



Test Report No.: SA170704W004



# RF EXPOSURE REPORT

**Product:** POS Terminal

**Model Name:** Q30

**FCC ID:** V5PQ30

**Applicant:** PAX Technology Limited

**Address:** Room 2416, 24/F., Sun Hung Kai Centre, 30 Harbour Road, Wanchai, Hong Kong

**Manufacturer:** 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.

**Prepared by:** Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch

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**Report No.:** SA170704W004

**Received Date:** Jun. 30, 2017

**Test Date:** Jul. 01, 2017 ~ Jul. 10, 2017

**Issued Date:** Jul. 11, 2017

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**BUREAU**  
**VERITAS**

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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA170704W004	Original release	Jul. 11, 2017



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# 1 CERTIFICATION

**PRODUCT:** POS Terminal  
**BRAND NAME:** PAX  
**MODEL NAME:** Q30  
**APPLICANT:** PAX Technology Limited  
**TESTED:** Jul. 01, 2017 ~ Jul. 10, 2017  
**TEST SAMPLE:** Production Unit  
**STANDARDS:** **FCC Part 2 (Section 2.1091)**  
**FCC OET Bulletin 65, Supplement C (01-01)**  
**KDB 447498 D01 General RF Exposure Guidance v06**  
**IEEE C95.1**

The above equipment has been tested by **Bureau Veritas Shenzhen Co., Ltd. Dongguan 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 :** Harry, **DATE:** Jul. 11, 2017  
(Harry Li/ Engineer)

**APPROVED BY :** Sam Tung, **DATE:** Jul. 11, 2017  
( Sam Tung / Manager)



## 2 GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

<b>PRODUCT</b>	POS Terminal	
<b>MODEL NAME</b>	Q30	
<b>NOMINAL VOLTAGE</b>	5.0Vdc (adapter or host equipment)	
<b>OPERATING TEMPERATURE RANGE</b>	0 ~ 40°C	
<b>MODULATION TYPE</b>	<b>WLAN</b>	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
	<b>Bluetooth</b>	GFSK, $\pi/4$ -DQPSK, 8DPSK
	<b>BT_LE</b>	BT-LE(GFSK) for DTS
	<b>NFC</b>	ASK
<b>OPERATING FREQUENCY</b>	<b>WLAN</b>	2412 ~ 2462MHz for 11b/g/n(HT20)
	<b>Bluetooth/BT_LE</b>	2402MHz ~ 2480MHz
	<b>NFC</b>	13.56MHz
<b>ANTENNA GAIN</b>	PCB Antenna with 0.6dBi gain	
<b>HW VERSION</b>	Q30-XXX-XXX-XXXX	
<b>SW VERSION</b>	PED4.0	
<b>I/O PORTS</b>	Refer to user's manual	
<b>CABLE SUPPLIED</b>	N/A	

**NOTE:**

- For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- The EUT was powered by the following adapter:

<b>ADAPTER</b>	
<b>BRAND:</b>	N/A
<b>MODEL:</b>	HKA00505010-2P
<b>INPUT:</b>	AC 100-240V, 250mA
<b>OUTPUT:</b>	DC 5V, 1000mA
<b>MANUFACTURER:</b>	SHENZHEN HUNKEY ELECTRIC CO., LTD

- For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.



### 3 RF EXPOSURE

#### 3.1 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)
<b>LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE</b>				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

#### 3.2 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

#### 3.3 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**.



### 3.4 CONDUCTED POWER

#### WIFI 2.4G

##### 802.11b

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
1	2412	15.35	N/A
6	2437	15.20	N/A
11	2462	15.17	N/A

##### 802.11g

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
1	2412	14.58	N/A
6	2437	14.53	N/A
11	2462	14.26	N/A

##### 802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
1	2412	13.65	N/A
6	2437	12.85	N/A
11	2462	12.37	N/A



Bluetooth

GFSK

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
0	2402	8.63	N/A
39	2441	<b>8.84</b>	N/A
78	2480	8.52	N/A

DQPSK

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
0	2402	4.91	N/A
39	2441	5.53	N/A
78	2480	4.68	N/A

8DPSK

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
0	2402	4.90	N/A
39	2441	5.27	N/A
78	2480	4.46	N/A

BT-LE (GFSK)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
0	2402	7.46	N/A
19	2440	7.17	N/A
39	2480	6.80	N/A





### 3.5 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

#### BT & WIFI 2.4G

Band	Frequency (MHz)	Operating Mode	Antenna Gain (dBi)	Tune-up Power (dBm)	E.I.R.P Power (mW)	Power Density (mW/cm <sup>2</sup> )	limit (mW/cm <sup>2</sup> )	PASS / FAIL
Bluetooth	2441	BT_GFSK	0.6	9.0	9.120	0.002	1.00	PASS
WIFI 2.4G	2412	11b	0.6	15.5	40.738	0.008	1.00	PASS