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Report No.: TMWK2201000113KR

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Rev.: 00

## RF Exposure Evaluation Report

**FCC 47 CFR § 2.1091**

for

**AX1800 Wi-Fi 6 AI Router, AX1800 MESH ROUTER, AX1800 MESH SYSTEM**

**Model Name.: M18**

Prepared for:

**D-Link Corporation**

**14420 Myford Road Suite 100 Irvine California United States 92606**

Prepared by

**Compliance Certification Services Inc.**

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**Issue Date: August 2, 2022**

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### Revision History

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00	August 2, 2022	Initial Issue	ALL	Doris Chu

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## 1 Attestation of Test Results

Applicant Name	D-Link Corporation
Model Name	14420 Myford Road Suite 100 Irvine California United States 92606
Applicable Standards	FCC 47 CFR § 2.1091 KDB 447498 D04 FCC 47 CFR § 1.1307 FCC 47 CFR § 1.1310 Published RF exposure KDB procedures
Receive EUT Date:	January 17, 2022
<p>Compliance Certification Services Inc. , tested the above equipment in accordance with the requirements set forth in the above standards. Determination of compliance is based on the results of the compliance measurement,not taking into account measurement instrumentation uncertainty.All indications of Pass/Fail in this report are opinions expressed by Compliance Certification Services Inc, based on interpretations and/or observations of test results. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.</p>	
<p>Approved &amp; Released By:</p> 	
<p>Sky Zhou Asst. Section Manager Compliance Certification Services Inc.</p>	



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## 2 Test Specification, Methods and Procedures

The tests documented in this report were performed in accordance with FCC 47 CFR § 2.1091, the following FCC Published RF exposure [KDB](#) procedures:

- 447498 D04 Interim General RF Exposure Guidance v01
- 865664 D02 RF Exposure Reporting v01r02



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### 3 Device Under Test (DUT) Information

#### 3.1 DUT Description

Product	AX1800 Wi-Fi 6 AI Router, AX1800 MESH ROUTER, AX1800 MESH SYSTEM
Trade Name	D-Link
Model No.	M18
Model Discrepancy	N/A
Hardware Version	1A
Software Version	1.00
Sample Stage	Identical prototype

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### 3.2 Wireless Technologies

<b>Frequency bands</b>	<input type="checkbox"/> Bluetooth: 2402MHz-2480MHz <input checked="" type="checkbox"/> 802.11b/g/n HT20/ac (VHT20)/ax (HE20): 2412MHz ~ 2462 MHz <input checked="" type="checkbox"/> 802.11n HT40/ac (VHT40)/ax (HE40): 2422MHz ~ 2452MHz <input checked="" type="checkbox"/> 802.11a/n HT20: 5180MHz ~ 5240MHz / 5260MHz ~ 5320MHz / 5500MHz ~ 5720MHz / 5745MHz ~ 5825MHz <input checked="" type="checkbox"/> 802.11ac VHT20: 5180MHz ~ 5240MHz / 5260MHz ~ 5320MHz / 5500MHz ~ 5720MHz / 5745MHz ~ 5825MHz <input checked="" type="checkbox"/> 802.11ax HE20: 5180MHz ~ 5240MHz / 5260MHz ~ 5320MHz / 5500MHz ~ 5720 MHz / 5745MHz ~ 5825MHz <input checked="" type="checkbox"/> 802.11n HT40: 5190MHz ~ 5230MHz / 5270MHz ~ 5310MHz / 5510MHz ~ 5710MHz / 5755MHz ~ 5795MHz <input checked="" type="checkbox"/> 802.11ac VHT 40: 5190MHz ~ 5230MHz / 5270MHz ~ 5310MHz / 5510MHz ~ 5710MHz / 5755MHz ~ 5795MHz <input checked="" type="checkbox"/> 802.11ax HE40: 5190MHz ~ 5230MHz / 5270MHz ~ 5310MHz / 5510MHz ~ 5710MHz / 5755MHz ~ 5795MHz <input checked="" type="checkbox"/> 802.11ac VHT80: 5210MHz / 5290MHz / 5530MHz ~ 5690 MHz / 5775MHz <input checked="" type="checkbox"/> 802.11ax HE80: 5210MHz / 5290MHz / 5530MHz ~ 5690 MHz / 5775MHz <input type="checkbox"/> Others
<b>Exposure classification</b>	<input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm <sup>2</sup> ) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm <sup>2</sup> )

