



# INDUSTRIAL TILT SENSOR

## HIGH-PRECISION LORAWAN TILT & ANGLE SENSOR

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### KEY FEATURES

- ◆ **Structural Angle Monitoring:** Specifically designed to detect the pitch and roll angle of critical infrastructure such as towers, poles, buildings, and other large-scale equipment.
- ◆ **Extended 5-Year Battery Life\*:** Engineered for long-term autonomous operation with a high-capacity 8500mAh Li-SOCl<sub>2</sub> battery. An optional solar-powered configuration is also available for perpetual deployment.
- ◆ **Configurable Angle Alarms:** Supports angle alarms to provide immediate alerts when tilt measurements exceed predefined thresholds, enabling proactive maintenance and safety measures.

### DEVICE OVERVIEW

The **ioX-Connect LoRaWAN Industrial Tilt Sensor** is a robust, outdoor-rated device designed for monitoring the structural integrity of assets by measuring their pitch and roll angles. The sensor wirelessly transmits this data to the ioX-Connect platform via a LoRaWAN network. It leverages ultra-long-range spread spectrum communication, which provides high interference immunity while minimizing power consumption. The device supports wireless Over-the-Air (OTA) firmware updates for easy maintenance. Powered by a high-capacity 8500mAh battery or an optional solar-powered battery, it is built for long-term use of up to 5 years.

*\*Battery life depends on reporting intervals and device usage*

### TECHNICAL FEATURES

- **LoRaWAN Version:** v1.0.3, Class A
- **Power Options:** 8500mAh Li/SOCl<sub>2</sub> or Solar Powered + 3000mAh Li-ion battery option | Self-Discharge: <1% / Year @ 25°C
- **Key Capabilities:** Angle Alarm, Datalog feature, and Battery Level Monitoring
- **Firmware Updates:** Wireless OTA (Over-The-Air) firmware upgrade capability
- **Supported Frequency Bands:** CN470, EU433, KR920, US915, EU868, AS923, AU915, IN865
- **Uplink/Downlink:** Transmits data periodically and supports downlink for configuration changes
- **Operating Temperature:** -40 ~ 85°C
- **Measurement:** Pitch and Roll | **Accuracy:** 0.3°
- **RF Output:** Max +22 dBm constant RF output | **RX Sensitivity:** Down to -139 dBm

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