

Test Report No:
24B0101R-RFUSV17S-A

RF EXPOSURE EVALUATION DECLARATION

Product Name	goRAN+ Base Station
Brand Name	
Model No.	BS1AT-D08US
FCC ID	2AXTDBS1ATD08US
Applicant's Name / Address	Ubiik Inc. 19F., No. 17, Sec. 1, Chengde Rd., Datong Dist., Taipei City 103, Taiwan (R.O.C.)
Manufacturer's Name / Address	Ubiik Inc. 19F., No. 17, Sec. 1, Chengde Rd., Datong Dist., Taipei City 103, Taiwan (R.O.C.)
Test Method Requested, Standard	FCC CFR Title 47 Part 2.1091 Radiofrequency radiation exposure evaluation: mobile devices.
Verdict Summary	IN COMPLIANCE
Documented By	 Amelia Wu
Approved By	 Allen Lin
Date of Receipt	Nov. 04, 2024
Date of Issue	May 28, 2025
Report Version	V1.0

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Competences and Guarantees

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

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General Conditions

1. The test results relate only to the samples tested.
2. The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.
3. This report must not be used to claim product endorsement by TAF or any agency of the government.
4. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.
5. Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Revision History

Version	Description	Issued Date
V1.0	Initial issue of report	May 28, 2025

1. General Information

1.1. EUT Description

RF General Information		
Frequency Range (MHz)	Operating Frequency (MHz)	Modulation Type
902~928	1.4MHz DL: 925~928 MHz 3MHz DL: 925~928 MHz (UL: 902-915MHz / DL: 925-928MHz)	Cat-1: QPSK / 16QAM / 64QAM Cat-M1: QPSK / 16QAM

RF General Information			
Evaluation Mode	Band	Operating Frequency Range (MHz)	Modulation Type
LTE	Band 106	Uplink: 897.5 ~ 900.5 Downlink: 936.5 ~ 939.5	Cat-1: QPSK / 16QAM / 64QAM Cat-M1: QPSK / 16QAM

The EUT supports two radio functions, a chip on board and the other is a certified WWAN module, and the WWAN module detail as below.

Brand Name	Model No.	FCC ID	Band	Operating Frequency Range (MHz)	Modulation Type
UBIIK	RC7611	2AXTDRC76B	LTE Band 2	Uplink: 1710 ~ 1910 Downlink: 1930 ~ 1990	QPSK / 16QAM
			LTE Band 4	Uplink: 1710 ~ 1755 Downlink: 2110 ~ 2155	
			LTE Band 13	Uplink: 777 ~ 787 Downlink: 746 ~ 756	

Note: The above EUT information is declared by the manufacturer.

1.2. Testing Location Information

Testing Location Information		
Test Laboratory : DEKRA Testing and Certification Co., Ltd.		
1 (TAF: 3024)	ADD: No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. TEL: +886-3-582-8001 FAX: +886-3-582-8958 Test site Designation No. TW3024 with FCC. Conformity Assessment Body Identifier (CABID) TW3024 with ISED.	
2 (TAF: 3024)	ADD: No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. TEL: +886-3-582-8001 FAX: +886-3-582-8958 Test site Designation No. TW3024 with FCC. Conformity Assessment Body Identifier (CABID) TW3024 with ISED.	
Test site number for address 1 includes HC-SR02. Test site number for address 2 includes HC-CB02, HC-CB03, HC-CB04, HC-SR10 and HC-SR12.		

2. RF Exposure Evaluation

2.1. Test Limit

(A) Test Limit for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric 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)
0.3-3.0	614	1.63	*(100)	<6
3.0-30	1842/f	4.89/f	*(900/f ²)	<6
30-300	61.4	0.163	1.0	<6
300-1500	-	-	f/300	<6
1500-100,000	-	-	5	<6

(B) Test Limit for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric 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

Note: f = frequency in MHz; *Plane-wave equivalent power density

Power Density (S) is calculated by the following formula:

$$S=(P*G) /4\pi R^2$$

where:

S = power density (in appropriate units, e.g. mW/ cm²)

P = power input to the antenna (in appropriate units, e.g., mW)

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

π = 3.1416

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

2.2. Test Result of RF Exposure Evaluation

Exposure Environment: General Population / Uncontrolled Exposure

SRD

Maximum conducted output power (dBm)	Antenna Gain (dBi)	E.I.R.P (dBm)	E.I.R.P (mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)	PASS / FAIL
29.87	4.93	34.800	3019.952	0.096	0.617	PASS

WWAN LTE of EUT

Evaluation Mode	Maximum Conducted Output Power (dBm)	Max Antenna Gain to Meet Limit (dBi)	E.I.R.P (dBm)	E.I.R.P (mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Test Result (PASS/FAIL)
LTE Band 106	29.92	12.20	42.120	16292.960	0.519	0.625	PASS

WWAN LTE of WWAN module

Evaluation Mode	Maximum Conducted Output Power (dBm)	Antenna Gain (dBi)	E.I.R.P (dBm)	E.I.R.P (mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Test Result (PASS/FAIL)
LTE Band 2	24.00	1.80	25.800	380.189	0.012	1.000	PASS
LTE Band 4	24.00	0.60	24.600	288.403	0.009	1.000	PASS
LTE Band 13	24.00	1.40	25.400	346.737	0.011	0.518	PASS

Co-location

Conclusion:

The formula of calculated the MPE is:

$$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$$

CPD = Calculation power density

LPD = Limit of power density

1. WWAN LTE of EUT + WWAN LTE of WWAN module = $0.829 + 0.021 = 0.850$, therefore the maximum calculations of above situations are less than the "1" limit.
2. SRD + WWAN LTE of WWAN module = $0.155 + 0.021 = 0.176$, therefore the maximum calculations of above situations are less than the "1" limit.

Note:

1. Distance (cm): 50 for Maximum Permissible Exposure.
2. The above EUT information is declared by the manufacturer.
3. The results are based on the maximum power.