



Certification Exhibit

FCC ID: SK9OW1

FCC Rule Part: 47 CFR Part 2.1091

Project Number: 72187413

Manufacturer: Itron, Inc
Model Name: OW1

RF Exposure

General Information:

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

Technical Information:

Detail	Description
Frequency Range	902.4 – 927.6 MHz
Modulation Format	FSK, OFDM, DSSS
Data rates (kbps)	FSK: 50, 150 OFDM: 200, 600 DSSS: 6.25, 12.5
Number of Channels	64
Channel Spacing	400kHz
Antenna Type / Description:	Monopole Cisco Antenna ANT-5G-MP-OUT-N / 2 dBi

Note: Only the technical parameters listed above, from the original certification, were evaluated for the additional antenna. The device is capable of additional modes / frequency bands, as defined in subsequent permissive change applications, which are not valid for use with the antenna detailed above.

Maximum Transmitter Conducted Power: *29.54dBm, 899.50mW
 Maximum System EIRP: 31.54dBm, 1425.61mW
 Exposure Conditions: 20 centimeters

RF Exposure Calculation

Table 1: Device Characteristics

Technical Parameters	900 MHz radio
Frequency (MHz)	915.2
Separation Distance (cm)	20.0
Separation Distance (m)	0.20
Antenna Gain (dBi)	2.0
ERP Easily Determined	YES
Conducted Power (dBm)	29.54
Conducted Power (mW)	899.50
Duty Factor (Source-Based) %	100.0
Maximum (Source-Based) Time-Averaged Conducted Power (mW)	899.50
Maximum (Source-Based) Time-Averaged ERP (mW)	869.27
Maximum (Source-Based) Time-Averaged EIRP (mW)	1425.61
Maximum Output (mW)	899.50

Test Exemption Criteria

Test exemption is determined by 47 CFR 1.1307(b)(3)(i)(B) where single RF source is exempt if:

The available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula. P_{th} is given by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

d = the separation distance (cm);

Table 2: 47 CFR 1.1307(b)(3)(i)(B) SAR – Based Exemption Pth (mW)

Technical Parameters	900 MHz radio
x	1.47
ERP _{20cm} (mW)	1867.01
Maximum Output (mW)	899.498
P _{th} (mW)	1867.008
Exemption	YES