

RF EXPOSURE REPORT

OF

Applicant: Cisco Systems
125 West Tasman Drive San Jose California United States
95134-1706

Manufacturer: Cisco Systems
125 West Tasman Drive San Jose California United States
95134-1706

Product Name: FM1200V-HW

Brand Name: Fluidmesh FM1200V VOLO

Model No.: FM1200V-HW

Model Difference: N/A

Report Number: ER/2020/30138

FCC ID: R5S1200V

FCC Rule Part Part 2.1091

Issue Date: Dec. 25, 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



Testing Laboratory
3702

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/2020/30138	Rev.00	Original.	Dec. 25, 2020	Revised By: Elle Chang

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:	FM1200V-HW		
Brand Name:	Fluidmesh FM1200V VOLO		
Model No.:	FM1200V-HW		
Model Difference:	N/A		
Hardware Version:	N/A		
Software Version:	N/A		
Power Supply:	24V from AC/DC Adapter		
	Adapter:	Model No.: GFP241DA-240100HB Supplier: GME	
Modulation type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 802.11ac only		
Transition Rate:	802.11 n_20MHz: 6.5 – 144.4Mbps		
	802.11 n_40MHz: 13.5 – 300.0Mbps		

1.2 Antenna Information:

Antenna Type	Supplier	Antenna Part No.	Freq. (MHz)	Ma/n / Aux	Peak Antenna Gain (dBi)
Integrated	N/A	N/A	5150~5250	Main / Aux	12
			5470~5725	Main / Aux	12
			5725~5850	Main / Aux	12

1.3 Rated Power

802.11n_HT40_MIMO

CH	Frequency (MHz)	Data Rate	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
			CH 0	CH 1				
38	5190	MCS8	6.81	6.22	9.71	9.347	20.98970004	PASS
46	5230	MCS8	12.91	12.56	15.92	39.086	20.98970004	PASS
102	5510	MCS8	5.53	4.97	8.44	6.983	14.97 or 11+10log(B) = 27.65	PASS
110	5550	MCS8	6.61	6.1	9.54	9.004	14.97 or 11+10log(B) = 27.70	PASS
134	5670	MCS8	6.38	5.95	9.35	8.614	14.97 or 11+10log(B) = 27.79	PASS
142	5710(U-NII 2C)	MCS8	6.17	5.38	8.94	7.839	14.97 or 11+10log(B) = 27.45	PASS
142	5720 (U-NII 3)	MCS8	-0.56	-1.81	2.21	1.664	20.98970004	PASS
151	5755	MCS8	12.92	12.42	15.86	38.538	20.98970004	PASS
159	5795	MCS8	12.85	11.95	15.60	36.349	20.98970004	PASS

Note:

5470~5725MHz is disabled by software when the device marketed in the USA.

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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)

FCC Standalone MPE

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	Power Density / Limit
WLAN 5G	5230.00	20	15.92	15.01	1238.80	0.247	1.000	Pass	0.247

~ End of Report ~

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