



Hopewind Datalogger Weather Station Access

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1. Overview

This document introduces weather station access for Hopewind datalogger (including hopeComBox1000 and hopePowerBox series). The recommended Seven Sensor model can be easily connected. If you use other weather station model, it must meet the requirements in part 4.

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2. System Solution Introduction

Hopewind hopeComBox1000 and hopePowerBox are compatible with weather station, also provide hopeCloud APP to monitor the system performance.

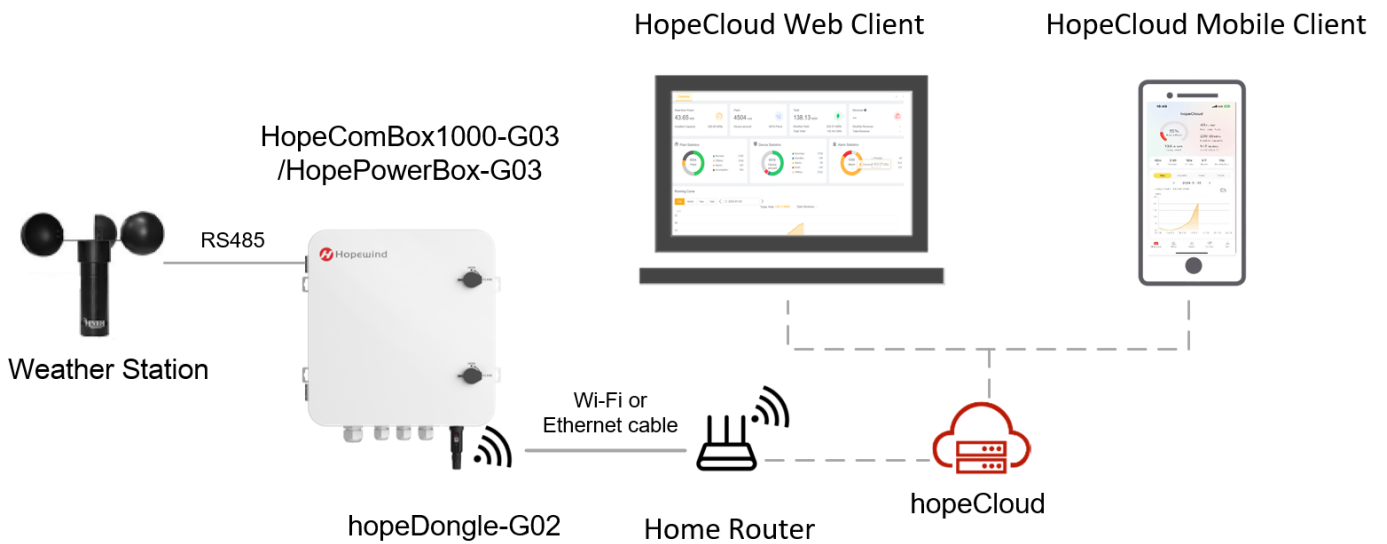


Fig. 1 System Solution

Note: Hopewind does not manufacture or sell weather stations. Instead, we recommend a weather station model and provide the hopeCloud app for customization, which supports the collection of weather data.

