

RF Exposure Evaluation Report

FCC ID : XPYNORAB2
Equipment : NORA-B2 stand-alone Bluetooth Low Energy module
Brand Name : u-blox
Model Name : NORA-B201, NORA-B206, NORA-B211, NORA-B216, NORA-B261, NORA-B266, NORA-B221, NORA-B226, NORA-B271, NORA-B276, NORA-B281, NORA-B286
Applicant : u-blox AG
Zürcherstrasse 68, 8800 Thalwil, Switzerland
Manufacturer : u-blox AG
Zürcherstrasse 68, 8800 Thalwil, Switzerland
Standard : 47 CFR FCC Part 2 Subpart J, section 2.1093

The product was received on Apr. 07, 2025, and testing was started from Apr. 15, 2025 and completed on Apr. 24, 2025. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in KDB 447498 D04 Interim General RF Exposure Guidance v01 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Hsinhua Laboratory, the test report shall not be reproduced except in full.



Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

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History of This Test Report

[illegible]

Reviewed by: Ben Tseng

Report Producer: Debby Hung

1. General Description

1.1. EUT General Information

RF General Information			
Evaluation Mode	Frequency Range (MHz)	Operating Frequency (MHz)	Modulation Type
Bluetooth	2400-2483.5	2402-2480	LE: DSSS (GFSK)
802.15.4	2400-2483.5	2405-2475	DSSS (O-QPSK)

1.2. Table for Multiple Listing

The model names in the following table are all refer to the identical product.

Model	Antenna	Memory	NVM/RAM	SW Varina
NORA-B201	RF-port available at solder land (antenna pin)	nRF54L15	1.5MB /256 KB	Open CPU version
NORA-B206	integrated PCB trace antenna	nRF54L15	1.5MB /256 KB	Open CPU version
NORA-B281	RF-port available at solder land (antenna pin)	nRF54L15	1.5MB /256 KB	UCX version
NORA-B286	integrated PCB trace antenna	nRF54L15	1.5MB /256 KB	UCX version
NORA-B211	RF-port available at solder land (antenna pin)	nRF54L10	1.0 MB /192 KB	Open CPU version
NORA-B216	integrated PCB trace antenna	nRF54L10	1.0 MB /192 KB	Open CPU version
NORA-B261	RF-port available at solder land (antenna pin)	nRF54L10	1.0 MB /192 KB	UCX version
NORA-B266	integrated PCB trace antenna	nRF54L10	1.0 MB /192 KB	UCX version
NORA-B221	RF-port available at solder land (antenna pin)	nRF54L05	0.5 MB /96 KB	Open CPU version
NORA-B226	integrated PCB trace antenna	nRF54L05	0.5 MB /96 KB	Open CPU version
NORA-B271	RF-port available at solder land (antenna pin)	nRF54L05	0.5 MB /96 KB	UCX version
NORA-B276	integrated PCB trace antenna	nRF54L05	0.5 MB /96 KB	UCX version

From the above models, model: NORA-B201, NORA-B206 was selected as representative model for the test and its data was recorded in this report.

**1.3. Testing Location Information**

Test Lab. : Sporton International Inc. Hsinhua Laboratory		
☒ Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)	
	TEL: 886-3-327-3456	FAX: 886-3-327-0973
Test site Designation No. TW3785 with FCC.		
☐ Wen 33rd.St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)	
	TEL: 886-3-318-0787	FAX: 886-3-318-0287
Test site Designation No. TW0008 with FCC.		

2. RF Exposure Evaluation

2.1. Applicable Standard

In accordance with FCC 47 CFR part 2 (2.1093) this device has been defined as a portable device which is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.

Portable devices must be evaluated using the specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2003.

2.2. SAR evaluation

- Per KDB 447498 D04 Interim General RF Exposure Guidance v01,
Option (B): §1.1307(b)(3)(i)(B): Device operates between 300 MHz and 6 GHz and the maximum time-averaged power or effective radiated power (ERP), whichever is greater, $\leq P_{th}$.

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

Where

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

and

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

d = the separation distance (cm);

802.15.4

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;D1D	5.30	7.21	12.51	0.50	12.1930	1.50	B	22.410	0.5441

Bluetooth

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;BT-LE	3.00	6.85	9.85	0.50	6.6086	1.50	B	22.426	0.2947

- Per KDB 447498 D04 Interim General RF Exposure Guidance v01 exclusion thresholds is $12.1930 < 22.410$, RF exposure evaluation is not required.

—————THE END—————