Beyond RFID: Smart Identification and Sensing with BLE (Bluetooth Low Energy) labels and tags

IDENTIV

Why BLE technology?

BLE tags enable live tracking of items by regularly broadcasting signals that indicate their presence. Many of these tags may also include sensors to capture environmental data such as temperature. BLE gateways scan for nearby tags and can detect multiple items at once, allowing data to be combined. This supports real-time monitoring of each item's location and condition.

Unlike HF and UHF RFID tags, which usually require close-range scanning or gate-based detection, BLE tags broadcast their presence and status every 2 to 10 seconds. As long as a BLE gateway is within range, the backend system remains updated on an item's status - not just at specific checkpoints, but throughout the entire journey. BLE may also complement other tracking technologies by providing continuous monitoring between checkpoints, without requiring direct interaction with a reader.

Real-Time Tracking

Easy Integration
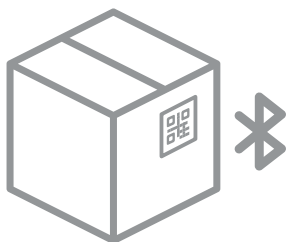
Smarter Efficiency

Cost-Effective Solutions

1 BLE Tag Attached to Item Transmits

- Identification data
- Sensor reading
- Secure, authenticated messages

2 BLE Reader Detects Activity

- Tags appearing or disappearing
- Tags changing state (e.g., temperature or humidity shifts)

3 Platform Tracks In Real Time

- Item location
- Item condition

What is it?

Our BLE labels are built for smart tracking, sensing, and communication. A wide range of sensors can be easily integrated into any BLE label. They operate instantly with affordable BLE gateways - and even with smartphones.

Who is it for?

Businesses and organizations across industries such as retail, logistics, healthcare, food and beverage, manufacturing, and more - anywhere real-time product visibility, environmental monitoring, or secure data transmission is needed.

What problems does it solve?

BLE technology simplifies product tracking and inventory management, reduces waste through improved condition monitoring, enhances supply chain visibility, enables smarter automation, and lowers infrastructure costs by leveraging existing mobile and BLE networks.

Key features:

- High read ranges of 10 meters or more
- Temperature sensing
- End-user interoperability via mobile phones
- Significantly lower infrastructure costs compared to UHF

- Custom form factors to meet customer requirements
- Various layers and surface materials for any application
- Customized artwork and encoding
- An extended read range compared to other technologies

- Available in battery-powered and battery-free versions
- Integrates with low-cost BLE gateways and smartphones
- Integrated microcontroller with onboard cryptography

Why Identiv?

Low MOQ of 20,000 units

Mass production capacity for hundreds of millions of units

Advanced inline quality control with complete (100%) testing

Custom form factors to meet customer requirements

Various layers and surface materials for every application

Customized artwork and encoding