

Sense^{IoT}

Intelligent, powerful IoT devices



Omni-ID[®]

Our panelist

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Product Manager

Agenda

- Introduction
- Sense Family
 - Sense Locate and Condition Devices
 - SenseConfig app
 - OmniSphere middleware platform
 - Evaluation kits
 - Sense Locate SHIELD **NEW**
- Wrap up & Questions

Sense^{IoT}



OmniSphere
IoT Middleware from Omni-ID

Omni-ID[®]

Omni-ID

- Leading provider of UHF RFID devices since 2007.
- Focused on Industrial & Logistics.



Introducing the Sense IoT Portfolio from Omni-ID

Sense^{IoT}

A new range of powerful, intelligent devices to power your IoT projects.

Harnessing the power of Bluetooth Low Energy (BLE) and LoRaWan (LoRa) – high performance open standard communication protocols.

A range of sensors provide solutions for a range of use cases.

The first release in an anticipated long line of forward looking devices from Omni-ID offering robust, reliable, effective linkage to the IoT.

The future of tracking, monitoring, sensing and data gathering
Intelligent, Powerful IOT Devices



LoRaWAN (LoRa)



LoRaWAN nodes communicate with physical gateways which then communicate via a cellular or IP network to Cloud or network server



Offering long range and several year's life from a compact battery



Low power IoT focused communications technology



Offers high accuracy (3-5m) when combined with GPS and accelerometer



Communication is possible over large distances (up to 15km line of sight)



Operates in the international and free to use ISM frequency band (868 or 915 MHz)

Sense^{IoT} Locate - Position



- Radio Protocol – LoRaWan Class A Device,
- Configuration - NFC
- Battery Life – 5 years+ (2,000 movements)
- Read Range – Up to 3-4km urban. Can be up to 15km line of sight
- Construction – Overmolded durable, impact resistant TPE (Thermoplastic Elastomer)
- Sensors – GPS, Accelerometer, Temperature
- Temperature Sensor Range -20°C to +60°C with an accuracy of +2°C

POWERED BY



Open standard LPWAN
protocols



Long Communication
Ranges



Long battery
life

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Sense^{IoT} Condition Monitoring Series



Powerful, sensitive and accurate devices that provide reliable feedback when there is a change in conditions.
Three variants measuring different conditions:-

Sense^{IoT} Condition - Alert



- Battery Life – 5 years+ (25,000 activations)
- Read Range – 3-4km urban. Can be up to 15km line of sight
- Sensors – Push Button
- Two different beaconing schemes allow user to set alarm on button press.
- Class A end node

Sense^{IoT} Condition - Distance



- Battery Life – 5 years+ (at 15 minute range reading intervals)
- Read Range – 3-4km urban. Can be up to 15km line of sight
- Sensors – Laser Range Finder
- Laser Range – 1-200cm with a tolerance of +/-2cm
- Robust, accurate laser range finder creates a highly effective 'state change' alerting device
- Easily configurable to communicate at different intervals
- Class A end node

Bluetooth Low Energy - BLE



Power efficient version of Bluetooth which is compatible with a huge range of devices and infrastructures



Available with iBeacon, eddiestone or generic protocols



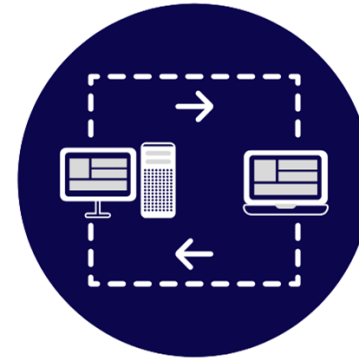
Much wider range than standard Bluetooth (200m compared with 10-20m)



Allows for low cost and low infrastructure requirements



Easy communication via network (Wi-Fi, LAN, Cellular) to Cloud or locally hosted application server



Simplicity and low price allow for high volumes so that data is read and processed quickly

