



RF EXPOSURE REPORT

REPORT NO.: SA140217C18

MODEL NO.: PCE4502AN

FCC ID: TVE-120502

IC: 7280B-120502

RECEIVED: Feb. 17, 2014

TESTED: Feb. 19 ~ Feb. 25, 2014

ISSUED: Feb. 26, 2014

APPLICANT: Fortinet Inc.

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ISSUED BY: Bureau Veritas Consumer Products Services
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RELEASE CONTROL RECORD

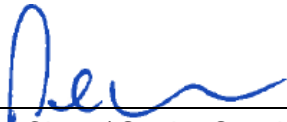
ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA140217C18	Original release	Feb. 26, 2014



1. CERTIFICATION

PRODUCT: 802.11 ac Module
MODEL: PCE4502AN
BRAND: Fortinet
APPLICANT: Fortinet Inc.
TEST SAMPLE: ENGINEERING SAMPLE
STANDARDS: **FCC Part 2 (Section 2.1091)**
FCC OET Bulletin 65, Supplement C (01-01)
IEEE C95.1
RSS-102 Issue 4 (2010-12)

The above equipment (Model: PCE4502AN) 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** : Feb. 26, 2014
Pettie Chen / Senior Specialist

APPROVED BY :  , **DATE** : Feb. 26, 2014
Ken Liu / Senior Manager

2. RF EXPOSURE

2.1 LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

For FCC Part 2 (Section 2.1091)

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

For RSS-102 Issue 4 (2010-12)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (W/m ²)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	F/150	6
1500-100,000	10	6

F = Frequency in MHz

2.2 MPE CALCULATION FORMULA

For FCC Part 2 (Section 2.1091)

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

where

P_d = power density in mW/cm^2

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

For RSS-102 Issue 4 (2010-12)

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

where

P_d = power density in W/m^2

P_{out} = output power to antenna in W

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in meter

2.3 CLASSIFICATION

For FCC Part 2 (Section 2.1091)

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**.

For RSS-102 Issue 4 (2010-12)

The antenna of this product, under normal use condition, is at least 0.2m away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

For FCC Part 2 (Section 2.1091)

FREQUENCY BAND (MHz)	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
5180-5240	16.99	8.76	20	0.075	1
5745-5825	24.70	8.76	20	0.441	1

NOTE: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 8.76\text{dBi}$

For RSS-102 Issue 4 (2010-12)

FREQUENCY BAND (MHz)	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (m)	POWER DENSITY (W/m ²)	LIMIT (W/m ²)
5180-5240	16.99	8.76	0.2	0.75	10
5745-5825	24.70	8.76	0.2	4.41	10

NOTE: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 8.76\text{dBi}$