



A D T

# RF EXPOSURE REPORT

**REPORT NO.:** SA111124C12

**MODEL NO.:** TEW-751DR

**FCC ID:** XU8TEW751DR

**RECEIVED:** Nov. 14, 2011

**TESTED:** Nov. 14 ~ Dec. 06, 2011

**ISSUED:** Dec. 09, 2011

**APPLICANT:** TRENDNET, Inc.

**ADDRESS:** 20675 Manhattan Place, Torrance, CA 90501,  
USA

**ISSUED BY:** Bureau Veritas Consumer Products Services  
(H.K.) Ltd., Taoyuan Branch

**LAB ADDRESS:** No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist.,  
New Taipei City, Taiwan ( R.O.C )

**TEST LOCATION:** No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei  
Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

This test report consists of 6 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced, except in full, without the written approval of our laboratory. The client should not use it to claim product, certification, approval, or endorsement by any government agency. The test results in the report only apply to the tested sample.



A D T

## TABLE OF CONTENTS

RELEASE CONTROL RECORD .....	3
1. CERTIFICATION .....	4
2. RF EXPOSURE.....	5
2.1 LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE).....	5
2.2 MPE CALCULATION FORMULA .....	5
2.3 CLASSIFICATION .....	5
2.4 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER.....	6



A D T

## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
Original release	NA	Dec. 09, 2011



A D T

## 1. CERTIFICATION

**PRODUCT:** Wireless Router

**MODEL:** TEW-751DR

**BRAND:** TRENDnet

**APPLICANT:** TRENDNET, Inc.

**TESTED:** Nov. 14 ~ Dec. 06, 2011

**TEST SAMPLE:** ENGINEERING SAMPLE

**STANDARDS:** FCC Part 2 (Section 2.1091)

FCC OET Bulletin 65, Supplement C (01-01)

IEEE C95.1

The above equipment (Model: TEW-751DR) 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 : Pettie Chen , DATE: Dec. 09, 2011  
Pettie Chen / Specialist

APPROVED BY : Gary Chang , DATE: Dec. 09, 2011  
Gary Chang / Technical Manager



A D T

## 2. RF EXPOSURE

### 2.1 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> )	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

### 2.2 MPE CALCULATION FORMULA

$$Pd = (Pout \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

Pd = power density in mW/cm<sup>2</sup>

Pout = 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

### 2.3 CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.



A D T

## 2.4 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

FREQUENCY BAND (MHz)	MAX CONDUCTED POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
2412-2462	25.5	2	20	0.111	1
5180-5240	16.1	2	20	0.013	1
5745-5825	24.7	2	20	0.093	1

### CONCLUSION:

Both of the WLAN 2.4G & 5.0G can transmit simultaneously, the formula of calculated the MPE is:

$$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$$

CPD = Calculation power density

LPD = Limit of power density

$$1. \text{ WLAN 2.4G + WLAN 5.0G} = 0.111 + 0.093 = 0.204.$$

Therefore, the maximum calculation of this situation is 0.204, which is less than the "1" limit.