

# Weather Station for our Friends in Africa

Current partners: Uganda, Benin, Ghana

## Idea

We build our own data loggers based on ESP32. Data transmission is done via Wifi, Cellular Network or LoRaWAN.

## Sensors

An initial set of sensors:

### Tipping Bucket Rain Gauge

**Rain Sensor**  
Comply with National Standard  
GB/T 21978.2-2014

- Precise Measurement
- 304 Stainless Steel
- Strong Anti-interference

UICPAL Sensors

The image shows a cylindrical stainless steel tipping bucket rain gauge. To the left of the gauge are three icons: a scale for 'Precise Measurement', a pair of scissors for '304 Stainless Steel', and a lightning bolt for 'Strong Anti-interference'. The text 'Comply with National Standard GB/T 21978.2-2014' is at the top left. The brand name 'UICPAL Sensors' is at the bottom.

### Wind Velocity (Anemometer)

**Wind Speed Transmitter**

RS485  
Output → 4-20mA  
0-5V  
0-10V

- Small Rotational Resistance
- Highly Sensitive
- Waterproof and Anti-corrosion
- Resolution: 0.1 m/s
- Range: 0-30m/s

UICPAL Sensors

The image shows a cup anemometer. To the left of the anemometer is a list of specifications: 'RS485', 'Output → 4-20mA', '0-5V', and '0-10V'. Below this is a list of features: 'Small Rotational Resistance', 'Highly Sensitive', 'Waterproof and Anti-corrosion', 'Resolution: 0.1 m/s', and 'Range: 0-30m/s'. The brand name 'UICPAL Sensors' is at the bottom.

### Wind Direction



## Air Temperature

- PT100 (best)
- DS18B20

## Air Humidity

## Air Pressure

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