Moon

Radio module LoRa data logger for DeepWave monitoring in real time system with long range transmission, mounts an external antenna that extends the transmission distance in all directions. It has an OLED screen for checking, 4-keys for screen scrolling, buzzer for sound alarms, external power connector (adapter not included). It comes with 2 Smart Sensors inputs to connect any type of available Smart Sensor (not included). The **Smart Sensors** are always provided with a **reference traceable calibration certificate** and allow an quick, economic and easy recaslibration procedure of the whole system without any external the intervention. Batteries are standard and easily replaceable by the user (with the external power the batteries are used for backup).



Applications



Pharmaceutical



Cosmetics



Medical



Cold Chain



Healthcare



Warehouses



Environment



Validation



Food & Beverages



Laboratories



Constructions

Main features

- Radio module with long distance transmission (up to 3 km in open field)
- Accepts up to two Smart Sensors of temperature, humidity, differential pressure, light
- 0.91" OLED display
- External antenna to increase the distance up to 50%
- 4-buttons for screen control
- External power
- User replaceable batteries
- Accredia traceable certificate included along with the Smart Sensors

Plus

- Quick installation
- Easy configuration
- Fast recalibration procedure with the Smart Sensors
- Covers long transmission distances
- Easy to read display
- Acoustic alarms for immediate intervention
- Forget about battery replacing thanks to the external power
- Validatable DeepWave system in pharmaceutical and medical environment

The system

DeepWave is made up by:

- DeepWave radio modules (LoRa nodes)
- Helios receiver (LoRa gateway)
- TSLog 21 software

Accessories

- TSLog 21
- Helios LoRa Gateway
- Surface Support for DeepWave Node
- Wall Mounting support for DeepWave Node
- Temperature Smart Sensor
- -80°C temperature Smart Sensor
- 200 temperature Smart Sensor
- Temperature Smart Sensor with thin cable
- Temperature and humidity Smart Sensor
- Differential Pressure Smart Sensor
- Light Smart Sensor (On/Off)
- Temperature Smart Sensor with internal sensor
- Smart Sensor / ZED IT adapter cable extensions
- Flat DeepWave Node / Smart Sensor cable extension
- LoRa Node / Smart Sensor cable extensions

Technical specifications

| Dimensions | 159.6 X 88 x 33 (mm) (with connectors) / 146.6 X 88 X 33 (mm) (without connectors) |
|--|--|
| Weight | 280 g |
| Materials | ABS, Rubber |
| Sensors | 2 X Smart Sensor inputs |
| Temperature range | -20 °C ÷ +50 °C (non condensing) |
| Memory (n. of acquisitions) | 16.383 |
| Acquisition step | From one every 5 minutes up (in steps of 1 minute) |
| Display size | 0,91" 22,4 x 5,7 (mm) (128 x 32 pixel) |
| Display and functions | Current values, Alarms, Diagnostics, Radio Signal Strength |
| Alarms | Local (acoustic) |
| Functions | Data recording, transmission, alarm |
| | |
| Communication | Radio |
| Communication Protocollo Radio | Radio LoRa |
| | |
| Protocollo Radio | LoRa |
| Protocollo Radio Available frequencies | LoRa 868 MHz, 915 MHz, 920 MHz, 923-2 MHz |
| Protocollo Radio Available frequencies Antennae | LoRa 868 MHz, 915 MHz, 920 MHz, 923-2 MHz External |
| Protocollo Radio Available frequencies Antennae Battery type | LoRa 868 MHz, 915 MHz, 920 MHz, 923-2 MHz External 3 X AA 1,5 V batteries |
| Protocollo Radio Available frequencies Antennae Battery type Battery life | LoRa 868 MHz, 915 MHz, 920 MHz, 923-2 MHz External 3 X AA 1,5 V batteries 12 months with 15 minutes transmission step and 2 sensors connected |
| Protocollo Radio Available frequencies Antennae Battery type Battery life Power supply | LoRa 868 MHz, 915 MHz, 920 MHz, 923-2 MHz External 3 X AA 1,5 V batteries 12 months with 15 minutes transmission step and 2 sensors connected 6-26 V (adapter not included) |
| Protocollo Radio Available frequencies Antennae Battery type Battery life Power supply Protection degree | LoRa 868 MHz, 915 MHz, 920 MHz, 923-2 MHz External 3 X AA 1,5 V batteries 12 months with 15 minutes transmission step and 2 sensors connected 6-26 V (adapter not included) IP65 |