F2 Labs
16740 Peters Road
Middlefield, Ohio 44062
United States of America
www.f2labs.com

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:

Julius Chiller, Senior Wireless Project Engineer

Report Reviewed by:

Ken Littell, Vice President of Operations

F2 Labs	F2 Labs	F2 Labs
26501 Ridge Road	16740 Peters Road	8583 Zionsville Road
Damascus, MD 20872	Middlefield, OH 44062	Indianapolis, IN 46268
Ph 301.253.4500	Ph 440.632.5541	Ph 317.610.0611

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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:	$\underline{\text{E.I.R.P.}}$ 4 π R2
Results:	E.I.R.P. = 0.03mW 0.03mW at the 2402 MHz Low Channel (highest) $\underline{\text{0.03mW}}$ = $\underline{\text{0.03mW}}$ = $\underline{\text{0.03 mW}}$ = 0.000006 mW/cm^2 4 π R2 5026.55 $P(dBm)=E(dBuVm)+20LOG(d)-G-104.77$ 80 + 9.542425 + 0 - 104.77 = - 15.23dBm $P(dBm)=-15.23 \; which \; is \; 0.03mW$ **$\underline{\text{0.000006 mW/cm}^2}$ = Ratio of 0.000006** ** 1mW/cm^2** E.I.R.P. = 660.7mW 660.7mW at the 902.4 MHz Low Channel (highest) $\underline{\text{660.7mW}}$ = $\underline{\text{660.7mW}}$ = = 0.131 mW/cm^2 4 π R2 5026.55 **$\underline{\text{0.131 mW/cm}^2}$ = 0.22 ratio** **0.602 mW/cm^2** **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: E.I.R.P.   4 π R2
Results: E.I.R.P. = 0.03mW   0.03mW at the 2402 MHz Low Channel (highest) $\dfrac{0.03mW}{4 \pi R2} = \dfrac{0.03mW}{5026.55} = 0.00006$ W/m^2 $P(dBm)=E(dBuVm)+20LOG(d)-G-104.77$ 80 + 9.542425 + 0 - 104.77 = - 15.23dBm $P(dBm)= -15.23$ *which is* $0.03mW$ **$\dfrac{0.00006 \text{ W/m}^2}{5.35\text{W/m}^2}$ = Ratio of 0.000011**   E.I.R.P. = 660.7mW   660.7mW at the 902.4 MHz Low Channel (highest) $\dfrac{660.7mW}{4 \pi R2} = \dfrac{660.7mW}{5026.55} = 1.31$ W/m2   **$\dfrac{1.31 \text{ W/m}^2}{2.73 \text{ W/m}^2}$ = 0.48 ratio**   **0.48 ratio + 0.000011 ratio = 0.480011 combined ratio**