RF EXPOSURE REPORT

REPORT NO.: SA111130E01B R1

MODEL NO.: J20H045

FCC ID: MCLJ20H045

RECEIVED: July 17, 2012

TESTED: July 31, 2012

ISSUED: Aug. 30, 2012

APPLICANT: Hon Hai PRECISION IND.CO.,LTD

ADDRESS: 5F-1,5 Hsin-An Road Hsinchu, Science-Based Industrial Park Taiwan, R.O.C.

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

LAB ADDRESS: No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan, R.O.C.

This report should not be used by the client to claim product certification, approval, or endorsement by any government agencies.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA111130E01B	Original release	Aug. 28, 2012
SA111130E01B-1 R1	Modified Antenna Specification of the EUT	Aug. 30, 2012

1.CERTIFICATION

PRODUCT:	WiFi Module
BRAND NAME:	FOXCONN
MODEL NO.:	J20H045
TEST SAMPLE:	R&D SAMPLE
TESTED:	July 31, 2012
APPLICANT:	Hon Hai PRECISION IND.CO.,LTD
STANDARDS:	FCC Part 2 (Section 2.1091)
	FCC OET Bulletin 65, Supplement C (01-01)
	IEEE C95.1

The above equipment (Model: J20H045) 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:** *Aug. 30, 2012*
(Lori Chung, Specialist)

APPROVED BY : _____ , **DATE:** *Aug. 30, 2012*
(May Chen, Deputy Manager)

2. RF EXPOSURE LIMIT

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

3. MPE CALCULATION FORMULA

$Pd = (Pout*G) / (4*pi*r^2)$

where

Pd = power density in mW/cm^2

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

4. 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**.

5.Antenna Gain

There are nine antennas provided to this EUT, please refer to the following table:

Original Antennas									
No.	Brand	Model	Type	Connector	Gain (dBi)	Cable loss(dB)	Cable length (cm)	Diversity Function	For which port
1	ethertronics	1001215	PCB trace	U.FL	2.58	0.36	10	Yes	Wi-Fi AUX
2	ethertronics	1001212	PCB trace	U.FL	2.66	0.576	16	Yes	Wi-Fi main
3	ethertronics	1001218	PCB trace	U.FL	2.48	0.82	23	No	BT
Newly Antennas									
No.	Brand	Model	Type	Connector	Gain (dBi)	Cable loss(dB)	Cable length (mm)	Diversity Function	For which port
4	ethertronics	1001454	PCB trace	U.FL	2.22	0.36	95	Yes	Wi-Fi AUX
5	ethertronics	1001455	PCB trace	U.FL	2.27	0.2	60	Yes	Wi-Fi main
6	ethertronics	1001456	PCB trace	U.FL	2.19	0.55	160	No	BT
7	ethertronics	1001506	PCB trace	U.FL	2.36	0.8	260	Yes	Wi-Fi AUX
8	ethertronics	1001503	PCB trace	U.FL	2.5	0.7	175	Yes	Wi-Fi main
9	ethertronics	1001509	PCB trace	U.FL	4	0.82	210	No	BT

6.CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

FOR WLAN:

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm^2)	LIMIT (mW/cm^2)
2412-2462	234.4	2.7	20	0.087	1.00

Note : The Maximum power was refer to the Radio test report (Report No.: RF111130E01)

FOR BLUETOOTH FUNCTION

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm^2)	LIMIT (mW/cm^2)
2402 ~ 2480	1.343	3.18	20	0.00056	1.00

CONCLUSION:

Both of the WLAN and Bluetooth can transmit simultaneously, the formula of calculated the MPE is:

$CPD_1 / LPD_1 + CPD_2 / LPD_2$ + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

Therefore, the worst-case situation is 0.087 / 1 + 0.00056 / 1 = 0.08756, which is less than “1”. This confirmed that the device comply with FCC 1.1310 MPE limit.

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