

FCC RF Exposure Report

FCC ID : MXF-XR1710G
Equipment : Wi-Fi 7 Router
Model No. : XR1710G
Brand Name : Brightspeed
Applicant : Gemtek Technology Co., Ltd.
Address : No. 15-1 Zhonghua Road, Hsinchu Industrial
Park, Hukou, Hsinchu, Taiwan, 30352.
Standard : 47 CFR FCC Part 2.1091
Received Date : Jan. 10, 2024
Tested Date : Jan. 10 ~ Mar. 27, 2024

We, International Certification Corporation, would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:


Along Chen / Assistant Manager

Approved by:


Gary Chang / Manager

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Release Record

Report No.	Version	Description	Issued Date
FA411201-01	Rev. 01	Initial issue	May 14, 2024

1 MPE EVALUATION OF MOBILE DEVICES

1.1 LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE

Frequency Range (MHz)	Power Density (mW /cm ²)	Averaging Time (minutes)
300~1500	F/1500	30
1500~100000	1.0	30

1.2 MPE EVALUATION FORMULA

$$Pd = \frac{Pt}{4 * Pi * R^2}$$

Where

Pd= Power density in mW/cm²

Pt= EIRP in mW

Pi= 3.1416

R= Measurement distance

1.3 REFERENCE GUIDANCE

447498 D01 General RF Exposure Guidance v06

1.4 DEVIATION FROM TEST STANDARD AND MEASUREMENT PROCEDURE

None

1.5 MEASUREMENT UNCERTAINTY

The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)).

Parameters	Uncertainty
Conducted power	±0.808 dB

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1.6 MPE EVALUATION RESULTS

Non-beamforming mode

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Maximum Tune Up Limit (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	*Ratio	Pass / Fail
2412~2462 ^{Note}	29.42	29.5	2.01	24	0.196	1	0.196	Pass
5180~5240 ^{Note}	28.45	28.5	4.87	24	0.300	1	0.300	Pass
5745~5825 ^{Note}	29.84	30.0	4.99	24	0.436	1	0.436	Pass
5260~5320	23.84	24.0	4.64	24	0.101	1	0.101	Pass
5500~5700	23.75	24.0	5.25	24	0.116	1	0.116	Pass

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Maximum Tune Up Limit (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	*Ratio	Pass / Fail
5925-6425 ^{Note}	22.88	23.0	4.4	24	0.076	1	0.076	Pass
6425-6525 ^{Note}	24.54	25.0	3.68	24	0.102	1	0.102	Pass
6525-6875 ^{Note}	21.72	22.0	2.48	24	0.039	1	0.039	Pass
6875-7125 ^{Note}	24.29	24.5	3.99	24	0.098	1	0.098	Pass

*Ratio = Power density / Limit.

Beamforming mode

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Maximum Tune Up Limit (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	*Ratio	Pass / Fail
2412~2462 ^{Note}	29.04	29.5	3.34	24	0.266	1	0.266	Pass
5180~5240 ^{Note}	28.26	28.5	7.30	24	0.525	1	0.525	Pass
5745~5825 ^{Note}	28.98	29.0	6.94	24	0.542	1	0.542	Pass
5260~5320	23.07	23.5	6.83	24	0.149	1	0.149	Pass
5500~5700	23.08	23.5	6.90	24	0.151	1	0.151	Pass

*Ratio = Power density / Limit.

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Maximum Tune Up Limit (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	*Ratio	Pass / Fail
5925-6425 ^{Note}	22.56	23.0	6.96	24	0.137	1	0.137	Pass
6425-6525 ^{Note}	18.41	18.5	5.32	24	0.033	1	0.033	Pass
6525-6875 ^{Note}	24.17	24.5	5.38	24	0.134	1	0.134	Pass
6875-7125 ^{Note}	21.57	22.0	5.00	24	0.069	1	0.069	Pass

*Ratio = Power density / Limit.

Note: Test results of these frequency bands are leveraged from original MPE report, report no. FA411201.

1.7 MPE EVALUATION OF SIMULTANEOUS TRANSMISSION

Non-beamforming mode

Mode	Max Ratio of Each Mode
WLAN 2.4GHz	0.196
WLAN 5GHz	0.436
WLAN 6GHz	0.102
Sum	0.734
Limit	1
Pass / Fail	Pass

Beamforming mode

Mode	Max Ratio of Each Mode
WLAN 2.4GHz	0.266
WLAN 5GHz	0.542
WLAN 6GHz	0.137
Sum	0.945
Limit	1
Pass / Fail	Pass

2 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corporation (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website <http://www.icertifi.com.tw>.

Linkou

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Kwei Shan

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No.2-1, Lane 6, Wen San 3rd
St., Kwei Shan Dist., Tao Yuan
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Kwei Shan Site II

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If you have any suggestion, please feel free to contact us as below information.

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