

## RF Exposure Report

**Report No.:** SA180730C06D

**FCC ID:** XU8TEW840APBO

**Test Model:** TEW-840APBO, TEW-842APBO, TEW-844APBO

**Series Model:** TEW-840APBO2K, TEW-844APBO2K

**Received Date:** Mar. 21, 2019

**Test Date:** Apr. 11 ~ Apr. 13, 2019

**Issued Date:** Apr. 19, 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
SA180730C06D	Original release	Apr. 19, 2019

# 1 Certificate of Conformity

**Product:** 14 dBi WiFi AC867 Outdoor Directional PoE Access Point (Refer to note for more details)

**Brand:** TRENDnet

**Test Model:** TEW-840APBO, TEW-842APBO, TEW-844APBO

**Series Model:** TEW-840APBO2K, TEW-844APBO2K (Refer to note for more details)

**Sample Status:** Engineering sample

**Applicant:** TRENDnet, Inc.

**Test Date:** Apr. 11 ~ Apr. 13, 2019

**Standards:** FCC Part 2 (Section 2.1091)  
KDB 447498 D01 General RF Exposure Guidance v06  
IEEE C95.1-1992

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 :** Polly Chien, **Date:** Apr. 19, 2019  
Polly Chien / Specialist

**Approved by :** Bruce Chen, **Date:** Apr. 19, 2019  
Bruce Chen / Project Engineer

## Note:

All models are listed as below. Model TEW-840APBO, TEW-842APBO and TEW-844APBO are the representative for final test.

Brand	Model	Product	Difference
TRENDnet	TEW-840APBO	14 dBi WiFi AC867 Outdoor Directional PoE Access Point	Internal direct 14dBi antenna
	TEW-840APBO2K	14 dBi WiFi AC867 Outdoor PoE Preconfigured Point-to-Point Bridge Kit	
	TEW-842APBO	5 dBi Wireless AC867 Outdoor PoE Omni-Directional Access Point	Accessory with external dipole 5dBi*2 antenna
	TEW-844APBO	19 dBi WiFi AC867 Outdoor Directional PoE Access Point	Internal direct 19dBi antenna
	TEW-844APBO2K	19 dBi WiFi AC867 Outdoor PoE Preconfigured Point-to-Point Bridge Kit	

## 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 25cm 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> )
Patch Ant. for model: TEW-840APBO and TEW-840APBO2K use only (CDD Mode)					
5180-5240	15.01	16.43	25	0.177	1
5745-5825	22.29	16.43	25	0.948	1
Patch Ant. for model: TEW-840APBO and TEW-840APBO2K use only (Beamforming Mode)					
5180-5240	11.99	16.43	25	0.088	1
5745-5825	19.21	16.43	25	0.467	1
Dipole Ant. for model: TEW-842APBO (CDD Mode)					
5180-5240	16.33	8.18	25	0.036	1
5745-5825	26.71	8.18	25	0.393	1
Dipole Ant. for model: TEW-842APBO (Beamforming Mode)					
5180-5240	13.32	8.18	25	0.018	1
5745-5825	23.70	8.18	25	0.196	1
Patch Ant. for model: TEW-844APBO and TEW-844APBO2K (CDD Mode)					
5180-5240	5.22	18.51	25	0.030	1
5745-5825	20.30	18.51	25	0.968	1
Patch Ant. for model: TEW-844APBO and TEW-844APBO2K (Beamforming Mode)					
5180-5240	2.21	18.51	25	0.015	1
5745-5825	17.23	18.51	25	0.477	1

Note:

1. Patch Ant. for model: ENS500-ACv2 and EAS100-14 Directional gain = 13.42dBi + 10log(2) = 16.43dBi
2. Dipole Ant. for model: ENS500EXT-ACv2 and EAS100EXT Directional gain = 5.17dBi + 10log(2) = 8.18dBi
3. Patch Ant. for model: EnStation5-ACv2 and EAS100-19 Directional gain = 15.50dBi + 10log(2) = 18.51dBi

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