RF Exposure Evaluation Report

Applicant:	OMO Systems Ltd.
Address of Applicant:	Griva Digeni, 80, SWEPCO COURT 6, 2nd floor, 31016 Limassol, Cyprus
Equipment Under Test (EUT)	
Product Name:	OMO HUB
Model No.:	PRO NEO V1.0
FCC ID:	2A7ER-PRONEO-V1
Applicable standards:	FCC CFR Title 47 Part 2 (§2.1091)
Date of sample receipt:	21 Jun., 2022
Date of Test:	22 Jun., to 02 Aug., 2022
Date of report issue:	03 Aug., 2022
Test Result:	PASS

Tested by:	Mike.ou ***Test Engineer***	***Date:***	*03 Aug., 2022*
Reviewed by:	Aiwen Zhang ***Project Engineer***	***Date:***	*03 Aug., 2022*
Approved by:	Chris Zhang ***Manager***	***Date:***	*03 Aug., 2022*

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in above the application standard version. Test results reported herein relate only to the item(s) tested.

1 Version

Version No.	Date	Description
00	*03 Aug., 2022*	*Original*

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3 General Information

3.1 Client Information

Applicant:	OMO Systems Ltd.
Address:	Griva Digeni, 80, SWEPCO COURT 6, 2nd floor, 31016 Limassol, Cyprus
Manufacturer:	OMO Systems Ltd.
Address:	Griva Digeni, 80, SWEPCO COURT 6, 2nd floor, 31016 Limassol, Cyprus
Factory:	Hangzhou Roombanker Technology Co., Ltd.
Address:	A#801 Wantong center, Hangzhou, China

3.2 General Description of E.U.T.

Product Name:	OMO HUB
Model No.:	PRO NEO V1.0
Operation Frequency:	BLE: 2402MHz~2480MHz ZigBee: 2405MHz~2480MHz WCDMA: Band II: 1852.4 MHz - 1907.6 MHz Band IV: 1712.4 MHz - 1752.6 MHz Band V: 826.4 MHz - 846.6 MHz LTE: Band 2: 1850 MHz - 1910 MHz Band 4: 1710 MHz - 1755 MHz Band 5: 824 MHz - 849 MHz Band 12: 699 MHz - 716 MHz Band 13: 777 MHz - 787 MHz Band 14: 788 MHz - 798 MHz Band 66: 1710 MHz - 1780 MHz Band 71: 663 MHz - 698 MHz
Modulation technology:	BLE: GFSK; ZigBee: OQPSK; WCDMA: QPSK; LTE: QPSK, 16QAM
Antenna Type:	External glue stick Antenna & Internal Antenna
Antenna gain:	BLE: 2.0 dBi; ZigBee: 1.25 dBi; WCDMA/LTE:6.0 dBi
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

3.3 Operating Modes

Operating mode	Detail description
BLE mode	Keep the EUT in continuously transmitting in BLE mode
ZigBee mode	Keep the EUT in continuously transmitting in ZigBee mode
WCADM Band II mode	Keep the EUT in continuously transmitting in WCADM Band II mode
WCADM Band IV mode	Keep the EUT in continuously transmitting in WCADM Band IV mode
WCADM Band V mode	Keep the EUT in continuously transmitting in WCADM Band V mode
LTE Band 2 mode	Keep the EUT in continuously transmitting in LTE Band 2 mode
LTE Band 4 mode	Keep the EUT in continuously transmitting in LTE Band 4 mode
LTE Band 5 mode	Keep the EUT in continuously transmitting in LTE Band 5 mode
LTE Band 12 mode	Keep the EUT in continuously transmitting in LTE Band 12 mode
LTE Band 13 mode	Keep the EUT in continuously transmitting in LTE Band 13 mode
LTE Band 66 mode	Keep the EUT in continuously transmitting in LTE Band 66 mode

LTE Band 71 mode	Keep the EUT in continuously transmitting in LTE Band 71 mode

3.4 Additions to, deviations, or exclusions from the method

No

3.5 Laboratory Facility

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

- **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

- **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

- **CNAS - Registration No.: CNAS L15527**

JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527.

- **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf

3.6 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.
Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.
Tel: +86-755-23118282, Fax: +86-755-23116366
Email: info-JYTee@lets.com, Website: http://jyt.lets.com

4 Technical Requirements Specification

4.1 Limits

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 1.1307(b)

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

4.2 Test Procedure

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

Where:

S = power density

P = power input to the antenna

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

R = distance to the centre of radiation of the antenna

4.3 Result

Frequency (MHz)	Maximum Output power (dBm)	Maximum Output power (mW)	Antenna Gain (dBi)	Antenna Gain (numeric)	Distance (cm)	Result (mW/cm^2)	Limits for General Population/ Uncontrolled Exposure (mW/cm^2)
BLE							
2480	8.598	7.24	2.0	1.58	20.00	0.002	1.0
ZigBee							
2480	6.604	4.58	1.25	1.33	20.00	0.001	1.0
WCDMA							
Band II	23.17	207.49	6.0	4.0	20.00	0.164	1.0
Band IV	23.39	218.27	6.0	4.0	20.00	0.173	1.0
Band V	23.01	199.99	6.0	4.0	20.00	0.158	0.55
LTE							
Band 2	23.85	242.66	6.0	4.0	20.00	0.192	1.0
Band 4	23.72	235.50	6.0	4.0	20.00	0.187	1.0
Band 5	23.98	250.03	6.0	4.0	20.00	0.198	0.56
Band 12	23.74	236.59	6.0	4.0	20.00	0.187	0.48
Band 13	23.85	242.66	6.0	4.0	20.00	0.192	0.52
Band 14	23.90	245.47	6.0	4.0	20.00	0.195	0.53
Band 66	23.82	240.99	6.0	4.0	20.00	0.191	1.0
Band 71	23.47	222.33	6.0	4.0	20.00	0.176	0.45

Simultaneous transmission(Worse mode):

ANT No.	Mode	Ratio	Total Ratio	Limit
Main ANT	LTE Band 71	0.391	0.394	1.00
Secondary ANT	BLE	0.002		
	ZigBee	0.001		

Note: 1.Just the worst case mode was shown in report.

2.The WCDMA Max Output Power Please refer to R1907A0408-R1V1, R1907A0408-R2V1, R1907A0408-R3V1 report, LTE Max Output Power Please refer to R1907A0408-R2V1, R1907A0408-R1V1, R1907A0408-R3V1, R1907A0408-R4V1 report.

4.4 Conclusion

The device is exempt from the SAR test and satisfies RF exposure evaluation.

------End of report------