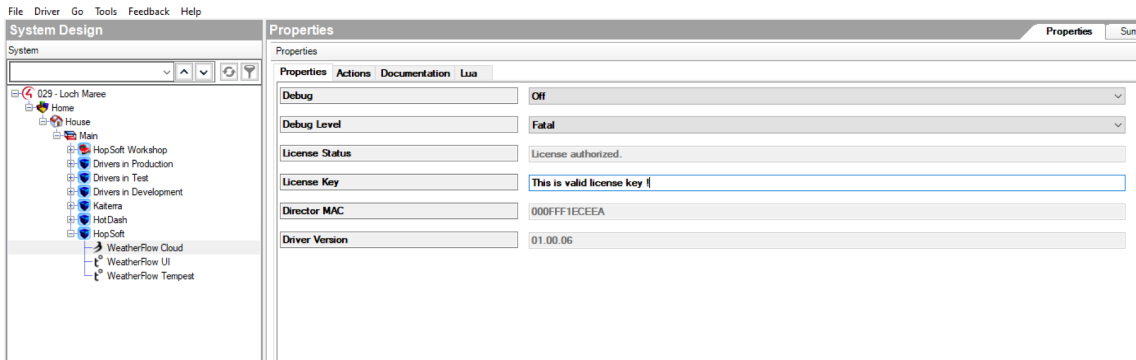
## 3. Driver Configuration

### Cloud Driver

#### Add License

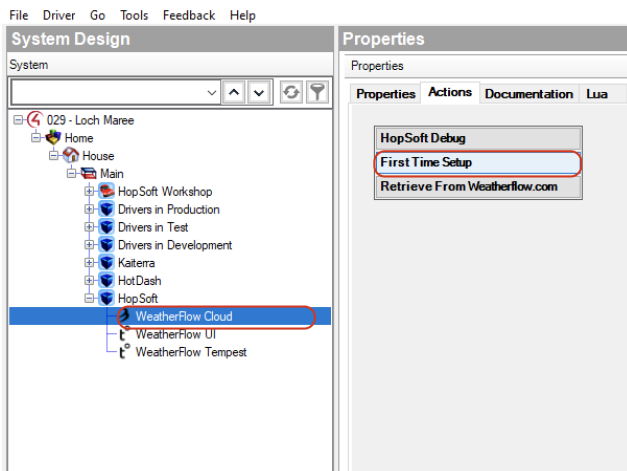
License key - License key provided after driver purchase, driver comes with three day trial which gets automatically activated if no license key is entered.

Copy/Paste license key into License Key field in properties and click set. License key field will be updated according to license status.

