FCC RF Exposure Report

FCC ID	:	**HDC-17600074**
Equipment	:	**WiFi 7 10G Router**
Model No.	:	**SDG-8733, SDG-8734, SDG-8733v, SDG-8734v** **(Please refer to section 1.1.1 for more details)**
Brand Name	:	**Adtran**
Applicant	:	**Adtran**
Address	:	**901 Explorer Boulevard, Huntsville, Alabama, United States, 35806-2807**
Standard	:	**47 CFR FCC Part 2.1091**
Received Date	:	**Mar. 13, 2024**
Tested Date	:	**Mar. 13 ~ Apr. 26, 2024**

We, International Certification Corporation, would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:	**Approved by:**
Along Chen / Assistant Manager	**Gary Chang / Manager**

Table of Contents

Release Record

Report No.	Version	Description	Issued Date
FA431301-01	Rev. 01	Initial issue	Oct. 08, 2024

1 General Description

1.1 Information

This report is issued as a supplementary report to the original project no. FA431301. The difference is concerned with following items:

- ✧ Adding two models for configurations with VoIP function
- ✧ Version of I/O board is changed from V02 to V03.

Due to no affect any test items, all test results remain unchanged.

1.1.1 Product Details (Adding models were marked in boldface.)

The following models are provided to this EUT.

Brand Name	Model Name	Product Name	Description
Adtran	SDG-8733	WiFi 7 10G Router	W/O VOIP, With 10G RJ45 WAN Port
	SDG-8734	WiFi 7 10G Router	W/O VOIP, With 10G SFP WAN Port
	SDG-8733v	**WiFi 7 10G Router**	**W/ VOIP, With 10G RJ45 WAN Port**
	SDG-8734v	**WiFi 7 10G Router**	**W/ VOIP, With 10G SFP WAN Port**

2 MPE EVALUATION OF MOBILE DEVICES

2.1 LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE

Frequency Range (MHz)	Power Density (mW /cm^2)	Averaging Time (minutes)
300~1500	F/1500	30
1500~100000	1.0	30

2.2 MPE EVALUATION FORMULA

$$\mathbf{Pd} = \frac{Pt}{4 * Pi * R^2}$$

Where

Pd= Power density in mW/cm^2
Pt= EIRP in mW
Pi= 3.1416
R= Measurement distance

2.3 REFERENCE GUIDANCE

447498 D01 General RF Exposure Guidance v06

2.4 DEVIATION FROM TEST STANDARD AND MEASUREMENT PROCEDURE

None

2.5 MEASUREMENT UNCERTAINTY

The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)).

Parameters	Uncertainty
Conducted power	±0.808 dB

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

2.6 MPE EVALUATION RESULTS

Non-beamforming mode

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Maximum Tune Up Limit (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)	*Ratio	Pass / Fail
2412-2462	27.19	27.5	5.006	25	0.227	1	0.227	Pass
5180-5240	28.02	28.5	6.346	25	0.389	1	0.389	Pass
5260-5320	23.35	23.5	6.51	25	0.128	1	0.128	Pass
5500-5720	23.73	24	6.018	25	0.128	1	0.128	Pass
5745-5825	29.00	29.5	5.982	25	0.450	1	0.450	Pass
5925-6425	21.93	22	5.509	25	0.072	1	0.072	Pass
6425-6525	19.52	20	4.485	25	0.036	1	0.036	Pass
6525-6875	22.67	22.7	5.028	25	0.075	1	0.075	Pass
6875-7125	21.48	21.5	4.287	25	0.048	1	0.048	Pass

*Ratio = Power density / Limit.

Beamforming mode

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Maximum Tune Up Limit (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)	*Ratio	Pass / Fail
2412-2462	27.01	27.5	5.880	25	0.277	1	0.277	Pass
5180-5240	26.98	27	5.880	25	0.247	1	0.247	Pass
5260-5320	23.85	24	5.440	25	0.112	1	0.112	Pass
5500-5720	23.71	24	5.460	25	0.112	1	0.112	Pass
5745-5825	28.79	29.5	4.950	25	0.355	1	0.355	Pass
5925-6425	21.83	22	4.790	25	0.061	1	0.061	Pass
6425-6525	19.51	20	4.360	25	0.035	1	0.035	Pass
6525-6875	22.44	22.5	5.320	25	0.077	1	0.077	Pass
6875-7125	21.37	21.5	5.267	25	0.060	1	0.060	Pass

*Ratio = Power density / Limit.

The device contains one certified BT module, FCC ID: Y82-DA14531MOD.

Frequency Range (MHz)	Maximum Tune Up limit (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)	*Ratio	Pass / Fail
2402-2480	2.2	-0.5	25	0.0002	1	0.0002	Pass

Note: Above output power value is from module's test report.

2.7 MPE EVALUATION OF SIMULTANEOUS TRANSMISSION

Non-beamforming mode

Mode	Max Ratio of Each Mode
WLAN 2.4GHz	0.227
WLAN 5GHz	0.450
WLAN 6GHz	0.075
BT	0.0002
Sum	0.752
Limit	1
Pass / Fail	Pass

Beamforming mode

Mode	Max Ratio of Each Mode
WLAN 2.4GHz	0.277
WLAN 5GHz	0.355
WLAN 6GHz	0.077
BT	0.0002
Sum	0.709
Limit	1
Pass / Fail	Pass

3 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corporation (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website http://www.icertifi.com.tw.

Linkou

Tel: 886-2-2601-1640

No.30-2, Ding Fwu Tsuen, Lin Kou District, New Taipei City, Taiwan (R.O.C.)

Kwei Shan

Tel: 886-3-271-8666

No.3-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

No.2-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

Kwei Shan Site II

Tel: 886-3-271-8640

No.14-1, Lane 19, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

If you have any suggestion, please feel free to contact us as below information.

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Email: ICC_Service@icertifi.com.tw

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