FCC ID: T58DL4480VR Report No.: T160504D02-RP1-2

IEEE C95.1

KDB 447498 D01 v06

47 C.F.R. Part 1, Subpart I, Section 1.1310 47 C.F.R. Part 2, Subpart J, Section 2.1091

RF EXPOSURE REPORT

For

AC1200 Wireless Dual Band VDSL2 Gigabit VolP IAD

Model: DL4480V

Trade Name: netis

Issued for

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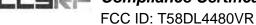
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1. Limit

According to §15.247(i), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this chapter.

2. EUT Specification

Product Name	AC1200 Wireless Dual Band VDSL2 Gigabit VoIP IAD			
Model Number	DL4480V			
Identify Number	T160504D02			
Received Date	May 04, 2016			
Frequency band (Operating)	802.11b/g/gn HT20 Mode: 2412MHz ~ 2462MHz 802.11gn HT40 Mode: 2422MHz ~ 2452MHz 802.11a, 802.11ac VHT20 Mode: 5180 MHz ~ 5240 MHz / 5745 MHz ~ 5825 MHz 802.11ac VHT40 Mode: 5190 MHz ~ 5230 MHz / 5755 MHz ~ 5795 MHz 802.11ac VHT80 Mode: 5210 MHz / 5775 MHz			
Device category	Mobile (>20cm separation)			
Exposure classification	 ☐ Occupational/Controlled exposure (S = 5mW/cm²) ☑ General Population/Uncontrolled exposure (S=1mW/cm²) 			
Antenna Specification	WiFi 2.4GHz Antenna: Ant. 1 (Chain A), Antenna Gain: 1.5 dBi Ant. 2 (Chain B), Antenna Gain: 1.5 dBi WiFi 5GHz Antenna: Ant. 1 (Chain A), Antenna Gain: 2 dBi Ant. 2 (Chain B), Antenna Gain: 2 dBi			
Maximum average output power	IEEE 802.11b Mode: 21.61 dBm IEEE 802.11g Mode: 23.69 dBm IEEE 802.11gn HT20 MCS0 Mode: 23.14 dBm IEEE 802.11gn HT40 MCS0 Mode: 20.63 dBm IEEE 802.11a Mode: 23.87 dBm IEEE 802.11ac VHT20 NSS1/MCS0 Mode: 25.11 dBm IEEE 802.11ac VHT40 NSS1/MCS0 Mode: 24.82 dBm IEEE 802.11ac VHT80 NSS1/MCS0 Mode: 23.36 dBm			
Evaluation applied	MPE Evaluation*			

Remark:

- 1. For more details, please refer to the User's manual of the EUT.
- 2. This submittal(s) (test report) is intended for FCC ID: T58DL4480VR filing.

3. Test Results

No non-compliance noted.

Calculation

Given
$$E = \frac{\sqrt{30 \times P \times G}}{d}$$
 & $S = \frac{E^2}{3770}$

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:

$$S = \frac{30 \times P \times G}{3770d^2}$$

Changing to units of mW and cm, using:

$$P(mW) = P(W) / 1000$$
 and

$$d(cm) = d(m) / 100$$

Yields

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

Where

d = Distance in cm

P = Power in mW

G = Numeric antenna gain

 $S = Power density in mW / cm^2$

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4. 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

 $S = Power density in mW / cm^2$

Mode	Frequency (MHz)	Power (dBm)	Ant. Gain (dBi)	Distance (cm)	Power density (mW/cm²)	Limit (mW/cm²)
IEEE 802.11b	2462	21.61	1.5	20	0.0407	1
IEEE 802.11g	2437	23.69	1.5	20	0.0657	1
IEEE 802.11gn HT20 MCS0	2437	23.14	1.5	20	0.0579	1
IEEE 802.11gn HT40 MCS0	2437	20.63	1.5	20	0.0325	1
IEEE 802.11a	5745	23.87	2	20	0.0769	1
IEEE 802.11ac VHT20 NSS1/MCS0	5200	25.11	2	20	0.1023	1
IEEE 802.11ac VHT40 NSS1/MCS0	5230	24.82	2	20	0.0957	1
IEEE 802.11ac VHT80 NSS1/MCS0	5775	23.36	2	20	0.0683	1

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Simultaneously MPE

Simultaneously MPE = MPE 1 / Limit 1 + MPE 2 / Limit2 +

WiFi 2.4GHz + 5GHz Mode

Simultaneously MPE = $(0.0657 / 1) + (0.1023 / 1) = 0.168 \text{ mW/cm}^2$