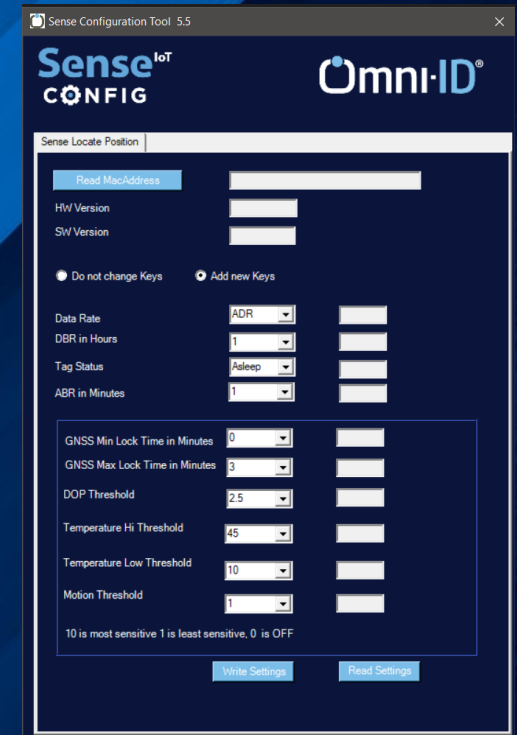
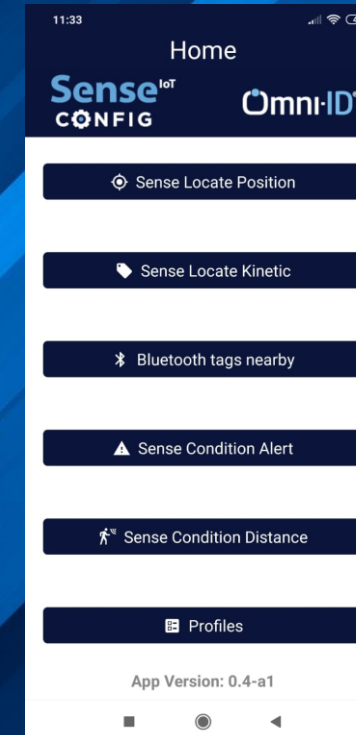
Sense^{IoT} Locate - Kinetic








- Radio Protocol – Bluetooth Low Energy (BLE)
- Battery Life – up to 5 years (5% motion, 10 second beacon rate)
- Read Range 200m+ depending on reading device
- Construction – Overmolded durable, impact resistant TPE (Thermoplastic Elastomer)
- Sensors – Accelerometer, Temperature
- Temperature Sensor Range -20°C to +60°C with an accuracy of +2°C
- Ideal for medium range tracking including:-
Hospitals, manufacturing facilities, warehouse management, cold chain condition monitoring, facilities management, ports construction and mining, asset management.

Sense^{IoT} CONFIG

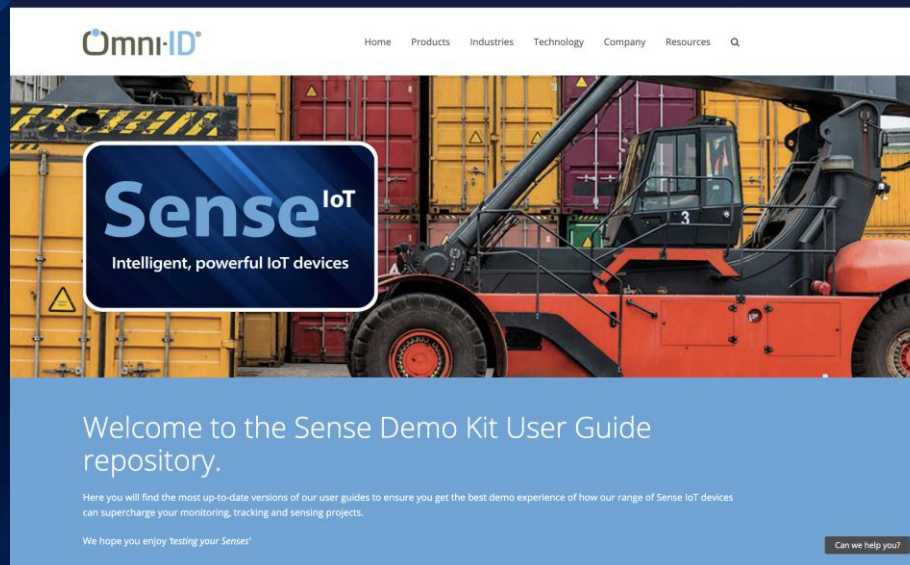
- Sense Config is our NFC Tool to configure Sense tags. Available for the following platforms:
 - Windows
 - Android



