

# packetTEMP+HUM

**PacketTEMP+HUM Sensor** is a LoRaWAN® compatible environment monitoring device developed by Packetworx. It is optimized for real-time monitoring of ambient temperature and humidity on a specific area or location.

The device is designed to be low-power and to operate efficiently with battery. It solves critical issues related to temperature-humidity and also allows users to properly monitor the environmental conditions effectively. Data gathered by the sensors can be easily logged, viewed and analyzed using the packetVIEW software or 3rd party software.



## Features

- Optimized for Ambient Temperature and Humidity Monitoring
- LoRaWAN® Compatible
- Accurate Temperature and Humidity readings
- Factory-calibrated sensor with traceability
- Battery Operated
- Small form factor

## Applications

- Smart Factories
- Smart Building and Office
- Smart Cities
- Environment monitor
- Industrial and Home Automation
- Efficient Manufacturing

## Technical Specification

### LoRa

|                  |             |
|------------------|-------------|
| Device           | S76S        |
| Integrated MCU   | STM32L073xZ |
| Integrated RF IC | SX1276      |

### RF

|            |           |
|------------|-----------|
| Frequency  | 868Mhz    |
| Antenna    | Internal  |
| Modulation | LoRa      |
| Range      | Up to 15k |
| RF Power   | +25dBm    |

### Electricals

|                   |                     |
|-------------------|---------------------|
| Operating Voltage | 3.6V                |
| Power Source      | Battery             |
| Battery Type      | LiSOCl <sub>2</sub> |

### On board Sensor

|                        |        |
|------------------------|--------|
| Temperature - Humidity | HTS221 |
|------------------------|--------|

### Sensor Specification

|                          |   |
|--------------------------|---|
| Temperature and Humidity | Operating Temperature Range   -40° to 120° C          |
|                          | Temperature Range Accuracy   +/- 0.5° C @ 15 to 40° C |
|                          | +/- 1.0° C @ 0 to 60° C                               |
|                          | Operating Humidity Range   0 to 100% rH               |
|                          | Humidity Range Accuracy   +/- 3.5% rH @ 20 to 80% rH  |
|                          | +/- 5% rH @ 0 to 100% rH                              |
|                          | Output Data Rate (ODR)   1/7/12.5 Hz                  |
|                          | Low Power Mode   2uA (1Hz, 25° C)                     |
|                          | Accuracy Notes   Traceable factory calibration        |

| Data Transmission Frequency | 10 sec | 30 sec | 1 min | 2 min | 6 min | 15 min |
|-----------------------------|--------|--------|-------|-------|-------|--------|
| SF7                         | 14     |        |       | 72    | 0     | 39     |
| SF8                         | 0.93   |        |       | 51    | 4     | 29     |
| SF9                         | 0.72   |        |       | 39    |       | 21     |
| SF10                        | 0.61   |        |       | 25    |       | 12     |
| SF11                        | 0.50   |        | .9    | 13    |       | 7      |
| SF12                        | 0.50   |        | .7    | 0.91  |       | 3      |

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