# Sense IoT

**Intelligent, Powerful IoT Devices**

# [ **Technology** ] you can **id**entify with

## If you are in:

- Construction
- Intermodal
- Oil & Gas
- Transportation
- Mining
- Facilities Management
- Production Management

## And you need help on:

- Condition Monitoring
- Container Tracking
- Worker Accountability
- Asset Management
- Fleet Monitoring
- Material Flow
- Yard Management
- Parts Replenishment
- Early Detection of Emergency

## This is what you need:

# Sense IoT
**Intelligent, Powerful IoT Devices**

Powered by

**Bluetooth** ™

# Sense^IoT Bluetooth® Devices

## What are Sense^IoT BLE devices good for?

The Sense^IoT BLE range is built on the foundation of Bluetooth Low Energy (BLE). BLE is a very power efficient version of Bluetooth and can enable a simple coin cell powered BLE based tag/beacon to transmit multiple times a second that can last for over 5 years. Where Bluetooth was primarily a PAN network (Personal Area Network) with ranges up to around 10-20 m, BLE can offer comms range of around 200 m. These low power and long range characteristics have made BLE a serious technology option in the tracking and sensing space, allowing both low cost and low infrastructure requirements.

## How do BLE devices communicate?

BLE based IoT devices communicate with physical gateways (these can be dedicated standalone devices or other smart devices with BLE listening capability) which then communicate via network (WiFi, LAN, Cellular) to a cloud or locally hosted client application server.

## What happens next to make BLE devices so effective?

Sense^IoT BLE devices will gather sensor data internally and bundle with the tag's unique ID ready to transmit. They transmit the data as beacons at configurable intervals, or beacon rates – typically defined for default and alert beacon rates – without knowing if anything is listening to their transmitted messages. If there is a suitable BLE Gateway or other BLE listening device in range, it will gather the incoming data and process accordingly. Some may simply forward the data to the application server, others may process the data before sending it on. There is normally only one way communication between the tag and the gateway device.

Due to the simplicity and price points of BLE gateways, vs UHF RFID readers or LoRaWAN Gateways for example, they can be installed in high volumes in areas of high tag density to help ensure tag data is read and processed quickly. This can be additionally helpful for location based applications where the higher density of Gateways can help to increase the accuracy of the tag location given.

# Sense IoT
## Intelligent, Powerful IoT Devices



TRUST
CONFIDENCE
QUALITY

# [ Technology ] you can identify with



## Sense$^{IoT}$ Asset

The Sense$^{IoT}$ Asset device includes robust and durable Bluetooth. Low Energy beacons and is equipped with a temperature sensor and accelerometer for effective asset tracking. The BLE beacon can easily be configured via a smart phone application and in built NFC. The ultra rugged construction of the device makes it suitable for a huge range of IoT and IIoT applications.

The Sense$^{IoT}$ Asset device is ideal for applications requiring medium range tracking such as hospitals, manufacturing facilities, warehouse management, cold chain condition monitoring, container management, facilities management, ports, construction, mining and asset management.

### Sense IoT
Intelligent, Powerful IoT Devices

**Bluetooth**™

### Sense BLE product features:

- Very long reach, with up to 4 km in urban areas and 15 km in open field
- Short – medium range, with up to 200 m possible
- Minimal infrastructure requirements versus alternative technologies
- Long battery life of up to 5 years
- License free usage – uses same frequency bands as UHF RFID
- Enhanced GPS accuracy, providing 3–5 m
- Simple sensing input





## Omni-ID®
Intelligent Tracking & Monitoring Devices

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