

# RF EXPOSURE REPORT

**REPORT NO.:** SA140224C05

**MODEL NO.:** TEW-731BR

**FCC ID:** XU8TEW731BRV2

**RECEIVED:** Feb. 24, 2014

**TESTED:** Feb. 26 ~ Apr. 02, 2014

**ISSUED:** Apr. 14, 2014

**APPLICANT:** TRENDnet, Inc.

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

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

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**TEST LOCATION:** No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei  
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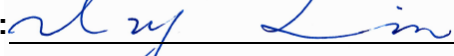
## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA140224C05	Original release	Apr. 14, 2014

## 1. CERTIFICATION

**PRODUCT:** N300 Wireless Home Router  
**MODEL NO.:** TEW-731BR  
**BRAND:** TRENDnet  
**APPLICANT:** TRENDnet, Inc.  
**TESTED:** Feb. 26 ~ Apr. 02, 2014  
**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-731BR) 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** :  , **DATE** : Apr. 14, 2014  
Ivy Lin / Specialist

**APPROVED BY** :  , **DATE** : Apr. 14, 2014  
Ken Liu / Senior Manager

## 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

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

where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

G = gain of antenna in linear scale

$\pi$  = 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**.

## 2.4 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

### 1TX

MODE	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
802.11b	20.58	2	20	0.036	1
802.11g	19.41	2	20	0.028	1
802.11n (20MHz)	19.28	2	20	0.027	1
802.11n (40MHz)	17.72	2	20	0.019	1

### 2TX

MODE	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
802.11b	23.06	5.01	20	0.128	1
802.11g	19.42	5.01	20	0.055	1
802.11n (20MHz)	17.05	2	20	0.016	1
802.11n (40MHz)	17.84	2	20	0.019	1

#### NOTE:

#### For 2TX:

**802.11b/g:** Directional gain = 2dBi + 10log(2) = 5.01dBi

**802.11n:** IEEE 802.11n, MCS = 8-15, NSS = 2,  
Directional gain = 2dBi + 10log(2/2) = 2dBi

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