



LPWAN Weather station

LPWAN Weather station is dedicated to weather monitoring and smart agricultural projects where periodical measurement of weather condition is required. This device is scalable and can be equipped with different sensors and can be delivered in two different form factors – miniUNI in standard Solidus Tech IP65 box or microUNI in radiation shield. The weather station is available for different LPWAN networks, today we support Sigfox (all bands), LoRaWAN and NBLoT. Following sensors can be available:

- Thermometer for air temperature
- Humidity meter for air relative humidity
- Air pressure
- External thermometer in cable for soil temperature
- Rain gauge
- Wind speed
- Wind direction
- Leaf moisture
- Soil moisture based on Watermark sensor

Usage

- Temperature and relative humidity measurement indoor
- Rain volume – irrigation optimization
- Meteorology – weather models
- Smart agricultural models
- Long term weather trends monitoring



LPWAN weatherstation	Parameter
Protection	IP65/IP68 in radiation shield
Power supply	3.6V lithium battery 14505(M)/2600mAh, 2 batteries possible
Power consumption	<3,5uA in deep sleep/80mA transmission (Sigfox, LoRa)/250mA(NBLoT)
Battery lifetime	cca 25 000 transmissions
Supported LPWAN standards	Sigfox, LoRaWAN, NBLoT (one of selected upon order)
Dimensions standard/radiation shield	107 x 65 x 33 mm/ 180 x 95 mm
Weight standard/radiation	120g /180g
Sensor temperature/humidity/air pressure	BME280/ T accuracy 0.5°C/RH accuracy +/-3%, range -40 to 85°C/0 to 100%RH/300 to 1100hPa
Rain gauge	Pulse counter
Leaf moisture	
External thermometer	DS18B20, -40 to 125°C, accuracy 0.5°C
Leaf moisture	Meander resistivity measurement/ 300 to 65000 ohms
Soil moisture watermark	0 to 200cb
Wind speed and direction	0 to 150km/h (pulse meter, 1 pulse = 2.4km/h)/8 directions
Antenna/typical range	Helical, gain 2dBi/45 to 110km depends on LPWAN technology



