

ITRON INC.

RF EXPOSURE REPORT

SCOPE OF WORK

RF EXPOSURE CALCULATIONS – WIFI MODULE INTEGRATED INTO THE POLE MOUNT ROUTER
MAJOR REFRESH (PMR-MR)

REPORT NUMBER

106368701ATL-009

ISSUE DATE

13 January 2026

REVISION DATE

N/A

PAGES

9



DOCUMENT CONTROL NUMBER

Non-Specific Radio Report Shell Rev. December 2017
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RF EXPOSURE REPORT

Report Number: 106368701ATL-004

Project Number: G106368701

Report Issue Date: 13 January 2026

Model / HVIN: LWB5PLUS

FCC ID: SK9LWB5PLUS

IC: 864G-LWB5PLUS

Standards: FCC Title 47 CFR Parts 1.1310
RSS-102, Issue 6

Test Location

Intertek
1950 Evergreen Blvd., Suite 100
Duluth, GA 30096 USA
FCC Designation: US1046
CAB Designator: US0128

Client

Ittron, Inc.
313 North Hwy 11
West Union, SC 29696-2706 USA

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1 Introduction and Conclusion

RF Exposure calculations were performed on the product constructed as described in Section 4. Information provided by the client including maximum output power, antenna gain(s), and minimum separation distance(s) was used to determine if the product under evaluation was exempt from routine evaluation. Any change in these stated values may invalidate these results. No additions, deviations, or exclusions have been made from the standard(s) unless specifically noted.

Based on the results of our investigation, we have concluded the product under evaluation is exempt from routine evaluation for each of the standard(s) indicated. The results obtained in this test report pertain only to the item(s) evaluated. Intertek does not make any claims of compliance for samples or variants which were not evaluated.

2 Evaluation Summary

Section	Test full name	Result
5	Routine Evaluation Exemption Criteria (FCC Title 47 CFR Part 1.1307, 2.1091)	Exempt
6	ISED Routine Evaluation Exemption Criteria (RSS-102 Issue 6)	Exempt

3 Client Information

This evaluation was performed at the request of:

Client: Itron Inc.
313 North Hwy 11
West Union, SC 29696-2706 USA

Contact: Christopher O'Steen

Email: christopher.o'steen@itron.com

4 Description of Equipment Under Test and Variant Models

Manufacturer: Itron Inc.
313 North Hwy 11
West Union, SC 29696-2706 USA

Equipment Under Test			
Description	Manufacturer	Model Number (HVIN)	Serial Number
WLAN Radio	Ezurio LLC	LWB5PLUS	Not Labeled
Pole Mount Router Major Refresh	Itron, Inc.	PMR-MR	366956104

Receive Date:	20 October 2025
Received Condition:	Good
Type:	Production

Description of Equipment Under Test

The OpenWay Riva Pole Mount Router is a device that provides mesh network communications for either RFLAN or OpenWay Riva or in Dual Mesh mode. The equipment provides routing and backhauls support for utility metering data by bridging proprietary mesh networks operating in the ISM band to public cellular LTE networks.

Certification Purpose

This test report is a Class II Permissive Change on the WiFi module to support the integration and co-location of multiple radios within the PMR-MR host device.

Equipment Under Test Power Configuration (WLAN Module)

Rated Voltage	Rated Current	Rated Frequency	Number of Phases
5Vdc	1.0A	NA	NA

Radio/Receiver Characteristics (WLAN, FCC ID: SK9LWB5PLUS / IC: 864G-LWB5PLUS)

Frequency Range	2412 - 2462MHz
Modulation Type(s)	CCK/DSSS/OFDM
Maximum Output Power (Average Conducted):	18.19dBm
MIMO Information (# of Transmit and Receive antenna ports)	SISO
Equipment Type	Mobile – 28cm Separation Distance
Antenna Type and Gain	MSE-0183-006, PCTEL P/N: MMSO2300PTRASM-REL, 0dBi Peak