		Sense Config PC	Sense Config Android
Sense Locate - Position		✓	✓ *
Sense Locate - Kinetic		✓	✓
Sense Condition - Alert		✓	✓ *
Sense Condition - Distance		✓	✓ *
Sense - Shield		✓ Used to set audible alert volume	Not supported

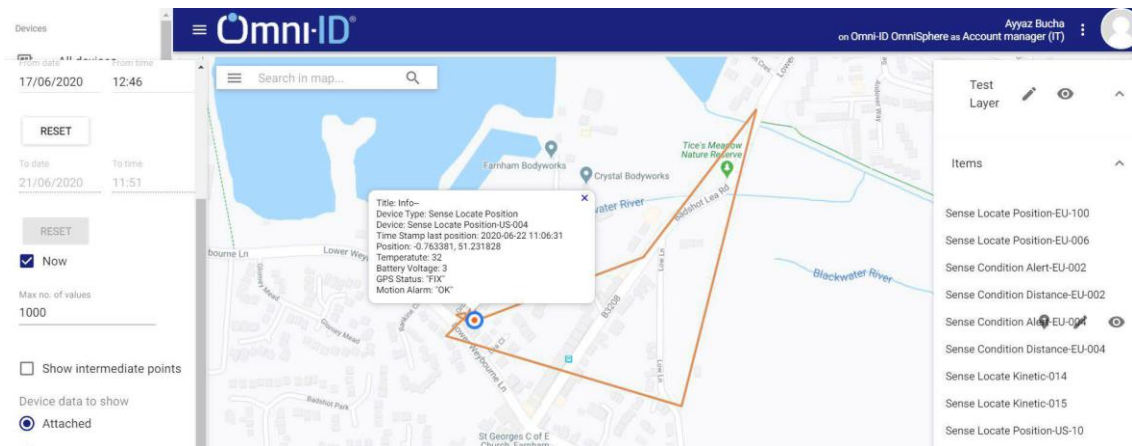
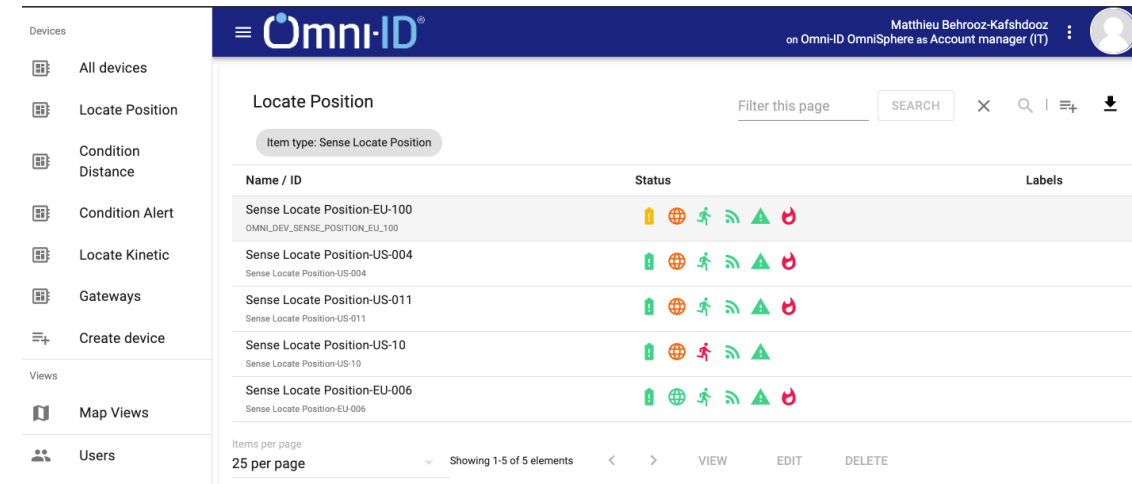


- PC NFC reader available with Sense Demo Kits
- Alternatively purchase ST Micro M24LR-Discovery kit
- Sense Config App and Guide available from:
<https://www.omni-id.com/sense-user-guide>





- Cloud based middleware platform for evaluation of all Sense device data. It can be hosted in the cloud or on premises.
- It is an extension of your hardware in the 'cloud' allowing you to interact with your devices and assets
- OmniSphere is intended to allow for rapid evaluation of the Sense IoT devices and facility and aid with POC's



