

RF EXPOSURE REPORT



Applicant: Chiun Mai Communication Systems, Inc
No.4, Minsheng St., Tucheng Dist., New Taipei City 23679,
Taiwan (R.O.C.)

Manufacturer: Chiun Mai Communication Systems, Inc
No.4, Minsheng St., Tucheng Dist., New Taipei City 23679,
Taiwan (R.O.C.)

Product Name: FusionAir-MRT

Brand Name: Fusion

Model No.: FURM99

Model Difference: N/A

Report Number: E2/2021/30068

FCC ID 2AZ9NBTWIM-FURM99

Issue Date: November 15, 2021

Approved By _____

John Yeh

We hereby certify that:

The above equipment was evaluate by SGS Taiwan Ltd. The evaluation in this report is in compliance with FCC Rule Part §2.1091.

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

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	Revised By
E2/2021/30068	00	Original	November 15, 2021	Ariel Chang

Note:

- 1、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 Product Description

Product Name:	FusionAir-MRT
Brand Name:	Fusion
Model No.:	FURM99
Model Difference:	N/A
Hardware Version:	N/A
Firmware Version:	N/A
Power Supply:	3.3Vdc

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1.2 Antenna Information:

1.2.1 BT / WLAN 2.4GHz

Antenna Type	Freq. (MHz)	Peak Antenna Gain (dBi)
PCB	2402-2480	2.74

1.2.2 WLAN 5GHz

Antenna Type	Freq. (MHz)	Peak Antenna Gain (dBi)
PCB	5150~5250	2.49
	5250~5350	2.54
	5470~5725	3.03
	5725~5850	2.10

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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 Permissible 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
1500-100000	/	/	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	Power Density / Limit
BLE 2M	2402.00	20	5.53	2.74	6.71	0.0013	1.000	Pass	0.001
WLAN 2.4G	2412.00	20	15.94	2.74	73.79	0.015	1.000	Pass	0.015
WLAN 5G	5500.00	20	15.94	3.03	78.89	0.016	1.000	Pass	0.016

~ End of Report ~

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