

**IEEE C95.1**

**KDB 447498 D03**

**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**

**300Mbps AV600 Wireless Powerline Adapter**

**Model: PL7622**

**Trade Name: netis**

**Issued for**

**NETIS SYSTEMS CO., LTD**

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Nanshan, Shenzhen, China**

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**Issued Date: January 12, 2016**



Testing Laboratory  
0240

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## Revision History

<b>Rev.</b>	<b>Issue Date</b>	<b>Revisions</b>	<b>Effect Page</b>	<b>Revised By</b>
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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**

<b>Product Name</b>	300Mbps AV600 Wireless Powerline Adapter
<b>Model Number</b>	PL7622
<b>Identify Number</b>	T151006D04
<b>Received Date</b>	October 06, 2015
<b>Frequency band (Operating)</b>	IEEE 802.11b/g/gn HT20 Mode: 2412MHz ~ 2462MHz IEEE 802.11gn HT40 Mode: 2422MHz ~ 2452MHz
<b>Device category</b>	Mobile (>20cm separation)
<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>	WiFi (2.4GHz) Ant. 0 Antenna Gain :3.28 dBi (Numeric gain:2.13) Ant. 1 Antenna Gain :3.28 dBi (Numeric gain:2.13)
<b>Maximum Peak output power</b>	IEEE 802.11b Mode: 12.67 dBm (18.493 mW) IEEE 802.11g Mode: 25.12 dBm (325.087 mW) IEEE 802.11gn HT 20 Mode 27.58 dBm (572.796 mW) IEEE 802.11gn HT 40 Mode 27.14 dBm (517.607 mW)
<b>Evaluation applied</b>	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: T58PL7622R filing to comply with Section 15.207, 15.209 and 15.247 of the FCC Part 15, Subpart C Rules.

### 3. Test Results

*No non-compliance noted.*

#### **Calculation**

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

Where  $E = \text{Field strength in Volts / meter}$

$P = \text{Power in Watts}$

$G = \text{Numeric antenna gain}$

$d = \text{Distance in meters}$

$S = \text{Power density in watts / meter}$

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

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

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

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

Where  $d = \text{Distance in cm}$

$P = \text{Power in mW}$

$G = \text{Numeric antenna gain}$

$S = \text{Power density in mW / cm}^2$

#### 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<sup>2</sup>

##### IEEE 802.11b mode:

Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)
2437	18.493	2.13	20	0.0078	1

##### IEEE 802.11g mode:

Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)
2437	325.087	2.13	20	0.1378	1

##### IEEE 802.11gn HT20 mode:

Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)
2437	572.796	2.13	20	0.2428	1

##### IEEE 802.11gn HT40 mode:

Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)
2437	517.607	2.13	20	0.2194	1