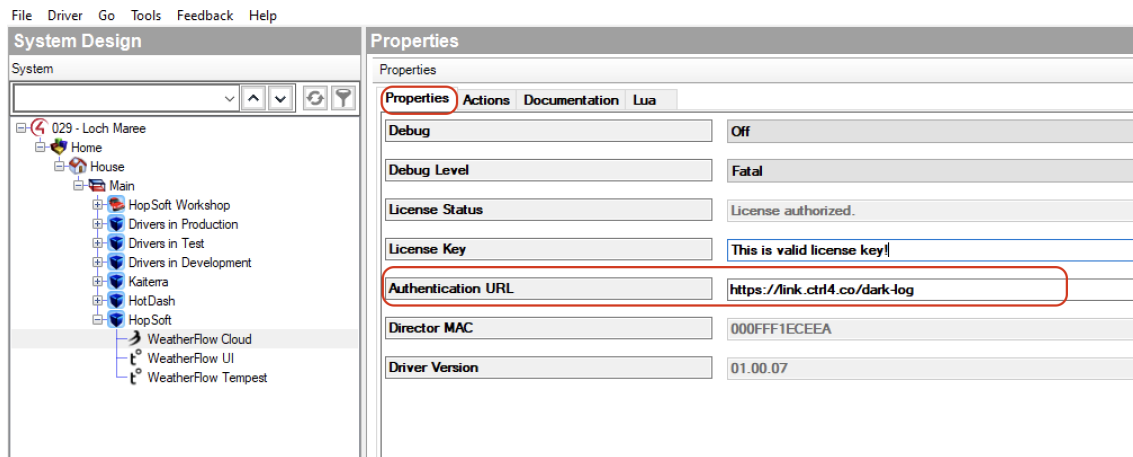


#### Authenticate WeatherFlow cloud access.

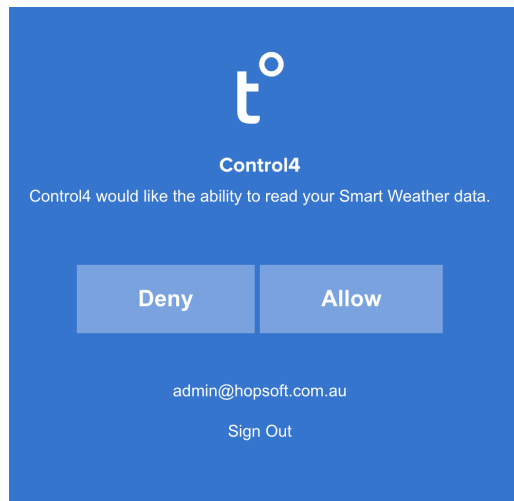
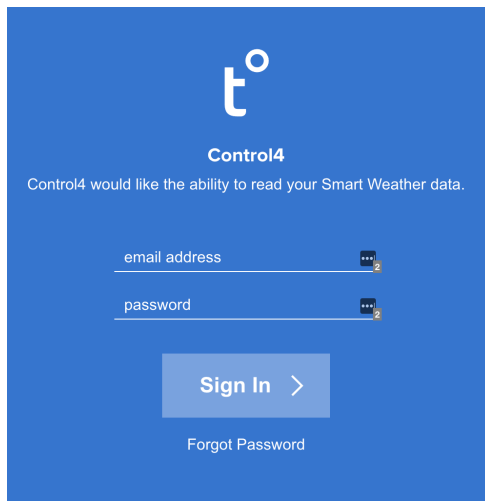
Select cloud driver in composer and click on first time setup in actions tab of the driver.



Go to driver properties and copy url from “Authentication URL”



Paste url in your browser and follow the steps to authenticate with WeatherFlow account.



You will see following page if authentication succeeded.

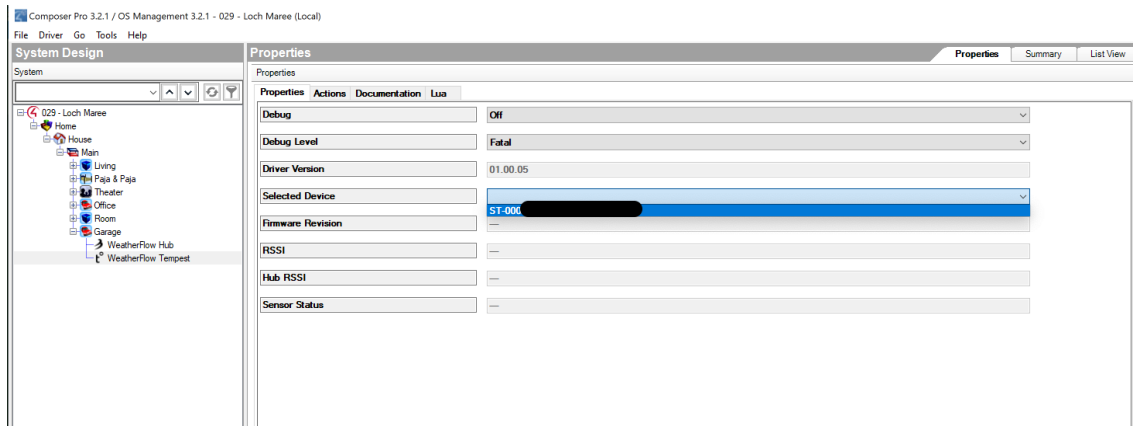
# Success!