<b>Antenna Specification</b>	<p><b>PCB Antenna</b></p> <p>WIFI 2.4GHz:  Chain 0: Gain: 2.54 dBi  Chain 1: Gain: 2.56 dBi  Power Directional Gain: 5.56 dBi</p> <p>WIFI 5GHz:  Chain 0:  5150~5250: Gain: 2.56 dBi  5250~5350: Gain: 2.56 dBi  5470~5725: Gain: 2.59 dBi  5725~5850: Gain: 2.68 dBi  Chain 1:  5150~5250: Gain: 2.42 dBi  5250~5350: Gain: 2.42 dBi  5470~5725: Gain: 2.63 dBi  5725~5850: Gain: 2.72 dBi  Power Directional Gain:  5150~5250: Gain: 5.50 dBi  5250~5350: Gain: 5.50 dBi  5470~5725: Gain: 5.62 dBi  5725~5850: Gain: 5.71 dBi</p> <p>2.4GHz: Direction Gain: 5.56 dBi (Numeric gain: 3.60) Worst  5GHz: Direction Gain: 5.71 dBi (Numeric gain: 3.72) Worst</p>
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Maximum Measurement Average Power	<b>2.4GHz</b>		
	<b>BFM OFF</b>		
	IEEE 802.11b Mode:	21.07 dBm	(127.938 mW)
	IEEE 802.11g Mode:	21.13 dBm	(129.718 mW)
	IEEE 802.11n HT 20 Mode:	21.35 dBm	(136.458 mW)
	IEEE 802.11n HT 40 Mode:	19.81 dBm	(95.719 mW)
	IEEE 802.11ac (VHT 20) Mode:	21.47 dBm	(140.281 mW)
	IEEE 802.11ac (VHT 40) Mode:	19.85 dBm	(96.605 mW)
	IEEE 802.11ax HE20 Mode:	21.79 dBm	(151.008 mW)
	IEEE 802.11ax HE40 Mode:	18.99 dBm	(79.250 mW)
	<b>BFM ON</b>		
	IEEE 802.11ac (VHT 20) Mode:	18.14 dBm	(65.163 mW)
	IEEE 802.11ac (VHT 40) Mode:	16.56 dBm	(45.290 mW)
	IEEE 802.11ax HE20 Mode:	18.53 dBm	(71.285 mW)
	IEEE 802.11ax HE40 Mode:	15.75 dBm	(37.584 mW)
	<b>5GHz</b>		
	<b>BFM OFF- Master</b>		
	IEEE 802.11a Mode:	24.77 dBm	(299.916 mW)
	IEEE 802.11n HT 20 Mode:	26.53 dBm	(449.780 mW)
	IEEE 802.11ac VHT 20 Mode:	26.70 dBm	(467.735 mW)
	IEEE 802.11n HT 40 Mode:	26.16 dBm	(413.048 mW)
	IEEE 802.11ac VHT 40 Mode:	26.18 dBm	(414.954 mW)
	IEEE 802.11ac VHT 80 Mode:	23.70 dBm	(234.423 mW)
	IEEE 802.11ax HE20 Mode:	27.03 dBm	(504.661 mW)
	IEEE 802.11ax HE40 Mode:	27.53 dBm	(566.239 mW)
	IEEE 802.11ax HE80 Mode:	24.56 dBm	(285.759 mW)
	<b>BFM OFF- Slave</b>		
	IEEE 802.11a Mode:	23.51 dBm	(224.388 mW)
	IEEE 802.11n HT 20 Mode:	26.50 dBm	(446.684 mW)
	IEEE 802.11ac VHT 20 Mode:	26.56 dBm	(452.898 mW)
IEEE 802.11n HT 40 Mode:	25.83 dBm	(382.825 mW)	
IEEE 802.11ac VHT 40 Mode:	25.88 dBm	(387.258 mW)	
IEEE 802.11ac VHT 80 Mode:	23.61 dBm	(229.615 mW)	
IEEE 802.11ax HE20 Mode:	26.73 dBm	(470.977 mW)	
IEEE 802.11ax HE40 Mode:	27.48 dBm	(559.758 mW)	
IEEE 802.11ax HE80 Mode:	24.36 dBm	(272.898 mW)	

