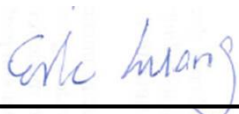


# RF Exposure Evaluation Report

APPLICANT : Mobekta LLC  
EQUIPMENT : Digital Camera Receiver  
MODEL NAME : PL67WR  
FCC ID : 2AHXE-5310  
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 / Manager



Approved by: Jones Tsai / Manager



## SPORTON INTERNATIONAL INC.

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



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**Revision History**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA651918-03	Rev. 01	Initial issue of report	Jan. 19, 2017



## **1. Administration Data**

### **1.1. Testing Laboratory**

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

Applicant	
Company Name	Mobekta LLC
Address	2900 Westfork Dr. Suite 401 Baton Rouge, Louisiana 70827

## **2. Description of Equipment Under Test (EUT)**

Product Feature & Specification	
EUT Type	Digital Camera Receiver
Model Name	PL67WR
FCC ID	2AHXE-5310
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2412 MHz ~ 2472 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Mode	· 802.11a/b/g/n/ac HT20/HT40/VHT20/VHT40/VHT80 · Bluetooth LE

**3. Maximum RF average output power among production units****<Antenna 0a and Antenna 0a+1a>**

Band / Frequency (MHz)		IEEE 802.11 Average Power (dBm)		
		SISO Mode	MIMO Mode	
		Antenna 0a	Antenna 0a+1a	
		11b	11g	HT20
2.4GHz Band	2412	21.5	19.0	16.0
	2437	23.5	23.5	23.0
	2462	20.5	19.0	17.5
	2467	19.0	16.5	16.0
	2472	14.5	14.0	14.0

Band / Frequency (MHz)		IEEE 802.11 Average Power (dBm)					
		MIMO Mode					
		Antenna 0a+1a					
		11a	HT20	HT40	VHT20	VHT40	VHT80
5.2GHz Band	5180	19.5	19.0		19.0		
	5190			15.0		15.0	
	5210						15.0
	5220	21.0	21.5		21.0		
	5230			20.5		20.5	
	5240	21.0	21.5		21.0		

Band / Frequency (MHz)		IEEE 802.11 Average Power (dBm)					
		MIMO Mode					
		Antenna 0a+1a					
		11a	HT20	HT40	VHT20	VHT40	VHT80
5.8GHz Band	5745	21.5	22.0		22.0		
	5755			22.0		21.5	
	5775						20.5
	5785	21.0	21.5		21.5		
	5795			21.5		21.5	
	5825	21.0	21.5		21.0		



**<Antenna 0b and Ant 0b+1b>**

Band / Mode	Average Power (dBm)	
	SISO Mode	
	Antenna 0b	
	LE	
	GFSK	
Bluetooth	7.5	

Band / Frequency (MHz)		IEEE 802.11 Average Power (dBm)		
		SISO Mode	MIMO Mode	
		Antenna 0b	Antenna 0b+1b	
		11b	11g	HT20
2.4GHz Band	2412	21.5	19.5	18.0
	2437	23.0	24.0	23.0
	2462	21.0	19.0	19.5
	2467	17.5	18.0	18.0
	2472	14.0	17.0	16.0

Band / Frequency (MHz)		IEEE 802.11 Average Power (dBm)					
		MIMO Mode					
		Antenna 0b+1b					
		11a	HT20	HT40	VHT20	VHT40	VHT80
5.2GHz Band	5180	19.0	19.0		19.0		
	5190			16.0		16.0	
	5210						15.5
	5220	20.5	20.5		20.5		
	5230			20.0		20.0	
	5240	20.5	20.5		20.5		

Band / Frequency (MHz)		IEEE 802.11 Average Power (dBm)					
		MIMO Mode					
		Antenna 0b+1b					
		11a	HT20	HT40	VHT20	VHT40	VHT80
5.8GHz Band	5745	21.0	21.0		21.0		
	5755			21.0		21.0	
	5775						20.5
	5785	21.0	21.0		21.0		
	5795			21.0		21.0	
	5825	20.5	20.5		20.5		



**<Antenna 1a and Ant 0b+1a>**

Band / Frequency (MHz)		IEEE 802.11 Average Power (dBm)		
		SISO Mode	MIMO Mode	
		Antenna 1a	Antenna 0b+1a	
		11b	11g	HT20
2.4GHz Band	2412	20.5	19.5	19.5
	2437	22.5	24.0	23.5
	2462	20.0	19.5	19.5
	2467	17.0	18.0	17.0
	2472	15.0	16.5	17.0

Band / Frequency (MHz)		IEEE 802.11 Average Power (dBm)					
		MIMO Mode					
		Antenna 0b+1a					
		11a	HT20	HT40	VHT20	VHT40	VHT80
5.2GHz Band	5180	18.0	18.0		18.0		
	5190			15.0		14.5	
	5210						11.5
	5220	20.5	20.5		20.5		
	5230			19.5		19.5	
	5240	20.5	20.5		20.5		

Band / Frequency (MHz)		IEEE 802.11 Average Power (dBm)					
		MIMO Mode					
		Antenna 0b+1a					
		11a	HT20	HT40	VHT20	VHT40	VHT80
5.8GHz Band	5745	21.0	21.0		21.0		
	5755			21.0		21.0	
	5775						20.5
	5785	21.0	21.0		21.0		
	5795			21.0		21.0	
	5825	20.5	20.5		20.5		



**<Antenna 1b and Antenna 0a+1b>**

Band / Frequency (MHz)		IEEE 802.11 Average Power (dBm)		
		SISO Mode	MIMO Mode	
		Antenna 1b	Antenna 0a+1b	
		11b	11g	HT20
2.4GHz Band	2412	19.5	18.0	17.5
	2437	22.5	23.5	23.0
	2462	19.0	18.0	17.5
	2467	18.5	16.5	16.5
	2472	15.5	14.0	14.5

Band / Frequency (MHz)		IEEE 802.11 Average Power (dBm)					
		MIMO Mode					
		Antenna 0a+1b					
		11a	HT20	HT40	VHT20	VHT40	VHT80
5.2GHz Band	5180	19.5	19.0		18.5		
	5190			16.0		16.0	
	5210						14.5
	5220	21.0	21.0		21.0		
	5230			21.0		21.0	
	5240	21.0	21.0		21.0		

Band / Frequency (MHz)		IEEE 802.11 Average Power (dBm)					
		MIMO Mode					
		Antenna 0a+1b					
		11a	HT20	HT40	VHT20	VHT40	VHT80
5.8GHz Band	5745	22.0	22.0		22.0		
	5755			21.5		21.5	
	5775						21.0
	5785	21.0	21.5		21.5		
	5795			21.5		21.5	
	5825	21.0	21.0		21.0		





#### **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)
<b>(A) Limits for Occupational/Controlled Exposures</b>				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	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

## **5. Radio Frequency Radiation Exposure Evaluation**

### **5.1. Standalone Power Density Calculation**

Mode	Band	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 20cm (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
SISO	Bluetooth	2.42	7.50	9.920	0.010	9.817	0.002	1.000
	2.4GHz WLAN	2.42	23.50	25.920	0.391	390.841	0.078	1.000
MIMO	2.4GHz WLAN	2.42	24.00	26.420	0.439	438.531	0.087	1.000
	5GHz WLAN	2.61	22.00	24.610	0.289	289.068	0.058	1.000

**Note:**

1. In the above table have assessed Bluetooth, WLAN 2.4GHz and WLAN 5GHz by referring to their maximum antenna gain and maximum power.
2. SISO mode cannot operate simultaneously when WLAN operates in MIMO mode.

### **Conclusion:**

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