Close this window and return  
to the Control4 app.

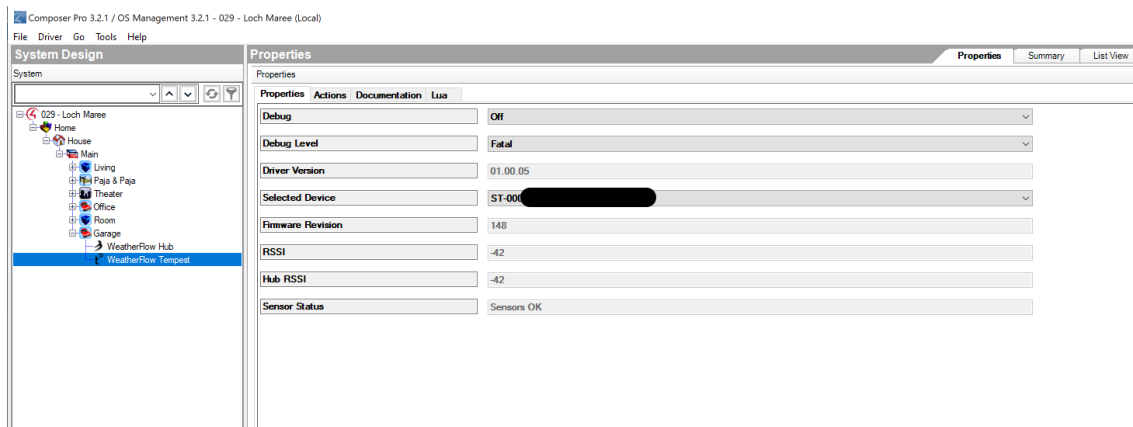
# Tempest Driver

## Selected Device

Select correct weatherflow device serial number and click set.



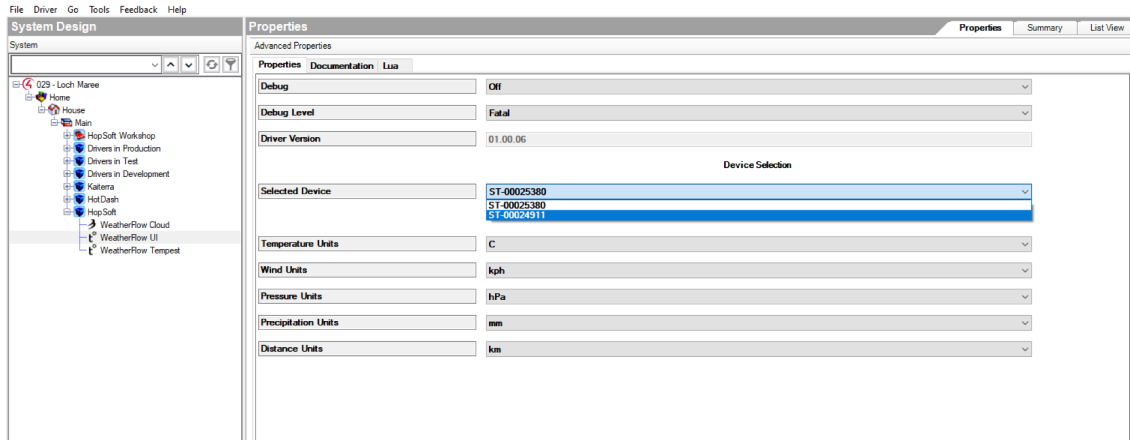
At this point your driver is configured and Tempest driver properties should be updated (within 1 minute).



