RF EXPOSURE REPORT

REPORT NO.: SA110913C20

MODEL NO.: BelAir20E-11, CW20E-11

FCC ID: RAR-40005001

RECEIVED: Sep. 05, 2011

TESTED: Sep. 05 ~ Sep. 26, 2011

ISSUED: Sep. 29, 2011

APPLICANT: BelAir Networks Inc.

ADDRESS: 603 March Road Kanata Ontario K2K 2M5 Canada

ISSUED BY: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

LAB ADDRESS: No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou Hsiang, Taipei Hsien 244, 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.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
Original release	NA	Sep. 29, 2011

1. CERTIFICATION

PRODUCT:	802.11n dual-band WIFI router
MODEL NO.:	BelAir20E-11, CW20E-11
BRAND:	BelAir, MOTOROLA
APPLICANT:	BelAir Networks Inc.
TEST SAMPLE:	ENGINEERING SAMPLE
TESTED:	Sep. 05 ~ Sep. 26, 2011
STANDARDS:	**FCC Part 2 (Section 2.1091)**
	FCC OET Bulletin 65, Supplement C (01-01)
	IEEE C95.1

The above equipment (Model: BelAir20E-11) 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: ___Sep. 29, 2011___
Pettie Chen / Specialist

APPROVED BY : _____ , DATE: ___Sep. 29, 2011___
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 25cm 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)	MODE	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
2412-2462	802.11b	22.5	6	25	0.091	1
	802.11g	29.4	6	25	0.443	1
	802.11n (20MHz)	28.8	3	25	0.192	1
	802.11n (40MHz)	28.4	3	25	0.174	1
5180-5240	802.11a	12.9	7	25	0.013	1
	802.11n (20MHz)	12.8	4	25	0.006	1
	802.11n (40MHz)	15.3	4	25	0.011	1
5745-5825	802.11a	27.7	7	25	0.373	1
	802.11n (20MHz)	27.4	4	25	0.174	1
	802.11n (40MHz)	27.2	4	25	0.168	1

NOTE:
(802.11b/g): Directional gain = 3dBi + 10log(2) = 6.0dBi
(802.11a): Directional gain =4dBi + 10log(2) = 7.0dBi

CONCULSION:

Both of the WLAN 2.4G & 5.0G can transmit simultaneously, the formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

1. WLAN 2.4G + WLAN 5.0G = 0.443 + 0.373 = 0.816
Therefore, the maximum calculation of this situation is 0.816, which is less than the "1" limit.