TEST REPORT

CTK Co., Ltd.
(Ho-dong), 113, Yejik-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea
Tel: +82-31-339-9970
Fax: +82-31-624-9501

Report No.: CTK-2022-02092

1. Applicant

◦ Name : BITFINDER, INC

◦ Address : 315 Montgomery Street, 10th Floor, San Francisco, California, United States

◦ Date of Receipt : 2022-05-13

2. Manufacturer

◦ Name : BITFINDER, INC

◦ Address : 315 Montgomery Street, 10th Floor, San Francisco, California, United States

3. Use of Report : For FCC & ISED Certification

4. Test Sample / Model : AWAIR MESH SURFACE MOUNT / AWAIRNET

5. Date of Test : 2022-05-26 to 2022-06-13

6. Test Standard(method) used : FCC 47 CFR part 2 subpart J 2.1091, RSS-102 Issue 5

7. Testing Environment: Temp.: (23 ± 1) ℃, Humidity: (48 ± 3) % R.H.

8. Test Results : Compliance

9. Location of Test : ☒ Permanent Testing Lab ☐ On Site Testing

The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This report cannot be reproduced or copied without the written consent of CTK.

Approval	Tested by Gwanyong Kim: (Signature)	Technical Manager Young-taek Lee: (Signature)

Remark. This report is not related to KOLAS accreditation and relevant regulation.

2022-08-08

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REPORT REVISION HISTORY

Date	Revision	Page No
2022-08-08	Issued (CTK-2022-02092)	all

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CONTENTS

1. General Product Description

1.1 Client Information

Company	BITFINDER, INC
Contact Point	315 Montgomery Street, 10th Floor, San Francisco, California, United States
Contact Person	Name : Kevin Cho E-mail : adnan@getawair.com

1.2 Product Information

FCC ID	2AF65AWAIRNET
Certification Number ISED	28737-AWAIRNET
Product Description	AWAIR MESH SURFACE MOUNT
Basic model (HVIN)	AWAIRNET
Variant Model name	-
FVIN	0.7.4.revc1
Operating Frequency Range	13.56 MHz
RF Output Power	64.1 dBuV/m @ 3m
Antenna Type	FPC Coil Antenna
Power Source	DC 3.3 V, DC 5 V (Selectively use)

1.3 Peripheral Devices

Device	Manufacturer	Model No.	Serial No.
Note Computer	HP	15-bs563TU	CND7253R6P
AC/DC Adapter	HP	HSTNN-LA40	7628011101

2. Facility and Accreditations

2.1 Test Facility

5, Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, 17142 Korea

2.2 Laboratory Accreditations and Listings

Country	Agency	Registration Number
USA	FCC	805871
CANADA	ISED	8737A-2
KOREA	NRRA	KR0025

2.3 Calibration Details of Equipment Used for Measurement

Test equipment and test accessories are calibrated on regular basis. The maximum time between calibrations is one year or what is recommended by the manufacturer, whichever is less. All test equipment calibrations are traceable to the Korea Research Institute of Standards and Science (KRISS), therefore, all test data recorded in this report is traceable to KRISS.

3. RF Exposure Assessment

3.1 Introduction

FCC Limit

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(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
300-1,500	-	-	f/1500	30
1,500-100,000	-	-	1.0	30
Note 1 : f = frequency in MHz; *Plane-wave equivalent power density Note 2 : For the applicable limit, see FCC 1.1310				

ISED Limit

RF Field Strength Limits for Devices Used by the General Public (Uncontrolled Environment)				
Frequency Range (MHz)	Electric Field (V/m rms)	Magnetic Field (A/m rms)	Power Density (W/m^2)	Reference Period (minutes)
0.003-10	83	90	-	Instantaneous*
0.1-10	-	0.73/f	-	6**
1.1-10	87/$f^{0.5}$	-	-	6**
10-20	**27.46**	**0.0728**	-2	6
20-48	58.07/$f^{0.25}$	0.1540/$f^{0.25}$	8.944/$f^{0.5}$	6
48-300	22.06	0.05852	1.291	6
300-6000	3.142 $f^{0.3417}$	0.008335 $f^{0.3417}$	0.02619 $f^{0.6834}$	6
6000-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	616000/$f^{1.2}$
150000-300000	0.158 $f^{0.5}$	4.21 x 10^{-4} $f^{0.5}$	6.67 x 10^{-5} f	616000/$f^{1.2}$
Note: f is frequency in MHz. * Based on nerve stimulation (NS). ** Based on specific absorption rate (SAR).				

