FCC RF Exposure Report

FCC ID	:	**P27-XIONESCM2**
Equipment	:	**XiOne-SC (B)**
Model No.	:	**SCXIxxBEIxCO; SCXIxxBEI** **(Refer to item 1.1 for more details.)**
Brand Name	:	**Comcast Xfinity; Cox; Shaw** **(Refer to item 1.1 for more details.)**
Applicant	:	**Sercomm Corporation**
Address	:	**8F, 3-1, YuanQu St., NanKang, Taipei, 11503, Taiwan**
Standard	:	**47 CFR FCC Part 2.1091**
Received Date	:	**Jun. 10, 2021**
Tested Date	:	**Jun. 12 ~ Jul. 15, 2021**

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 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**

Testing Laboratory 2732

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Release Record

Report No.	Version	Description	Issued Date
FA161001	Rev. 01	Initial issue	Jul. 26, 2021
FA161001	Rev. 02	Modify frequency range of RF4CE	Jul. 28, 2021

1 Information

1.1 PRODUCT DETAILS

The following models are provided to this EUT.

Brand Name	Model Name	Product Name	Description
Comcast Xfinity; Cox; Shaw	SCXIxxBEIxCO; SCXIxxBEI	XiOne-SC (B)	Where "x" may be any alphanumeric for External Body Color.

- All models are electrically identical, different model names are for marketing purpose.
- The above models, model **SCXI11BEI** was selected as a representative one for the final test and only its data was recorded in this report.

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

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

Where

Pd= Power density in mW/cm^2
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

Non-beamforming

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Rated Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)	*Ratio	Pass / Fail
2412~2462 (Wi-Fi)	25.83	26.0	3.81	20	0.190	1	0.190	Pass
5150~5250 (Wi-Fi)	23.28	23.5	3.83	20	0.108	1	0.108	Pass
5250~5350 (Wi-Fi)	23.32	23.5	3.87	20	0.109	1	0.109	Pass
5470~5725 (Wi-Fi)	23.81	24.0	3.85	20	0.121	1	0.121	Pass
5725~5850 (Wi-Fi)	26.52	27.0	3.92	20	0.246	1	0.246	Pass
2402-2480 (BT EDR)	12.80	13.0	3.85	20	0.010	1	0.010	Pass
2402-2480 (BT LE)	12.83	13.0	3.85	20	0.010	1	0.010	Pass
2425-2475 (RF4CE)	6.83	7.0	0.02	20	0.00	1	0.001	Pass

*Ratio = Power density / Limit.

Beamforming

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Rated Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)	*Ratio	Pass / Fail
2412~2462 (Wi-Fi)	21.41	21.5	6.60	20	0.128	1	0.128	Pass
5150~5250 (Wi-Fi)	20.27	20.5	6.78	20	0.106	1	0.106	Pass
5250~5350 (Wi-Fi)	20.31	20.5	6.87	20	0.109	1	0.109	Pass
5470~5725 (Wi-Fi)	20.80	21.0	6.84	20	0.121	1	0.121	Pass
5725~5850 (Wi-Fi)	23.51	24.0	6.72	20	0.235	1	0.235	Pass

*Ratio = Power density / Limit.

Note:

For 2.412 ~ 2.462 GHz

DG = Directional Gain=10 * log($(10^{3.37/20}+10^{3.81/20})^2/2$) = 6.60 dBi

For 5.15 ~ 5.25 GHz

DG = Directional Gain=10 * log($(10^{3.7/20}+10^{3.83/20})^2/2$=6.78 dBi

For 5.25 ~ 5.35 GHz

DG = Directional Gain=10 * log($(10^{3.87/20}+10^{3.85/20})^2/2$=6.87 dBi

For 5.47 ~ 5.725 GHz

DG = Directional Gain=10 * log($(10^{3.8/20}+10^{3.85/20})^2/2$=6.84 dBi

For 5.725 ~ 5.85 GHz

DG = Directional Gain=10 * log($(10^{3.5/20}+10^{3.92/20})^2/2$=6.72 dBi

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 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

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 Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

No.2-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

Kwei Shan Site II

Tel: 886-3-271-8640

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

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

Tel: 886-3-271-8666
Fax: 886-3-318-0345
Email: ICC_Service@icertifi.com.tw

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