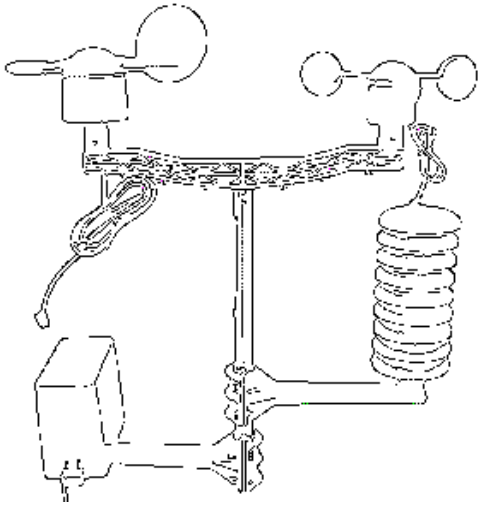
Dialog Weather Station
QUICK INSTALL GUIDE

Hardware Version
GSM V2.0
NBIOT V2.0



Dialog ideamart
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Contents

English

Status Check User interface

http://iot.ideamart.io/

Technical hotline

94 76412345

Specification

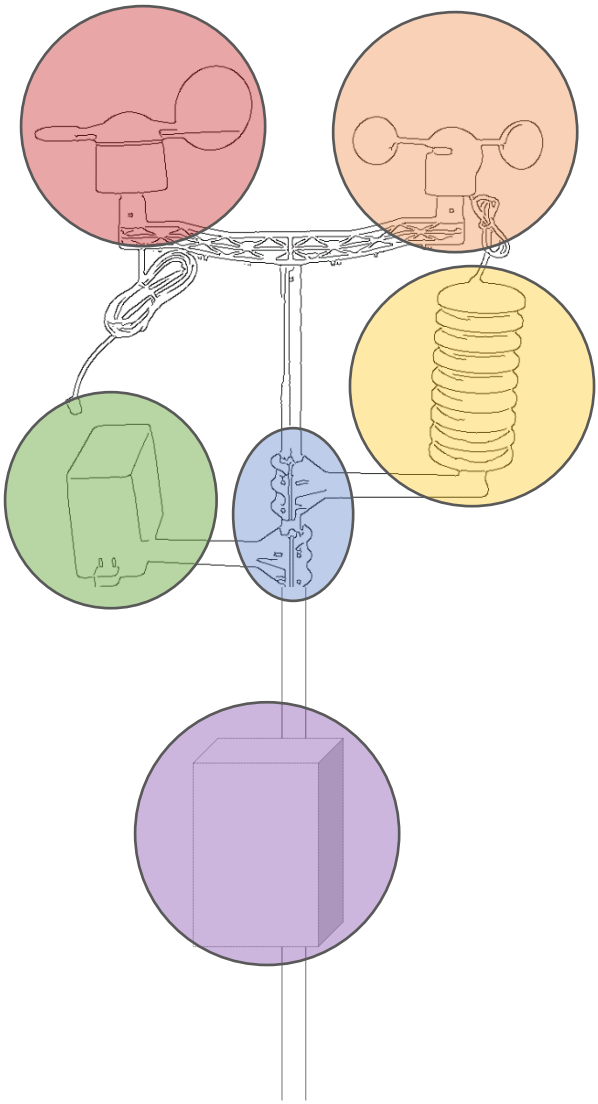
Communication Module	
SIM	Standard SIM
Network	GSM Version GSM : 850/900/1800/1900MHz NBIOT Version GSM/GPRS/EDGE 900/1800 MHz NBIOT 900, EMTC 1800Mhz
Power	Direct 12V (Self power via data cable)
GPS	Only in NBIOT version GNSS
Data Transfer	GSM Version • GPRS class 12: max. 85.6 kbps (downlink/uplink) NBIOT Version • LTE CAT M1 - Uplink up to 375kbps, - Downlink up to 300kbps • NB-IoT - Uplink up to 66kbps, - Downlink up to 34kbps • EDGE Class - Max. 236.8Kbps(DL/UL) • GPRS - Max. 85.6Kbps(DL/UL)