Radio/Receiver Characteristics (Cellular, FCC ID: N7NEM7455 / IC: 2417C-EM7455)	
Frequency Range	LTE Band 2/25: 1850-1915MHz LTE Band 4: 1710-1755MHz LTE Band 5/26: 814-849MHz LTE Band 7: 2500-2570MHz LTE Band 12: 699-716MHz LTE Band 13: 777-787MHz LTE Band 30: 2305-2315MHz LTE Band 41: 2496-2690MHz
Modulation Type(s)	QPSK/16-QAM
Maximum Output Power (Conducted):	24dBm
MIMO Information (# of Transmit and Receive antenna ports)	TX/RX Primary + Diversity RX Only
Equipment Type	Module integrated into host device
Antenna Type and Gain	576009-001, Laird P/N: TRA6927M3PWN-001, Peak Gains: 698-960MHz = 3.5dBi, 1710-1990MHz = 5.5dBi, 2100-2700MHz 4.6dBi

Radio/Receiver Characteristics (NIC, FCC ID: SK9NIC / IC: 864G-NIC)	
Frequency Range	FSK 100: 902.3 – 926.9MHz FSK 150: 902.4 – 927.6MHz GFSK 150: 902.3 – 926.9MHz GFSK 200: 902.3 – 926.9MHz GFSK 300: 902.4 – 927.6MHz OFDM 600: 902.3 – 927.6MHz OFDM 1200: 903.2 – 926.0MHz OFDM 2400: 903.2 – 926.0MHz
Modulation Type(s)	FSK/GFSK/OFDM
Maximum Output Power (Conducted):	30dBm
MIMO Information (# of Transmit and Receive antenna ports)	SISO
Equipment Type	Module integrated into host device
Antenna Type and Gain	MSE-0270-001, LAIRD P/N: TRA9023P, 3dBi Peak

Radio/Receiver Characteristics (RFLAN, FCC ID: SK9 ITR9002 / IC: 864G-ITR9002)	
Frequency Range	902.25 – 927.75MHz
Modulation Type(s)	FSK
Maximum Output Power (Conducted):	27dBm
MIMO Information (# of Transmit and Receive antenna ports)	SISO
Equipment Type	Module integrated into host device
Antenna Type and Gain	MSE-0270-001, LAIRD P/N: TRA9023P, 3dBi Peak

5 Maximum Permissible Exposure Criteria

§ 1.1310: The criteria listed in table 1 shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of §2.1093 of this chapter.

TABLE 1 TO § 1.1310(e)(1)—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)				
Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(i) Limits for Occupational/Controlled Exposure				
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
300-1,500			f/300	<6
1,500-100,000			5	<6
(ii) 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
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

f = frequency in MHz. * = Plane-wave equivalent power density.

5.1 Calculations

Band / Technology	Frequency (MHz)	Measured Conducted Power (dBm)	Max Tune Up Power		Antenna Gain		Separation Distance (m)	Result (mW/cm ²)	Limit (mW/cm ²)	Percent of Limit (%)
			(dBm)	(W)	(dBi)	Numeric				
LTE Band 2	1850	24	24	0.251	5.5	3.548	0.28	0.0904	1.000	9.0%
LTE Band 4	1710	24	24	0.251	5.5	3.548	0.28	0.0904	1.000	9.0%
LTE Band 5	824	24	24	0.251	3.5	2.239	0.28	0.0570	0.549	10.4%
LTE Band 7	2500	23	23	0.200	4.6	2.884	0.28	0.0585	1.000	5.9%
LTE Band 12	699	24	24	0.251	3.5	2.239	0.28	0.0570	0.466	12.2%
LTE Band 13	777	24	24	0.251	3.5	2.239	0.28	0.0570	0.518	11.0%
LTE Band 25	1850	24	24	0.251	5.5	3.548	0.28	0.0904	1.000	9.0%
LTE Band 26	814	24	24	0.251	3.5	2.239	0.28	0.0570	0.543	10.5%
LTE Band 30	2305	23	23	0.200	4.6	2.884	0.28	0.0585	1.000	5.9%
LTE Band 41	2496	23	23	0.200	4.6	2.884	0.28	0.0585	1.000	5.9%
WLAN	2412	18.19	18.19	0.066	0	1.000	0.28	0.0067	1.000	0.7%
NIC - Standalone	902.3	30	30	1.000	3	1.995	0.28	0.2025	0.602	33.6%
NIC - w/ITR9002	902.3	27	27	0.501	3	1.995	0.28	0.1014	0.602	16.8%
ITR9002	902.3	27	27	0.501	3	1.995	0.28	0.1014	0.602	16.8%

Using LTE Band 12 + WLAN + NIC Full Power as worst-case scenario

Simultaneous Transmissions: 46.5%

Using LTE Band 12 + WLAN + NIC + RFLAN as worst-case scenario

Simultaneous Transmissions: 46.5%

Notes:

- 1) LTE tune up power and WLAN conducted power were retrieved from the modules' certifications, and the antenna gain values were provided by the customer. Intertek makes no claim as to the accuracy of this information.
- 2) The limit for simultaneous transmissions is 100%.
- 3) When the NIC and RFLAN are allowed to operate simultaneously, the NIC output power is limited to 27dBm.

