

RF Exposure Report

Report No.: SA120531C10Q

FCC ID: U2M-AN300APIN

Test Model: AN-300-AP-I-N

Received Date: Jul. 04, 2016

Test Date: Jul. 23 ~ Sep. 29, 2016

Issued Date: Oct. 14, 2016

Applicant: Senao Networks, Inc.

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

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Release Control Record

Issue No.	Description	Date Issued
SA120531C10Q	Original release.	Oct. 14, 2016

1 Certificate of Conformity

Product: Araknis Networks 300-series Dual-Band Concurrent Wireless-N Indoor Access Point

Brand: Araknis Networks

Test Model: AN-300-AP-I-N

Sample Status: Engineering Sample

Applicant: Senao Networks, Inc.

Test Date: Jul. 23 ~ Sep. 29, 2016

Standards: FCC Part 2 (Section 2.1091)
KDB 447498 D03 (January 17, 2014)
IEEE C95.1

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 EMC characteristics under the conditions specified in this report.

Prepared by :  , **Date:** Oct. 14, 2016
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Approved by :  , **Date:** Oct. 14, 2016
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 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

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

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 21cm 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)
2412-2462	29.91	5.01	21	0.560	1
5180-5240	17.99	5.01	21	0.036	1
5745-5825	21.08	5.01	21	0.073	1

Note: Directional gain = 2.0dBi + 10log(2) = 5.01dBi

CONCLUSION:

Both of the WLAN 2.4G & WLAN 5G 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

$$\text{WLAN 2.4G} + \text{WLAN 5.0G} = 0.560 + 0.073 = 0.633$$

Therefore, the maximum calculation of this situation is 0.633, which is less than the "1" limit.

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