

# 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**

Prepared by:

  
\_\_\_\_\_  
Jeremy Pickens, RF Lab Manager

Reviewed by:

  
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David Schramm, Operations Manager

*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 MHz<sup>1</sup>  
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/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  |                 |                                                                           |                        |            |         |
| 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   |
|                |                                |                   |
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