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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: V4.0

FCC ID: 2AQX2-G2RWHPMOD

IC: 24232-G2RWHPMOD

Testing Commenced: 2024-01-11

Testing Ended: 2025-01-10

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-R1-05E	First Issue	2025-01-28	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: V4.0

Serial No.: 412

Firmware: V4.0

Hardware: V1.0.3

FCC ID: 2AQX2-G2RWHPMOD

IC: 24232- G2RWHPMOD

4.2 Trade Name:

Runwise, Inc.

4.3 Power Supply:

Module is DC powered at 3.7VDC nominal

4.4 Applicable Rules:

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

4.5 Equipment Category:

Radio Transmitter-FHSS

4.6 Antenna:

2.5dBi Dipole

6dBi Omni Antenna

8dBi Yagi Antenna

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) $P(dBm) = E(dBuVm) + 20 \log(d) - G - 104.77$ $80 + 9.542425 + 0 - 104.77 = -15.23dBm$ $P(dBm) = -15.23 \text{ which is } 0.03mW$ $\frac{0.03mW}{4 \pi R^2} = \frac{0.03 mW}{5026.55} = 0.000006 mW/cm^2$ 0.000006 mW/cm² is below the 1mW/cm² limit
	900 MHz E.I.R.P. = 3499mW 3499mW at the 902.4 MHz Low Channel with 8 dBi Yagi antenna. The transmission has a duty cycle range of 0.027% to 30.5% with the max duty cycle possible being 30.5%. The max time-averaged power is 1066mW. $\frac{1066mW}{4 \pi R^2} = \frac{1066mW}{5026.55} = 0.212 mW/cm^2$ 0.212 mW/cm² is below the limit of 0.602mW/cm² for 20cm distance.



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) $P(dBm) = E(dBuV/m) + 20 \log(d) - G - 104.77$ $80 + 9.542425 + 0 - 104.77 = -15.23dBm$ $P(dBm) = -15.23 \text{ which is } 0.03mW$ $\frac{0.03mW}{4 \pi R^2} = \frac{0.03 mW}{5026.55} = 0.00006 W/m^2$ 0.00006 W/m² is below the 5.35 W/m² limit
	900 MHz E.I.R.P. = 3499mW 3499mW at the 902.4 MHz Low Channel with 8 dBi Yagi antenna. The transmission has a duty cycle range of 0.027% to 30.5% with the max duty cycle possible being 30.5%. The max time-averaged power is 1066mW. $\frac{1066mW}{4 \pi R^2} = \frac{1066mW}{5026.55} = 2.12 W/m^2$ 2.12 W/m² is below the limit of 2.74W/m² for 20cm distance.