

Iota Networks, LLC.

RF Exposure Exhibit

SCOPE OF WORK

EMC TESTING – IotaComm, Model: 800CD-HW

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RF Exposure Exhibit (Mobile Devices)

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**Testing performed on the
IotaComm
Model Tested: 800CD-HW**

FCC ID: 2BOTM-88877788

to

47CFR 2.1091

for

Iota Networks, LLC.

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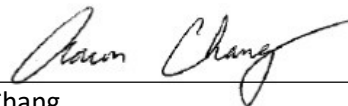
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Report No. 105602545MPK-003	
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Model Number:	800CD-HW
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Applicable Regulation:	47CFR 2.1091

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1.0 RF Exposure Summary

Test	Reference FCC	Result
Radio frequency Radiation Exposure Evaluation	47 CFR§2.1091	Complies

2.0 RF Exposure Limits

In this document, we evaluate the RF Exposure to human body due the intentional transmission from the transmitter (EUT). The limits for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 are followed.

2.1 FCC Limits

According to FCC 1.1310 table 1: The criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
(A)Limits For Occupational / Control Exposures				
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				
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

F = Frequency in MHz

* = plane wave equivalent density

3.0 Test Results

3.1 Classification

Radio is installed inside a mobile host device. The antenna of the product, under normal use condition, is at least 20 cm away from the body of the user and accessible to the end user. Warning statement to the user for keeping at least 20 cm or more separation distance with the antenna should be included in user's manual.

3.2 EIRP calculations

The table in the IotaComm, Model: 800CD-HW consists of one radio: 809.1025MHz – 816.9875MHz F1D/FSK Modulation.

3.3 Maximum RF Power

Specification of Radios on the 800CD-HW	
Location	Table
Type ¹	F1D / FSK Modulation
Frequency Range	809.1025 – 816.9875MHz
Antenna Rated RF Output Power	19.88 dBm
Antenna Gain ¹	0.8 dBi

¹As provided by the client. Intertek takes no responsibility for the accuracy of this information.

3.4 RF Exposure Calculation

3.4.1 RF Exposure calculation for 809.1025MHz – 816.9875MHz range

Frequency Range (MHz)	EIRP ¹ (dBm)	EIRP ¹ (mW)	Power Density (mW/cm ²) @20 cm	FCC Limit (mW/cm ²)
809.1025 - 816.9875	20.68	116.950	0.02327	0.544658333

¹As provided by the client. Intertek takes no responsibility for the accuracy of this information.

4.0 Variant Models

Not applicable.

5.0 Document History

Revision/ Job Number	Writer Initials	Reviewers Initials	Date	Change
1.0 / G105602545	AM	AC	May 12, 2025	Original Document

Appendix A: Power Density Calculation

The Power Density can be calculated using the formula

$$S = \text{EIRP} / 4\pi D^2$$

Where: S is Power Density in mW/cm²

D is the distance from the antenna in cm.

END OF TEST REPORT