Sense^{IoT} LoRa Technology Evaluation Kit



Lora Kit V1 \$1,499 **AVAILABLE NOW**

- 5 Sense Locate Position
- Sense Config NFC Reader + Magnet
- MultiTech Gateway
- 2 Month OmniSphere License

New LoRa Kits (8/15)

- 4 Sense Locate Position
- 1 Sense Condition Distance
- 1 Sense Condition Alert
- Sense Config NFC Reader for PC
- Config Apps
- Multitech gateway preconfigured
- 2 Months OmniSphere License
- Provisional Price \$1,499

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Sense^{IoT} BLE Technology Evaluation Kit



BLE Kit V1 \$299 **AVAILABLE NOW**

- 5 Sense Locate Kinetic
- Sense Config NFC Reader + Magnet
- 2 Month Omnisphere License
- Stand alone Kit no Cloud platform

BLE kit V2-including BLE Gateway for integration into Omnisphere

- 2 Months OmniSphere License
- \$999

Sense^{IoT} Locate - SHIELD

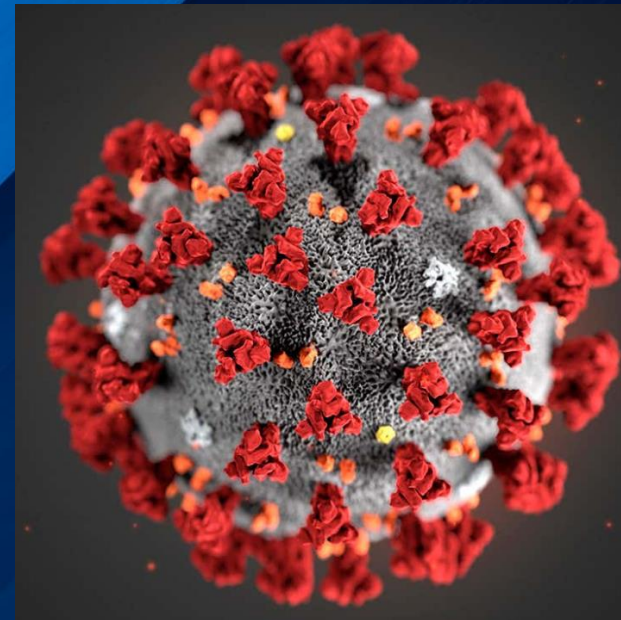
Workplace Distance Control & Monitoring

Get back to work!

Social Distancing & Contact tracing

Combining the power of Sense^{IoT} devices with the pinpoint accuracy of Quuppa location techniques to create the most effective staff monitoring, distance measuring and warning system.

Ensuring staff safety, controlling the spread of infection and keeping your business facility open.



Sense^{IoT}

Locate – **SHIELD**

Wear it, Hang it or Clip it.



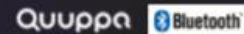
This Solution vs RSSI - The Difference in Accuracy is Clear

- Numerous RSSI based solutions are being developed using either smart phones or alternative wearable technologies.
- Accuracy of RSSI distance measurements is limited by factors such as:-
 - location of phone (in pocket or bag, etc)
 - Orientation of users related to location of phone (person has phone in back pocket; adjacent person is 1m in front, signal has to propagate through human body and will be attenuated)
 - Orientation of signals sent and received by the devices relative to each other - heavy metal environment will cause reflections and multipath effect
- RSSI solutions are easy and low cost to roll out as smart phone ownership increases and are useful back-up to general contact tracing resource but accuracy can not be relied upon in critical workplace distancing and monitoring scenarios.
- The Sense Locate - Shield solution uses advanced antenna arrays located in gateway infrastructure which provide highly accurate real time position data based on signal 'Angle of Arrival' technology.



Sense^{IoT} Locate - SHIELD BLE beacon

The Omni-ID Sense Shield BLE beacon can be used for contact tracing using highly accurate (sub 1 meter) personnel tracking. When a member of staff is found to be Covid-19 positive, the solution provides simple and reliable identification of personnel who have been in contact with the infected person, enabling organisations to quarantine select individuals avoiding the need to close down large operations. Furthermore, the device can be used to implement Social Distancing rule enforcement and warn members of staff when they are in breach of distance regulations. The system continuously monitors the position of personnel and when two or more persons are in breach of social distancing rules an audible alert is sounded on the device. The solution can be adapted to individual workplaces and tailored to local regulations.



