

FCC RF EXPOSURE REPORT

For

MAYA-W2 host-based multiradio modules

MODEL NUMBER: MAYA-W271-00B

REPORT NUMBER: 4791682450-1-RF-7

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Prepared for

**u-blox AG
Zuercherstrasse 68, Thalwil, Ch-8800 Switzerland**

Prepared by

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

Building 10, Innovation Technology Park, No. 1, Li Bin Road, Song Shan Lake Hi-Tech Development Zone Dongguan, 523808, People's Republic of China

Tel: +86 769 22038881

Fax: +86 769 33244054

Website: www.ul.com

Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
<u>V0</u>	<u>May 12, 2025</u>	<u>Initial Issue</u>	<u>\</u>

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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: u-blox AG
Address: Zuercherstrasse 68, Thalwil, Ch-8800 Switzerland

Manufacturer Information1

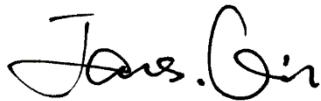
Company Name: u-blox AG
Address: Zuercherstrasse 68, Thalwil, Ch-8800 Switzerland

EUT Information

EUT Name: MAYA-W2 host-based multiradio modules
Model: MAYA-W271-00B
Series Model: \
Brand: \
Sample Received Date: February 21, 2025
Sample Status: Normal
Sample ID: 8456961

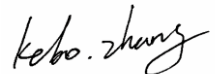
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47CFR§2.1091	PASS
KDB 447498 D01	PASS

Prepared By:



James Qin
Project Engineer

Checked By:



Kebo Zhang
Senior Project Engineer

Approved By:



Stephen Guo
Operations Manager

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 and KDB447498 D01 v06.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	<p>A2LA (Certificate No.: 4102.01) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA.</p> <p>FCC (FCC Designation No.: CN1187) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules</p> <p>ISED (Company No.: 21320) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320 and the test lab Conformity Assessment Body Identifier (CABID) is CN0046.</p> <p>VCCI (Registration No.: G-20192, C-20153, T-20155 and R-20202) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793.</p> <p>Facility Name: Chamber D, the VCCI registration No. is G-20192 and R-20202 Shielding Room B, the VCCI registration No. is C-20153 and T-20155</p>
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Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

Note 2: The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

Note 3: For below 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30MHz had been correlated to measurements performed on an OFS.

4. REQUIREMENT

LIMIT AND CALCULATION METHOD

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

Limits for General Population/Uncontrolled Exposure

RF EXPOSURE LIMIT

Frequency Range (MHz)	E-field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (Minutes)
0.3 -- 1.34	614	1.63	(100)*	30
1.34 -- 30	824/f	2.19/f	(180/f ²)*	30
30 -- 300	27.5	0.073	0.2	30
300 -- 1500	--	--	f/1500	30
1500 -- 100,000	--	--	1.0	30

CALCULATION METHOD

$$S = PG / 4\pi R^2$$

Where:

S=power density

P=power input to antenna

G=power gain of the antenna in the direction of interest relative to an isotropic radiator

R=distance to the center of radiation of the antenna

CALCULATED RESULTS**For Single RF Source**

Operation Band	Frequency (MHz)	Antenna Gain (dBi)	Tune-up Limit (dBm)	Power Density at R = 20 cm (W/m ²)	FCC Limit (W/m ²)	FCC Conclusion
BT	2402	2.13	17.9	0.2003	10.0000	Pass
BLE	2402	2.13	19.7	0.3032	10.0000	Pass
Zigbee	2405	2.13	21.4	0.4485	10.0000	Pass
2.4GHz WiFi	2402	3.55	19.1	0.3662	10.0000	Pass
U-NII	5170	4.28	19.5	0.4750	10.0000	Pass

Simultaneous Analysis:

Co-location of this module with other transmitters that operate simultaneously is required to be evaluated using the FCC multi-transmitter procedures.

$$2.4\text{GHz WiFi}/5\text{GHz WiFi (worst)} + \text{BT}/\text{BLE}/\text{Zigbee (worst)} = 0.475/10 + 0.4485/10 = 0.0924$$

Note:

1. The calculated distance is 20 cm.
2. The power comes from operation description.

END OF REPORT