<b>5GHz</b>		
<b>BFM ON- Master</b>		
IEEE 802.11ac VHT 20 Mode:	23.57 dBm	(227.510 mW)
IEEE 802.11ac VHT 40 Mode:	22.92 dBm	(195.884 mW)
IEEE 802.11ac VHT 80 Mode:	20.54 dBm	(113.240 mW)
IEEE 802.11ax HE20 Mode:	23.83 dBm	(241.546 mW)
IEEE 802.11ax HE40 Mode:	24.51 dBm	(282.488 mW)
IEEE 802.11ax HE80 Mode:	21.55 dBm	(142.889 mW)
<b>BFM ON- Slave</b>		
IEEE 802.11ac VHT 20 Mode:	23.49 dBm	(223.357 mW)
IEEE 802.11ac VHT 40 Mode:	22.51 dBm	(178.238 mW)
IEEE 802.11ac VHT 80 Mode:	20.46 dBm	(111.173 mW)
IEEE 802.11ax HE20 Mode:	23.49 dBm	(223.357 mW)
IEEE 802.11ax HE40 Mode:	24.34 dBm	(271.644 mW)
IEEE 802.11ax HE80 Mode:	21.19 dBm	(131.522 mW)

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Maximum tune up power	<b>2.4GHz</b>	
	<b>BFM OFF</b>	
	IEEE 802.11b Mode:	22.00 dBm (158.489 mW)
	IEEE 802.11g Mode:	22.00 dBm (158.489 mW)
	IEEE 802.11n HT 20 Mode:	22.00 dBm (158.489 mW)
	IEEE 802.11n HT 40 Mode:	20.50 dBm (112.202 mW)
	IEEE 802.11ac (VHT 20) Mode:	22.00 dBm (158.489 mW)
	IEEE 802.11ac (VHT 40) Mode:	20.50 dBm (112.202 mW)
	IEEE 802.11ax HE20 Mode:	22.50 dBm (177.828 mW)
	IEEE 802.11ax HE40 Mode:	19.50 dBm (89.125 mW)
	<b>BFM ON</b>	
	IEEE 802.11ac (VHT 20) Mode:	19.00 dBm (79.433 mW)
	IEEE 802.11ac (VHT 40) Mode:	17.50 dBm (56.234 mW)
	IEEE 802.11ax HE20 Mode:	19.50 dBm (89.125 mW)
	IEEE 802.11ax HE40 Mode:	16.50 dBm (44.668 mW)
	<b>5GHz</b>	
	<b>BFM OFF- Master</b>	
	IEEE 802.11a Mode:	25.50 dBm (354.813 mW)
	IEEE 802.11n HT 20 Mode:	27.50 dBm (562.341 mW)
	IEEE 802.11ac VHT 20 Mode:	27.50 dBm (562.341 mW)
	IEEE 802.11n HT 40 Mode:	27.00 dBm (501.187 mW)
	IEEE 802.11ac VHT 40 Mode:	27.00 dBm (501.187 mW)
	IEEE 802.11ac VHT 80 Mode:	24.50 dBm (281.838 mW)
	IEEE 802.11ax HE20 Mode:	28.00 dBm (630.957 mW)
	IEEE 802.11ax HE40 Mode:	28.50 dBm (707.946 mW)
	IEEE 802.11ax HE80 Mode:	25.50 dBm (354.813 mW)
	<b>BFM OFF- Slave</b>	
	IEEE 802.11a Mode:	24.50 dBm (281.838 mW)
	IEEE 802.11n HT 20 Mode:	27.50 dBm (562.341 mW)
	IEEE 802.11ac VHT 20 Mode:	27.50 dBm (562.341 mW)
	IEEE 802.11n HT 40 Mode:	26.50 dBm (446.684 mW)
	IEEE 802.11ac VHT 40 Mode:	26.50 dBm (446.684 mW)
IEEE 802.11ac VHT 80 Mode:	24.50 dBm (281.838 mW)	
IEEE 802.11ax HE20 Mode:	27.50 dBm (562.341 mW)	
IEEE 802.11ax HE40 Mode:	28.00 dBm (630.957 mW)	
IEEE 802.11ax HE80 Mode:	25.00 dBm (316.228 mW)	