Main Board	
Processsor	Espressif ESP32 CPU and Memory: Xtensa® 32-bit LX6 Dua-core processor, up to 600 DMIPS. 448 KByte ROM 520 KByte SRAM 16 KByte SRAM in RTC.
WiFi	802.11 b/g/n/e/i 802.11 n (2.4 GHz), up to 150 Mbps 802.11 e: QoS for wireless multimedia technology. 802.11 i security features: pre-authentication and TSN Wi-Fi Protected Access (WPA)/WPA2/WPA2-Enterprise/Wi-Fi Protected Setup (WPS) Infrastructure BSS Station mode/SoftAP mode Wi-Fi Direct (P2P), P2P Discovery, P2P Group Owner mode and P2P Power Management
Interfaces	RJ45 UART WS2818
Power	12V DC 1.5A

LED	Power LED Status LED WS2818
Button	Reset Button Restart button

Communication Board	
Processor	ATmega328
Interfaces	RS485 ISP I2C
Power	Direct 12V (Self power via RJ45cable)
Sensors	BMP280
LED	Power LED PB0 LED PB1 LED
Button	Reset Button

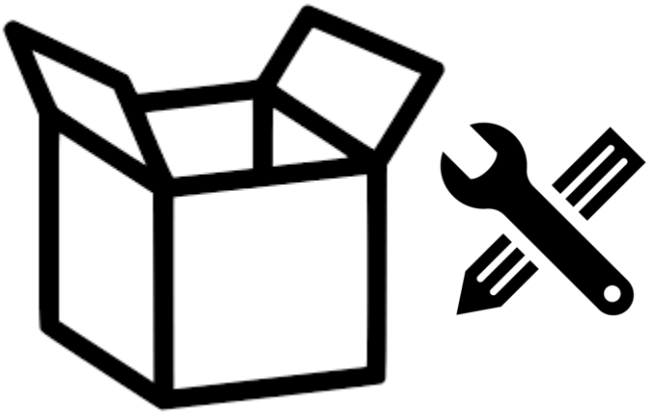
Components



- **Wind direction Sensor**
- **Wind direction Sensor**
- **Rain Gauge**
- **Temperature humidity Sensor Shelter**
- **Mounting Brackets**
- **Sensor and communication Control Box**

GETTING STARTED

Carefully remove all items from the box and read this Quick Install Guide completely before starting your installation. Inspect each component for damage that may have occurred during transportation. Please contact Dialog Weather Technical Support with any installation questions or issues at **+94 767 412 345** or email at dialogweather@gmail.com.



English

PARTS INCLUDED

- ✓ Temperature Relative Humidity Sensor Shelter
- ✓ Rain Gauge
- ✓ Wind direction Sensor
- ✓ Wind direction Sensor
- ✓ Sensor and communication control box
- ✓ Printed circuit Boards
    - Main board
    - Sensor board
    - Sim800 communication board
    - Power supply board
- ✓ Wind sensor mounting brackets
- ✓ Sensor Mounting brackets
- ✓ Station Mounting bracket (Metal)
- ✓ Mounting mast (two-section)
- ✓ Ethernet LAN Cable
- ✓ Power supply Cable
- ✓ Set of Cable Ties
- ✓ Acrylic mounting

FINDING THE BEST LOCATION

Choosing the best possible location to install Dialog Weather Station ensures accurate measurement of weather. Position the Dialog Weather Station in a location that takes all the following into account

- In an open area
- Clear of wind obstructions (especially for the prevailing wind direction)
- Far away from ventilation and heat sources (minimum of 50 feet)
- Far away from electric lines and other noise sources
- Safe from vandalism
- Close enough for cables to connect to a power source
- Wind sensors must be a minimum of 10 feet from roof

- Temperature Humidity Sensor shelter must be a minimum of 8 feet from roof
- Year-round power and Internet connection

Installation

STEP 1

Secure the Weather Station sensors to the mast so the sensors are oriented properly and the minimum required height above the roof surface.

Connect the wind speed sensor to either end of the wind sensor mounting arm. Align the holes, and fasten with long bolt and nut. Tighten with precision screwdriver while securing the nut with pliers, as shown in Figure 1.