Test method

a) Performed aggregate both leakage E-field and H-field at surrounding the device from all simultaneous transmitting coils.
b) During testing, the EUT was placed on a non-conductive table top and the ancillary equipment (e.g., mobile phone) was placed on the EUT for charging. Maximum E-field and H-field measurement were tested 20 cm* from each side of the EUT. Along the side of the EUT to side of E-field probe and H-field probe were positioned at the location to search maximum field strength.
* The actual test was tested at 15 cm.

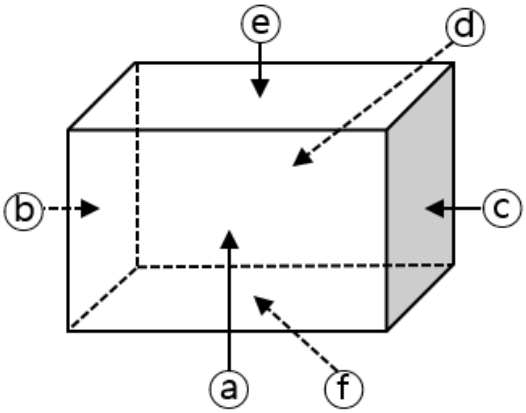
3.2 Maximum Measurement Uncertainty

The value of the measurement uncertainty for the measurement of each parameter.
Coverage factor k = 2, Confidence levels of 95 %

item	Uncertainty
H-field	15 % (C.L. : Approx. 95 %, k = 2)
E-field	15 % (C.L. : Approx. 95 %, k = 2)

3.3 Test Set-up

3.3.1 EUT Position



Note : ⓐ : Front, ⓑ : Left, ⓒ : Right, ⓓ : Rear, ⓔ : Top, ⓕ : Bottom

3.3.2 Test mode

Mode
Transmit Status (DC 3.3 V)
Transmit Status (DC 5 V)

3.4 Test-related

3.4.1 Test Result

-Complied

The probe was positioned at the location where there is maximum field strength on each side of the EUT. The maximum E-field and H-field is reported below.

- DC 3.3 V (13.56 MHz)

E-field Measurements

Distance (cm)	Position ⓐ (V/m)	Position ⓑ (V/m)	Position ⓒ (V/m)	Position ⓓ (V/m)	Position ⓔ (V/m)	Position ⓕ (V/m)	FCC Limit (V/m)	ISED Limit (V/m)
15	0.62	0.78	0.57	0.27	0.40	0.62	60.77	27.46

H-field Measurements

Distance (cm)	Position ⓐ (A/m)	Position ⓑ (A/m)	Position ⓒ (A/m)	Position ⓓ (A/m)	Position ⓔ (A/m)	Position ⓕ (A/m)	FCC Limit (A/m)	ISED Limit (A/m)
15	0.0176	0.0100	0.0093	0.0077	0.0077	0.0082	0.1615	0.0728

- DC 5 V (13.56 MHz)