<b>5GHz</b>		
<b>BFM ON- Master</b>		
IEEE 802.11ac VHT 20 Mode:	24.50 dBm	(281.838 mW)
IEEE 802.11ac VHT 40 Mode:	23.50 dBm	(223.872 mW)
IEEE 802.11ac VHT 80 Mode:	21.50 dBm	(141.254 mW)
IEEE 802.11ax HE20 Mode:	24.50 dBm	(281.838 mW)
IEEE 802.11ax HE40 Mode:	25.50 dBm	(354.813 mW)
IEEE 802.11ax HE80 Mode:	22.50 dBm	(177.828 mW)
<b>BFM ON- Slave</b>		
IEEE 802.11ac VHT 20 Mode:	24.00 dBm	(251.189 mW)
IEEE 802.11ac VHT 40 Mode:	23.50 dBm	(223.872 mW)
IEEE 802.11ac VHT 80 Mode:	21.00 dBm	(125.893 mW)
IEEE 802.11ax HE20 Mode:	24.00 dBm	(251.189 mW)
IEEE 802.11ax HE40 Mode:	25.00 dBm	(316.228 mW)
IEEE 802.11ax HE80 Mode:	22.00 dBm	(158.489 mW)

**Notes:**

1. For more details, please refer to the User's manual of the EUT.
2. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.
3. The tune up power referred the AVG power of the test report TMWK2201000110KR and TMWK2201000111KR for RF Exposure assessment purpose.

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## 4 Maximum Permissible Exposure

### 4.1 Limits for Maximum Permissible Exposure (MPE)

**Table 1 - Limits for Maximum Permissible Exposure (MPE)**

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	* 100	6
3.0-30	1842/f	4.89/f	* 900/f <sup>2</sup>	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	* 100	30
1.34-30	824/f	2.19/f	* 180/f <sup>2</sup>	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
<b>1,500-100,000</b>			1.0	30

## 4.2 MPE Calculation Method

### Calculation

$$\text{Given } E = \frac{\sqrt{30 \times P \times G}}{d} \text{ \& } S = \frac{E^2}{377}$$

Where E = Field strength in Volts / meter

P = Power in Watts

G = Numeric antenna gain

d = Distance in meters

S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377 d^2}$$

Changing to units of mW and cm, using:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \text{ Equation 1}$$

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm<sup>2</sup>

If, Substituting the MPE safe distance using d = 20 cm into Equation 1:

$$S = 0.000199 \times P \times G$$

### 4.3 MPE EXEMPTION

- (A) The available maximum time-averaged power is no more than 1 mW
- (B) The available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold  $P_{th}$  (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive).  $P_{th}$  is given by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left( \frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

$d$  = the separation distance (cm);

- (C) Using Table 1 and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, R must be at least  $\lambda/2\pi$ , where  $\lambda$  is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of  $\lambda/4$  or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

Single RF Sources Subject to Routine Environmental Evaluation	
RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	1,920 R <sup>2</sup> .
1.34-30	3,450 R <sup>2</sup> /f <sup>2</sup> .
30-300	3.83 R <sup>2</sup> .
300-1,500	0.0128 R <sup>2</sup> f.
1,500-100,000	19.2R <sup>2</sup> .

Note: R is in meters, f is in MHz.

#### 4.4 Multiple RF sources

In the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation),

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$



## 5 MAXIMUM PERMISSIBLE EXPOSURE

Substituting the MPE safe distance using  $d = 20$  cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm<sup>2</sup>

### WIFI 2.4GHz- BFM OFF

Mode	Frequency (MHz)	Max Tune-up power(dBm)	Max Tune-up power(mW)	G(dBi)	G(num.)	D(cm)	Power Density in mW/cm2	Limit Power Density in mW/cm2
IEEE 802.11b	2462.00	22.00	158.49	5.56	3.60	20.0	0.113	1.000
IEEE 802.11g	2462.00	22.00	158.49	5.56	3.60	20.0	0.113	1.000
IEEE 802.11n HT20	2462.00	22.00	158.49	5.56	3.60	20.0	0.113	1.000
IEEE 802.11n HT40	2452.00	20.50	112.20	5.56	3.60	20.0	0.080	1.000
IEEE 802.11ac VHT20	2462.00	22.00	158.49	5.56	3.60	20.0	0.113	1.000
IEEE 802.11ac VHT40	2452.00	20.50	112.20	5.56	3.60	20.0	0.080	1.000
IEEE 802.11ax HE20	2462.00	22.50	177.83	5.56	3.60	20.0	0.127	1.000
IEEE 802.11ax HE40	2452.00	19.50	89.13	5.56	3.60	20.0	0.064	1.000

