

RF EXPOSURE REPORT



Applicant: FNATIC GEAR LIMITED
2 Ebor St, London, E1 6AW, UK
Manufacturer: FNATIC GEAR LIMITED
2 Ebor St, London, E1 6AW, UK
Product Name: Wireless Dongle
Brand Name: FNATIC
Model No.: C-MS0004
Model Difference: N/A
Report Number: E2/2021/A0032
FCC ID 2A3COC-MS0004
Issue Date: December 29, 2021
Date of EUT Received: October 7, 2021

Approved By

John Yeh

We hereby certify that:

The above equipment was evaluate by SGS Taiwan Ltd. The evaluation in this report is in compliance with FCC Rule Part §2.1093.

The results of this report relate only to the sample identified in this report.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.
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Revision History

Report Number	Revision	Description	Issue Date	Revised By
E2/2021/A0032	00	Original	December 29, 2021	Ariel Chang

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1 DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)

1.1 Product Description

Product Name:	Wireless Dongle
Brand Name:	FNATIC
Model No.:	C-MS0004
Model Difference:	N/A
Hardware Version:	20210714
Firmware Version:	52820V05
Power Supply:	5Vdc

1.2 Antenna Information:

1.2.1 2.4GHz

Antenna Type	Freq. (MHz)	Peak Antenna Gain (dBi)
Embedded Antenna	2400~2500	1.21
Note: 1. Antenna information is provided by the applicant.		

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2 RF EXPOSURE EVALUATION FOR PORTABLE CONDITIONS

2.1 FCC Standard Applicable:

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

As per KDB 447498 D01 4.3.1,

Step a: For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot$

$[\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g Head & Body SAR and ≤ 7.5 for 10-g extremity Hand SAR, where

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- The values 3.0 and 7.5 are referred to as numeric thresholds in **step b)** below

Step b: For 100 MHz to 6 GHz and test separation distances > 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following (also illustrated in Appendix B):

1) $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz})/150)]\}$ mW, for 100 MHz to 1500 MHz

2) $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot 10]\}$ mW, for > 1500 MHz and ≤ 6 GHz

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2.2 Measurement Result:

$$EIRP[dBm] = E[dBuV/m] + 20\log(d[meters]) - 104.77$$

Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBμV	dB	dBμV/m	dBμV/m	dB
2402.747	Peak	93.99	4.79	98.78	114.00	-15.22

Freq. (MHz)	Field strength (dBuV/m@3m)	Conducted power (dBm)	Conducted power (mW)	Exemption Limit (mW)
2403	98.78	2.34	1.714	10

As the result of calculation result indicates, the RF exposure generating from given transmitter (transmitter employed digital modulation) can be excluded from SAR measurement, and is deemed compliant with RF exposure as per FCC.

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