

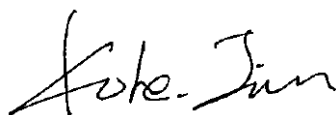
RF EXPOSURE EVALUATION REPORT

Application No.: GZCR2210001282AT
Applicant: NW BLUE LLC
Address of Applicant: 7805 SW 40th Ave #19282 Portland, OR 97219 USA
Manufacturer: CUBEPILOT PTY. LTD.
Address of Manufacturer: 153 Mercer street, Geelong, VIC, Australia 3220
Factory: NW BLUE LLC
Address of Factory: 1130 NW Noble Drive Estacada, Oregon 97023
Equipment Under Test (EUT):
EUT Name: HERELINK Blue Air Unit
Model No.: HLBA-1001
Trade Mark: **HERELINK**
Standard(s) : 47 CFR Part 1.1310
 KDB447498D01 General RF Exposure Guidance v06
Date of Receipt: 2022-10-09
Date of Evaluation: 2022-10-09
Date of Issue: 2022-11-21

Evaluation Result:

Pass*

* In the configuration evaluated, the EUT complied with the standards specified above.



Kobe Jian
EMC Laboratory Manager

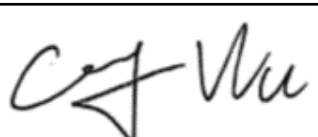
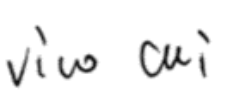


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Revision Record			
Version	Report No.	Date	Remark
01	GZCR221000128203	2022-11-21	Original

Authorized for issue by:			
			
		Curry Wu/Project Engineer	
			
		Vico Cui/Reviewer	



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2 Evaluation Summary

Item	Standard	Method	Requirement	Result
RF Exposure	KDB447498D01 General RF Exposure Guidance v06	KDB447498D01 General RF Exposure Guidance v06	47 CFR Part 1.1310	Pass

Note:

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.



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4 General Information

4.1 Details of E.U.T.

Power supply: DC 7-12V
 Cable(s): about 0.5m micro HDMI cable
 about 1.5m USB cable
 Operation Frequency: 2412MHz to 2462MHz for 20MHz
 2409MHz to 2459MHz for 10MHz
 Modulation Type: QPSK
 Bandwidth: 10MHz & 20MHz
 Antenna Type: Dedicated antenna
 Antenna Number: 2
 Antenna Gain: 3.98 dBi for both
 Remark: Ant 1 is transmitting + receiving function
 Ant 2 is receiving function only

4.2 Channel List

10MHz:

1	2409.00	5	2429.00	9	2449.00
2	2414.00	6	2434.00	10	2454.00
3	2419.00	7	2439.00	11	2459.00
4	2424.00	8	2444.00		

20MHz:

1	2412.00	5	2432.00	9	2452.00
2	2417.00	6	2437.00	10	2457.00
3	2422.00	7	2442.00	11	2462.00
4	2427.00	8	2447.00		

4.3 Evaluating Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,
 198 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District,
 Guangzhou, China 510663

Tel: +86 20 82155555 Fax: +86 20 82075059

No tests were sub-contracted.



4.4 Facility

The facility is recognized, certified, or accredited by the following organizations:

- **NVLAP (Lab Code: 200611-0)**

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

- **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

- **CNAS (Lab Code: L0167)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2018 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of Testing Laboratories.

- **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818.

- **ISED (Registration No.: 4620B, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

- **VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)**

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

- **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.

4.5 Deviation from Standards

None

4.6 Abnormalities from Standard Conditions

None



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5 Technical Requirements Specification

5.1 RF Exposure Evaluation

5.1.1 Limit & Test Method

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part1.1307(b)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
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) Limits for General Population/Uncontrolled Exposure				
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

F= Frequency in MHz

Friis Formula

Friis transmission formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

5.1.2 Conclusion

Normal use condition
for Distance between antenna and body: 20cm declared by applicant
Antenna Gain: 3.98 dBi

Frequency (MHz)	Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
10MHz						
2409	2.5	11.48	14.060	0.00699	1	Complies
2434	2.5	11.05	12.735	0.00633	1	Complies
2459	2.5	11.59	14.421	0.00717	1	Complies
20MHz						
2412	2.5	11.81	15.171	0.00755	1	Complies
2437	2.5	11.14	13.002	0.00647	1	Complies
2462	2.5	11.86	15.346	0.00763	1	Complies

So SAR report is not required.

Note: Refer to report No. GZCR221000128202 for EUT test Max Conducted Peak Output Power value.

6 EUT Constructional Details (EUT Photos)

Refer to External and Internal Photos for GZCR2210001282AT

- End of the Report -