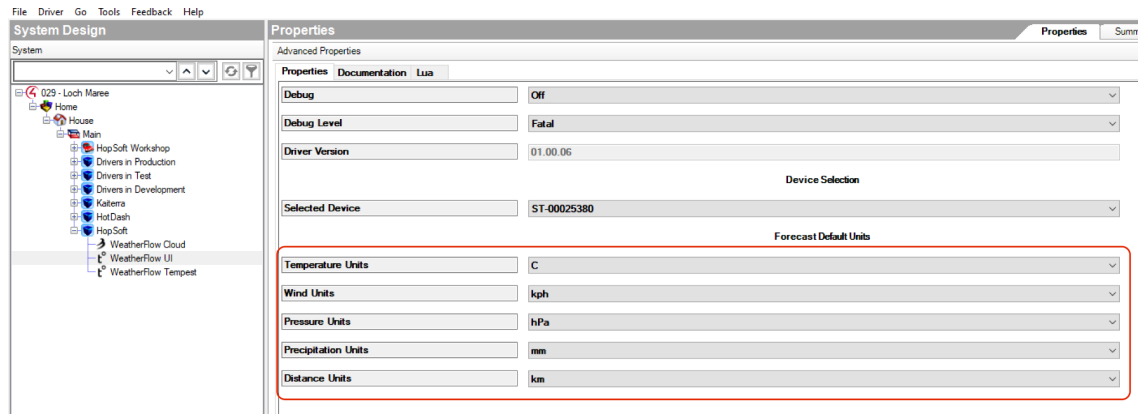
# UI Button Driver

## Selected Device

Select correct weatherflow device serial number and click set.



Configure default units, such as temperature, pressure, etc....



## Variables

Variable	Description	Units
WIND_LULL_M	Wind Lull (minimum 3 second sample)	m/s
WIND_LULL_K	Wind Lull (minimum 3 second sample)	knots
WIND_AVERAGE_M	Wind Avg (average over report interval)	m/s
WIND_AVERAGE_K	Wind Avg (average over report interval)	knots
WIND_GUST_M	Wind Gust (maximum 3 second sample)	m/s
WIND_GUST_K	Wind Gust (maximum 3 second sample)	knots
WIND_DIRECTION	Wind Direction	Degrees
WIND_SAMPLE_INTERVAL	Wind Sample Interval	seconds
STATION_PRESSURE	Station Pressure	MB
AIR_TEMPERATURE_C	Air Temperature	C
AIR_TEMPERATURE_F	Air Temperature	F
RELATIVE_HUMIDITY	Relative Humidity	%
ILLUMINANCE	Illuminance	Lux
UV_INDEX	UV	Index
SOLAR_RADIATION	Solar Radiation	W/m^2
PRECIPITATION_ACCUMULATED	Precip Accumulated	mm
PRECIPITATION_TYPE	Precipitation Type	0 = none, 1 = rain, 2 = hail
LIGHTING_STRIKE_AVG_DISTANCE	Lightning Strike Avg Distance	km
LIGHTING_STRIKE_COUNT	Lightning Strike Count	
BATTERY_VOLTAGE	Battery	Volts

REPORT_INTERVAL	Report Interval	Minutes
RAPID_WIND_EVENT_SPEED	Wind speed at the time of "Rapid Wind" event	m/s
RAPID_WIND_EVENT_DIRECTION	Wind direction at the time of "Rapid Wind" event	Degrees
LIGHTING_STRIKE_EVENT_DISTANCE	Distance from lighting strike at the time of "Lighting Strike" event.	km
LIGHTING_STRIKE_EVENT_ENERGY	Lighting Strike energy at the time of "Lighting Strike" event.	
AIR_DENSITY	Air Density	kg/m3
DELTA_T	Delta T	C
DEW_POINT	Dew Point Temperature	C
FEELS_LIKE	Feels like Temperature	C
HEAT_INDEX	Heat Index Temperature	F
PRECIP_ACCUM_LOCAL_YESTERDAY	Accumulated Rain Yesterday	mm
PRESSURE_TREND	Pressure trend	Raising Falling Steady
LIGHTING_STRIKE_COUNT_1H	Lighting count last hour	
LIGHTING_STRIKE_COUNT_3H	Lighting count last three hours	
LIGHTING_STRIKE_LAST_DISTANCE	Distance of last lighting strike	
WIND_CHILL	Wind chill	C
FORECAST_TODAY_CONDITIONS	Today forecast conditions	String
FORECAST_TODAY_AIR_TEMP_HIGH_C	Today high temp	C
FORECAST_TODAY_AIR_TEMP_LOW_C	Today low temp	C
FORECAST_TODAY_AIR_TEMP_HIGH_F	Today high temp	F
FORECAST_TODAY_AIR_TEMP_LOW_F	Today high temp	F

