



## RF EXPOSURE EVALUATION REPORT

**Application No.:** GZCR2204000403AT  
**Applicant:** HEXAERO PTE. LTD.  
**Address of Applicant:** 160 ROBINSON ROAD #14-04 SPORE BUSINESS FEDERATION CTR  
SINGAPORE (068914)  
**Manufacturer:** HEXAERO PTE. LTD.  
**Address of Manufacturer:** 160 ROBINSON ROAD #14-04 SPORE BUSINESS FEDERATION CTR  
SINGAPORE (068914)  
**Factory:** Diamond Digital Corporation  
**Address of Factory:** 8F., No.168-3, Liancheng Rd., Zhonghe Dist., New Taipei City 235, Taiwan  
**Equipment Under Test (EUT):**  
**EUT Name:** HERELINK Air Unit  
**Model No.:** HX4-06210  
**Trade Mark:** HERELINK  
**Standard(s):** 47 CFR Part 1.1307  
KDB447498D01 General RF Exposure Guidance v06  
**Date of Receipt:** 2022-04-14  
**Date of Evaluation:** 2022-06-21  
**Date of Issue:** 2022-07-22

<b>Evaluation Result:</b>	<b>Pass*</b>
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\* 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	GZCR220400040303	2022-07-22	Original

Authorized for issue by			
			
		Curry Wu/Project Engineer	
			
		Ricky Liu/Reviewer	

## 2 Evaluation Summary

Radio Spectrum Technical Requirement				
Item	Standard	Method	Requirement	Result
RF Exposure	KDB447498D01 General RF Exposure Guidance v06	KDB447498D01 General RF Exposure Guidance v06	KDB447498D01 General RF Exposure Guidance v06	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.

### 3 Contents

	Page
<b>1 Cover Page .....</b>	<b>1</b>
<b>2 Evaluation Summary .....</b>	<b>3</b>
<b>3 Contents .....</b>	<b>4</b>
<b>4 General Information.....</b>	<b>5</b>
4.1 Details of E.U.T. ....	5
4.2 Evaluating Location .....	5
4.3 Facility .....	6
4.4 Deviation from Standards.....	6
4.5 Abnormalities from Standard Conditions .....	6
<b>5 Technical Requirements Specification.....</b>	<b>7</b>
5.1 RF Exposure Evaluation .....	7
5.1.1 Limit & Test Method.....	7
5.1.2 Conclusion .....	8
<b>6 EUT Constructional Details (EUT Photos) .....</b>	<b>9</b>



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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 Gain:	4.97dBi

### 4.2 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.



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### 4.3 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.

### 4.4 Deviation from Standards

None

### 4.5 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 <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposures</b>				
0.3–3.0 .....	614	1.63	*(100)	6
3.0–30 .....	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30–300 .....	61.4	0.163	1.0	6
300–1500 .....	.....	.....	f/300	6
1500–100,000 .....	.....	.....	5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3–1.34 .....	614	1.63	*(100)	30
1.34–30 .....	824/f	2.19/f	*(180/f <sup>2</sup> )	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/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

G = gain of antenna in linear scale

$\pi = 3.1416$

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

$P_d$  is the limit of MPE, 1 mW/cm<sup>2</sup>. 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.



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**5.1.2 Conclusion**

Normal use condition for Distance between antenna and body: 20cm declared by applicant

Antenna Gain: 4.97 dBi

Frequency (MHz)	Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
10M						
2409	3.141	17.11	51.404	0.03212	1	Complies
2434	3.141	17.09	51.168	0.03197	1	Complies
2459	3.141	17.15	51.880	0.03241	1	Complies
20M						
2412	3.141	14.15	26.002	0.01625	1	Complies
2437	3.141	14.55	28.510	0.01781	1	Complies
2462	3.141	14.42	27.669	0.01729	1	Complies

The signal of 10MHz and 20MHz can not be transmitted at the same time.

So SAR report is not required.

Note: Refer to report GZCR220400040302 for EUT test Max Conducted Peak Output Power value.



## 6 EUT Constructional Details (EUT Photos)

Refer to Appendix - External and Internal Photos for GZCR2204000403AT

- End of the Report -