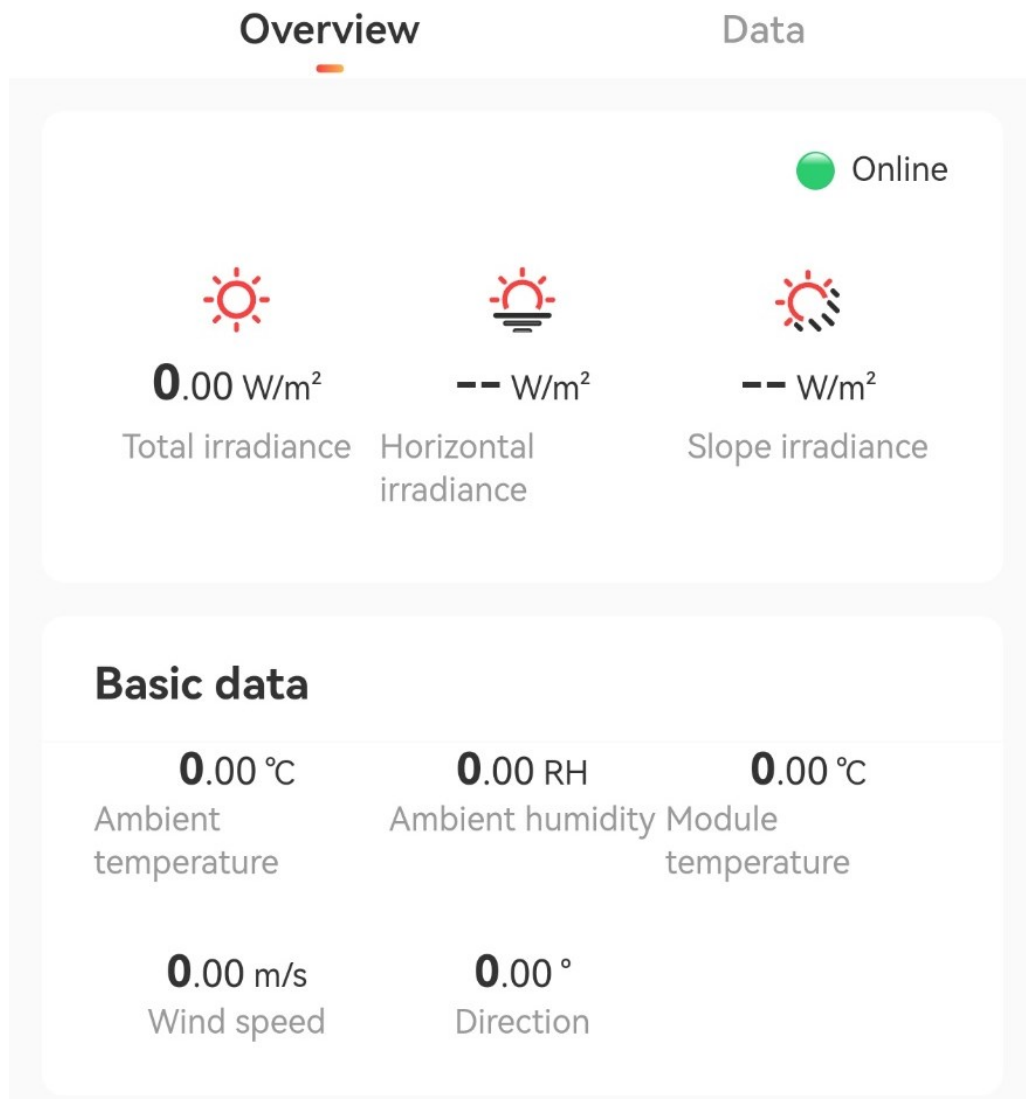


Fig. 2 Weather Station Monitoring on hopeCloud APP

Note: On the hopeCloud mobile client, you can monitor six types of meteorological data: total irradiance, ambient temperature, ambient humidity, module temperature, wind speed and direction. But the other two, horizontal irradiance and slope irradiance, will available later.

3. Recommended Weather Station

Hopewind recommends the Seven Sensor weather station, which is fully supported by the hopeCloud platform.



Supplier Name: *Seven Sensor*


Web link: <https://www.sevensensor.com/>

Contact information :

-  Tel: +90 (530) 889 8019
-  Tel: +1 (657) 604-6561
-  SevenSensor
-  Mail: sales@sevensensor.com

3.1 Model Selection

To connect and configure Seven Sensor products to datalogger, select the appropriate products type and model.

Brand: <i>Seven Sensor</i> 	
Type	Model
Irradiance Sensor(PV Pyranometer)	3S-IS-5
Module Temperature Sensor	3S-MT-PT1000
Wind Speed Sensor	3S-WS-PLS
Ambient Temperature Sensor	3S-AT-PT1000
Relative Humidity & Ambient Temperature Sensor	3S-RH/AT
Wind Direction Sensor	3S-WD

