

RF Exposure Report (FCC)

Report No.: WIR125986-FCC-ACT-RF Exposure

Test Model: Splunk SPLKEH201GL

Received Date: February 10, 2023

Test Date: March 14, 2023– April 24, 2023

Issued Date: July 15, 2023

Applicant: Actineon, Inc.

Address: 2530 Zanker Road, San Jose, California 95131

Issued By: Eurofins Electrical and Electronic Testing NA, Inc.

Lab Address: 3162 Belick St. Santa Clara CA, 95054



1. Certificate of Conformity

Product: IOT EDGE HUB
Brand: Actineon
Test Model: Splunk SPLKEH201GL
FCC ID: 2BBHWSPLKEH201GL
Series Model: N/A
Sample Status: Engineering Sample
Applicant: Actineon, Inc.
Test Date: March 14, 2023– April 24, 2023

Standard: FCC Part 2 (Section 2.1091)
KDB 447498 D01 General RF Exposure Guidance v06
IEEE C95.1-1992

Richard Dollente
Richard Dollente
Test Engineer, Wireless Laboratory

Engineering Statement: The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made.

Gary Chou
Gary Chou
Wireless Engineering Manager, Wireless Laboratory

Revision	Report Date	Reason for Revision
Ø	July 15, 2023	Initial Issue.

2. RF Exposure

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

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				
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

f = Frequency in MHz; *Plane-wave equivalent power density

2.1 MPE Calculation Formula

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

2.2 Antenna Gain

WLAN/ BT/ BLE:

Antenna Manufacturer/ Model:

Quectel/ YF0026AA

Antenna Type: PCB Antenna

Antenna Gain:

2.4 GHz: 3.2 dBi

5GHz: 5dBi

Cellular:

Antenna Manufacturer/ Model:

Quectel/ YE0007AA

Antenna Type: Dipole Antenna

680 MHz -960 MHz : 3.0 dBi

1710 MHz - 2170 MHz : 4.1 dBi

2170 MHz - 2690 MHz : 3.2 dBi

3300 MHz – 4000 MHz : 3.9 dBi

2.3 Calculation Result worst case of Maximum Conducted Power

Type/ Band	Frequency Band (MHz)	Max Power (tune up) (dBm)	Max Power (tune up) (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
LTE-CAT-M	B2,B4,B5,B12,B13,B25,B26,B66,B85	25.00	316.227	4.1	20	0.161790	0.477
Bluetooth LE/ BT	2402-2480	4.6810	2.9383	3.2	20	0.001222	1
WLAN 2.4GHz	2412-2462	21.7753	150.4977	3.2	20	0.062586	1
WLAN 5GHZ	5180-5825	23.2401	210.8677	5	20	0.132727	1

The maximum calculations of above situations are less than the limit.
The SAR evaluation is not required.

Note:

- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

3. This device contains

TYPE	Model No.	FCC ID	Note
-	-	-	-

4. Conclusion

Conclusion:

The formula of calculated the MPE is:

$$CPD1 / LPD1 + CPD2 / LPD2 +etc. < 1$$

CPD = Calculation power density

LPD = Limit of power density

Worse case

Total MPE Percentage for

$$LTE-CAT-M+2.4GHZ WLAN+BT/BLE = 0.40299039 < 1$$

$$LTE-CAT-M+5GHZ WLAN+BT/BLE = 0.47313139 < 1$$

Therefore, the maximum calculations of above situations are less than the “1” limit.
The SAR evaluation is not required.