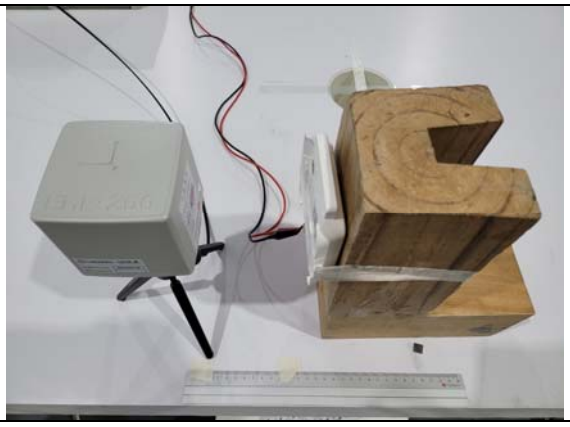
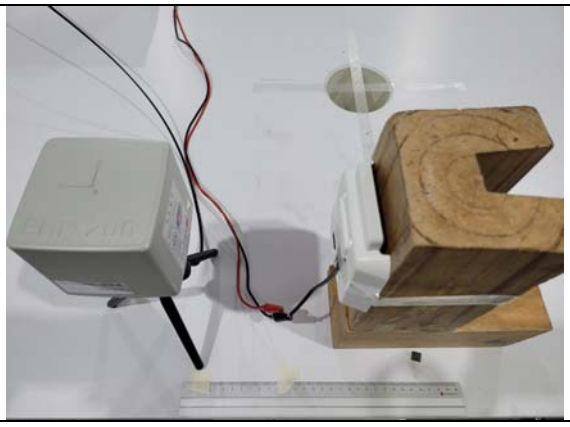
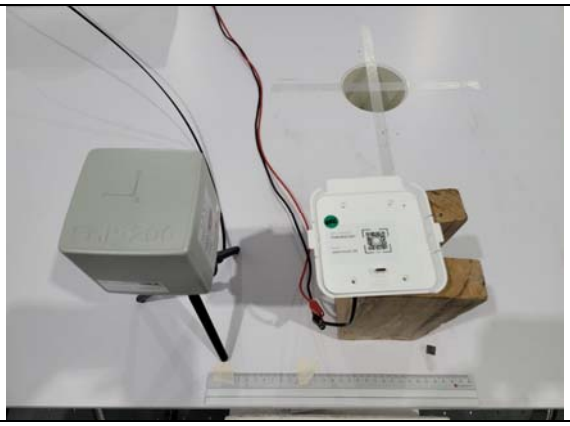
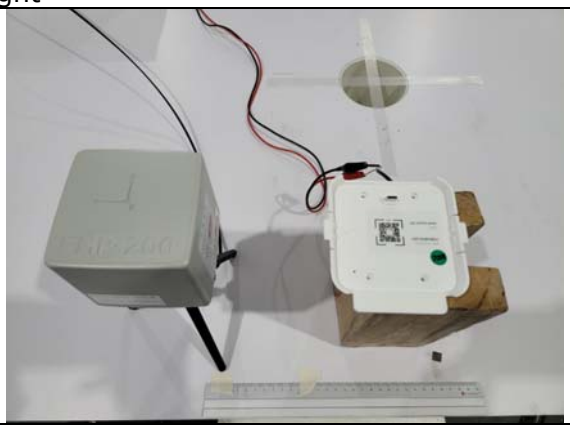
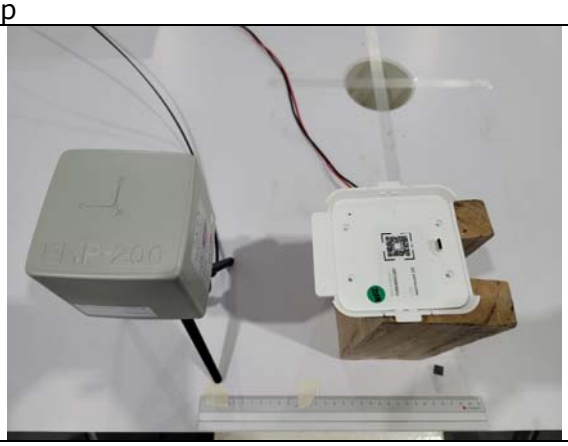
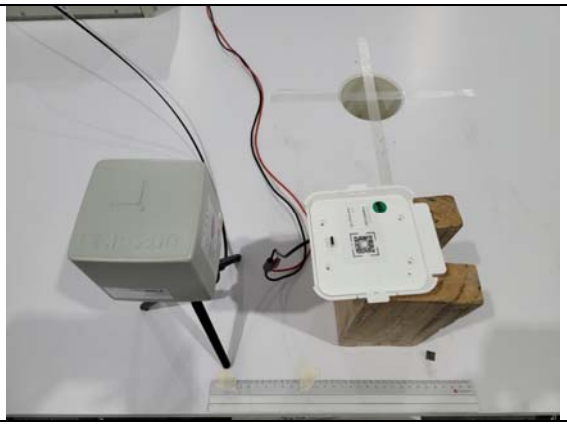
E-field Measurements

Distance (cm)	Position ⓐ (V/m)	Position ⓑ (V/m)	Position ⓒ (V/m)	Position ⓓ (V/m)	Position ⓔ (V/m)	Position ⓕ (V/m)	FCC Limit (V/m)	ISED Limit (V/m)
15	0.48	0.38	0.61	0.35	0.58	0.80	60.77	27.46

H-field Measurements

Distance (cm)	Position ⓐ (A/m)	Position ⓑ (A/m)	Position ⓒ (A/m)	Position ⓓ (A/m)	Position ⓔ (A/m)	Position ⓕ (A/m)	FCC Limit (A/m)	ISED Limit (A/m)
15	0.0155	0.0067	0.0064	0.0094	0.0087	0.0093	0.1615	0.0728

3.4.2 Test Result

Front	Near
	
Left	**Right**
	
Top	**Bottom**
	
Antenna Location	
	

APPENDIX A – Test Equipment Used For Tests

No.	Name of Equipment	Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date
1	Electric and Magnetic Field Analyzer	Narda	EHP-200AC	170WX91010	2021-10-27	2022-10-27
2	EHP200-TS Software	Narda	EHP200-TS	650.000.207	-	-
3	Dual-Tracking DC Power Supply	Topward Electric Instruments Co.,Ltd.	6303D	711196	2022-04-18	2023-04-18

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