

Introduction

NanoThings is the world’s first connected (Internet of Things) temperature monitoring solution capable of providing autonomous source-to-store temperature traceability.

NanoTag

The patent pending NanoTag is a temperature monitoring smart label. It boasts ultra long wireless range, disposability, and completely autonomous function, while registering a maximum thickness of 1.5mm. Despite its size, the NanoTag has an industry leading active battery life and data storage capacity. The NanoTag also embodies industry leading edge intelligence. Once applied to a product, the NanoTag removes 100% of downstream physical handling (eg: device removal and manual scanning). The NanoTag automatically distinguishes between coverage areas (connected touchpoints) and dark areas (no coverage) in the cold chain, and it autonomously switches between real time mode and sleep/record mode, thus elongating battery life and preventing data loss. The NanoTag will even alert stakeholders when it has departed and arrived at each touchpoint, providing uniform and real-time change in custody data.

NanoTag Features

- Autonomous data offloading
- Autonomous edge based state detection
- Bidirectional communication (RX & TX)
- Ultra long range (up to 10 miles line of sight)
- Buttonless activation technology (guarantees proper activation and simplifies use)
- Wireless programmability
- Proprietary battery drain feature (enables safe disposal)
- Best in industry storage capacity
- Airtight encapsulation (protects against water, snow, and dirt)
- Label-like form factor (allows for easy application to virtually any surface)
- Single use design (requires no reverse logistics)
- Patent pending



PRODUCT SPECIFICATIONS

Hardware

Typical Use Case	Cold chain monitoring, inventory monitoring, location monitoring, turnover monitoring, damage detection
Monitoring Specification	Ambient temperature
Memory Type	Non-volatile flash
Storage Capacity	24,000 temperature readings
Temperature Sampling Interval	Programmable
Temperature Measurement Range	-30°C to 60°C
Typical Temperature Accuracy Range	40°C to 60°C: ±0.5°C -30°C to 40°C: ±1°C
Temperature Resolution	0.1°C
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	Up to two years (Battery life is highly dependent on use case. Please request battery life calculator for a precise estimate.)
Housing	Water and dirt resistant, food-grade packaging
Mounting	Release liner
Dimensions	95x130x1.5mm
Weight	6.5g

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