6 ISED Routine Evaluation Exemption Criteria

RSS-102 Issue 6 § 5.3.2: RF Exposure limits

The electric and magnetic field strength reference levels, power density reference levels, and associated reference period for devices employed by the general public (uncontrolled environment) and controlled-use devices (controlled environment) are specified in table 7 and table 8. Note that the power density limits specified in these tables apply to whole body exposure conditions.

Table 7: RF field strength and power density limits for devices used by the general public (uncontrolled environment)

Frequency range (MHz)	Electric field (V _{RMS} /m)	Magnetic field (A _{RMS} /m)	Power density (W/m ²)	Reference period (minutes)
10-20	27.46	0.0728	2	6
20-48	$58.07 / f^{0.25}$	$0.1540 / f^{0.25}$	$8.944 / f^{0.5}$	6
48-300	22.06	0.05852	1.291	6
300-6000	$3.142 f^{0.3417}$	$0.008335 f^{0.3417}$	$0.02619 f^{0.6834}$	6
6000-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	$616000 / f^{1.2}$
150000-300000	$0.158 f^{0.5}$	$4.21 \times 10^{-4} f^{0.5}$	$6.67 \times 10^{-5} f$	$616000 / f^{1.2}$

6.1 Calculations

Band / Technology	Frequency (MHz)	Measured Conducted Power (dBm)	Max Tune Up Power		Antenna Gain		Separation Distance (m)	Result (W/m ²)	Limit (W/m ²)	Percent of Limit (%)
			(dBm)	(W)	(dBi)	Numeric				
LTE Band 2	1850	24	24	0.251	5.5	3.548	0.28	0.904	4.476	20.2%
LTE Band 4	1710	24	24	0.251	5.5	3.548	0.28	0.904	4.242	21.3%
LTE Band 5	824	24	24	0.251	3.5	2.239	0.28	0.570	2.576	22.1%
LTE Band 7	2500	23	23	0.200	4.6	2.884	0.28	0.585	5.499	10.6%
LTE Band 12	699	24	24	0.251	3.5	2.239	0.28	0.570	2.302	24.8%
LTE Band 13	777	24	24	0.251	3.5	2.239	0.28	0.570	2.474	23.0%
LTE Band 25	1850	24	24	0.251	5.5	3.548	0.28	0.904	4.476	20.2%
LTE Band 26	814	24	24	0.251	3.5	2.239	0.28	0.570	2.554	22.3%
LTE Band 30	2305	24	24	0.251	4.6	2.884	0.28	0.735	5.202	14.1%
LTE Band 41	2496	24	24	0.251	4.6	2.884	0.28	0.735	5.493	13.4%
WLAN	2412	18.19	18.19	0.066	0	1	0.28	0.067	5.366	1.2%
NIC - Standalone	902.3	30	30	1.000	3	1.995	0.28	2.025	2.74	73.9%
NIC - w/RFLAN	902.3	27	27	0.501	3	1.995	0.28	1.014	2.74	37.0%
RFLAN	902.3	27	27	0.501	3	1.995	0.28	1.014	2.74	37.0%

Using LTE Band 12 + WLAN + NIC Full Power as worst-case scenario

Simultaneous Transmissions: 99.9%

Using LTE Band 12 + WLAN + NIC + RFLAN as worst-case scenario

Simultaneous Transmissions: 100.0%

Notes:

- 1) LTE tune up power and WLAN conducted power were retrieved from the modules' certifications, and the antenna gain values were provided by the customer. Intertek makes no claim as to the accuracy of this information.
- 2) The limit for simultaneous transmissions is 100%.
- 3) When the NIC and RFLAN are allowed to operate simultaneously, the NIC output power is limited to 27dBm.

7 Revision History

Revision Level	Date	Report Number	Prepared By	Reviewed By	Notes
0	13 January 2026	106368701ATL-009	JOP	US	Original Issue