



RADIO EXPOSURE TEST REPORT

FCC ID : ZL7-RADAR1
Equipment : AEGIS RADAR
Brand Name : GIANT 、 Liv 、 momentum
Model Name : AEGIS RADAR
Applicant : GIANT MANUFACTURING CO., LTD.
No. 999, Sec. 1, Dongda Rd., Xitun Dist., Taichung City
40763, TAIWAN (R.O.C.)
Manufacturer : Maintek Computer (Suzhou) Co., Ltd.
No. 233, Jin Feng Rd., Suzhou New District, Suzhou,
Jiangsu, China 215011
Standard : 47 CFR Part 2.1091

The product was received on Apr. 12, 2025, and testing was started from Jun. 17, 2025 and completed on Jun. 18, 2025. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in 47 CFR Part 2.1091 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)



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Photographs of EUT v01



History of this test report

TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-A1_1 Ver1.1

Page Number : 3 of 8
Issued Date : Oct. 30, 2025
Report Version : 01



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
2	-	Exposure evaluation	PASS	-

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the chapter "Measurement Uncertainty".

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Sam Chen

Report Producer: Cathy Chiu



1 General Description

1.1 EUT General Information

The Channel Plan(s)		
Evaluation Mode	Operating Frequency (GHz)	Modulation Type
24000 ~ 24250 MHz	24135	FMCW

1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	PEGATRON	AEGIS RADAR ANTENNA 10	Patch Antenna	N/A	9

Note: The above information was declared by manufacturer.

For 24GHz function (1TX/1RX):

Only Ant. 1 can be used as transmitting/receiving antenna.

1.3 Table for Multiple Listing

The brand names in the following table are all refer to the identical product.

Brand Name	Description
GIANT	All the brands are identical, the difference brand served as marketing strategy.
Liv	
momentum	

Note 1: From the above brands, brand: GIANT was selected as representative model for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.

1.4 Table of EUT Information

EUT	Crystal		MCU		
	Brand Name	Model Name	Brand Name	Model Name	Part Number
1	FUJICOM	FSX3M 12.000000M18FDI	Infineon	XMC4700	E196F2048
2	TXC	7M12000039	Infineon	XMC4700	E196K2048

Note 1: From the above, EUT 2 was selected to test and record in this report.

Note 2: The above information was declared by manufacturer.

1.5 Accessories

N/A



1.6 Testing Location

Testing Location Information	
Test Lab. : Sporton International Inc. Hsinchu Laboratory	
Hsinchu	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)
(TAF: 3787)	TEL: 886-3-656-9065 FAX: 886-3-656-9085
	Test site Designation No. TW3787 with FCC.
	Conformity Assessment Body Identifier (CABID) TW3787 with ISED.



2 Maximum Permissible Exposure

2.1 Limit of Maximum Permissible Exposure

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	*(100)	<6
3.0-30	1842/f	4.89/f	*(900/f ²)	<6
30-300	61.4	0.163	1.0	<6
300-1500	-	-	f/300	<6
1500-100,000	-	-	5	<6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
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

Note: f = frequency in MHz ; *Plane-wave equivalent power density

2.2 MPE Calculation Method

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d}$$

$$\text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$



2.3 Calculated Result and Limit

Exposure Environment: General Population / Uncontrolled Exposure

Theoretical Value (dBuV/m)	OBW (MHz)	Conducted power (dBm)	Direction Gain (dBi)	EIRP (dBm)	Distance (m)	Factor (dB)
110.03	21.86	9.69	9	18.69	1	104.74

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)
24135.0	9.00	9.69	18.69	0.50	19.19	0.08292	20	0.01650	1.00000

————THE END————