

RF EXPOSURE REPORT

OF

Applicant: Fluidmesh Networks LLC
81 Prospect Street Brooklyn NY 11201 USA

Product Name: FM4200F

Brand Name: Fluidmesh FM4200F

Model No.: FM4200F

Model Difference: N/A

Report Number: ER/2020/30119

FCC ID: R5S-4200F

FCC Rule Part Part 2.1091

Issue Date: Jun. 01, 2020

We hereby certify that:

The above equipment was verified by SGS Taiwan Ltd. The evaluation in this report is in compliance with the above rule(s).

The results of this report relate only to the sample identified in this report.

Approved By: _____

John Teh

Yeh John / Asst. Manager



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.
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Revision History

Report Number	Revision	Description	Issue Date	Remark
ER/2020/30119	Rev.00	Original.	Jun. 01, 2020	Revised By: Susan Lin

Note:

1、Disclaimer

Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.

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1 DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)

1.1 General:

Product Name:	FM4200F	
Brand Name:	Fluidmesh FM4200F	
Model No.:	FM4200F	
Model Difference:	N/A	
Hardware Version:	N/A	
Software Version:	N/A	
Power Supply:	48Vdc from POE Adapter	
	Adapter:	Model No.: GME241DA-480050G, Supplier: N/A

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1.2 Antenna Information:

1.2.1 WLAN 5GHz

Antenna Type	Supplier	Antenna Part No.	Freq. (MHz)	Peak Antenna Gain (dBi)	Worst Antenna Gain
Shark Dual	FLUIDMESH	N/A	5725~5850	13	
Tube	FLUIDMESH	N/A	5725~5850	14.6	V

1.3 Rated Power

1.3.1 WLAN 5GHz:

802.11	Freq. Range (MHz)	Modulation Technology	Max. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Worst Case
n HT20	5725~5850	OFDM	18.29	14.60	32.89	V
n HT40	5725~5850		18.21	14.60	32.81	

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2 FCC MAXIMUM PERMISSIBLE EXPOSURE (MPE)

2.1 FCC Standard Applicable

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

This is a Mobile device, the MPE is required.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for Maximum Permissive Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
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
1500-15000	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equipment power density

Prediction of MPE limit at a given distance

$$S = PG / 4\pi R^2$$

Where: S = Power density

P = Power input to antenna

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

R = Distance to the center of radiation of the antenna

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2.2 Power Density Calculation (Worst Case)

Operation Mode	Evaluation Frequency (MHz)	Operation Distance (cm)	Max. output Power (dBm)	Antenna Gain (dBi)	Max. output Power EIRP (mW)	Power Density (PD) (mW/cm ²)	Limit (mW/cm ²)	Pass / Fail
WLAN 5G	5745.00	20	18.29	14.60	1945.36	0.387	1.000	Pass

Note:

1. $\Sigma(\text{E- Field Strength} / \text{Limit})$: This is a summation of [(E- Field Strength for each transmitter/antenna included in the simultaneous transmission) / (corresponding MPE limit)].
2. Considering the collocated transmitters, the aggregated (E- Field Strength /limit) is smaller than 1, and MPE of collocated transmitters is compliant.

~ End of Report ~

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