

RF Exposure Evaluation Report

FCC ID : XPYANNAB5
Equipment : ANNA-B5 stand-alone Bluetooth Low Energy module
Brand Name : u-blox
Model Name : ANNA-B501, ANNA-B561, ANNA-B505 , ANNA-B565
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 Jul. 14, 2026, and testing was started from Jul. 24, 2026 and completed on Aug. 12, 2026. 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

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Photographs of EUT V01

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	O-QPSK

1.1.1 Antenna Information

Model Name : ANNA-B501, ANNA-B561					
External Antenna					
Ant.	Brand	Model Name	Antenna Type	Connector	Support
1	Taoglas	FXP72.07.0053A	PCB Antenna	u.fl	BLE + 802.15.4
2	Taoglas	FXP74.07.0100A	PCB Antenna	u.fl	BLE + 802.15.4
3	Taoglas	FXP75.07.0045B	PCB Antenna	u.fl	BLE + 802.15.4
4	Taoglas	PC17.07.0070A	PCB Antenna	I-Pex	BLE + 802.15.4

Ant.	Gain (dBi)	
	802.15.4	BT
1	3.06	3.06
2	4	4
3	2.5	2.5
4	0.9	0.9

For BT function:

For IEEE 802.15.1 Bluetooth mode (1TX/1RX)

Ant. 1 or Ant. 2 or Ant.3 or Ant.4 could transmit/receive.

For 802.15.4 function:

For IEEE 802.15.4 mode (1TX/1RX)

Ant. 1 or Ant. 2 or Ant.3 or Ant.4 could transmit/receive.

Model Name : ANNA-B505, ANNA-B565					
Integrated Antenna					
Ant.	Brand	Model Name	Antenna Type	Connector	Support
1	U-Blox	ANNA-B5	Chip Antenna	u.fl	BLE + 802.15.4

Ant.	Gain (dBi)	
	802.15.4	BT
1	-0.38	-0.38

For BT function:

For IEEE 802.15.1 Bluetooth mode (1TX/1RX)

Ant. 1 could transmit/receive.

For 802.15.4 function:

For IEEE 802.15.4 mode (1TX/1RX)

Ant. 1 could transmit/receive.

1.2. Table for Multiple Listing

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

Model Name	Description		
	Antenna type	Antenna	Software
ANNA-B501	External Antenna	Antenna pin	Open CPU
ANNA-B561	External Antenna	Antenna pin	u-connectXpress
ANNA-B505	Integrated Antenna	Chip antenna	Open CPU
ANNA-B565	Integrated Antenna	Chip antenna	u-connectXpress

From the above models, model: ANNA-B501, ANNA-B505 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.		

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	4.00	6.50	8.35	0.50	7.674	1	B	10.3	0.7462

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	4.00	6.37	8.22	0.50	7.447	1	B	10.175	0.7322

- Per KDB 447498 D04 Interim General RF Exposure Guidance v01 exclusion thresholds is $7.447 < 10.175$, RF exposure evaluation is not required.

—THE END—