

Quuppa QT1

*Quuppa Tag Module
User Guide v. DRAFT
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Revision History

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1. Introduction

Quuppa QT1 is a Tag Module designed to be integrated into your Tag mechanics and to be fully compatible with the Quuppa Intelligent Locating System. Other parts of the Quuppa Intelligent Locating System are Quuppa Locators and Quuppa Positioning Engine software. The Quuppa Intelligent Locating System allows you to locate and track any objects equipped with Quuppa Tags in an environment equipped with Quuppa Locators.

Read this guide carefully and watch the Quuppa Tutorial and Quuppa Academy videos before starting to use the system. For the latest guides, additional information, and downloads related to your Quuppa product, go to Quuppa Customer Portal at <https://secure.quuppa.com/>.

2. Features

3. Using the Quuppa QT1

3.1. General Instructions

Activate Quuppa QT1

Before using Quuppa QT1, you must activate it and configure it for your Quuppa Intelligent Locating System.

1. Press the reset button for one second to activate Quuppa QT1
2. Within 30 seconds, send a configuration command to the Quuppa QT1. For details, see Quuppa Tag configuration tutorial in the Quuppa Customer Portal.

Attaching QT1

Quuppa QT1 is not meant to be directly attached to a locatable object. It is meant to be installed into a host product. Please follow the host product's instruction regarding its installation to a locatable object.

IMPORTANT For optimal operation do not attach a product containing Quuppa QT1 onto a large metal surface.

Reset to factory settings

To reset to factory settings, press and hold the reset button for 10 seconds.

3.2. Integrating QT1 into a host device

3.3. QT1 Pinout

3.4. OEM Instructions

In order to have the same RF properties in the final product as in the QT1, a battery must not be placed directly below the antenna.

4. Product Information

4.1. Battery / power source

Quuppa QT1 does not include a battery. [here instructions on what kind of power source to use]

WARNING RISK OF EXPLOSION IF INCORRECT POWER SOURCE IS USED. DISPOSE USED BATTERIES ACCORDING TO LOCAL REGULATION.

4.2. Technical Specifications

Item	Description
Dimensions	26.5 mm × 24.5 mm × 1.6 mm
Weight	1.5g
Operating temp. range	−30°C ... +85°C
Storage temp. range	−30°C ... +85°C
Carrier frequencies	2401 2402 ... 2408 2481 MHz
Power supply	External 3.0 V power supply (not included)
Certifications	Pending CE, FCC, IC, Japan and Korea
Functionality	Button, LED, Accelerometer, I/O pins for connecting simple peripherals, compatible with Quuppa firmware library

5. Care and Maintenance

6. 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.



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.

7. FCC and IC Regulatory Statements

Model	FCC ID	IC ID
QT1	QE9QT1	10657A-QT1

Item	Description
Radio	nRF52832 Bluetooth SoC by Nordic Semiconductor
Radio transmission	Bi-directional
Number of channels	81 channels (1 MHz) but only one at a time
Carrier frequencies	2401 2402 ... 2408 2481 MHz
Modulation	GFSK
Max Output Power	2.5 mW
Antenna	Integrated printed IFA antenna with 0dBi gain

7.1. Industry Canada Statement

This device complies with ISED's licence-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.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be chosen so that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Le présent appareil est conforme aux CNR d'ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. le dispositif ne doit pas produire de brouillage préjudiciable, et
2. ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radio électrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

7.2. 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 or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into 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.

WARNING Changes or modifications not expressly approved by Quuppa could void the user's authority to operate the equipment.

This portable transmitter with its antenna complies with FCC/IC RF exposure limits for general population / uncontrolled exposure.

7.3. OEM Responsibilities

WARNING The OEM must ensure that FCC and IC labelling requirements are met. This includes a clearly visible label on the outside of the OEM enclosure specifying the appropriate Quuppa Oy FCC and IC identifiers for this product.

Contains FCC ID: QE9QT1

Contains IC: 10657A-QT1

or

Contains Transmitter Module FCC ID: QE9QT1

Contains Transmitter Module IC: 10657A-QT1

If the size of the end product is larger than 8x10cm, then the following FCC part 15.19 statement has to also be available visibly on outside of device:

The enclosed 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.

The Quuppa Tag Module (QT1) has been certified for integration into products only by OEM integrators under the following conditions:

1. The antenna(s) must be installed such that a minimum separation distance of 5mm is maintained between the radiator (antenna) and all persons at all times.
2. The transmitter module must not be co-located or operating in conjunction with any other antenna or transmitter.

As long as the two conditions above are met, further transmitter testing will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

IMPORTANT In the event that these conditions cannot be met (for certain configurations or co-location with another transmitter), then the FCC and Industry Canada authorizations are no longer considered valid and the FCC ID and IC Certification Number cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC and Industry Canada authorization.

8. Japan (MIC) Regulatory

9. CE Regulatory

10. EU Declaration of Conformity

A copy of the Declaration of Conformity can be found at: www.quuppa.com/support.

11. Bluetooth SIG Qualification

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