

RF EXPOSURE REPORT

Product: Smart Kiosk

Model Name: SK600

Additional model: SK800

FCC ID: V5PSK

Applicant: PAX Technology Limited

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Test Date: Apr. 18, 2020 ~ May. 06, 2020

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA190429W001-1	Original release	Jul. 13, 2019
SA191120W002-1	Based on the original product add one model SK800, changed power module. All test data is copied from the original test report SA190429W001-1.	Dec. 11, 2019
SA200417W002-1	Based on the original report RF191120W002-1 changed the WWAN module from ME3630 to GM500_U1A, the module ME3630 and module GM500_U1A are identical in hardware, only cancel LTE B17 and GSM function, no affect other RF function. In this report test data was copied from the original test report RF191120W002-1.	May. 07, 2020



Test Report No.: SA200417W002-1

1 CERTIFICATION

PRODUCT: Smart Kiosk

BRAND NAME: PAX

MODEL NAME: SK600

ADDITIONAL MODEL: SK800

APPLICANT: PAX Technology Limited

TESTED: Apr. 18, 2020 ~ May. 06, 2020

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 **BV 7Layers Communications Technology (Shenzhen) Co. Ltd** 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 : Alex, **DATE:** May. 07, 2020
(Alex Chen/ Engineer)

APPROVED BY : Luke Lu, **DATE:** May. 07, 2020
(Luke Lu / Manager)



2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Smart Kiosk	
MODEL NAME	SK600	
ADDITIONAL MODEL	SK800	
NOMINAL VOLTAGE	AC120V	
OPERATING TEMPERATURE RANGE	0 ~ 50°C	
MODULATION TYPE	WLAN	802.11b : DSSS 802.11a/g/n/ac : OFDM Bluetooth : GFSK, $\pi/4$ -DQPSK, 8-DPSK, LE
	WCDMA	BPSK/QPSK
	LTE	QPSK, 16QAM
OPERATING FREQUENCY	WIFI 2.4G	WLAN : 2412 ~ 2462, 5150 ~ 5350, 5470 ~ 5725, 5725 ~ 5825 Bluetooth : 2402 ~ 2480
	WCDMA	1852.4MHz ~ 1907.6MHz (FOR WCDMA II) 826.4MHz ~ 846.6MHz (FOR WCDMA V)
	LTE	1850.7MHz ~ 1909.3MHz (FOR LTE Band2) 1710.7MHz ~ 1754.3MHz (FOR LTE Band4) 824.7MHz ~ 848.3MHz (FOR LTE Band5) 699.7MHz ~ 715.3MHz (FOR LTE Band12)
ANTENNA GAIN	WLAN 2.4G	External Antenna with 1.5dBi gain
	WLAN 5G	External Antenna with 6.04dBi gain for B1 External Antenna with 5.79dBi gain for B2 External Antenna with 5.25dBi gain for B3 External Antenna with 4.75dBi gain for B4
	WCDMA V	Fixed External Antenna with 1.0dBi gain
	WCDMA II	Fixed External Antenna with 1.5dBi gain
	LTE Band 2	Fixed External Antenna with 1.5dBi gain
	LTE Band 4	Fixed External Antenna with 1.5dBi gain
	LTE Band 5	Fixed External Antenna with 1.0dBi gain
	LTE Band 12	Fixed External Antenna with 1.0dBi gain
HW VERSION	NA	
SW VERSION	NA	
I/O PORTS	Refer to user's manual	
CABLE SUPPLIED	N/A	



NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. The hardware differences between SK800 with SK600:

Product size and weight	
SK600	Size: 660 x325 x 178 (mm) Weight: 7.8kg
SK800	Size: 965x 390x 175 (mm) Weight: 13kg

Product screen size	
SK600	screen size: 15"
SK800	screen size: 23.8"

Except Listings above, the others are the same.

3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report. SK600 was main test model for full conducted test items.

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

TUNE-UP POWER TABLE

Band	Frequency (MHz)	Operating Mode	Tune-Up Power And Tolerance (dBm)
BT	2441	GFSK	9.5
WIFI 2.4G	2437	11b(20MHz)	16.0
WIFI 5G B1	5230	11a(20MHz)	15.0
WIFI 5G B2	5270	11a(20MHz)	15.0
WIFI 5G B3	5510	11a(20MHz)	15.0
WIFI 5G B4	5755	11a(20MHz)	15.0
WCDMA II	1880	RMC12.2K	23.5
WCDMA V	836.4	RMC12.2K	24.5
LTE 2	1880	QPSK	23.0
LTE 4	1732.5	QPSK	23.0
LTE 5	836.5	QPSK	23.5
LTE 12	707.5	QPSK	24.0

**3.5 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER****BT**

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	1.50	9.50	12.589	0.003	1.00	PASS

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
WIFI 2.4G	2437	11b	1.50	16.00	56.234	0.011	1.00	PASS

WIFI 5G

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
WIFI 5G B1	5230	11a	6.04	15.00	127.057	0.025	1.00	PASS
WIFI 5G B2	5270	11a	5.79	15.00	119.950	0.024	1.00	PASS
WIFI 5G B3	5510	11a	5.25	15.00	105.925	0.021	1.00	PASS
WIFI 5G B4	5755	11a	4.75	15.00	94.406	0.019	1.00	PASS

WCDMA

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
WCDMA II	1880.0	RMC12.2K	1.50	23.50	316.228	0.063	1.00	PASS
WCDMA V	846.4	RMC12.2K	1.00	24.50	354.813	0.071	0.56	PASS

LTE

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
Band 2	1880	QPSK	1.50	23.00	281.838	0.056	1.00	PASS
Band 4	1732.5	QPSK	1.50	23.00	281.838	0.056	1.00	PASS
Band 5	836.5	QPSK	1.00	23.50	281.838	0.056	0.56	PASS
Band 12	707.5	QPSK	1.00	24.00	316.228	0.063	0.47	PASS

3.6 CONCLUSION OF SIMULTANEOUS TRANSMITTER

Both of the WLAN and plug-in device can transmit simultaneously, the formula of calculated the MPE is:

$$\text{CPD1/LPD1} + \text{CPD2/LPD2} + \dots \text{etc.} < 1$$

CPD = Calculation power density

LPD = Limit of power density

Therefore the worst-case situation is, which is less than “1”, This confirmed that the device comply with FCC 1.1310 MPE limit.

Band	Frequency (MHz)	Power Density (mW/cm ²)	limit (mW/cm ²)	Power Density / Limit	Total Power Density / Limit	MPE Limit	PASS / FAIL
WIFI 5G-11a	5230	0.025	1	0.025	0.096	1.000	PASS
WCDMA Band V	846.4	0.071	1	0.071			

--END--