



MPE/RF EXPOSURE EVALUATION REPORT

FCC CFR 47 Part 1.1310

Report No.: ITRO67-U46A Rev A

Company: Itron, Inc

Model Name: ERW-1350-001, ERG-5600-501

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Model Name: ERW-1350-001, ERG-5600-501

To: FCC CFR 47 Part 1.1310

Test Report Serial No.: ITRO67-U46A Rev A

This report supersedes: NONE

Applicant: Itron, Inc
2401 North State St.
Waseca, Minnesota 56093
USA

Issue Date: 3rd September 2024

This Test Report is Issued Under the Authority of:

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TESTING CERT #2381.01

MiCOM Labs is an ISO 17025 Accredited Testing Laboratory

1. MAXIMUM PERMISSABLE EXPOSURE

Calculations for Maximum Permissible Exposure Levels

Power Density = Pd (mW/cm²) = EIRP/(4*π*d²)

EIRP = P * G

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

Numeric Gain = 10 ^ (G (dBi)/10)

The calculations in the table below use the highest conducted power values together with the highest antenna gain specified for the EUT. These calculations represent worst case in terms of the exposure levels.

Band	Freq (MHz)	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Power Density (mW/cm ²) @ 20cm	Power Density Limit (mW/cm ²)	Min Calculated safe distance for Limit (cm)	RATIO Power Density/ Limit
902.0 - 928.0	902.0	2.23	1.67	26.71	468.81	0.156	0.60	10.18	0.259

Note: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

SUMMARY; Minimum safe distance to meet the RF exposure requirements = 20cm

Specification - Maximum Permissible Exposure Limits

The Limits are defined in Table 1 of FCC §1.1310.

The Limits for General Population/Uncontrolled Exposure apply to the ERW-1350 due to its intended use.

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)
(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

The Itron ERW-1350-001 is also marketed as the following Model Numbers per Manufacturer Declaration of Similarity (refer to Section 2 of this report).

ERW-1650-001, ERW-1650-004, ERW-1650-008, ERW-1650-009
ERG-5600-501, ERG-5600-502, ERG-5600-503, ERG-5600-505
ERG-7600-501, ERG-7600-502, ERG-7600-503, ERG-7600-505
ERW-1350-002, ERW-1650-002, ERW-1650-010

2. Manufacturer Declaration of Similarity



August 22, 2024

Itron, Inc.
2401 N. State St.
Waseca, MN 56093
507-781-4300
www.itron.com

Subject: Declaration of Similarity:
FCC ID: EWQ24GW,
ISED ID: 864D-24GW

Dear Sir or Madam,

We declared all models listed are identical using the same PCB with the same trace layout. All models use the exact same radio and RF circuitry. The difference between the models is the polycarbonate enclosure to allow different installation options of the product. Models with a description containing PIT are installed in utility enclosures which are in the ground. Where as models with the description containing REMOTE are installed above ground and can be attached to walls, pipes, or other options. Both PIT and REMOTE products can be ordered with two or four batteries depending on desired battery life in different network situations. The PIT products are the only models that support an external antenna. The differences of these variants does not affect any RF or EMC performance and both product types have been evaluated for compliance.

This aforementioned statements are supported by the following exhibits *EWQ24GW_864D-24GW_ExternalPhotos* and *EWQ24GW_864D-24GW_InternalPhotos*.

Product Information	
Marketing Name(s)	100G ERT Module 100W ERT Module 500G ERT Module 500W ERT Module
Description	Utility AMR device
Models(s)	ERG-5600-501, ERG-5600-502, ERG-5600-503, ERG-5600-505 ERW-1350-002, ERW-1350-002 ERG-7600-501, ERG-7600-502, ERG-7600-503, ERG-7600-505 ERW-1650-001, ERW-1650-004, ERW-1650-008, ERW-1650-009 ERW-1650-002, ERW-1650-010

Sincerely,



Dan Bomsta
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