# **RF Exposure Evaluation Report**

APPLICANT : PAX Technology Limited

**EQUIPMENT** : Smart Tablet

**BRAND NAME** : PAX

MODEL NAME : Aries6

**FCC ID** : V5PAR6LITE

**STANDARD** : 47 CFR Part 2.1091

FCC KDB 447498 D01 v06

We, Sporton International (Shenzhen) Inc., would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091 and FCC KDB 447498 D01 v06, and pass the limit. Without written approval of Sporton International (Shenzhen) Inc., the test report shall not be reproduced except in full.

Reviewed by: Long Liang / Supervisor

Johnny Chen

Approved by: Johnny Chen / Manager





Report No.: FA941109-01

### Sporton International (ShenZhen) Inc.

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Sporton International (Shenzhen) Inc.

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## SPORTON LAB. RF Exposure Evaluation Report

## **Revision History**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA941109-01	Rev. 01	Initial issue of report	Dec. 19, 2019

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## 1. Administration Data

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

Sporton International (Shenzhen) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Testing Laboratory					
Test Firm	Sporton International (Shenzhen) Inc.				
Test Site Location  1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518  People's Republic of China  TEL: +86-755-86379589  FAX: +86-755-86379595					
Test Site No.	FCC Designation No.	FCC Test Firm Registration No.			
Test Site No.	CN1256	421272			

Applicant Applicant				
Company Name	PAX Technology Limited			
Address	Room 2416, 24/F., Sun Hung Kai Centre, 30 Harbour Road, Wanchai, Hong Kong			

Manufacturer					
Company Name	PAX Computer Technology (Shenzhen) Co., Ltd.				
Address	4/F, No.3 Building, Software Park, Second Central Science-Tech Road, High-Tech industrial Park, Shenzhen, Guangdong, P.R.C.				

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

Product Feature & Specification					
EUT Type	Smart Tablet				
Brand Name	PAX				
Model Name	Aries6				
FCC ID	V5PAR6LITE				
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 ~ 5720 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz NFC: 13.56 MHz				
Mode	WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE NFC:ASK				
HW Version	N/A				
SW Version	N/A				
EUT Stage	Production Unit				

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

- 1. WLAN operating in 5600~5650MHz is notched.
- 2. This device does not support voice function.
- 3. 802.11n-HT40 is not supported in 2.4GHz WLAN.

#### **Comments and Explanations:**

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

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## 3. Maximum RF average output power among production units

### <Bluetooth>

Mode	Maximum Average Power (dBm)		
Bluetooth BR/EDR	7.0		
Bluetooth LE	4.5		

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#### <WLAN 2.4GHz>

Mode	Maximum Average Power (dBm)
802.11b	17.0
802.11g	16.5
802.11n-HT20	15.5

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### <WLAN 5GHz Mode>

	Mode	Maximum Average Power (dBm)			
	802.11a	14.0			
	802.11n-HT20	13.5			
WLAN 5.2GHz	802.11n-HT40	13.5			
WLAN 5.2GHZ	802.11ac-VHT20	13.5			
	802.11ac-VHT40	13.5			
	802.11ac-VHT80	12.0			
	802.11a	14.0			
	802.11n-HT20	13.5			
WLAN 5.3GHz	802.11n-HT40	13.5			
WLAN 5.3GHZ	802.11ac-VHT20	13.5			
	802.11ac-VHT40	13.5			
	802.11ac-VHT80	11.5			
	802.11a	15.0			
	802.11n-HT20	14.0			
\\\\	802.11n-HT40	14.0			
WLAN 5.5GHz	802.11ac-VHT20	14.0			
	802.11ac-VHT40	14.0			
	802.11ac-VHT80	13.5			
	802.11a	14.5			
	802.11n-HT20	14.0			
WLAN 5.8GHz	802.11n-HT40	14.0			
WLAIN 5.6GHZ	802.11ac-VHT20	14.0			
	802.11ac-VHT40	14.0			
	802.11ac-VHT80	14.0			

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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 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 20.0 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. Standalone 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/mW^2)	Limit (mW/mW^2)
WLAN 5GHz	5180.0	1.73	15.00	16.73	0.047	47.098	0.009	1.000
WLAN 2.4GHz	2412.0	1.50	17.00	18.50	0.071	70.795	0.014	1.000
Bluetooth	2402.0	1.50	7.00	8.50	0.007	7.079	0.001	1.000

#### Note:

- 1. For conservativeness, the lowest uplink frequency of each band is used to determine the MPE limit of that band.
- 2. In the above table have assessed WLAN 2.4GHz and WLAN 5GHz by referring to their maximum direction gain and maximum output power.
- 3. EUT will choose either WLAN 2.4GHz or WLAN 5GHz according to the network signal condition; therefore, 2.4GHz WLAN and 5GHz WLAN will not operate simultaneously at any moment.
- 4. WLAN5GHz and WLAN2.4GHz can't transmit simultaneously with Bluetooth.

### **Conclusion:**

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

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