

RF Exposure Report

Project Number: 4538164

Report Number: 4538164EMC03

Revision Level: 1

Client: Atlas Populi (Private) Limited

Equipment Under Test: Asset Tracker

Model: GSET 20 & GSET 10

Contains FCC ID: 2AC7Z-ESPWROOM32D

Contains FCC ID: 2AURCLRNHEL

Contains IC: 21098-ESPWROOM32D

Contains IC: 6514A-RN2903

Applicable Standards: 47 C.F.R. §§ 2.1091 and 2.1093; FCC KDB 447498

FCC KDB 447498 D01 General RF Exposure Guidance v06

Report issued on: 20 December 2019

Result: Exempt

Evaluated by:



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Reviewed by:



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Remarks: This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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1 General Information

1.1 Client Information

Name: Atlas Populi (Private) Limited
Address: 281, 2nd Floor, R. A. De Mel Mawatha
City, State, Zip, Country: Colombo 03, 00300, Sri Lanka

1.1 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

1.2 General Information of EUT

Product Marketing Name (PMN): Asset Tracker
Model Number (HVIN): GSET20 & GSET10
Serial Number: Not labeled

Module 1 FCC ID: 2AURCLRNHEL
Module1 Frequency Range: 902.3-927.5 MHz
Module 1 Modulation: FSK (LoRa)
Module 1 Antenna Type: Copper Spring (PCB mounted)
Module 1 Antenna Gain: 2.15 dBi

Module 2 FCC ID: 2AC7Z-ESPWROOM32D
Module2 Frequency Range: 2412-2462 MHz
Module 2 Modulation: 802.11 b DSSS
802.11 g/n HT20/HT40 OFDM
Module 2 Antenna Type: Internal Trace
Module 2 Antenna Gain: 3.7 dBi

Rated Voltage: 3.7VDC

The GSET 10 and the GSET 20 share electrically identical RF circuitry. The information above is true for both HVIN.

2 RF Exposure

2.1 Test Result

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

2.2 Test Method

Using the maximum power (including tune-up tolerances), the power density was calculated. Maximum antenna gain was assumed for this exercise.

2.3 Single transmission RF Exposure Levels (mW/cm²)

Band of Operation		Conducted Power w/tolerance dBm	Antenna Gain	Cable Loss	Average EIRP		Distance (R) cm	Power Density EIRP _{avg} /(4πR ²) mW/cm ²	FCC mW/cm ²	% of Limit	Verdict
Type	MHz				dBm	mW					
LoRA WAN	902.3-927.5	19.1	2.2	0.0	21.2	133	20	0.026	0.60	4%	Pass
WLAN 2.4	2412-2462	18.0	3.7	0.0	21.7	148	20	0.029	1.00	3%	Pass

Simultaneous Transmission - Percent of Limit		
Band	LoRA WAN	WLAN 2.4
LoRA WAN		7%
WLAN 2.4	7%	

3 Revision History

Revision Level	Description of changes	Revision Date
0	Initial release	19 November 2019
1	Model information was updated for TCB package. Section 1.2 and cover page.	20 December 2019