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Quuppa QT3-1 Tag Real Time Locating System User Manual

Contents

Quuppa QT3-1 Tag Real Time Locating System

The Quuppa QT3-1 is a tag that is compatible with the Quuppa Intelligent Locating SystemTM. Other parts of the system are the Quuppa Locators and the Quuppa Positioning Engine (QPE) software. The Quuppa system allows you to locate and track any object equipped with a Quuppa Tag, a Quuppa compatible Tag or any Bluetooth enabled device emulating the Quuppa Tag, in an environment equipped with Quuppa Locators.

Read this guide carefully and watch the Quuppa Academy videos before starting to use the system. For the latest guides and additional information related to your Quuppa product, go to **quuppa.com/documentation**.

The QT3-1 Tag Features include:

- Compatibility with Quuppa system release 8.0 or above
- LED blink for visual identification
- The default configuration that can be customized
- IP68 waterproof casing
- In-built CR2354 battery with a long lifespan

Product Usage Instructions

Before using the Quuppa QT3-1, it is recommended to read this guide carefully and watch the Quuppa Academy videos. Please note that the LED blink uses a relatively large amount of power and should only be used when necessary to conserve the tag's battery.

To apply a new configuration, make sure that the tag is activated and use one of the following methods to send the new configuration to the tag:

- Quuppa system APIs
- Quuppa Configuration Tool

It is important not to attach the Quuppa QT3-1 onto a large metallic surface or hot surface. Additionally, do not attach the tag so that the button is permanently pressed down.
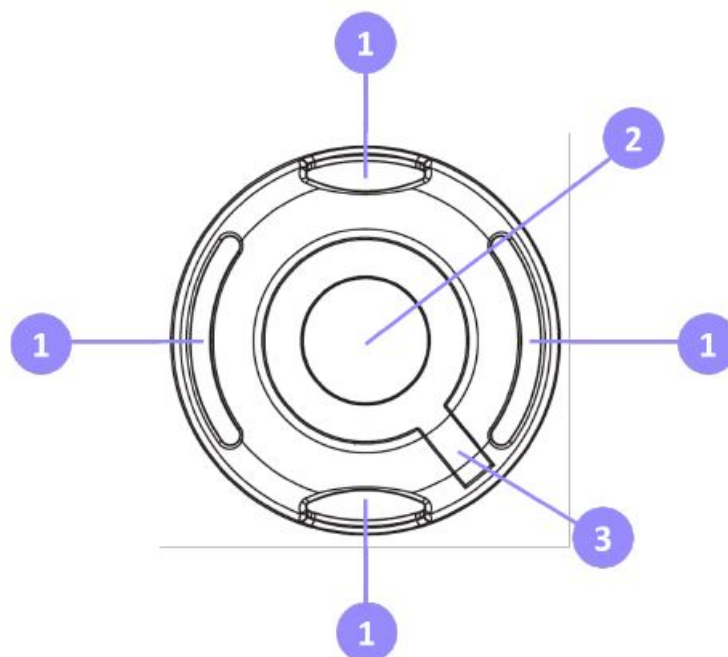
The Quuppa QT3-1 has IP protection class IP68, meaning it is dust and water-resistant and can be immersed in 1.5 meters of freshwater for up to 30 minutes. The battery voltage level can be monitored using the Quuppa

system, and once the battery is discharged, the Quuppa QT3-1 must be recycled properly according to local regulations. Do not attempt to open the casing to replace the battery to avoid the risk of explosion.

Tag Features

The Quuppa QT3-1 has the following features:

- 4 mounting holes (1)
- Button (2)
- Red LED (3)
- Waterproof casing
- 2.4 GHz radio SoC
- Accelerometer
- Pre-programmed with Quuppa Firmware

Using the QT3-1 Tag

This section covers how to use the Quuppa QT3-1. Please note that the Quuppa QT3-1 is compatible with Quuppa system release 8.0 or above.

General Instructions

Activating the QT3-1
Before using the Quuppa QT3-1 you must activate it and configure it for your Quuppa system. To activate the tag, use the Button Press method, i.e. press the button for 1 second to activate the Quuppa QT3-1.
With the default configurations set for new QT3-1 tags, the tag will remain activated for 24 seconds after it becomes inactive before entering the storage mode again.

Configuring the QT3-1
Tag configurations define the behavior of the tags in your Quuppa system. For example, you can configure a tag to blink its LED light every time it enters a particular zone within your Quuppa system.

Note:

The LED blink uses a relatively large amount of power and so we recommend that to conserve the tag's battery, you only use the LED blink when necessary.

New tags will be configured to use a default configuration. You can change this configuration to better suit the needs of your use case. To apply a new configuration, make sure that the tag is activated and use one of the following methods to send the new configuration to the tag:

- Quuppa Site Planner (QSP) and a Focusing Locator
- Quuppa Positioning Engine (QPE) API requests

For more information, please refer to our product documentation available at **quuppa.com/documentation**.

Attaching QT3-1 to a Locatable Object
Attach the Quuppa QT3-1 to a locatable object.

- **Important:** For optimal operation do not attach Quuppa QT3-1 onto a large metallic surface.
- **Warning:** Never attach Quuppa QT3-1 onto hot surfaces.
- **Important:** Do not attach the Quuppa QT3-1 so that the button is permanently pressed down.

