

FCC RF EXPOSURE REPORT

FCC ID: NDD9574781603

Project No. : 1604061
Equipment : AC1200 Dual-Band Wi-Fi Extender
Model : EW-7478AC
Serial Model : EW-7478WAP, RE11S, RG21, RE11, RE10
Applicant : EDIMAX TECHNOLOGY CO., LTD.
Address : No.3, Wu-Chuan 3rd Road, Wu-Gu, New Taipei
City 24891, Taiwan

According: : FCC Guidelines for Human Exposure IEEE
C95.1

B T L I N C .

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MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi^2} = \frac{EIRP}{4\pi^2}$$

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Table for Filed Antenna

2.4G

Ant.	Brand	Model Name	Antenna Type	Connector	Gain(dBi)
1		98272PRSX000	Dipole	SMA	3.19
2		98272PRSX000	Dipole	SMA	3.19

5G

Ant.	Brand	Model Name	Antenna Type	Connector	Gain(dBi)
1		98272PRSX000	Dipole	SMA	3.55
2		98272PRSX000	Dipole	SMA	3.55

Note:

(1) The EUT incorporates a MIMO function. Physically, the EUT provides two completed two transmitters and two receivers (2T2R).

Operating Mode	2TX
TX Mode	
802.11b	V (ANT 1 + ANT 2)
802.11g	V (ANT 1 + ANT 2)
802.11n(20MHz)	V (ANT 1 + ANT 2)
802.11n(40MHz)	V (ANT 1 + ANT 2)

TEST RESULTS

2.4G

EUT :	AC1200 Dual-Band Wi-Fi Extender	Model Name :	EW-7478AC
Temperature :	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX B MODE /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
3.19	2.0845	24.65	291.7427	0.12104598	1	Complies
3.19	2.0845	26.52	448.7454	0.18618744	1	Complies
3.19	2.0845	24.7	295.1209	0.12244763	1	Complies

UNII-1

EUT :	AC1200 Dual-Band Wi-Fi Extender	Model Name :	EW-7478AC
Temperature :	25 °C	Relative Humidity:	65 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	UNII-1/TX N20 Mode_Total		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
3.55	2.2646	18.94	78.3430	0.03531428	1	Complies
3.55	2.2646	18.99	79.2501	0.03572320	1	Complies
3.55	2.2646	18.95	78.5236	0.03539569	1	Complies

UNII-3

EUT :	AC1200 Dual-Band Wi-Fi Extender	Model Name :	EW-7478AC
Temperature:	25 °C	Relative Humidity:	65 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	UNII-3/TX AC(VHT80) Mode_Total		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
3.55	2.2646	18.25	66.8344	0.03012662	1	Complies

For 2.4G+5G simultaneous transmission MPE:

$$0.1862/1+0.0357/1=0.2219<1$$

Note: the calculated distance is 20 cm.