

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 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

2.2 MPE Calculation Formula

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

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

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 ²) | Limit (mW/cm ²) |
|----------------------|-----------------|--------------------|---------------|-------------------------------------|-----------------------------|
| 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

---END---