3.2 System Diagram

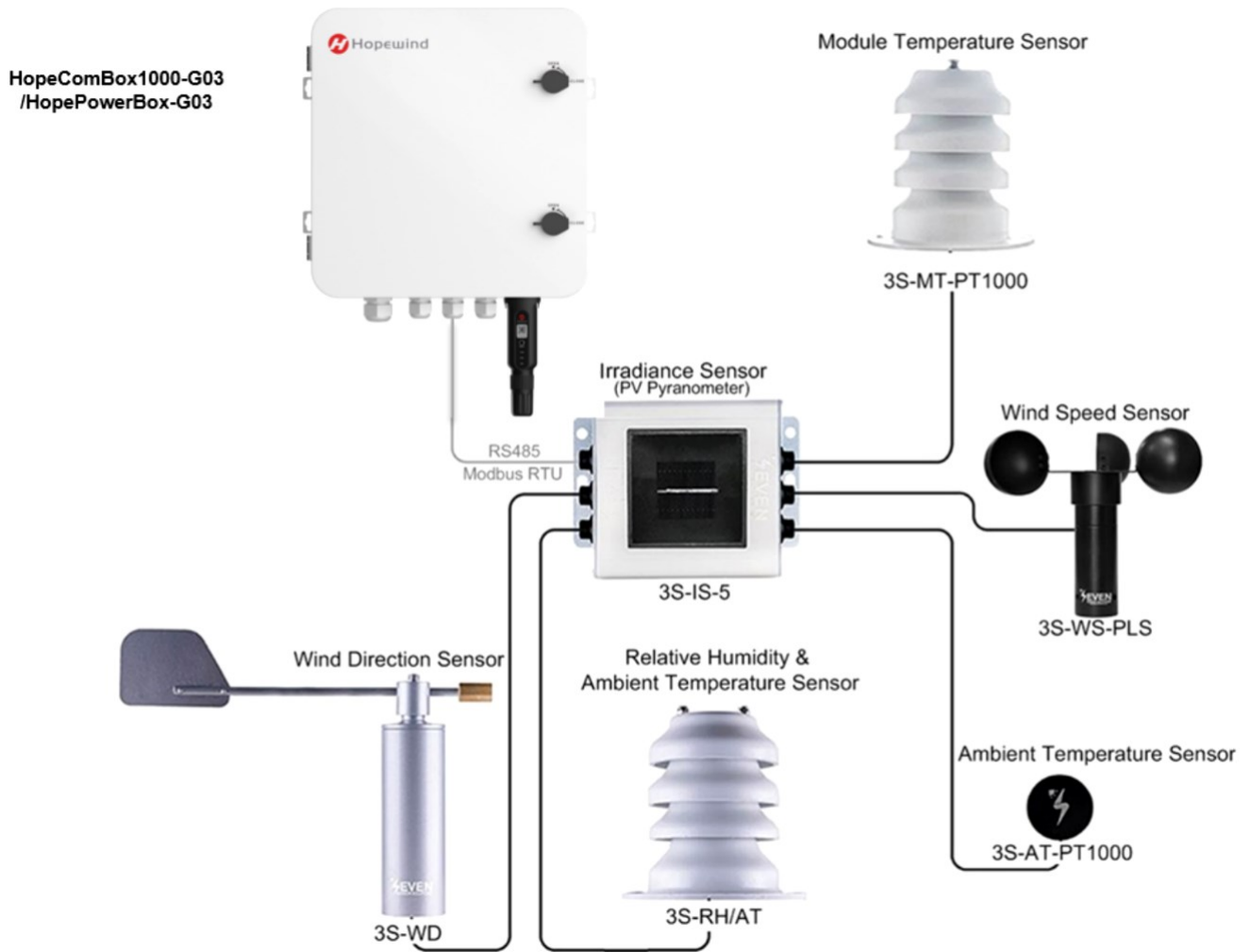


Fig. 3 System Diagram

4. Compatible Weather Station

To connect other weather station to the hopeComBox1000 or hopePowerBox, and view the data on hopeCloud, ensure the weather station supports Modbus RTU via RS485 and the Modbus map follows the sheet below.

Factory default setting:9600 Baud, 8N1, address:1

Table. 1 Weather Station Access Modbus Map Requirement

Address	Parameter	Unit	Data Type	Gain	No.	Min. Value	Max. Value	ENUM/BIT Value	Details	Signal Type	Note
3	Wind speed	m/s	int16	10	1						
5	Temperature compensated Irradiance	W/m ²	int16	10	1						Array plane irradiance
16	Cell temperature	°C	int16	10	1						
17	External ambient temperature	°C	int16	10	1						
18	External relative humidity	%	int16	10	1						
19	Wind direction	°	int16	10	1						

Note: If you choose other weather station not recommended by Hopewind, please contact our engineers to confirm compatibility.