FORECAST_TODAY_PRECIP_TYPE	Today precip type	0 = none, 1 = rain, 2 = hail
FORECAST_TODAY_PRECIP_PROBABILITY	Today precip probability	%
FORECAST_TOMORROW_CONDITIONS	Tomorrows forecast conditions	
FORECAST_TOMORROW_AIR_TEMP_HIGH_C	Tomorrow high temp	C
FORECAST_TOMORROW_AIR_TEMP_LOW_C	Tomorrow low temp	C
FORECAST_TOMORROW_AIR_TEMP_HIGH_F	Tomorrow high temp	F
FORECAST_TOMORROW_AIR_TEMP_LOW_F	Tomorrow low temp	F
FORECAST_TOMORROW_PRECIP_TYPE	Tomorrow precip type	0 = none, 1 = rain, 2 = hail
FORECAST_TOMORROW_PRECIP_PROBABILITY	Tomorrow precip type probability	%

## Events

WeatherFlow Tempest Events

Lighting Strike

Lighting Strike  
Rain Start  
Rapid Wind

**Lighting Strike** - fired when station detects lighting strike, more details can be acquired from two related variable (LIGHTING\_STRIKE\_EVENT\_DISTANCE, LIGHTING\_STRIKE\_EVENT\_ENERGY)

**Rain Start** - fired when station detects rain

**Rapid Wind** - fired when station detects sudden/rapid wind change, more details can be acquired from two related variables (RAPID\_WIND\_EVENT\_SPEED, RAPID\_WIND\_EVENT\_DIRECTION)

## Connections

Driver provides connection for current temperature and humidity which can be used with other drivers to display these values on UI. Below example shown use of Control4 Temperature display thermostat driver.

Composer Pro 3.2.1 / OS Management 3.2.1 - 029 - Loch Maree (Local)

File Driver Go Tools Help

### Connections

Control/AV Network

029 - Loch Maree

- Home
  - House
    - Main
      - Living
        - Paja & Paja
        - Theater
        - Office
        - Room
        - Garage
          - WeatherFlow Hub
            - WeatherFlow Tempest

Advanced Lighting

### Control & Audio Video Connections

WeatherFlow Tempest

Name	Type	Connection	Input/Output	Connected To
<b>Control Inputs</b>				
WeatherFlow Network	Control	WEATHERFLOW	Input	WeatherFlow Hub->WeatherFlow Network
<b>Control Outputs</b>				
Current Temperature	Control	TEMPERATURE_VAL...	Output	Temperature Display->Temperature In
Current Humidity	Control	HUMIDITY_VALUE	Output	Temperature Display->Humidity In

### HUMIDITY\_VALUE Input Devices

Device	Name	Location	Connections
Temperature Display	Humidity In	Room	WeatherFlow Tempest->Current Humidity

## Possible Condition Strings:

Clear

Rain Likely

Rain Possible

Snow

Snow Possible

Wintry Mix Likely

Wintry Mix Possible

Thunderstorms Likely

Thunderstorms Possible

Windy

Foggy

Cloudy

Partly Cloudy

Very Light Rain