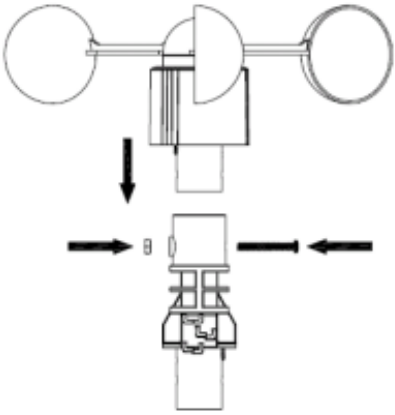


Figure 1

Connect the wind direction to the other end of the wind sensor mounting arm. Align the holes, and fasten with long bolt and nut. Tighten with precision screwdriver while securing the nut with pliers, as shown in Figure 2.

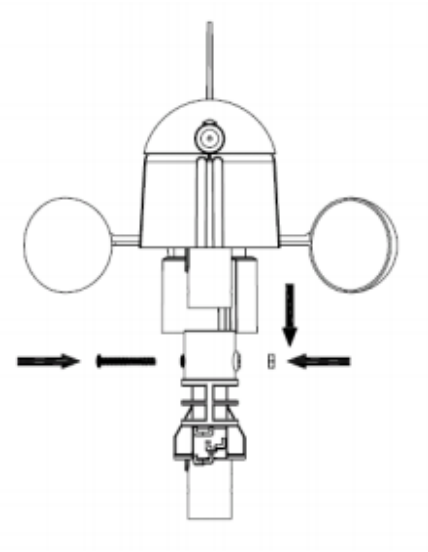


Figure 2

Connect the Wind sensor assembly to the top mounting pole, align the holes, and fasten with short set screw and long bolt and nut. Tighten with precision screwdriver while securing the nut with pliers, as shown in Figure 3.

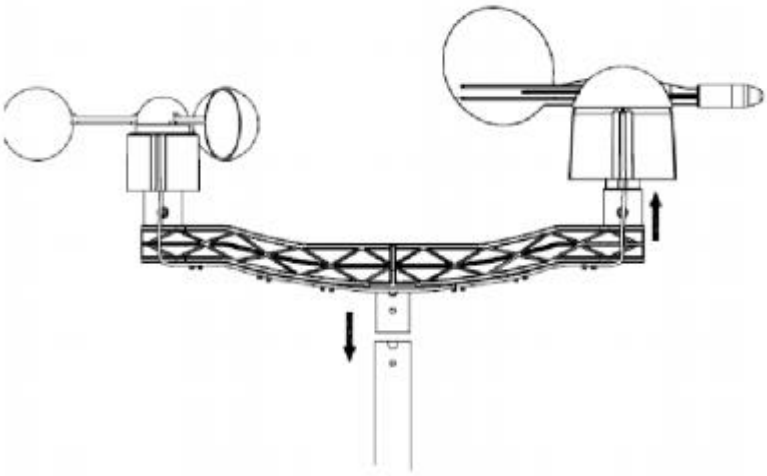


Figure 3

Connect the rain gauge with long set screw. Tighten with precision screwdriver, as shown in Figure 4.

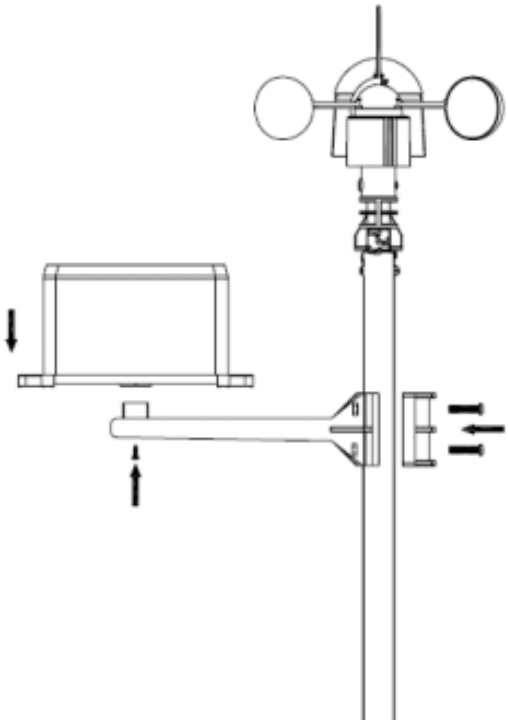


Figure 4

Insert the Sensor board to Temperature and Humidity Sensor enclosure. Connect the Temperature and Humidity Sensor enclosure to the mounting arm with short bolt and nut.

