

RF EXPOSURE REPORT

Product: POS Terminal

Model Name: Q30

FCC ID: V5PQ30

Applicant: PAX Technology Limited

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Report No.: SA170704W004

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

Issued Date: Jul. 11, 2017

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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

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

ADAPTER	
BRAND:	N/A
MODEL:	HKA00505010-2P
INPUT:	AC 100-240V, 250mA
OUTPUT:	DC 5V, 1000mA
MANUFACTURER:	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 ²)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	F/1500	30
1500-100,000	1.0	30

F = Frequency in MHz

3.2 MPE CALCULATION FORMULA

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 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	8.84	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 ²)	limit (mW/cm ²)	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