

## RF Exposure Report

**Report No.:** SA180503C11D

**FCC ID:** XU8TEW841APBO

**Test Model:** TEW-841APBO

**Received Date:** May 31, 2019

**Test Date:** Jun. 14 ~ Jul. 03, 2019

**Issued Date:** Jul. 11, 2019

**Applicant:** TRENDnet, Inc.

**Address:** 20675 Manhattan Place, Torrance, CA 90501 U.S.A.

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

**Lab Address:** No. 47-2, 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 Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

**FCC Registration /  
Designation Number:** 788550 / TW0003



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### Release Control Record

Issue No.	Description	Date Issued
SA180503C11D	Original release	Jul. 11, 2019

## 1 Certificate of Conformity

**Product:** 5 dBi Wireless AC1300 Outdoor PoE+ Omni-Directional Access Point

**Brand:** TRENDnet

**Test Model:** TEW-841APBO

**Sample Status:** Engineering sample

**Applicant:** TRENDnet, Inc.

**Test Date:** Jun. 14 ~ Jul. 03, 2019

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

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.3 -2002

The above equipment 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 RF characteristics under the conditions specified in this report.

**Prepared by :** , **Date:** Jul. 11, 2019  
Polly Chien / Specialist

**Approved by :** , **Date:** Jul. 11, 2019  
Bruce Chen / Project Engineer

## 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.

### 3 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
CDD Mode					
2412-2462	23.55	8.18	20	0.296	1
5180-5240	16.16	8.18	20	0.054	1
5745-5825	23.07	8.18	20	0.265	1
Beamforming Mode					
2412-2462	20.03	8.18	20	0.132	1
5180-5240	13.15	8.18	20	0.027	1
5745-5825	20.06	8.18	20	0.133	1

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. Directional gain = 5.17dBi + 10log(2) = 8.18dBi

#### Conclusion:

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4GHz + WLAN 5GHz = 0.296 + 0.265 = 0.561 < 1

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