Tighten with precision screwdriver, as shown in Figure 5. Slide the Temperature and Humidity Sensor Shelter (rain shield) over the Temperature and Humidity Sensor enclosure after connecting the cables from the Wind senors, rain gauge and sensor and communication control box. Attach the Temperature and Humidity Sensor shelter with mounting arm to the upper mounting pole.

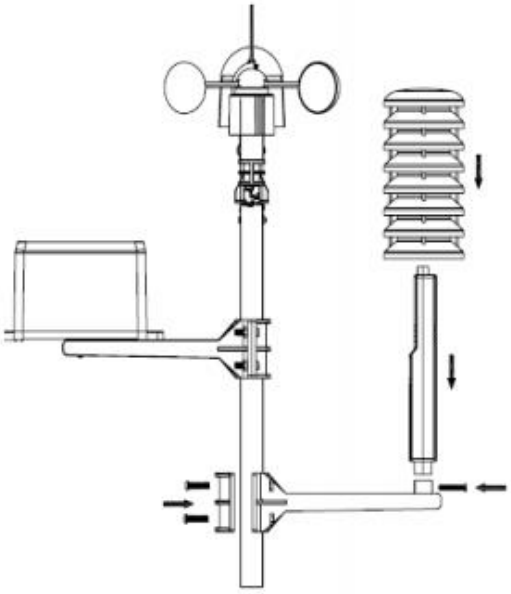


Figure 5

STEP 2

Connect the sensor cables. Run the main Data Etherenet Cable into the Sensor and control Box

Connect the wind speed cable to the wind direction phone jack, as shown in Figure 6. Connect the wind direction cable to the Sensor Board jack (reference the label on the Temperature Humidity Sensor enclosure).

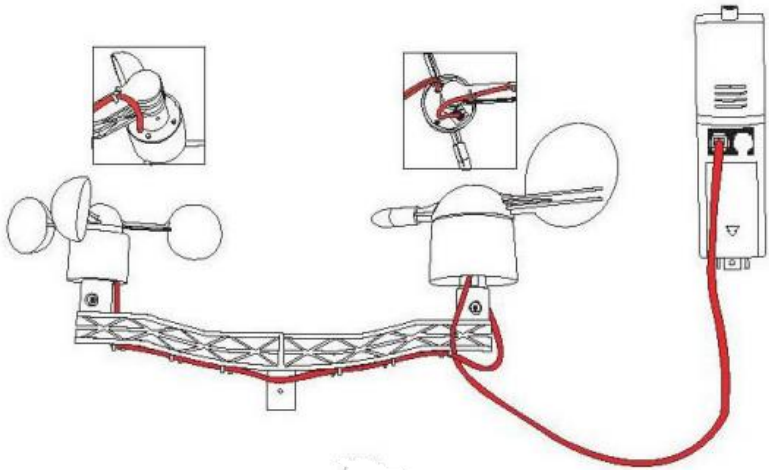


Figure 6

Connect the rain gauge cable to the Sensor board phone jack (reference the label on the Temperature Humidity Sensor enclosure) as shown in Figure 7.

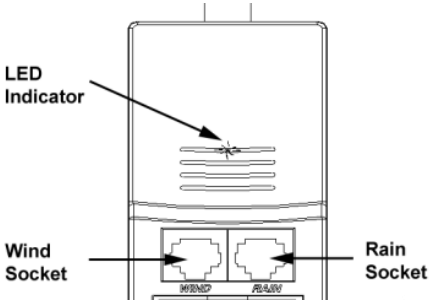


Figure 7

Connect Ethernet LAN cable to Sensor board RJ45 jack. Slide the rain shield over the Temperature Humidity Sensor enclosure. Use the enclosed zip ties to clean up the cables, as shown in Figure 8.