Reset to Factory Settings
To reset the device to factory settings hold the QT3-1 button side up and press the button until the LED turns off (5 seconds). While still pressing the button, turn the QT3-1 button side down. The LED will start blinking. Keep the button pressed for another 10 seconds until the LED stops blinking and turns continuously on.
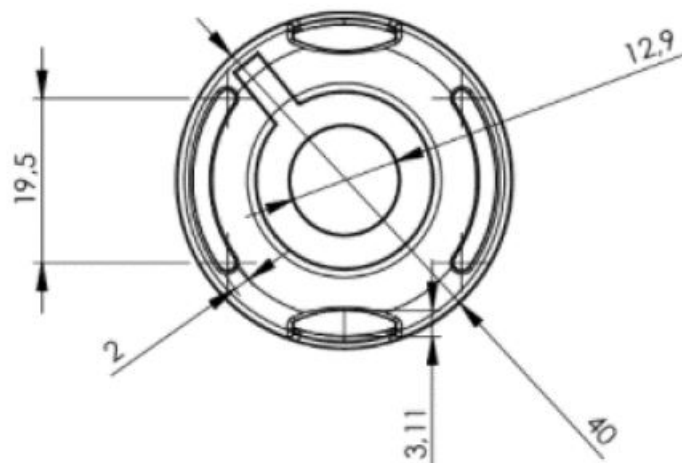
QT3-1 2D Barcode
The backside of the QT3-1 includes a 2D barcode that contains the Tags ID number. The 2D barcode can be scanned for example with a separate 2D barcode reader or a suitable mobile phone app. You may need to select the setting "scan the white barcode on black background" for optimal performance.
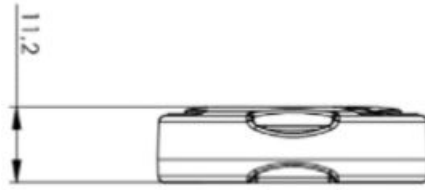
Mechanical Details

QT1-1 dimensions

Dimensions (mm), front view:

Dimensions (mm), side view:

Waterproof casing
Quuppa QT3-1 has IP protection class IP68. This means that it's dust and water-resistant and can be immersed in 1.5 meters of freshwater for up to 30 minutes.

Battery
Quuppa QT3-1 has an in-built CR2354 battery. In normal operation, the battery will last for several years. The battery voltage level can be monitored using the Quuppa system. Once the battery is discharged, Quuppa QT3-1 has to be recycled properly according to local regulations. Do not attempt to open the casing to replace the battery.

Warning:
Risk of explosion if the battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

Technical Specifications

Model number	QT3-1
Dimensions	⌀: 40 mm, h: 11,2 mm
Weight	10 g
IP protection class	IP 68
Operating temp. range	0°C…+60°C
Storage temp. range	–30°C…+70°C
Radio	Silabs BG22
Radio transmission	Bi-directional
Number of channels	**Proprietary Mode:** 81 channels (1 MHz) but only one at a time (for Japan 80 channels) **BLE Mode:** 40 channels (2 MHz) but only one at a time
Carrier frequencies	**Proprietary Mode:** 2401 2402 … 2480 2481 MHz (for Japan: 2402 … 2408 2481 MHz) **BLE Mode:** 2402 2404 … 2478 2480 MHz
Max Output Power	+6dBm
Power supply	CR2354 Due to waterproofing the battery is non-removable and non-rechargeable.
Power rating	3VDC 15mA
Certifications	CE, FCC, IC
Functionality	Button, LED, Accelerometer

Important:

Quuppa devices should only be used in environments that fit the conditions listed in the above table. Exposure to more stress (e.g. operating the device in higher than recommended temperatures) may affect the reliability of the device or even cause permanent damage to the device.

Packaging and Storage
The QT3-1 is shipped in a cardboard box. One box contains 5 pcs of QT3-1 and one overpack contains 10 such boxes, in total 50 pcs of QT3-1.
Please note the storage temperature ranges when storing the QT3-1. Please note that the device is sensitive to ESD and may be damaged by it.

Care and Maintenance

Your Quuppa QT3-1 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 sink the device in deep water (> 1.5 meters).
- 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.

Recycling and Disposal

Always return your used electronic products, batteries, and packaging materials to dedicated collection points. This way you help 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 proper product and battery disposal prevents potential negative consequences for the environment and human health. For more information, contact your city, the place of purchase, or **support@quuppa.com**.

Certifications

The QT3-1 Locator has the following certifications:

FCC and IC Regulatory Statements

FCC Statement

This device complies with Part 15 of the FCC Rules. 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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution:
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement:
The equipment complies with RF exposure limits set forth for an uncontrolled environment. The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Industry Canada Statement

This device complies with ISED's license-exempt RSSs. 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.

RF exposure warning:
The equipment complies with RF exposure limits set forth for an uncontrolled environment. The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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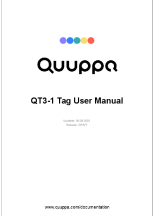
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The availability of particular products may vary by region. Please check with your Quuppa dealer for details. This device may contain commodities, technology or software subject to export laws and regulations from the US and other countries. Diversion contrary to law is prohibited.

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Documents / Resources

	Quuppa QT3-1 Tag Real Time Locating System [pdf] User Manual QE9QT3, QT3-1, QT3-1 Tag, QT3-1 Tag Real Time Locating System, Real Time Locating System, Locating System

References

- 🔍 **Product Documentation**