

ITRON, INC.

RF EXPOSURE REPORT

SCOPE OF WORK

MPE – RIVA HW 4.1 METER MODULE

REPORT NUMBER

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RF EXPOSURE REPORT

Report Number: 106366295ATL-004

Project Number: G106366295

Report Issue Date: 14 January 2026

Model / HVIN: ACT2

FCC ID: SK9ACT2

IC: 864G-ACT2

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

Report prepared by



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1 Introduction and Conclusion

RF Exposure measurements were performed on the product constructed as described in Section 4.

Based on the results of our investigation, we have concluded the product under evaluation complies with 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
0	Maximum Permissible Exposure (FCC Title 47 CFR Part 1.1310 / IEEE C95.3-2021)	Compliant
6	ISED Routine Evaluation Exemption Criteria (RSS-102 Issue 6 / IEEE C95.3-2021)	Compliant

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	Serial Number
Electricity Meter Module	Itron, Inc.	ACT2	105100513370

Receive Date:	28 October 2025
Received Condition:	Good
Type:	Production

Description of Equipment Under Test (provided by client)

The Itron ACT2 is an electricity metering module which includes a 902.3 to 927.6MHz transmitter as well as 2.4GHz WLAN. The module operates on 24Vdc which is supplied by a host device.

Radio/Receiver Characteristics	
Frequency Range / Number of Channels	FSK/50kbps: 902.4 – 927.6MHz, 64 Channels FSK/100kbps: 902.3 – 926.9MHz, 83 Channels FSK/150kbps: 902.3 – 926.9MHz, 64 Channels DSS/12.5kbps: 902.4 – 927.6MHz, 64 Channels GFSK/150kbps: 902.3 – 926.9MHz, 83 Channels GFSK/200kbps: 902.3 – 926.9MHz, 83 Channels GFSK/300kbps: 902.4 – 927.6MHz, 64 Channels OFDM/200kbps: 902.4 – 927.6MHz, 64 Channels OFDM/600kbps: 902.4 – 927.6MHz, 64 Channels Hybrid OFDM/1200kbps: 902.8 – 926.8MHz, 31 Channels DTS OFDM/1200kbps: 903.2 – 926.0MHz, 20 Channels DTS OFDM/2400kbps: 903.2 – 926.0MHz, 20 Channels
Data Rate / Modulation Type(s)	DSS: 12.5kbps FSK: 50kbps/100kbps/150kbps GFSK: 150kbps/200kbps/300kbps OFDM: 200kbps/600kbps/1200kbps/2400kbps
Channel Separation:	DSS: 12.5kbps / FSK: 50kbps/150kbps / GFSK: 300kbps / OFDM: 200kbps/600kbps (400kHz) FSK: 100kbps / GFSK: 150kbps/200kbps (300kHz) Hybrid OFDM: 1200kbps (800kHz) DTS OFDM: 1200kbps/2400kbps (1200kHz)
Maximum Conducted Output Power:	29.47dBm
Equipment Type	Mobile – 20cm Separation Distance
Antenna Type and Gain	¼ Wave Embedded Slot Antenna (2.5dBi) (Provided by Itron - Intertek takes no responsibility for the accuracy of this information.)

4.1 Justification

For this evaluation, the worst-case 900MHz channel and modulation (FSK 100k, 915.2MHz) and the worst-case WLAN channel and modulation (802.11b, 2437MHz) were independently evaluated at a distance of 20cm to show compliance with the mobile MPE limits. To show worst-case results, the lowest channel available in each band was used for the calculations.

4.2 Test Equipment

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
213489	Isotropic Probe 10Mhz to 40GHz	ETS-Lindgren	HI-6053	00264651	01/28/2025	01/28/2026
213489A	Fiber Optic-USB Adapter	ETS-Lindgren	HI-4413USB	00262238	CNR	CNR

CNR: Calibration not required

Software Utilized

Name	Manufacturer	Version
ProbeView LT	ETS-Lindgren	V1.0.5

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.

For this evaluation, the measurement guidance defined in IEEE C95.2 was used. An isotropic field probe was placed at a distance of 20cm from the module. The module was rotated 360° and evaluated in 3-axes to find the worst-case field strength. The field strength was then converted to power density for comparison against the applicable limits.

The following equation was applied to convert the resulting field strength measurements in V/m to spectral density in mW/cm²:

$$S_{(\text{mW}/\text{cm}^2)} = \frac{E_{(\text{V}/\text{m})}^2}{3770}$$

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 Test Data

Technology	Channel (MHz)	Distance (cm)	Max Probe Display (V/m)	Probe Factor (%)	Field Strength (V/m)	Power Density (mW/cm ²)	Limit (mW/cm ²)	% of Limit	Verdict
900MHz	902.3	20.00	23.20	0.97	22.50	0.134	0.602	22.26%	Compliant
WLAN	2412	20.00	2.67	1.23	3.28	0.003	1.000	0.30%	Compliant
Simultaneous Transmission (% of Limit):								22.56%	Compliant

Notes:

- 1) The limit for simultaneous transmissions is 100%.

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.

For this evaluation, the measurement guidance defined in IEEE C95.2 was used. An isotropic field probe was placed at a distance of 20cm from the module. The module was rotated 360° and evaluated in 3-axes to find the worst-case field strength. The field strength was then converted to power density for comparison against the applicable limits.

The following equation was applied to convert the resulting field strength measurements in V/m to spectral density in W/m²:

$$S_{(W/m^2)} = \frac{E_{(V/m)}^2}{377}$$

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 $f^{0.5}$	4.21×10 ⁻⁴ $f^{0.5}$	6.67×10 ⁻⁵ f	616000 / $f^{1.2}$

6.1 Test Data

Technology	Channel (MHz)	Distance (cm)	Max Probe Display (V/m)	Probe Factor (%)	Field Strength (V/m)	Power Density (W/cm ²)	Limit (W/cm ²)	% of Limit	Verdict
900MHz	902.3	20.00	23.20	0.97	22.5	1.343	2.740	49.01%	Compliant
WLAN	2412	20.00	2.67	1.23	3.28	0.029	5.366	0.54%	Compliant
Simultaneous Transmission (% of Limit):								49.55%	Compliant

Notes:

- 2) The limit for simultaneous transmissions is 100%.

7 Revision History

Revision Level	Date	Report Number	Prepared By	Reviewed By	Notes
0	14 January 2026	106366295ATL-004	JOP	US	Original Issue