Test Lab
Cert 2951.01

RF EXPOSURE REPORT

Product:	POS Terminal
Model Name:	Q20
FCC ID:	V5PQ20
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
Lab Location:	No. 34, Chenwulu Section, Guantai Rd., Houjie Town, Dongguan City, Guangdong 523942, China
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Report No.:	SA170713W004
Received Date:	Jun. 29, 2017
Test Date:	Jul. 01, 2017 ~ Jul. 10, 2017
Issued Date:	Jul. 11, 2017

This report should not be used by the client to claim product certification, approval, or endorsement by A2LA or any government agencies.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA170713W004	Original release	Jul. 11, 2017

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Dongguan Branch

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1 CERTIFICATION

PRODUCT:	POS Terminal
BRAND NAME:	PAX
MODEL NAME:	Q20
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 : _____ , **DATE:** Jul. 11, 2017
(Harry Li/ Engineer)

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

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	POS Terminal	
MODEL NAME	Q20	
NOMINAL VOLTAGE	DC 5V	
OPERATING TEMPERATURE RANGE	0 ~ 50℃	
MODULATION TYPE	**WLAN**	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
	Bluetooth	GFSK, π/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 0.7dBi gain	
HW VERSION	Q20-XXX-XXX-XXXX	
SW VERSION	PED 5.X	
I/O PORTS	Refer to user's manual	
CABLE SUPPLIED	USB cable: non-shielded, detachable, 1.0meter	

NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. The EUT matched the following USB cables:

USB CABLE	
BRAND:	N/A
MODEL:	083-302824-001
SIGNAL LINE:	1.0 meter

3. 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

Pd = (Pout*G) / (4*pi*r2)

where

Pd = power density in mW/cm2

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	15.47	N/A
6	2437	**15.85**	N/A
11	2462	15.35	N/A

802.11g

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
1	2412	14.15	N/A
6	2437	14.33	N/A
11	2462	14.61	N/A

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
1	2412	13.04	N/A
6	2437	13.35	N/A
11	2462	14.55	N/A

Bluetooth

GFSK

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
0	2402	9.02	N/A
39	2441	**9.13**	N/A
78	2480	8.57	N/A

DQPSK

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
0	2402	5.01	N/A
39	2441	5.07	N/A
78	2480	4.97	N/A

8DPSK

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
0	2402	5.07	N/A
39	2441	5.15	N/A
78	2480	5.01	N/A

BT-LE (GFSK)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
0	2402	8.02	N/A
19	2440	8.17	N/A
39	2480	7.84	N/A

3.5 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

TUNE-UP POWER TABLE

Band	Frequency (MHz)	Operating Mode	Tune-Up Power and Tolerance (dBm)
Bluetooth	2441	BT_GFSK	9.0 ± 0.5
WIFI 2.4G	2437	11b	15.5 ± 0.5

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	0.7	9.5	10.471	0.002	1.00	PASS
WIFI 2.4G	2437	11b	0.7	16.0	46.774	0.009	1.00	PASS