Applications

Ideal for aiding social distancing and enabling contact tracing in scenarios such as:

- ▶ Hospitals
- ▶ Warehouse facilities
- ▶ Ports and mines
- ▶ Commercial kitchens
- ▶ Manufacturing facilities
- ▶ Construction Yards
- ▶ Transport networks

Physical Specifications



Product	Lanyard or belt clip	Wearable device
Size (mm)	50.1 x 44.5 x 13	44.5 (Bezel size) Strap length 115 + 75 to buckle
Size (in)	1.97 x 1.75 x 0.51	1.79 (Bezel size) Strap length 4.5 + 2.9 to buckle

Attachment accessory available, belt clip, lanyard, watch strap



Operational Specifications

Radio Protocol	Bluetooth 5.0, +4dBm to -20dBm NFC (Beacon configured via NFC)
Supported Profile	Quuppa Profile
Battery Type	Replaceable CR2032
Battery Capacity	225 mAh
Battery Life	Target - 6 months under following conditions: Device stationary 10 hours/day (1 sec beacon rate) Device moving 14 hours/day (0.33 beacon rate) Enters alert mode 20 times per day with buzzer activation for 20 sec at each alert.
Read Range	200m+ depending on reading device
Alarm	Audible alert buzzer
Sensors	Programmable button, accelerometer and temperature
Temperature Sensor Range	-20°C to +60°C with an accuracy of ± 2°C
Visual Indicator	Bi colour LED (red and green)
Operating temperature	-20°C to +60°C
IP Rating	IP67

Visit www.omni-id.com to learn more about the complete range of Omni-ID RFID and IoT products

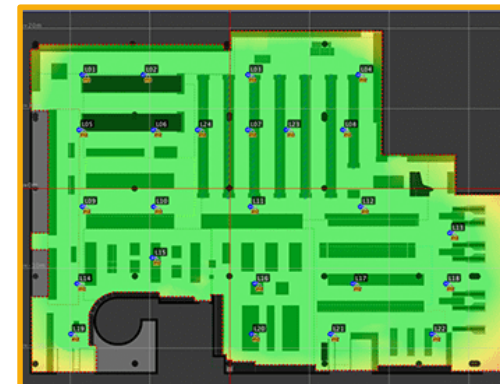


	Alarm State	Function
LED	In alarm	Blink Continuously every 1s (No LED time out)
Button	In Alarm state	Button can be used to silence the buzzer when in alarm (LED will continue in alarm state)
Buzzer	In alarm	Sound alarm continuously with 1s intermittently
Buzzer	Out of Alarm	One long continuous sound to indicate the tag out of alarm state.

LED	State	Colour
RED	In Alarm	Blink Continuously every 1s (No LED time out)
Green	Out of Alarm state (after alarm state)	Long green –time out after 30 s
RED	Quuppa setup	Switch on LED to Red only on pressing the button

Solution Uses Post Covid-19

- The Quuppa RTLS system can support a wide variety of applications in different sectors:
 - installed infrastructure can have many differing uses
 - understanding the intended deployment area & maximise the ROI on the deployment:
 - Transport hubs – tracking assets, personnel, key clients, baggage
 - Construction – tracking tools/assets, personnel, contractors, mustering, collision avoidance, etc
 - Manufacturing – tracking work in progress, staff, workstation usage, collision avoidance, mustering, secure zones, etc
 - Hospitals – tracking assets, staff, guests, (vulnerable) patients, hand hygiene, etc
 - Hospitality – tracking children/vulnerable guests, staff, assets, mustering, access control, etc
 - Offices – tracking staff, guests, desk utilisation, cleaning, washrooms, secure zones,
 - Specific industry possibilities can be discussed in more detail
- Use your short term Covid-19 budgets to invest in long term efficiency improvements.



In Conclusion

- Wider focus for Omni-ID – RFID and IoT with our trademark approach and quality
- First products in Sense IoT portfolio addressing a range of 'Location' and 'Condition Monitoring' scenarios with supporting middleware layer and configuration apps

Full product details and datasheets can be found at www.omni-id.com/sense

Email sales@omni-id.com or contact your usual Omni-ID representative

Thank YOU!

Matt Behroozi



Product Manager

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