NanoThings

NanoTag Real Time

Introduction

The NanoTag is the world's smallest, lowest cost, and versatile connected location tracker and temperature monitor.

NanoTag

The patent pending NanoTag is the first and only LPWAN sensor to boast a label-like form factor. Despite leveraging an antenna thinner than a human hair, the NanoTag is capable of extreme range and resiliency in the toughest RF environments, including sealed tractor trailers, cargo containers, cold storage facilities, and walk in freezers. Equipped with a pharmaceutical grade temperature sensor, the NanoTag can handle almost any temperature monitoring use case (hot and cold). While the temperature sensor is a standard feature on all NanoTags, the NanoTag is the world's most economical and easy to use asset tracking device. Simply tear, peel, and stick the NanoTag to virtually any product to track its approximate location in real time by leveraging the location estimator functionality of LoRa Cloud or any LoRa network server.

NanoTag Features

- Store and forward (one of the only sensors in the LoRa ecosystem with such feature)
- 2,000 sample rolling buffer memory
- Automatic transmission optimization (self optimizes to send as much data per packet as possible)
- Remotely configurable sample and transmit frequencies
- Buttonless activation technology (guarantees proper activation and simplifies use)
- Proprietary battery drain mode (enables safe disposal)
- Airtight encapsulation (protects against water, snow, and dirt)
- Mechanically flexible (allows for easy application to virtually any surface, including curved surfaces)
- LoRa network server agnostic
- Application agnostic (can be used for asset tracking, temperature monitoring, inventory monitoring, and more)

PRODUCT SPECIFICATIONS

Hardware

Typical Use Case	Temperature monitoring, supply chain tracking, inventory monitoring, location tracking
Monitoring Specification	Ambient temperature and cloud based location monitoring
Memory Type	Non-volatile flash
Storage Capacity	2,000 temperature sample rolling buffer
Temperature Sampling Interval	Programmable
Temperature Measurement Range	-30ºC to 60ºC
Typical Temperature Accuracy Range	40ºC to 60ºC: ±0.5ºC -30ºC to 40ºC: ±1ºC
Temperature Resolution	0.1ºC
Activation Method	Rip™ sensor (buttonless)
Wireless Radio	LoRa™
Read Range	Line of sight (unobstructed): Up to 10 miles Inside a metal carrier (obstructed): Up to 1 mile
Operating Frequency Band	902~928 MHz ISM
Battery Type	LiMnO2
Nominal Battery Capacity	600mAh
Active Battery Lifetime	50,000 transmissions (please visit https://www.nanothingsinc.com/nanotag-battery-life-estimator to calculate the expected NanoTag lifetime for your use case)
Housing	Water and dirt resistant, food-grade packaging
Mounting	3M adhesive backing with release liner
Dimensions	95x130x1.5mm
Weight	6.5g

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