



RF EXPOSURE REPORT

REPORT NO.: SA130725E03

MODEL NO.: TEW-812DRU, TEW-815DAP

FCC ID: XU8TEW1750ACV2

RECEIVED: July 25, 2013

TESTED: Aug. 08, 2013

ISSUED: Aug. 13, 2013

APPLICANT: TRENDnet, Inc.

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ISSUED BY: Bureau Veritas Consumer Products Services
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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA130725E03	Original release	Aug. 13, 2013



1. CERTIFICATION

PRODUCT: AC1750 Dual Band Wireless Router, AC1750 Dual Band Wireless Access Point

BRAND NAME: TRENDnet

MODEL NO.: TEW-812DRU, TEW-815DAP

TEST SAMPLE: ENGINEERING SAMPLE

APPLICANT: TRENDnet, Inc.

TESTED DATE: Aug. 08, 2013

STANDARDS: FCC Part 2 (Section 2.1091)
FCC OET Bulletin 65, Supplement C (01-01)
IEEE C95.1

The above equipment (Model: TEW-812DRU) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Phoenix Huang , **DATE:** Aug. 13, 2013
(Phoenix Huang, Specialist)

APPROVED BY : May Chen , **DATE:** Aug. 13, 2013
(May Chen, Manager)

2. RF EXPOSURE LIMIT

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm ²)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	F/1500	30
1500-100,000	1.0	30

F = Frequency in MHz

3. MPE CALCULATION FORMULA

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

r = distance between observation point and center of the radiator in cm

4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 24cm away from the body of the user. So, this device is classified as **Mobile Device**.

5. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

15.247(2.4GHz):

FREQUENCY (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
2412-2462	968.597	6	24	0.53273	1

15.247(5GHz):

FREQUENCY (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5745 ~ 5825	705.163	6	24	0.38784	1

15.407(5GHz):

FREQUENCY (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5180 ~ 5240	26.424	6	24	0.01453	1

CONCLUSION:

Both of the 2.4GHz and 5GHz WLAN can transmit simultaneously, the formula of calculated the MPE is:

$$CPD_1 / LPD_1 + CPD_2 / LPD_2 + \dots \text{etc.} < 1$$

CPD = Calculation power density

LPD = Limit of power density

Therefore, the worst-case situation is $0.53273 / 1 + 0.38784 / 1 = 0.921$, which is less than "1". This confirmed that the device comply with FCC 1.1310 MPE limit.

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