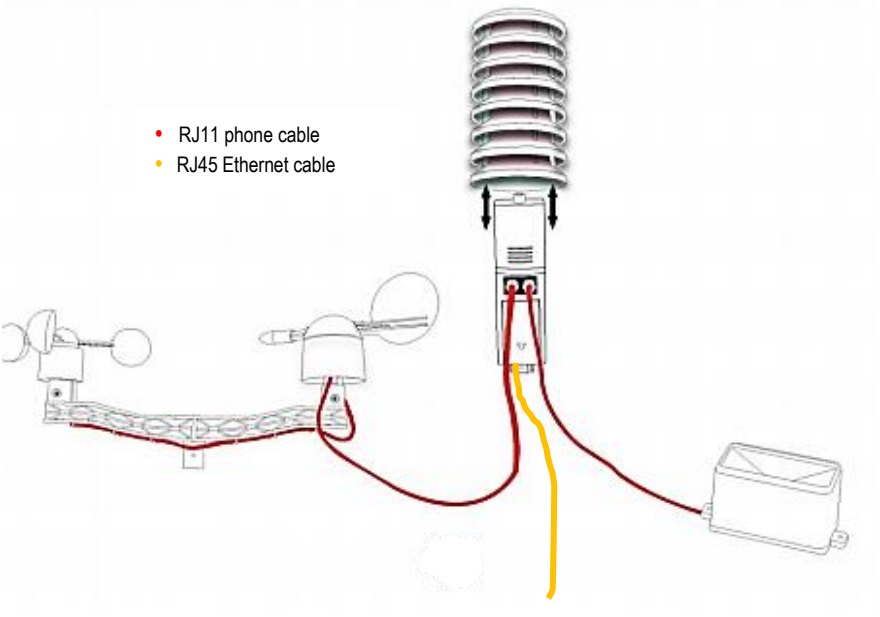


Figure 8

STEP 3

Secure the Sensor and Control box to the lower mast.

Connect the Sensor and Control box that contain all the printed circuit boards attached to the acyrilc mounting. Tighten both U brackets, as shown in Figure 9.

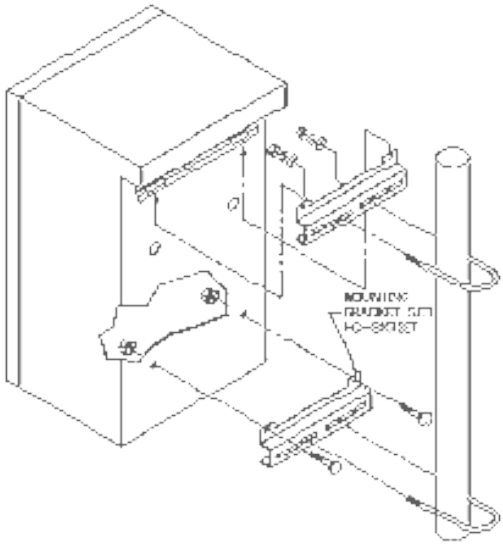


Figure 9

STEP 4

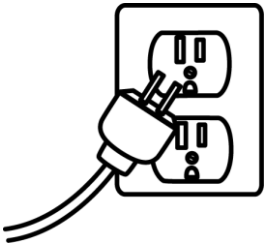
Raise the top of the mast and secure it to the bottom mast section.

Fasten the lower mounting pole (which is swaged on the top end) to mounting bracket. Slide the top weather station pole (with the sensor array) into the lower pole (connected to mounting bracket). Calibrate the wind direction sensor pointer to true north. True north can be estimated with a compass (which points to magnetic north) or a GPS, which provides true north. Wind direction is defined as the direction the wind is coming from (example, Winds from the north).

STEP 5

Securely connect and provide power to the weather station and activate your system.

Connect the power cable coming from Sensor and communication control box to power outlet and activate the system



Step 6

Fill “Post Installation” checklist and attach requested images.