

Wireless Temperature Humidity Sensor

Wireless Network Based on LoRa Technology



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Introduction

R711 is mainly used to detect the temperature and humidity of indoor air. It transmits the collected data to other devices for display through the wireless network communication module. The device conforms to the LoRa protocol standard.

This device has passed the LoRa Alliance certification and is allowed to use the following logo on the product.



Operating Principle

SHT30 temperature and humidity sensor communicates with LoRa module through I2C.

Main Characteristic

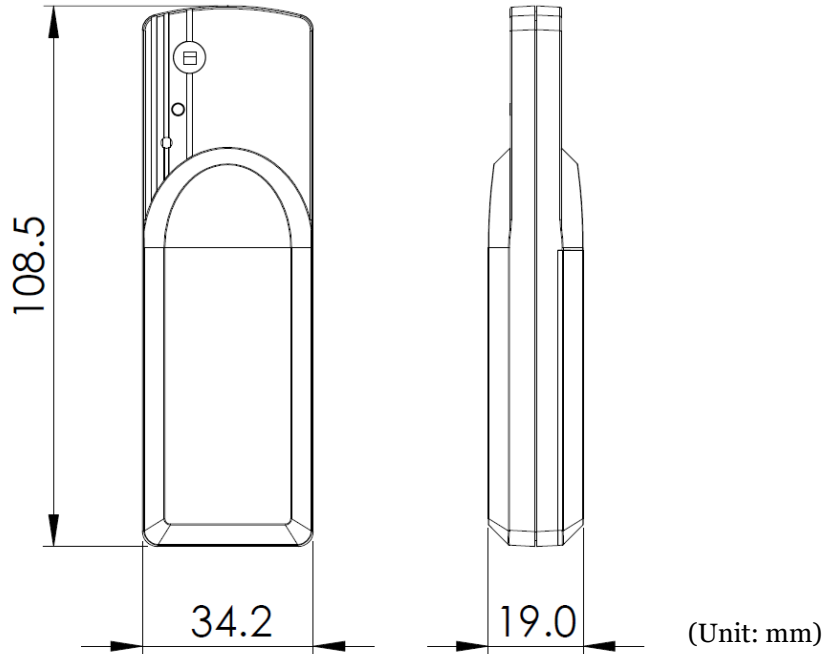
- 2 pcs AA alkaline battery power supply
- LoRaWAN™ Class A compatible
- Temperature and humidity detection
- Frequency Hopping Spread Spectrum (FHSS)
- Third Party online wireless sensor monitoring and notification system to configure sensors, view data and set alerts via SMS text and email (optional)
- Applicable to the third-party platform: Actility/ ThingPark, TTN, MyDevices/Cayenne
- Low consumption and long battery life

Battery Life*2:

Please refer to web: http://www.netvox.com.tw/electric/electric_calc.html

At this website, users can find battery lifetime for various models at different configurations.

Technical Specifications



Electric

Input power	2 x 1.5V AA alkaline battery
Operating Voltage Range	2.3V~3V
Standby Current	12uA/3V
Wake-up Current	6.63mA (typical value) The range of wake-up current: 0.8mA-20mA (When there is no transmitting and receiving data of LoRa)
Battery Measurement Accuracy	±0.1V
Low Voltage Threshold	2.4v

Module - R100H

Wake-up Current	(0.8mA-8mA) @3V
RF Receiving Current	11mA @3V
RF Transmitting Current	120mA @3V

* Specific electrical characteristics may vary depending on the power supply voltage.

Temperature and humidity Sensor

Operating Voltage	3VDC
Temperature Measurement Range	-20°C~55°C
Temperature Measurement Accuracy	±0.8°C @25°C (indoor)
Humidity Measurement Range	0%RH-100%RH
Humidity Measurement Accuracy	±5%RH @25°C (indoor)

Frequency

Frequency Range	863MHz-928MHz 470MHz-510MHz
TX Power	US915 20dbm AS923 16dbm AU915 20dbm CN470 19.15dbm EU868 16dbm KR920 14dbm IN865 20dbm
Receive Sensitivity	-121dBm (FSK, Frequency deviation=5kHz, Bit Rate=1.2kbps) -136dBm (LoRa, Spreading Factor=12, Bit Rate=293bps)
Antenna Type	Built-in antenna
Communication Distance	10km (visible linear obstacle-free transmission distance, actual transmission distance depending on the environment)
Data Transfer Rate	0.3kbps~50kbps
Modulation Method	LoRa/FSK (Note: choose one of them)
Supportable LoRaWAN Band	EU863-870, US902-928, AU915-928, KR920-923, AS923, CN470-510 (Note: The frequency band is optional and needs to be configured before shipment)

Physical

Dimension	L 108.5mm* W 34.2mm* H 19mm
Weight	83.8g
Operating Temperature Range	-20°C ~ 55°C
Storage Temperature Range	-40°C ~ 85°C
Operating Humidity Range	<90%RH (No condensation)