RF EXPOSURE REPORT

Applicant	Otis Science and Technology Development (Shanghai) Co., Ltd.
Address	Floor 3, Building 2, No. 200, Zhangheng Road, China (Shanghai) Pilot Free Trade Zone, Shanghai, China

Manufacturer or Supplier	Otis Science and Technology Development (Shanghai) Co., Ltd.
Address	Floor 3, Building 2, No. 200, Zhangheng Road, China (Shanghai) Pilot Free Trade Zone, Shanghai, China
Product	4G IoT Wireless Gateway
Brand Name	Otis ONE®
Model	GW0300B
Additional Model & Model Difference	N/A
Date of tests	Apr. 20, 2021 ~ May 12, 2021

☒ **FCC Part 2 (Section 2.1091)**

☒ **KDB 447498 D01**

☒ **IEEE C95.1**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Tested by Lucas Chen Project Engineer / EMC Department	Approved by Glyn He Assistant Manager / EMC Department
	 Date: Jun. 30, 2021

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FM2104WDG0210	Original release	Jun. 30, 2021

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1. CERTIFICATION

FCC ID:	2AUTDGW0300B
PRODUCT:	4G IoT Wireless Gateway
BRAND NAME:	Otis ONE®
MODEL NO.:	GW0300B
ADDITIONAL NO.:	N/A
TEST SAMPLE:	Engineering Sample
APPLICANT:	Otis Science and Technology Development (Shanghai) Co., Ltd.
STANDARDS:	FCC Part 2 (Section 2.1091)
	KDB 447498 D01
	IEEE C95.1

2. RF EXPOSURE LIMIT

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm^2)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

3. MPE CALCULATION FORMULA

$Pd = (Pout*G) / (4*pi*r^2)$

where

Pd = power density in mW/cm^2

Pout = 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

4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

5. ANTENNA GAIN

The antennas provided to the EUT, please refer to the following table:

Mode	Transmitter Circuit	Peak Gain (dBi)	Antenna Type
BT	Chain 0	3	Sucker Antenna
WIFI	Chain 0	3	Sucker Antenna

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

The tuned conducted Average Power (declared by client)

Mode	Frequency (MHz)	Target Power (dBm)	Tolerance (dBm)	Lower Tolerance (dBm)	Upper Tolerance (dBm)
BT-LE (GFSK)	2402-2480MHz	2	+-1	1	3
802.11b	2412-2462MHz	19	+-1	18	20
802.11g	2412-2462MHz	18	+-1	17	19
802.11n HT20	2412-2462MHz	16	+-1	15	17
802.11n HT40	2422-2452MHz	16	+-1	15	17

The measured conducted Average Power

Mode	Frequency (MHz)	Averaged Power (dBm)
BT-LE (GFSK)	2440	2.03
802.11b	2412	19.39
802.11g	2412	18.33
802.11n HT20	2412	15.74
802.11n HT40	2422	15.80

FREQUENCY BAND (MHz)	MAX AVERAGE POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
BT 2402-2480	3	3	20	0.00079	1.0
WiFi 2412-2462	20	3	20	0.03969	1.0

CONCLUSION:

The BT and WLAN can transmit simultaneously, the formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1
CPD = Calculation power density
LPD = Limit of power density

(0.00079/1)+(0.03969/1) = 0.04048<1, which is less than the “1” limit.

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