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MPE REPORT

Manufacturer: Runwise, Inc.
104 West 27th Street, Floor 3
New York, New York 10001 USA

Applicant: Same as Above

Product Name: Gen2 Wireless Network Module

Product Description: Serial UART to RF network interface, 900 MHz Radio

Model: V3.1

FCC ID: 2AQX2-G2RWMOD

IC: 24232-G2RWMOD

Testing Commenced: 2024-01-10

Testing Ended: 2024-04-26

Test Results: In Compliance

The EUT complies with the EMC requirements when manufactured identically as the unit tested in this report, including any required modifications. Any changes to the design or build of this unit subsequent to this testing may deem it non-compliant.

Standards:

- KDB447498
- FCC 1.1310
- Safety Code 6
- RSS-102



Evaluation Conducted by:

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Report Reviewed by:

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1 ADMINISTRATIVE INFORMATION

1.1 Measurement Location:

F2 Labs in Middlefield, Ohio.

Site description and attenuation data are on file with the FCC's Sampling and Measurement Branch at the FCC Laboratory in Columbia, MD.

Site description and attenuation data are on file with the Certification and Engineering Bureau, Industry Canada, Site Number 4730B.

1.2 Measurement Procedure:

All measurements were performed according to:

- KDB558074
- FCC 15.247
- FCC 15.249
- RSS-247
- RSS-210

1.4 Document History

Document Number	Description	Issue Date	Approved By
F2P30751A-C2-05E	First Issue	2024-05-01	K. Littell



2 SUMMARY OF TEST RESULTS

Test Name	Standard(s)	Results
RF Exposure for Device >20cm from Human	KDB447498 FCC 1.1310 Safety Code 6 RSS-102	Complies

Modifications Made to the Equipment
None



3 **ENGINEERING STATEMENT**

This report has been prepared on behalf of Runwise, Inc. to provide documentation for the calculations described herein, based on the measurements taken in supporting Test Reports. This equipment has been tested and calculations were found to comply with KDB447498, FCC 1.1310, Safety Code 6 and RSS-102. The test results found in this test report relate only to the item(s) tested.



4 EUT INFORMATION AND DATA

4.1 Equipment Under Test:

Product: Gen2 Wireless Network Module - 900 MHz Radio

Model: V3.1

Serial No.: 120

Firmware: V1.0

Hardware: V3.1

FCC ID: 2AQX2-G2RWMOD

IC: 24232-G2RWMOD

4.2 Trade Name:

Runwise, Inc.

4.3 Power Supply:

Battery-Operated (3VDC)

4.4 Applicable Rules:

- KDB447498
- FCC 1.1310
- Safety Code 6
- RSS-102

4.5 Equipment Category:

Radio Transmitter-FHSS

4.6 Antenna:

3.9dBi Monopole

2.5dBi Dipole

4.7 Accessories:

Device	Manufacturer	Model Number	Serial Number
Test Fixture	Texas Instruments	CC1350	Rev1.3.0
Accessory Software Version:		FW Rev:1.0	

4.8 Test Item Condition:

The equipment to be tested was received in good condition.

**5. RF EXPOSURE FOR DEVICE >20cm FROM HUMAN****5.1 Requirements: Distance used is 20cm**

FCC	
Limit:	2402 MHz = 1mW/cm ² 902.4 MHz = 0.602mW/cm ²
Formula Used for Result:	$\frac{E.I.R.P.}{4 \pi R^2}$
Results:	E.I.R.P. = 0.03mW 0.03mW at the 2402 MHz Low Channel (highest) $\frac{0.03mW}{mW/cm^2} = \frac{0.03mW}{4 \pi R^2} = \frac{0.03 mW}{5026.55} = 0.000006$ $P(dBm)=E(dBuVm)+20LOG(d)-G-104.77$ $80 + 9.542425 + 0 - 104.77 = -15.23dBm$ $P(dBm)=-15.23 \text{ which is } 0.03mW$ $\frac{0.000006 mW/cm^2}{1mW/cm^2} = \text{Ratio of } 0.000006$ E.I.R.P. = 660.7mW 660.7mW at the 902.4 MHz Low Channel (highest) $\frac{660.7mW}{4 \pi R^2} = \frac{660.7mW}{5026.55} = 0.131 mW/cm^2$ $\frac{0.131 mW/cm^2}{0.602 mW/cm^2} = 0.22 \text{ ratio}$ 0.22 ratio + 0.000006 ratio = 0.220006 combined ratio



IC	
Limit:	2402 MHz = 5.35W/m ² 902 4 MHz = 2.74W/m ²
Formula Used for Result:	$\frac{E.I.R.P.}{4 \pi R^2}$
Results:	E.I.R.P. = 0.03mW 0.03mW at the 2402 MHz Low Channel (highest) $\frac{0.03mW}{4 \pi R^2} = \frac{0.03mW}{5026.55} = 0.00006 \text{ W/m}^2$ $P(dBm) = E(dBuV/m) + 20 \log(d) - G - 104.77$ $80 + 9.542425 + 0 - 104.77 = -15.23 \text{ dBm}$ $P(dBm) = -15.23 \text{ which is } 0.03mW$ $\frac{0.00006 \text{ W/m}^2}{5.35 \text{ W/m}^2} = \text{Ratio of } 0.000011$ E.I.R.P. = 660.7mW 660.7mW at the 902.4 MHz Low Channel (highest) $\frac{660.7mW}{4 \pi R^2} = \frac{660.7mW}{5026.55} = 1.31 \text{ W/m}^2$ $\frac{1.31 \text{ W/m}^2}{2.73 \text{ W/m}^2} = 0.48 \text{ ratio}$ 0.48 ratio + 0.000011 ratio = 0.480011 combined ratio