

# RF EXPOSURE EVALUATION REPORT

FCC ID : MG3-PIRZWLR  
Equipment : UEI/Ecolink Z-Wave Long Range PIR Sensor  
Brand Name : Ecolink  
Model Name : PIRZWLR-ECO  
Marketing Name : Ecolink  
Applicant : Universal Electronics  
15147 N Scottsdale Rd Ste H300, Scottsdale,  
AZ 85254  
Standard : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part2.1091 and it complies with applicable limit.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 3786) and the FCC designation No. TW3786 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

The results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Laboratory, the test report shall not be reproduced except in full.



Approved by: Cona Huang / Deputy Manager



**SPORTON INTERNATIONAL INC. Wensan Laboratory**

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan



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## History of this test report

| Report No.  | Version | Description             | Issued Date   |
|-------------|---------|-------------------------|---------------|
| FA251207001 | Rev. 01 | Initial issue of report | Aug. 19, 2026 |
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**1. Description of Equipment Under Test (EUT)**

| Product Feature & Specification         |                                          |
|-----------------------------------------|------------------------------------------|
| Equipment Name                          | UEI/Ecolink Z-Wave Long Range PIR Sensor |
| Brand Name                              | Ecolink                                  |
| Model Name                              | PIRZWLR-ECO                              |
| Marketing Name                          | Ecolink                                  |
| FCC ID                                  | MG3-PIRZWLR                              |
| Wireless Technology and Frequency Range | Z-Wave: 912, 920 MHz                     |
| Mode                                    | 100kbps                                  |

**Reviewed by: Jason Wang****Report Producer: Carlie Tsai****2. Maximum Output Power**

| Mode   | Maximum Power(dBm) |
|--------|--------------------|
| Z-wave | 17.95              |



### **3. RF Exposure Limit Introduction**

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

| Frequency range (MHz)                                          | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm <sup>2</sup> ) | Averaging time (minutes) |
|----------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| <b>(A) Limits for Occupational/Controlled Exposures</b>        |                               |                               |                                     |                          |
| 0.3-3.0                                                        | 614                           | 1.63                          | *(100)                              | 6                        |
| 3.0-30                                                         | 1842/f                        | 4.89/f                        | *(900/f <sup>2</sup> )              | 6                        |
| 30-300                                                         | 61.4                          | 0.163                         | 1.0                                 | 6                        |
| 300-1500                                                       |                               |                               | f/300                               | 6                        |
| 1500-100,000                                                   |                               |                               | 5                                   | 6                        |
| <b>(B) Limits for General Population/Uncontrolled Exposure</b> |                               |                               |                                     |                          |
| 0.3-1.34                                                       | 614                           | 1.63                          | *(100)                              | 30                       |
| 1.34-30                                                        | 824/f                         | 2.19/f                        | *(180/f <sup>2</sup> )              | 30                       |
| 30-300                                                         | 27.5                          | 0.073                         | 0.2                                 | 30                       |
| 300-1500                                                       |                               |                               | f/1500                              | 30                       |
| 1500-100,000                                                   |                               |                               | 1.0                                 | 30                       |

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

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

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna

### **4. Radio Frequency Radiation Exposure Evaluation**

| Band   | Antenna Gain (dBi) | Maximum Power (dBm) | Maximum EIRP (dBm) | Maximum PG (mW) | Power Density at 20cm (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) |
|--------|--------------------|---------------------|--------------------|-----------------|---------------------------------------------|-----------------------------|
| Z-Wave | -2.39              | 17.95               | 15.56              | 35.97           | 0.007                                       | 0.608                       |

### **Conclusion:**

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.