

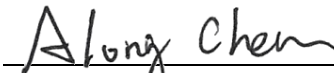
FCC RF Exposure Report

FCC ID : P27RP362M
Equipment : AC2100 Wi-Fi Mesh Extender ;
AC2100 Wi-Fi Mesh Router
Model No. : RP362M ; IP3421M
Multiple Listing : Refer to item 1.1.1 for more details
Brand Name : Sercomm
Applicant : Sercomm Corporation
Address : 8F, No. 3-1, YuanQu St., NanKang, Taipei 115,
Taiwan, R.O.C.
Standard : 47 CFR FCC Part 2.1091
Received Date : Feb. 12, 2020
Tested Date : Mar. 04 ~ Apr. 08, 2020

We, International Certification Corp., 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 may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:

Approved by:



Along Chen / Assistant Manager



Gary Chang / Manager



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Release Record

Report No.	Version	Description	Issued Date
FA021202-01	Rev. 01	Initial issue	Apr. 29, 2020

1 General Description

1.1 Information

1.1.1 Product Details

The following models are provided to this EUT.

Brand Name	Model Name	Product Name	Description
Sercomm	RP362MXXXXXXXXXX	AC2100 Wi-Fi Mesh Extender	FW: v1.00.01 supports 2 LANs. Indoor AP / Client
Sercomm	IP3421MXXXXXXXXXX	AC2100 Wi-Fi Mesh Router	FW: v1.00.00.001 supports 1 WAN & 1 LAN Indoor AP
<ul style="list-style-type: none"> ✦ the 1st X should be "blank" or "-"; the rest X could be 0 to 9, A to Z, "blank", "-“ or “/” , for marketing purpose. ✦ The above models used the same hardware but with the different firmware. ✦ The above models, model RP362M and IP3421M were selected as a representative one for the final test 			

2 MPE EVALUATION OF MOBILE DEVICES

2.1 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

2.2 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

2.3 DEVIATION FROM TEST STANDARD AND MEASUREMENT PROCEDURE

None

2.4 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.

2.5 MPE EVALUATION RESULTS

MPE Evaluation of Single Transmission

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Rated Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Ratio*	Limit (mW/cm ²)
Non-beamforming mode							
2412~2462 ^{Note}	25.30	25.5	2.32	20	0.120	0.120	1
5180~5240 ^{Note}	26.21	26.5	2.35	20	0.153	0.153	1
5745~5825 ^{Note}	27.20	27.5	2.66	20	0.206	0.206	1
5260~5320	23.60	24	2.35	20	0.086	0.086	1
5500~5700	23.56	24	2.96	20	0.099	0.099	1
Beamforming mode							
5180~5240 ^{Note}	25.96	26	8.25	20	0.529	0.529	1
5745~5825 ^{Note}	27.18	27.5	8.57	20	0.805	0.805	1
5260~5320	21.43	21.5	8.26	20	0.188	0.188	1
5500~5700	21.44	21.5	8.39	20	0.194	0.194	1

Note:

*Ratio = Power density / Limit.

- These 3 frequency bands are certified for original grant.
- For beamforming mode:
 - For 5150~5250 MHz band
Directional gain = $10 \times \log((10^{2.24/20} + 10^{2.35/20} + 10^{2.29/20} + 10^{2.03/20})^4 / 4) = 8.25$ dBi.
 - For 5745~5850 MHz band
Directional gain = $10 \times \log((10^{2.59/20} + 10^{2.5/20} + 10^{2.66/20} + 10^{2.45/20})^4 / 4) = 8.57$ dBi.
 - For 5250 ~ 5350 MHz band
Directional gain = $10 \times \log((10^{2.09/20} + 10^{2.21/20} + 10^{2.32/20} + 10^{2.35/20})^4 / 4) = 8.26$ dBi
 - For 5470 ~ 5725MHz band
Directional gain = $10 \times \log((10^{2.27/20} + 10^{2.12/20} + 10^{2.1/20} + 10^{2.96/20})^4 / 4) = 8.39$ dBi

2.6 MPE EVALUATION OF SIMULTANEOUS TRANSMISSION

Non-beamforming mode

Mode	Max Ratio of Each Mode
WLAN 2.4GHz	0.120
WLAN 5GHz	0.206
Sum	0.326
Limit	1
Pass / Fail	Pass

Beamforming mode

Mode	Max Ratio of Each Mode
WLAN 2.4GHz	0.120
WLAN 5GHz	0.805
Sum	0.925
Limit	1
Pass / Fail	Pass

3 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 Corp (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

Tel: 886-2-2601-1640

No. 30-2, Ding Fwu Tsuen, Lin
Kou District, New Taipei City,
Taiwan, R.O.C.

Kwei Shan

Tel: 886-3-271-8666

No. 3-1, Lane 6, Wen San 3rd St.,
Kwei Shan District, Tao Yuan City
333, Taiwan, R.O.C.

Kwei Shan Site II

Tel: 886-3-271-8640

No. 14-1, Lane 19, Wen San 3rd
St., Kwei Shan District, Tao Yuan
City 333, Taiwan, R.O.C.

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

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