RF Exposure Evaluation Report

Product	:	Open Frame
Trade mark	:	OUTFORM
Model/Type reference	:	UIO0421B-C02, UIO0418X-XYY, UIO0424X-XYY, UIO0421X-XYY,The 1st X is “A” or “B” represents the agent or the client; The 2nd X is A-Z represents the color; YY is client number from “01” to “90”
Serial Number	:	N/A
Report Number	:	EED32L00017403
FCC ID	:	2AO9X-UIO0421BC02
Date of Issue	:	May 14, 2019
Test Standards	:	47 CFR Part 1.1307 47 CFR Part 1.1310 KDB447498D01v06
Test result	:	PASS

Prepared for:

Outform Science and Technology Ltd.
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CENTRE TESTING INTERNATIONAL GROUP CO.,LTD. Report Seal

2 Version

Version No.	Date	Description
00	May 14, 2019	Original

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4 General Information

4.1 Client Information

Applicant:	Outform Science and Technology Ltd.
Address of Applicant:	No. A103 Medical Appliance and Industry Garden, #1019, Nanhai Road. Nanshan district ,Shenzhen 518035 China
Manufacturer:	Outform Science and Technology Ltd.
Address of Manufacturer:	No. A103 Medical Appliance and Industry Garden, #1019, Nanhai Road. Nanshan district ,Shenzhen 518035 China
Factory:	Outform Science and Technology Ltd.
Address of Factory:	No. A103 Medical Appliance and Industry Garden, #1019, Nanhai Road. Nanshan district ,Shenzhen 518035 China

4.2 General Description of EUT

Product Name:	Open Frame
Model No.(EUT):	UIO0421B-C02,UIO0418X-XYY, UIO0424X-XYY, UIO0421X-XYY,The 1st X is “A” or “B” represents the agent or the client; The 2nd X is A-Z represents the color; YY is client number from “01” to “90”
Test Model No.:	UIO0421B-C02
Trade Mark:	OUTFORM
EUT Supports Radios application	BT: 4.0 BT single mode, 2402MHz to 2480MHz WiFi: IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz

4.3 Product Specification subjective to this standard

Frequency Range:	BT: 4.0 BT single mode, 2402MHz to 2480MHz WiFi: IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz	
Modulation Type:	BT: GFSK WiFi:802.11b, 802.11g ,802.11n(20MHz)	
Antenna Type:	omnidirectional antenna	
Antenna Gain:	5dBi	
Power Supply:	Adapter	Model: EA10681U-120 Input: 100-240VAC~2.0A, 50~60Hz Output: 12V⎓6A
Conduct Peak Power:	15.56dBm	
	The Conduct Peak Power data refer to the report EED32L00017401, EED32L00017402	
Sample Received Date:	Jan. 24, 2019	
Sample tested Date:	May 08, 2019 to May 09, 2019	
The tested sample(s) and the sample information are provided by the client. Model No.:UIO0418X-XYY, UIO0424X-XYY, UIO0421X-XYY,The 1st X is “A” or “B” represents the agent or the client; The 2nd X is A-Z represents the color; YY is client number from “01” to “90” Only the model UIO0418X-XYY was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference being the color and model names due to difference agent and marketing pruposes.		

4.4 Test Location

All tests were performed at:
Centre Testing International Group Co., Ltd
Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China
Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385
No tests were sub-contracted.
FCC Designation No.: CN1164

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 RF Exposure Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Limits

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

A rough estimation of the expected exposure in power flux density on a given point can be made with the following equation:

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

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

EIRP = P*G

The antenna of the product, under normal use condition is at least 20 cm away from the body of the user. Warning statement to the user for keeping at least 20cm separation distance and the prohibition of operating to a person has been printed on the user's manual. Therefore, the S of the device is calculated with R=20cm, and if it is below the limit S, then we can conclude the device complies with the rules.

5.1.2 Test Procedure

Software provided by client enabled the EUT to transmit data at lowest, middle and highest channel individually.

5.1.3 EUT RF Exposure Evaluation

Antenna Gain: 2dBi

Output Power Into Antenna & RF Exposure Evaluation Distance:

Channel	Frequency (MHz)	Max Conducted Peak Output Power(dBm)	Gain (dBi)	EIRP* (dBm)	EIRP (mW)	R (cm)	S (mW/cm^2)	Limit (mW/cm^2)	Result
Highest	2462	15.56	5	20.56	113.76	20	0.023	1.0	Pass

Note: Refer to report No. EEED32L00017401, EED32L00017402 for EUT test Max Conducted Peak Output Power value.

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32L00017401 for EUT external and internal photos.

*** End of Report ***