### WIFI 2.4GHz- BFM ON

Mode	Frequency (MHz)	Max Tune-up power(dBm)	Max Tune-up power(mW)	G(dBi)	G(num.)	D(cm)	Power Density in mW/cm2	Limit Power Density in mW/cm2
IEEE 802.11ac VHT20	2462.00	19.00	79.43	5.56	3.60	20.0	0.057	1.000
IEEE 802.11ac VHT40	2452.00	17.50	56.23	5.56	3.60	20.0	0.040	1.000
IEEE 802.11ax HE20	2462.00	19.50	89.13	5.56	3.60	20.0	0.064	1.000
IEEE 802.11ax HE40	2452.00	16.50	44.67	5.56	3.60	20.0	0.032	1.000

**WIFI 5GHz- BFM OFF- Master**

Mode	Frequency (MHz)	Max Tune-up power(dBm)	Max Tune-up power(mW)	G(dBi)	G(num.)	D(cm)	Power Density in mW/cm2	Limit Power Density in mW/cm2
IEEE 802.11a	5825.00	25.50	354.81	5.71	3.72	20.0	0.263	1.000
IEEE 802.11n HT20	5825.00	27.50	562.34	5.71	3.72	20.0	0.417	1.000
IEEE 802.11n HT40	5795.00	27.50	562.34	5.71	3.72	20.0	0.417	1.000
IEEE 802.11ac VHT20	5825.00	27.00	501.19	5.71	3.72	20.0	0.371	1.000
IEEE 802.11ac VHT40	5795.00	27.00	501.19	5.71	3.72	20.0	0.371	1.000
IEEE 802.11ac VHT80	5775.00	24.50	281.84	5.71	3.72	20.0	0.209	1.000
IEEE 802.11ax HE20	5825.00	28.00	630.96	5.71	3.72	20.0	0.467	1.000
IEEE 802.11ax HE40	5795.00	28.50	707.95	5.71	3.72	20.0	0.524	1.000
IEEE 802.11ax HE80	5775.00	25.50	354.81	5.71	3.72	20.0	0.263	1.000

**WIFI 5GHz- BFM OFF- Slave**

Mode	Frequency (MHz)	Max Tune-up power(dBm)	Max Tune-up power(mW)	G(dBi)	G(num.)	D(cm)	Power Density in mW/cm2	Limit Power Density in mW/cm2
IEEE 802.11a	5825.00	24.50	281.84	5.71	3.72	20.0	0.209	1.000
IEEE 802.11n HT20	5825.00	27.50	562.34	5.71	3.72	20.0	0.417	1.000
IEEE 802.11n HT40	5795.00	27.50	562.34	5.71	3.72	20.0	0.417	1.000
IEEE 802.11ac VHT20	5825.00	26.50	446.68	5.71	3.72	20.0	0.331	1.000
IEEE 802.11ac VHT40	5795.00	26.50	446.68	5.71	3.72	20.0	0.331	1.000
IEEE 802.11ac VHT80	5775.00	24.50	281.84	5.71	3.72	20.0	0.209	1.000
IEEE 802.11ax HE20	5825.00	27.50	562.34	5.71	3.72	20.0	0.417	1.000
IEEE 802.11ax HE40	5795.00	28.00	630.96	5.71	3.72	20.0	0.467	1.000
IEEE 802.11ax HE80	5775.00	25.00	316.23	5.71	3.72	20.0	0.234	1.000

