



## RF Exposure Report

**Report No.:** SA130710E11H

**FCC ID:** MCLT77H462

**Test Model:** T77H462

**Received Date:** Oct. 14, 2015

**Test Date:** Nov. 24, 2015

**Issued Date:** Dec. 14, 2015

**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:** E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,  
Taiwan R.O.C.

**Test Location (1):** E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,  
Taiwan R.O.C.

**Test Location (2):** No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin  
Chu Hsien 307, Taiwan R.O.C.

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### Release Control Record

Issue No.	Description	Date Issued
SA130710E11H	Original release.	Dec. 14, 2015



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## 1 Certificate of Conformity

**Product:** 802.11abgn+BT4.0 module

**Brand:** FOXCONN

**Test Model:** T77H462

**Sample Status:** ENGINEERING SAMPLE

**Applicant:** Hon Hai PRECISION IND.CO.,LTD

**Test Date:** Nov. 24, 2015

**Standards:** FCC Part 2 (Section 2.1093)

447498 D01 General RF Exposure Guidance v06

IEEE Std C95.1-2005

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:

Dec. 14, 2015

Midoli Peng / Specialist

Approved by :



Date:

Dec. 14, 2015

May Chen / 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 <sup>2</sup> )	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

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

where

Pd = power density in mW/cm<sup>2</sup>

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**.

### 3 Antenna Gain

The antennas provided to the EUT, please refer to the following table:

Antenna Set 1							
Transmitter Circuit	Brand	Model	Antenna Type	Antenna Gain (dBi)	Frequency range (MHz to MHz)	Connector Type	
Chain (0)	Foxconn	T77H462	PIFA	-0.6	2400~2500	MHF4	
				-2.3	5150~5850		
Chain (1)	Foxconn	T77H462	PIFA	-0.6	2400~2500	MHF4	
				-2.3	5150~5850		
Antenna Set 2							
Transmitter Circuit	Brand	Model	Antenna Type	Antenna Gain (dBi) <Including cable loss>	Frequency range (MHz to MHz)	Cable Length (mm)	Connector Type
Chain (0) & Chain (1)	Wistron Neweb Corporation	DC33001GL00	PIFA	1.32	2400~2500	55	MHF4 (i-pec)
				1.62	5150-5350		
				-1.84	5470-5725		
				-2.12	5725-5850		
Antenna Set 3							
Transmitter Circuit	Brand	Model	Antenna Type	Antenna Gain (dBi) <Including cable loss>	Frequency range (MHz to MHz)	Cable Length (mm)	Connector Type
Chain (0) & Chain (1)	Wistron Neweb Corporation	DC33001GL10	PIFA	0.48	2400~2500	239	MHF4 (i-pec)
				-2.19	5150-5350		
				-2.70	5470-5725		
				-1.77	5725-5850		
Antenna Set 4							
Transmitter Circuit	Antenna P/N	Manufacturer	Antenna Type	Cable Assembly P/N and Information	Frequency range (MHz to MHz)	Antenna Gain (dBi) <Including cable loss>	Antenna Gain (dBi) <Excluding cable loss>
Chain (0)	Main Antenna (P/N: LA22RF754-1H)	LUXSHARE-ICT Co., Ltd.	PIFA	50 ohm coaxial cable Cable length:750 mm Diameter: Lowloss 1.13mm	2400-2500	0.43	2.68
					5150-5350	-8.70	-5.15
					5470-5725	-8.82	-5.15
					5725-5850	-8.98	-5.25
Chain (1)	Auxiliary Antenna (P/N: LA22RF755-1H )	LUXSHARE-ICT Co., Ltd.	PIFA	50 ohm coaxial cable Cable length: 750 mm Diameter: Lowloss1.13 mm	2400-2500	0.43	2.68
					5150-5350	-8.70	-5.15
					5470-5725	-8.82	-5.15
					5725-5850	-8.98	-5.25

Antenna Set 5									
Transmitter Circuit	Antenna P/N	Manufacturer	Antenna Type	Cable Assembly P/N and Information	Frequency range (MHz to MHz)	Antenna Gain (dBi) <Including cable loss>	Antenna Gain (dBi) <Excluding cable loss>	Cable loss max.(dB)	VSWR
Chain (0)	Main Antenna (P/N: LA22RF764-1H)	LUXSHARE -ICT Co., Ltd.	PIFA	50 ohm coaxial cable Cable length:220 mm Diameter:1.13mm	2400-2500	2.34	3.0	0.66	2.5 max
					5150-5350	0.67	1.71	1.04	2.5 max
					5470-5725	0.15	1.22	1.07	2.5 max
					5725-5850	-0.54	0.55	1.09	2.5 max
Chain (1)	Auxiliary Antenna (P/N: LA22RF765-1H)	LUXSHARE -ICT Co., Ltd.	PIFA	50 ohm coaxial cable Cable length: 250 mm Diameter:1.13 mm	2400-2500	0.83	1.58	0.75	2.5 max
					5150-5350	2.05	3.23	1.18	2.5 max
					5470-5725	0.61	1.84	1.23	2.5 max
					5725-5850	0.61	1.85	1.24	2.5 max

Antenna Set 6						
Transmitter Circuit	Antenna P/N	Manufacturer	Antenna Type	Cable Assembly P/N and Information	Frequency range (MHz to MHz)	Antenna Gain (dBi) <Including cable loss>
Chain (0)	Main Antenna (P/N: 1415-04LN000)	WNC	PIFA	Black 1.13(dia) x 50mm	2400-2500	0.72
					5150-5350	1.75
					5470-5725	1.55
					5725-5850	0.41
Chain (1)	Auxiliary Antenna (P/N: 1415-04LP000)	WNC	PIFA	White 1.13(dia) x 190mm	2400-2500	-0.41
					5150-5350	-1.00
					5470-5725	0.77
					5725-5850	0.04

Antenna Set 7						
Transmitter Circuit	Antenna P/N	Manufacturer	Antenna Type	Cable Assembly P/N and Information	Frequency range (MHz to MHz)	Antenna Gain (dBi) <Including cable loss>
Chain (0)	Main Antenna (P/N: 1415-04LR000)	WNC	PIFA	Black 1.13(dia) x 120mm	2400-2500	0.67
					5150-5350	0.6
					5470-5725	-0.75
					5725-5850	1.25
Chain (1)	Auxiliary Antenna (P/N: 1415-04LQ000)	WNC	PIFA	White 1.13(dia) x 143mm	2400-2500	-1.59
					5150-5350	1.12
					5470-5725	0.82
					5725-5850	0.33

Note : 1. For U-NII-1, UNII-2A: Antenna 5 was chosen for final test  
 Note : 2. For UNII-2C: Antenna 6 was chosen for final test  
 Note : 3. For UNII-3: Antenna 7 was chosen for final test

#### 4 Calculation Result Of Maximum Conducted Power

For 2.4GHz, BT-EDR & BT-LE data was copied from the original test report. (Report No.: SA130710E11E)

##### For WLAN

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
2412-2462	319.012	2.34	20	0.10878	1
5180-5240	94.695	2.05	20	0.03020	1
5260-5320	97.486	2.05	20	0.03109	1
5500--5700	83.079	1.55	20	0.02362	1
5745-5825	137.568	1.25	20	0.03650	1

##### For BT-EDR

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
2402-2480	9.099	2.34	20	0.00310	1

##### For BT-LE

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
2402 - 2480	6.237	2.34	20	0.00213	1

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