# **RF Exposure Evaluation Report**

APPLICANT : Pegatron Corp.

EQUIPMENT : UC phone

**BRAND NAME: CISCO** 

MODEL NAME : CP-8865

**FCC ID** : VUI88651257

STANDARD : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC., would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091 and pass the limit. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by: Eric Huang / Deputy Manager

Cole huans

Approved by: Jones Tsai / Manager





**Report No. : FA521701** 

#### SPORTON INTERNATIONAL INC.

No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Taoyuan City, Taiwan (R.O.C.)

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: VUI88651257 Page Number : 1 of 6 Report Issued Date: Jun. 17, 2015

Report Version

: Rev. 01

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### **Revision History**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA521701	Rev. 01	Initial issue of report	Jun. 17, 2015

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# 1. Administration Data

### 1.1. <u>Testing Laboratory</u>

Testing Laboratory					
Test Site	SPORTON INTERNATIONAL INC.				
Test Site Location	No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978				

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Applicant				
Company Name	Pegatron Corp.			
Address	5F No. 76 Ligong ST Beitou District Taipei, 112 Taiwan			

Manufacturer				
Company Name	Pegatron Corp.			
Address	5F No. 76 Ligong ST Beitou District Taipei, 112 Taiwan			

# 2. <u>Description of Equipment Under Test (EUT)</u>

Product Feature & Specification				
EUT Type	UC phone			
Brand Name	CISCO			
Model Name	CP-8865			
FCC ID	VUI88651257			
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5700 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz			
Mode	802.11a/b/g/n HT20/HT40/VHT20/VHT40     Bluetooth v3.0+EDR    Bluetooth v4.0-LE			
EUT Stage	Identical Prototype			

**Remark:** The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

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# 3. Maximum RF average output power among production units

	Average Power (dBm)					
Mode / Band		v4.0 with LE				
	1Mbps	2Mbps	3Mbps	V4.0 WITH LE		
Bluetooth	9	5	5	8		

Pand / Fraguency /	IEEE 802.11 Average Power (dBm)			
Band / Frequency (N	11b	11g	HT20	
	2412	19.0	16.5	16
2.4GHz Band	2437	19.0	18	18
	2462	19.0	16.5	16

Band / Frequency (MHz)		IEEE 802.11 Average Power (dBm)					
Band / Freque	ency (IVIHZ)	11a	HT20	HT40	VHT20	VHT40	VHT80
	L	16		14			
5.2GHz Band	М	16.5	16		15	15	15
Barra	Н	16.5		16			
	L			17			
5.3GHz Band	М	17	17		16	16	14
Dana	Н			15			
	L		16	14			13
5.5GHz Band	М	17	16	16	16	16	16
Dana	Н		15	16			
	L	16	15	14			
5.8GHz Band	М	17	17		16	16	14
Build	Н	17	17	16			

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## 4. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)	
800 St.	(A) Limits for O	ccupational/Controlled Expos	sures	W	
0.3-3.0	614	1.63	*(100)	6	
3.0-30	1842/	f 4.89/1	f *(900/f2)	6	
30-300	61.4	0.163	1.0	6	
300-1500			f/300	6	
1500-100,000			5	6	
	(B) Limits for Gene	ral Population/Uncontrolled I	Exposure		
0.3-1.34	614	1.63	*(100)	30	
1.34-30	824/	f 2.19/1	f *(180/f2)	30	
30-300	27.5	0.073	0.2	30	
300-1500			f/1500	30	
1500-100,000			1.0	30	

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S=\frac{PG}{4\pi R^2}$$

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna

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# 5. Radio Frequency Radiation Exposure Evaluation

### 5.1. Power Density Calculation

Band	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 20cm (mW/cm^2)	Limit (mW/cm^2)
Bluetooth	2402.0	1.86	9.00	10.860	0.012	12.190	0.002	1.000
2.4GHz WLAN	2412.0	1.86	19.00	20.860	0.122	121.899	0.024	1.000
5GHz WLAN	5180.0	2.08	17.00	19.080	0.081	80.910	0.016	1.000

#### **General Note:**

- 1. For conservativeness, the lowest uplink frequency of each band is used to determine the MPE limit of that band
- 2. WLAN and Bluetooth share the same antenna, and cannot transmit simultaneously.

### **Conclusion:**

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.

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