**WIFI 5GHz- BFM ON- Master**

Mode	Frequency (MHz)	Max Tune-up power(dBm)	Max Tune-up power(mW)	G(dBi)	G(num.)	D(cm)	Power Density in mW/cm2	Limit Power Density in mW/cm2
IEEE 802.11ac VHT20	5825.00	24.50	281.84	5.71	3.72	20.0	0.209	1.000
IEEE 802.11ac VHT40	5795.00	23.50	223.87	5.71	3.72	20.0	0.166	1.000
IEEE 802.11ac VHT80	5775.00	21.50	141.25	5.71	3.72	20.0	0.105	1.000
IEEE 802.11ax HE20	5825.00	24.50	281.84	5.71	3.72	20.0	0.209	1.000
IEEE 802.11ax HE40	5795.00	25.50	354.81	5.71	3.72	20.0	0.263	1.000
IEEE 802.11ax HE80	5775.00	22.50	177.83	5.71	3.72	20.0	0.132	1.000

**WIFI 5GHz- BFM ON- Slave**

Mode	Frequency (MHz)	Max Tune-up power(dBm)	Max Tune-up power(mW)	G(dBi)	G(num.)	D(cm)	Power Density in mW/cm2	Limit Power Density in mW/cm2
IEEE 802.11ac VHT20	5825.00	24.00	251.19	5.71	3.72	20.0	0.186	1.000
IEEE 802.11ac VHT40	5795.00	23.50	223.87	5.71	3.72	20.0	0.166	1.000
IEEE 802.11ac VHT80	5775.00	21.00	125.89	5.71	3.72	20.0	0.093	1.000
IEEE 802.11ax HE20	5825.00	24.00	251.19	5.71	3.72	20.0	0.186	1.000
IEEE 802.11ax HE40	5795.00	25.00	316.23	5.71	3.72	20.0	0.234	1.000
IEEE 802.11ax HE80	5775.00	22.00	158.49	5.71	3.72	20.0	0.117	1.000

## 6 MPE Exemption Option B

### WIFI 2.4GHz- BFM OFF

Mode	Frequency (MHz)	R(m)	Max Tune-up EIRP(dBm)	Max Tune-up ERP(dBm)	Max Tune-up ERP(mW)	ERP Threshold(mW)	MPE Exemption
IEEE 802.11b	2462.00	0.20	27.56	25.41	347.536	3060	Complies
IEEE 802.11g	2462.00	0.20	27.56	25.41	347.536	3060	Complies
IEEE 802.11n HT20	2462.00	0.20	27.56	25.41	347.536	3060	Complies
IEEE 802.11n HT40	2452.00	0.20	26.06	23.91	246.037	3060	Complies
IEEE 802.11ac VHT20	2462.00	0.20	27.56	25.41	347.536	3060	Complies
IEEE 802.11ac VHT40	2452.00	0.20	26.06	23.91	246.037	3060	Complies
IEEE 802.11ax HE20	2462.00	0.20	28.06	25.91	389.942	3060	Complies
IEEE 802.11ax HE40	2452.00	0.20	25.06	22.91	195.434	3060	Complies

### WIFI 2.4GHz- BFM ON

Mode	Frequency (MHz)	R(m)	Max Tune-up EIRP(dBm)	Max Tune-up ERP(dBm)	Max Tune-up ERP(mW)	ERP Threshold(mW)	MPE Exemption
IEEE 802.11ac VHT20	2462.00	0.20	24.56	22.41	174.181	3060	Complies
IEEE 802.11ac VHT40	2452.00	0.20	23.06	20.91	123.310	3060	Complies
IEEE 802.11ax HE20	2462.00	0.20	25.06	22.91	195.434	3060	Complies
IEEE 802.11ax HE40	2452.00	0.20	22.06	19.91	97.949	3060	Complies

### WIFI 5GHz- BFM OFF- Master

Mode	Frequency (MHz)	R(m)	Max Tune-up EIRP(dBm)	Max Tune-up ERP(dBm)	Max Tune-up ERP(mW)	ERP Threshold(mW)	MPE Exemption
IEEE 802.11a	5825.00	0.20	31.21	29.06	805.378	3060	Complies
IEEE 802.11n HT20	5825.00	0.20	33.21	31.06	1276.439	3060	Complies
IEEE 802.11n HT40	5795.00	0.20	33.21	31.06	1276.439	3060	Complies
IEEE 802.11ac VHT20	5825.00	0.20	32.71	30.56	1137.627	3060	Complies
IEEE 802.11ac VHT40	5795.00	0.20	32.71	30.56	1137.627	3060	Complies
IEEE 802.11ac VHT80	5775.00	0.20	30.21	28.06	639.735	3060	Complies
IEEE 802.11ax HE20	5825.00	0.20	33.71	31.56	1432.188	3060	Complies
IEEE 802.11ax HE40	5795.00	0.20	34.21	32.06	1606.941	3060	Complies
IEEE 802.11ax HE80	5775.00	0.20	31.21	29.06	805.378	3060	Complies

