

Certification Exhibit

FCC ID: SK9ACT1

FCC Rule Part: 47 CFR Part 2.1091

ACS Project Number: 16-0130

Manufacturer: Itron, Inc.
Model: ACT1

RF Exposure

General Information:

Applicant: Itron, Inc.
Device Category: Mobile
Environment: General Population/Uncontrolled Exposure

The 900MHz LAN radio is collocated and transmits simultaneously with the 2.4GHz WiFi radio.

Technical Information:**Table 1: Technical Information**

	<i>900MHz LAN Radio</i>	<i>2.4GHz WiFi Radio</i>
Frequency Band(s) (MHz)	902.4 - 927.6	2412 - 2462
Antenna Type(s)	1/4 Wave Embedded Slot Antenna	1/4 Wave Embedded Slot Antenna
Antenna Gain (dBi)	2.0	2.5
Conducted Power (dBm)	29.88	18.54
Conducted Power (mW)	972.75	71.45
Maximum Peak EIRP (mW)	1541.70	127.06
Maximum Peak ERP (mW)	939.72	77.45

MPE Calculation:

The Power Density (mW/cm²) is calculated as follows:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = power density (in appropriate units, e.g. mW/cm²)

P = power input to the antenna (in appropriate units, e.g., mW)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

Table 2: MPE Calculation (Including Collocated Devices)

Transmit Frequency (MHz)	Radio Power (dBm)	Power Density Limit (mW/Cm ²)	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW eq.)	Distance (cm)	Power Density (mW/cm ²)	Radio
915.2	29.88	0.61	972.75	2	1.585	20	0.307	A
2437	18.54	1.00	71.45	2.5	1.778	20	0.025	B

Summation of MPE ratios – Simultaneous Transmissions

This device contains multiple transmitters which can operate simultaneously; therefore the maximum RF exposure is determined by the summation of MPE ratios. The limit is such that the summation of MPE ratios is ≤ 1.0.

Table 3: Summation of MPE Ratios

	Scenario 1
Radio A	x
Radio B	x
Radio A MPE Ratio	0.502695957
Radio B MPE Ratio	0.025277269
MPE Ratio Summation:	0.527973226