

RF Exposure Report

Project Number: 4670216

Proposal Number: 11235

Report Number: 4670216EMC02

Revision Level: 1

Client: ADTRAN, Inc.

Equipment Under Test: LoRaWAN Gateway

Model / HVIN: 7310-8

Part Number: 17101318F

FCC ID: HDC-73108GW


Applicable Standards: 47 CFR §§ 2.1091

FCC KDB 447498 D01 General RF Exposure Guidance v06

Report issued on: 12 October 2020

Result: Compliant

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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: ADTRAN, Inc.
 Address: 901 Explorer Blvd.
 City, State, Zip, Country: Huntsville, AL 35806

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

1.3 General Information of EUT – LoRa Radio

EUT: LoRaWAN Gateway
 Model Number / HVIN: 7310-8
 Part Number: 17101318F
 Serial Number: J3H213

Frequency Range: 923.3 – 927.5 MHz
 Number of channels: 8
 Modulation type: LoRa
 Channel spacing: 600 kHz
 Antenna: External Dipole: 2.0dBi (Taoglas, M/N: TI.19.2113)
 External Dipole: 3.0dBi (Siretta, M/N: Delta 22B)

Rated Voltage: 54Vdc PoE

Sample Received Date: 03 SEP 2020
 Dates of testing: 08 SEP – xx SEP 2020

1.4 General Information of EUT – Bluetooth Radio

FCC ID: 2AKZA-QCA9377
 IC: 22364-QCA9377
 Frequency Range: 2402 – 2480 MHz¹
 Number of channels: 40
 Modulation type: GFSK (1Mbps BLE)
 Channel spacing: 2 MHz
 Antenna: Dipole (Inaccessible): 1.6dBi (Molex, M/N: TI.19.2113)

Rated Voltage: 5Vdc Powered from host

Note: Although the certified module supports WLAN operation, only the BLE functions will be enabled.

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 measured conducted power, the power density was calculated. Maximum antenna gain was assumed for this exercise.

For BLE, the power from the FCC grant was used.

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					
Sub GHz	923.3-927.5	25.4	3.0	0.0	28.4	692	20	0.138	0.62	22.4%	Pass
Bluetooth LE	2400-2483.5	6.3	1.6	0.0	7.9	6	20	0.001	1.00	0.1%	Pass

2.4 Simultaneous transmissions

Simultaneous Transmissions - Percent of Limit

	Sub GHz	Bluetooth LE
Sub GHz		22.5%
Bluetooth	22.5%	

4 Revision History

Revision Level	Description of changes	Revision Date
0	Initial Release	25 September 2020
1	Corrected FCC ID on cover page	12 October 2020