

RF Exposure Evaluation Report

Product : wireless module
Trade mark : Robotarget
Model/Type reference : 024FD12
Serial Number : N/A
Report Number : EED32Q81830102
FCC ID : 2BL9N-024FD12
Date of Issue : Dec. 24, 2024
Test Standards : 47 CFR Part 1.1307
47 CFR Part 1.1310
47 CFR Part 2.1091
KDB 447498 D04 Interim General RF
Exposure Guidance v01
Test result : PASS

Prepared for:

Prime Land Outdoor LLC
36917 Bouquet Canyon Road, Santa Clarita, CA 91390, United States

Prepared by:

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Dec. 24, 2024



Check No.: 6421121124

1 Version

Version No.	Date	Description
00	Dec. 24, 2024	Original

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3 General Information

3.1 Client Information

Applicant:	Prime Land Outdoor LLC
Address of Applicant:	36917 Bouquet Canyon Road, Santa Clarita, CA 91390, United States
Manufacturer:	Prime Land Outdoor LLC
Address of Manufacturer:	36917 Bouquet Canyon Road, Santa Clarita, CA 91390, United States

3.2 General Description of EUT

Product Name:	wireless module
Model No.(EUT):	024FD12
Test Model No.:	024FD12
Trade Mark:	Robotarget

3.3 Product Specification subjective to this standard

Frequency Range:	2402MHz~2480MHz
Modulation Type:	FLRC
Test Power Grade:	Default
Test Software of EUT:	sscom5.13.1
Antenna Type:	External antenna
Antenna Gain:	5.43dBi
Power Supply:	DC 3.3V
Sample Received Date:	Nov. 22, 2024
Sample tested Date:	Nov. 22, 2024 to Dec. 16, 2024
Remark: Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.	

3.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

3.5 Deviation from Standards

None.

3.6 Abnormalities from Standard Conditions

None.

3.7 Other Information Requested by the Customer

None.

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Limits

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold P_{th} (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1).

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

4.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

4.1.3 EUT RF Exposure Evaluation**For Stand alone:**

Frequency (MHz)	Estimation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE ratio
@2.4GHz	20	13.6	5.4300	16.88	48.7528	3060	0.0159

Note:

- ① EIRP=conducted power+antenna gain;
- ② $ERP=EIRP-2.15$;
- ③ $EIRP(dBm) = \text{Field strength of the fundamental signal}(dBuV/m@3m) - 95.23$;
- ④ $ERP(mW) = 10^{(ERP(dBm)/10)}$;
- ⑤ The estimation distance is 20cm;
- ⑥ The test data please refer to the report of EED32Q81830101 and only the worst case data was recorded in the report.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***