### WIFI 5GHz- BFM OFF- Slave

Mode	Frequency (MHz)	R(m)	Max Tune-up EIRP(dBm)	Max Tune-up ERP(dBm)	Max Tune-up ERP(mW)	ERP Threshold(mW)	MPE Exemption
IEEE 802.11a	5825.00	0.20	30.21	28.06	639.735	3060	Complies
IEEE 802.11n HT20	5825.00	0.20	33.21	31.06	1276.439	3060	Complies
IEEE 802.11n HT40	5795.00	0.20	33.21	31.06	1276.439	3060	Complies
IEEE 802.11ac VHT20	5825.00	0.20	32.21	30.06	1013.911	3060	Complies
IEEE 802.11ac VHT40	5795.00	0.20	32.21	30.06	1013.911	3060	Complies
IEEE 802.11ac VHT80	5775.00	0.20	30.21	28.06	639.735	3060	Complies
IEEE 802.11ax HE20	5825.00	0.20	33.21	31.06	1276.439	3060	Complies
IEEE 802.11ax HE40	5795.00	0.20	33.71	31.56	1432.188	3060	Complies
IEEE 802.11ax HE80	5775.00	0.20	30.71	28.56	717.794	3060	Complies

**WIFI 5GHz- BFM ON- Master**

Mode	Frequency (MHz)	R(m)	Max Tune-up EIRP(dBm)	Max Tune-up ERP(dBm)	Max Tune-up ERP(mW)	ERP Threshold(mW)	MPE Exemption
IEEE 802.11ac VHT20	5825.00	0.20	30.21	28.06	639.735	3060	Complies
IEEE 802.11ac VHT40	5795.00	0.20	29.21	27.06	508.159	3060	Complies
IEEE 802.11ac VHT80	5775.00	0.20	27.21	25.06	320.627	3060	Complies
IEEE 802.11ax HE20	5825.00	0.20	30.21	28.06	639.735	3060	Complies
IEEE 802.11ax HE40	5795.00	0.20	31.21	29.06	805.378	3060	Complies
IEEE 802.11ax HE80	5775.00	0.20	28.21	26.06	403.645	3060	Complies

**WIFI 5GHz- BFM ON- Slave**

Mode	Frequency (MHz)	R(m)	Max Tune-up EIRP(dBm)	Max Tune-up ERP(dBm)	Max Tune-up ERP(mW)	ERP Threshold(mW)	MPE Exemption
IEEE 802.11ac VHT20	5825.00	0.20	29.71	27.56	570.164	3060	Complies
IEEE 802.11ac VHT40	5795.00	0.20	29.21	27.06	508.159	3060	Complies
IEEE 802.11ac VHT80	5775.00	0.20	26.71	24.56	285.759	3060	Complies
IEEE 802.11ax HE20	5825.00	0.20	29.71	27.56	570.164	3060	Complies
IEEE 802.11ax HE40	5795.00	0.20	30.71	28.56	717.794	3060	Complies
IEEE 802.11ax HE80	5775.00	0.20	27.71	25.56	359.749	3060	Complies

## 7 Simultaneous Transmission Analysis

In the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation),

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

### Simultaneous Transmission Condition

RF Exposure Condition	Item	Capable Transmit Configurations	
	1	DTS	+ U-NII

### 7.1 Sum of the MPE for WIFI 2.4GHz & WIFI 5GHz

#### WIFI 2.4GHz + WIFI 5GHz

Simultaneous Transmission Mode:					
Mode	Frequency (MHz)	Max Tune-up ERP (mW)	ERP Threshold (mW)	simultaneous Transmission	simultaneous Transmission Limit
WIFI 2.4GHz	2462.00	389.94	3060.00	0.6526	≤ 1
WIFI 5GHz	5825.00	1606.94	3060.00		



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## 8 Facilities

All measurement facilities used to collect the measurement data are located at

No.11, Wugong 6th Rd., Wugu Dist., New Taipei City, Taiwan. (R.O.C.)

**END OF REPORT**