

Sense Asset User Guide



Revision History

Date	Version	Notes	Author
28-07-2021	02	Updated Doc	WND

Introduction

Congratulations, you are now the proud owner of the Sense IoT Bluetooth Technology Evaluation Kit that will help supercharge your IoT projects.

The IoT devices in this kit are called Sense Asset. As well as harnessing the power of Bluetooth Low Energy (BLE) these intelligent devices include an accelerometer.

Sense Asset (Quuppa) is a BLE tag that is compatible with the Quuppa Intelligent Locating System that allows you to locate and track the Sense Asset (Quuppa) tags in an environment equipped with Quuppa Locators.

Other parts of the Quuppa Intelligent Locating system are Quuppa Locators and Quuppa Positioning Engine (QPE) software.

Bluetooth Low Energy (BLE) – the power efficient version of Bluetooth is compatible with a huge range of devices and infrastructure.

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 device density to help ensure device 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 device location given.

This kit contains:

- 5 Sense Asset (Quuppa) IoT devices
- An NFC Programmer with sync cable
- Memory Stick containing Omni-ID Sense Config PC software and electronic version of this user guide

We hope you enjoy using this kit and ‘testing your Senses’.

The Omni-ID team.

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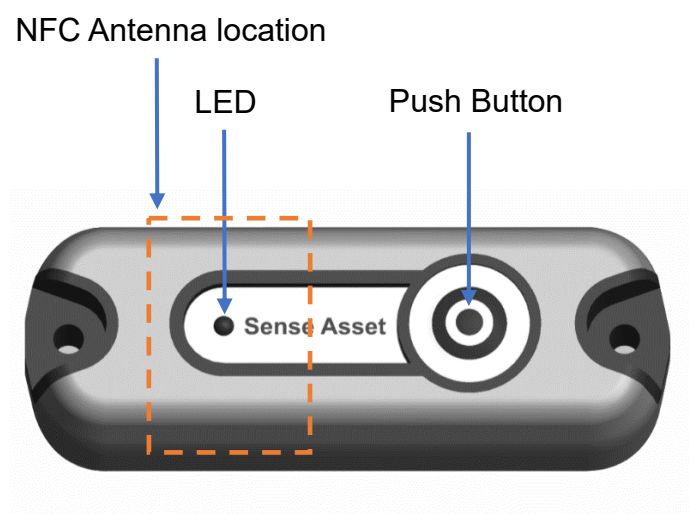
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1. Tag Operation

Sense Asset is designed for tracking and monitoring applications over BLE on a Quuppa Intelligent Locating System. Sense Asset is pre-programmed with Quuppa firmware and is equipped with an accelerometer and an LED light to indicate device status.

The Sense Asset (Quuppa) has the following features:

- Push Button
- LED
- Accelerometer
- Pre-programmed with Quuppa firmware



Sense Asset has the following built in sensor:

- Accelerometer

1.1. Activating the Sense Asset

Before using the Sense Asset you must activate and configure it for your Quuppa Intelligent Locating System.

1. Press the button for 1 second to wake the Sense Asset (Quuppa) from storage state.
2. Within 30 seconds, send a configuration command to the Sense Asset (Quuppa) from the Quuppa Site Planner (QSP) and add the tag to the project. For details, see instructions on Quuppa tag configuration from the Quuppa Customer Portal (QCP).

1.2. Sense Asset 2D barcode

There is a 2D barcode located on the underside of the Sense Asset which contains the tags ID number. The 2D barcode can be scanned with either a separate 2D barcode reader or a suitable mobile phone app.

1.3. Sense Asset NFC Configurable Settings

Sense Asset settings can be configured via NFC. Omni-ID provides software that works with ST Microelectronics M24LR Discovery NFC PCB tool. For further information refer to Omni-ID 'Sense Config PC App User Guide'.

2. Product IO Settings

The Sense Asset is equipped with a bi-colour LED and push button for alerts. The following table details the IO configuration:

IO	Function
Output 1	Green LED
Output 2	Red LED
Input: Button 2	Button Push

The button press is reported back to Quuppa Positioning Engine (QPE) as 'Button 2'.

3. Sense Asset product range

There are a number of product variants within the Sense Asset Product range all of which are based on the primary product, these are summarised in the table below.

Part Number	Part Name (Model)	Description
CP14886	Sense Asset	Primary SKU
CP15632	Sense Asset Temp	Greater operational temperature range than standard product.
CP15352	Sense Asset - Magnet	Primary SKU with magnet mount
CP15116	Sense Asset - Cable Tie	Primary SKU with Cable Tie attachment
CP15814	Sense Asset - ATEX, IECEx	ATEX certified version of Primary SKU

4. Fitting instructions for the Sense Asset

First ensure that the mounting surface is clean and free from debris, remove any dirt using the cloth.

IMPORTANT For optimal operation do not attach Sense Asset onto a large metallic surface.

IMPORTANT Avoid attaching Sense Asset in a way that the button is permanently pressed down.

5. Maintenance for the Sense Asset

The Sense Asset is a sealed unit and requires no maintenance during its life span.

6. Cleaning for the Sense Asset

The Sense Asset can be cleaned using water applied to a cloth.

Solvents and Oils should not be used for cleaning the Sense Asset

7. Environmental

The Sense Asset has an operational temperature range of -20 to +55 Degrees Celsius.

8. FCC Statement

This device complies with Part 15 of FCC Rules and standard(s).

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE

This equipment has been tested and found to comply with the limits for an Intentional radiator, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications

9. Care and Maintenance

Your Sense Asset is a product of superior design and craftsmanship and should be treated with care. The following suggestions will help you protect your warranty coverage.

- Do not attempt to open the device
- Do not submerge the device in deep water (> 1m)
- Do not use harsh chemicals, cleaning solvents or strong detergents to clean the device. Only use water and soap or a dry cloth to clean the surface of the device
- Do not paint the device
- Keep the device out of reach of small children

10. End of Life

At the end of its functional life the tag must be disposed of in a suitable local recycling facility and in accordance with any local laws pertaining to the recycling of waste electronic equipment. The tag consists of an ABS plastic case housing, electronic components and a lithium battery. The tag contains no substances banned by the European Union's Restriction of Hazardous Substances (RoHS) directive.

11. Recycling and Disposal

Always return your used electronic devices, batteries and packaging materials to dedicated collection point. This way you help to prevent uncontrolled waste disposal and promote the recycling of materials.



Disposal of Electrical and Electronic Equipment. This crossed-out wheeled-bin symbol indicates that this product should not be treated as household waste. Instead hand it over to the appropriate collection point for the recycling of electrical and electronic equipment in accordance with local environmental regulations for waste disposal.



Disposal of Waste Batteries. This product contains a battery. Do not dispose of them with other household waste. Instead, hand them over to the appropriate collection point for recycling. The battery does not contain Mercury (Hg), Cadmium (Cd) or Lead (Pb).

Ensuring correct product and battery disposal prevents potential negative impact on the environment and human health.

12. Contact details Omni-ID

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