

RF Exposure Evaluation Declaration

Report No.: S20250816910502

Issue Date: 11-07-2025

Applicant: Queclink Wireless Solutions Co., Ltd.
Address: No.30, Lane 500, Xinlong Road, Minhang District, Shanghai,
China, 201101
FCC ID: YQD-GV850CNA
Application Type: Certification
Product: GPS Tracker
Model No.: GV850CNA, GV851CNA
Trade Mark: Queclink
FCC Rule Part(s): CFR 47, FCC Part 2.1091 Radio frequency radiation exposure
evaluation: mobile devices.
Item Receipt date: Sep. 04, 2025
Test Date: Sep. 05 ~ Nov. 03, 2025

Compiled By

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(Stone Zhang)
Senior Test Engineer

Approved By

Line Chen

(Line Chen)
Engineer Manager



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 558074 D01. Test results reported herein relate only to the item(s) tested.

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The test report must not be used by the client to claim product certifications, approval, or endorsement by NVLAP, NIST or any agency of U.S. Government.

Revision History

Report No.	Version	Description	Issue Date
S20250816910502	Rev. 01	/	11-07-2025

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§2.1033 General Information

Applicant:	Queclink Wireless Solutions Co., Ltd.
Applicant Address:	No.30, Lane 500, Xinlong Road, Minhang District, Shanghai, China, 201101
Manufacturer:	Queclink Wireless Solutions Co., Ltd.
Manufacturer Address:	No.30, Lane 500, Xinlong Road, Minhang District, Shanghai, China, 201101
Factory:	Queclink Wireless Solutions Co., Ltd.
Factory Address:	No.30, Lane 500, Xinlong Road, Minhang District, Shanghai, China, 201101
Test Site:	Fanguang Inspection & Testing Co., Ltd.
LAB ID:	CN5037
LAB registration number:	600222-0
Test Site Address:	No.8 Ningyun Rd., Xinwu District Wuxi, Jiangsu 214000 China
FCC Rule Part(s):	FCC Part 2.1091
FCC ID:	YQD-GV850CNA
Test Device Serial No.:	S/N.: / ☐ Production ☒ Pre-Production ☐ Engineering

1. Product Information

1.1. Equipment Description

Product Name:	GPS Tracker
Test Model:	GV850CNA
Additional Model:	GV851CNA
Model difference descriptions:	Product of GPS Tracker, Model Name: GV850CNA & GV851CNA, Model: GV850CNA and its additional model: GV851CNA share the same circuit diagram, hardware version, software version, Bluetooth chip, RF module, 4G module, GNSS module and Bluetooth module. The only difference is that GV850CNA includes an additional CAN chip on its PCB.
Trade Mark:	Queclink
Input Voltage Range:	DC 8-32V
Software Version:	GV850_FCTR00A01V01_EMMC
Hardware Version:	V1.04
EUT sample number:	S202508169105-1-1 (Conducted) S202508169105-1-2 (Radiated)

Note: This information is provided by the Customer and its authenticity is the responsibility of the Customer.

1.2. Product Specification Subjective to this Report

Operating Frequency	BLE: 2402~2480MHz LTE Band2: 1850~1910MHz (TX);1930~1990MHz (RX) LTE Band4: 1710~1755MHz (TX);2110~2155MHz (RX) LTE Band5: 824~849MHz (TX);869~894MHz (RX) LTE Band12: 698~716MHz (TX);728~746MHz (RX) LTE Band13: 777~787MHz (TX);746~756MHz (RX) LTE Band66: 1710~1780MHz (TX);2110~2200MHz (RX)
Number of Channels	BLE: 40
Channel Spacing	BLE: 2MHz LTE Band2/4/5/12/13/66: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
Type of modulation	BLE: GFSK LTE Band2/4/5/12/13/66: QPSK, 16QAM
Antenna Type:	BLE: Ceramic antenna LTE Band2/4/5/12/13/66: PCB antenna
Antenna Gain:	BLE: 3.0dBi LTE Band2/4/5/12/13/66: 300-010-0K-A-05 Antenna:

	700 ~ 1000MHz: 5.0dBi 1700 ~ 2700MHz: 5.0dBi QA100_V3.0_MIRROR Antenna: 698 ~ 960MHz: 1.6dBi 1710 ~ 2400MHz: 3.1dBi 2500 ~ 2700MHz: 1.7dBi
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Note:

1. The maximum Antenna Gain was declared by the manufacturer.
2. For GPS Track, there are two types of antennas for the LTE function. The antennas are 300-010-0K-A-05 and QA100_V3.0_MIRROR.

2. RF Exposure Evaluation

2.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

r = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

For simultaneous transmission exposure cases, calculation formula is:

$$\sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

2.2. Calculation Method

Temperature:	23.2 °C
Relative Humidity:	58 %
ATM Pressure:	101.6 kPa
Test Data:	2025-10-09
Test Engineer:	Stone Zhang

Product	GPS Tracker
Test Item	RF Exposure Evaluation

Mode	Frequency (MHz)	Maximum Conducted Output Power (dBm)	Antenna Gain (dBi)	PG		MPE (mW/cm ²)	MPE Limits (mW/cm ²)
				(dBm)	(mW)		
BLE	2402	7.50	3.00	10.50	11.22	0.0022	1.00
LTE Band 2	1850.7	25.00	5.00	30.00	1000.00	0.1989	1.00
LTE Band 4	1710.7	25.00	5.00	30.00	1000.00	0.1989	1.00
LTE Band 5	824.7	25.00	5.00	30.00	1000.00	0.1989	0.55
LTE Band 12	699.7	25.00	5.00	30.00	1000.00	0.1989	0.47
LTE Band 13	779.5	25.00	5.00	30.00	1000.00	0.1989	0.52
LTE Band 66	1710.7	25.00	5.00	30.00	1000.00	0.1989	1.00

Remark: 1. MPE use distance is 20cm from manufacturer declaration of user manual.

Remark: 2. Use the maximum gain of all bands when evaluating.

Remark: 3. For simultaneous transmission is BLE and LTE 12 (worst case).

$$\sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} = 0.0022 + 0.3826 = 0.3848 < 1.$$

CONCLUSION:

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB 447498 v06.

Statement

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No.8 Ningyun Rd., Xinwu District Wuxi, Jiangsu 214000 China

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