LoRaWAN
Wireless Temperature & Vibration Sensor



OEX-301

The OEX-301 Wireless LoRaWAN Temperature and Vibration Monitoring Unit is a high-performance device that offers simultaneous measurement and monitoring of the vibration and temperature of target objects.

Equipped with advanced intelligent analysis algorithms, it not only collects raw acceleration data but also accurately records the time and duration of peak acceleration events. Designed with low power consumption in mind, the unit can operate reliably for extended periods on battery power, reducing maintenance costs and frequency. Its housing is made of high-strength alloy material with explosion-proof capabilities, making it suitable for harsh industrial environments with high temperatures and intense vibrations. Widely applicable across industries such as chemical, metallurgical, power generation, and mechanical manufacturing, the monitoring unit is ideal for online monitoring of vibration and surface temperature in critical equipment like pipelines, generators, air compressors, and pumps.

With real-time data monitoring and intelligent analysis, OEX-301 provides robust support for the health management and predictive maintenance of industrial equipment.

Salient Feature

Ø Supports LoRaWAN standard protocol, enabling quick integration with third-party platforms;

Ø Utilizes LoRaWAN modulation & demodulation technology for long-range and low power consumption

Ø Range -40~125 ℃

Ø Accuracy ±1℃ (At stable temperature conditions)

Ø Velocity Measurement Range-0.1-199.9mm/s

Ø Displacement Measurement Range-0.01-1.99mm/s

Ø Accuracy ±10%@100Hz

Ø Built-in 8500mAH battery, long lifespan;

Ø The sensor incorporates internal intelligent analysis algorithms to proactively detect & alert anomalies.

OmniWOT Technologies Private Limited
Suite-2, 156/B, First Floor, Muthu Plaza, Sangam Street, Sundarapuram, Coimbatore-641024

SPECIFICATION

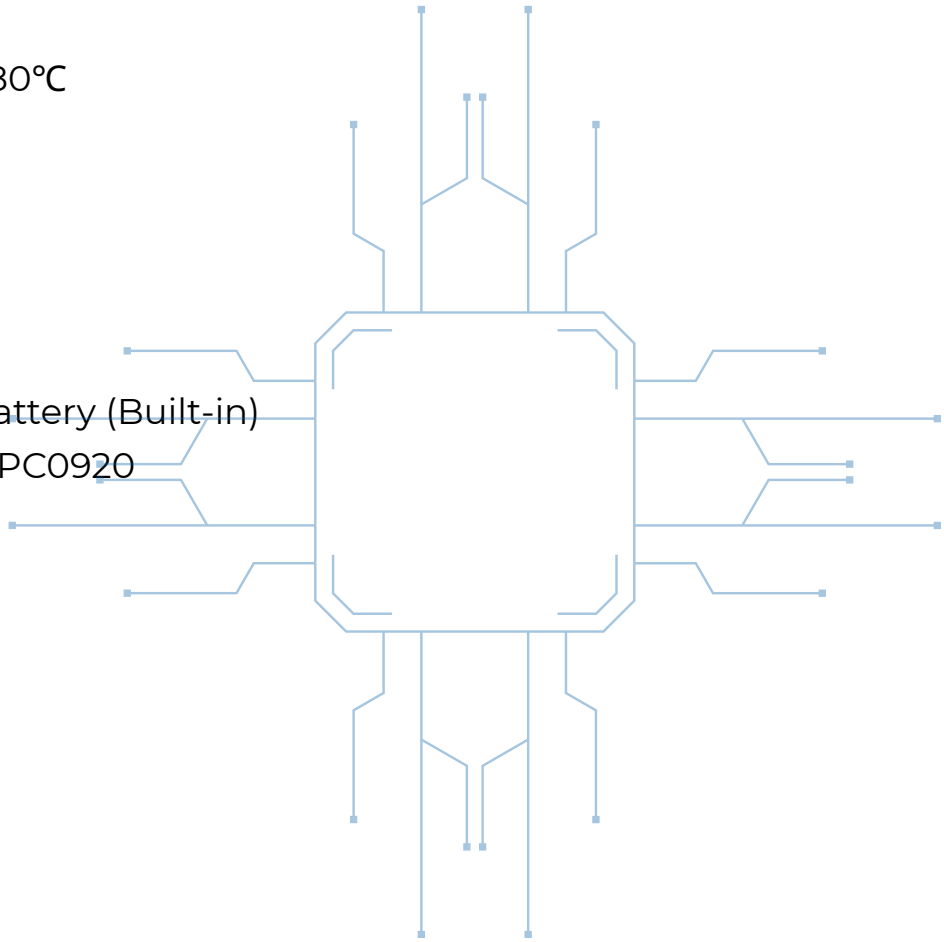
Frequency Bands ：CN470/EU868/US915/AS923/AU915MHz
Protocol ：LoRaWAN CLASS A
Max Transmit Power ： 19dBm
Max Rx Sensitivity ：-141dBm（SF= 12）
Temperature Range. ： -40~ 125 ℃
Temperature Accuracy：±0. 1℃(At stable temperature conditions)
Velocity Measurement Range： 0.1-199.9mm/s
Acceleration Measurement Range： 0.001~ 156.800m/s2(±16g)
Displacement Measurement Range： 0.01-1.99mm/s
Measurement range Accuracy： ±10%@100Hz
Data transfer rate：300bps～5.4Kbps

ENIVORNMENTAL SPEC

Operating Temperature：-10℃~+80℃
Operating Humidity： 10%~95%
Ingress Protection：IP67
Mounting Type: Bolt/Magnetic

Power Spec

Power Supply：3.6 V/8500mAH Battery (Built-in)
Battery Specifications:ER26500+UPC0920



info@omniwot.com
+91 75502 28044