EMF TEST REPORT

Test Report No. : **OT-24N-RWD-048**

Reception No. : **2410003622**

Applicant : **UNION COMMUNITY**

Address : **12F, Munjeong Daemyeong Valeon bldg, 127 Beobwon-ro Songpa-gu, Seoul, South Korea**

Manufacturer : **UNION COMMUNITY**

Address : **12F, Munjeong Daemyeong Valeon bldg, 127 Beobwon-ro Songpa-gu, Seoul, South Korea**

Type of Equipment : **Access controller**

FCC ID : **XX2-UBIOFACEPRMR**

Model Name : **UBio-X Face Premium**

Multiple Model Name : **N/A**

Serial number : **N/A**

Total page of Report : **6 pages (including this page)**

Date of Incoming : **October 17, 2024**

Date of Issuing : **November 28, 2024**

SUMMARY

The equipment complies with the requirements of ***FCC CFR 47 § 1.1307***

This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

This report is not correlated with the "KS Q ISO/IEC 17025 and KOLAS accreditation" of Korean Laboratory Accreditation Scheme.

Tested by	Reviewed by	Approved by
Dong-Yeon, Han / Engineer	Tae-Ho, Kim / Chief Engineer	Jae-Ho, Lee / Chief Engineer
ONETECH Corp.	ONETECH Corp.	ONETECH Corp.

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

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ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

Revision History

Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected
0	OT-24N-RWD-048	November 28, 2024	Initial Release	All

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1. VERIFICATION OF COMPLIANCE

Applicant : UNION COMMUNITY

Address : 12F, Munjeong Daemyeong Valeon bldg, 127 Beobwon-ro Songpa-gu, Seoul, South Korea

Contact Person : Dong Ho, Lee

Telephone No. : +82-2-6488-3054

FCC ID : XX2-UBIOFACEPRMR

Model Name : UBio-X Face Premium

Brand Name : -

Serial Number : N/A

Date : November 28, 2024

E.U.T. DESCRIPTION	Access controller
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	KDB 447498 D04 Interim General RF Exposure Guidance v01
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
MODIFICATIONS ON THE EQUIPMENT TO ACHIEVE COMPLIANCE	None

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

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2. GENERAL INFORMATION

2.1 Product Description

The UNION COMMUNITY, Model UBio-X Face Premium (referred to as the EUT in this report) is an Access controller, Product specification information described herein was obtained from product data sheet or user's manual.

DEVICE TYPE	Access controller
TRANSMITTING FREQUENCY	127.04 kHz, 13.56 MHz 2 412 MHz ~ 2 462 MHz, 2 402 MHz ~ 2 480 MHz
MODULATION	ASK
ANTENNA TYPE	Coil Antenna, PCB Antenna
LIST OF EACH OSC. or CRY. FREQ.(FREQ. >= 1 MHz)	32.768 kHz. 24 MHz, 48 MHz

2.2 Model Differences

-. None

2.3 Related Submittal(s) / Grant(s)

Original submittal only

3. EUT MODIFICATIONS

-. None

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4. RADIO FREQUENCY EXPOSURE

4.1 Environmental evaluation and exposure limit

In accordance with KDB 447498 D04 Interim General RF Exposure Guidance v01.

1 mW Test Exemption according paragraph 2.1.2

- 124.75 kHz Maximum measured power = 82.29 dBμV/m = 0.34 x 10^{-2} mW at 127.04 kHz
  with P = (E×d)2 / (30×Gp) with d = 3 m and Gp = 1

- 13.56 MHz Maximum measured power = 60.56 dBμV/m = 0.02 x 10^{-3} mW at 13.56 MHz
  with P = (E×d)2 / (30×Gp) with d = 3 m and Gp = 1

Calculated MPE Safe Distance(WLAN 2.4G & LE 1M)

Operating Freq. Band (MHz)	Operating Mode	Target Power W/tolerance (dBm)	Max tune up power		Antenna Gain		Safe Distance (cm)	Power Density (mW/cm²) @ 20 cm Separation	Limit (mW/cm²)
			(dBm)	(mW)	Log	Linear			
WLAN_ 2 400 ~ 2 483.5	802.11b	17.28 ± 1.0	18.29	67.30	1.57	1.44	2.77	0.019 2	1.00
	802.11g	14.88 ± 1.0	15.88	38.73			2.10	0.011 1	1.00
	802.11n_HT20	14.90 ± 1.0	15.90	38.90			2.11	0.011 1	1.00
	802.11n_HT40	15.13 ± 1.0	16.13	41.02			2.16	0.011 7	1.00
	Bluetooth LE 1M	5.71 ± 1.0	6.71	4.69			0.73	0.001 3	1.00

DATA for Intermodulation Transmit

According to above equation, the following result was obtained.

Simultaneous Transmission	Operating Mode	Power Density (mW/cm²)	Sum Power Density	Limit
WLAN 2.4G + 13.56 MHz (RFID) + 126.3 kHz	802.11b	0.019 2	0.019 4	1
	13.56 MHz (RFID)	0.000 1		
	126.3 kHz	0.000 1		