

# RF Exposure Report

Project Number: 5169396

Quotation Number: SUW-202311005606

Report Number: 5169396EMC02

Revision Level: 0

Client: Seaira Global

Equipment Under Test: Lora Transmitter for Watchdog 550

Model: Watchdog SmartSync

FCC ID: 2BF8M-WD-DRYFI

Applicable Standards: 47 CFR §§ 2.1091

FCC KDB 447498 D01 General RF Exposure Guidance v06

FCC OET Bulletin 65

Report issued on: 02 May 2024

Result: Compliant



FOR THE SCOPE OF ACCREDITATION UNDER CERTIFICATE NUMBER: 3212.01

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## 1 General Information

### 1.1 Client Information

Company Name: Seaira Global  
Address: 14021 NC HWY 50  
City, State, Zip, Country: Wilmington, North Carolina, 28445, USA

### 1.2 Test Laboratory

Name: SGS North America, Inc.  
Address: 620 Old Peachtree Road NW, Suite 100  
City, State, Zip, Country: Suwanee, GA 30024, USA

Accrediting Body: A2LA  
Type of lab: Testing Laboratory  
Certificate Number: 3212.01  
FCC Designation Number: US1126

### 1.3 General Information of EUT

Manufacturer: Lora Transmitter for Watchdog 550  
Product Marketing Name (PMN): Watchdog SmartSync  
Model Number: Watchdog SmartSync  
Serial Number: SGS ID#: SUW\_SP\_20240401213  
FCC ID: 2BF8M-WD-DRYFI

Type / Frequency Range: LoRa / 915 MHz  
Modulation: CSS  
Antenna: PCB Antenna  
Max Conducted Output Power: -17.6 dBm (based on +77.6 dBuV measurement @ 3m)

### 1.4 Operating Modes and Conditions

Maximum power levels were utilized for calculations.

## 2 RF Exposure

### 2.1 Test Results

Test Description	Product Specific Standard	Test Result
RF Exposure	FCC Part 1.1310	Compliant

### 2.2 Test Method

The formula below calculates power density.

$$S = \frac{PG}{4\pi R^2} \quad \text{Or} \quad S = \frac{EIRP}{4\pi R^2}$$

where;

S = Power density (mW/cm<sup>2</sup>)

P = Maximum sourced based average power delivered to antenna port (mW)

G = Maximum numeric power gain of antenna relative to an isotropic radiator (dBi -> linear)

R = Distance between by-stander and antenna (cm)

EIRP = Equivalent (or effective) isotropically radiated power

The limits for general population / uncontrolled exposure were used at a distance of 20cm.

### 2.3 Single transmission RF Exposure Levels (mW/cm<sup>2</sup>)

Band of Operation		Conducted Power w/tolerance dBm	Antenna Gain	Cable Loss	Average EIRP		Distance (R) cm	Power Density EIRP <sub>avg</sub> /(4πR <sup>2</sup> ) mW/cm <sup>2</sup>	FCC mW/cm <sup>2</sup>	% of Limit	Verdict
Type	MHz				dBm	mW					
LoRa	902-928	-17.6	0	0	-17.6	0.017378	20	0.000	0.60	0%	Pass

### 3 Revision History

Revision Level	Description of changes	Revision Date
0	Initial Release	02 May 2024