RF EXPOSURE REPORT

REPORT NO.:	SA120424C46
MODEL NO.:	WPEA-127NI
FCC ID:	Y7A-WPEA127NI
RECEIVED:	Apr. 24, 2012
TESTED:	May 10 ~ Jun. 06, 2012
ISSUED:	Jun. 13, 2012

APPLICANT:	Aircell Business Aviation Services, LLC
ADDRESS:	303 S Technology Ct, Bldg. A., Broomfield, CO 80021

ISSUED BY:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
LAB ADDRESS:	No. 47, 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 Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

TABLE OF CONTENTS

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA120424C46	Original release	Jun. 13, 2012

1. CERTIFICATION

PRODUCT:	802.11a/b/g/n Industrial-Grade Mini Card
MODEL:	WPEA-127NI
BRAND:	Aircell
APPLICANT:	Aircell Business Aviation Services, LLC
TESTED:	May 10 ~ Jun. 06, 2012
TEST SAMPLE:	ENGINEERING SAMPLE
STANDARDS:	**FCC Part 2 (Section 2.1091)**
	FCC OET Bulletin 65, Supplement C (01-01)
	IEEE C95.1

The above equipment (Model: WPEA-127NI) 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 :** Jun. 13, 2012
Pettie Chen / Specialist

APPROVED BY : _____ **, DATE :** Jun. 13, 2012
Gary Chang / Technical 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

Pd = (Pout*G) / (4*pi*r2)

where

Pd = power density in mW/cm2

Pout = 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**.

2.4 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

FREQUENCY BAND (MHz)	MODULATION MODE	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
2412-2462	802.11b	19.35	2	20	0.027	1
	802.11g	16.30	2	20	0.013	1
	802.11n (20MHz)	19.64	6.8	20	0.088	1
	802.11n (40MHz)	18.44	6.8	20	0.066	1
5180-5240	802.11a	14.41	3.9	20	0.013	1
	802.11n (20MHz)	12.11	8.7	20	0.024	1
	802.11n (40MHz)	12.79	8.7	20	0.028	1
5260-5320	802.11a	15.41	3.9	20	0.017	1
	802.11n (20MHz)	17.14	8.7	20	0.076	1
	802.11n (40MHz)	16.47	8.7	20	0.065	1
5500-5700	802.11a	15.23	4	20	0.017	1
	802.11n (20MHz)	16.80	8.8	20	0.072	1
	802.11n (40MHz)	16.93	8.8	20	0.074	1
5745-5825	802.11a	15.25	4	20	0.017	1
	802.11n (20MHz)	20.82	8.8	20	0.182	1
	802.11n (40MHz)	20.51	8.8	20	0.170	1

2.4GHz:
802.11n (20MHz) & 802.11n (40MHz): Directional gain = 2dBi + 10log(3) = 6.8dBi
5.0GHz:
5180~5240MHz: 802.11n (20MHz) & 802.11n (40MHz): Directional gain = 3.9dBi + 10log(3) = 8.7dBi
5260~5320MHz: 802.11n (20MHz) & 802.11n (40MHz): Directional gain = 3.9dBi + 10log(3) = 8.7dBi
5500~5700MHz: 802.11n (20MHz) & 802.11n (40MHz): Directional gain = 4dBi + 10log(3) = 8.8dBi