RF EXPOSURE REPORT

Product:	Integrated Smart Terminal
Model Name:	E700
FCC ID:	V5PE700GM
Applicant:	PAX Technology Limited
Address:	Room 2416, 24/F., Sun Hung Kai Centre, 30 Harbour Hong Kong China
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:	BV 7Layers Communications Technology (Shenzhen) Co. Ltd
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Report No.:	W7L-P21090005SA01
Received Date:	Sep. 01, 2021
Test Date:	Sep. 01, 2021 ~ Sep. 26, 2021
Issued Date:	Sep. 27, 2021

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
W7L-P21090005SA01	Original release	Sep. 27, 2021

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1 CERTIFICATION

PRODUCT:	Integrated Smart Terminal
BRAND NAME:	PAX
MODEL NAME:	E700
APPLICANT:	PAX Technology Limited
TESTED:	Sep. 01, 2021 ~ Sep. 26, 2021
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
FCC Designation No.	CN1171

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 : Simon , **DATE:** Sep. 27, 2021

(Simon Wang / Engineer)

APPROVED BY : Luke Lu , **DATE:** Sep. 27, 2021

(Luke Lu / Manager)

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Integrated Smart Terminal	
MODEL NAME	E700	
NOMINAL VOLTAGE	24Vdc (adapter or host equipment) 7.2Vdc (Li-ion, battery)	
OPERATING TEMPERATURE RANGE	0 ~ 50℃	
MODULATION TYPE	**WLAN**	DSSS, OFDM
	BT_LE	GFSK
	Bluetooth	GFSK, π/4-DQPSK, 8DPSK
	GPRS/EDGE	GMSK,8PSK
	WCDMA	BPSK/QPSK
	LTE	QPSK/16QAM
	NFC	ASK
OPERATING FREQUENCY	**WLAN**	2412 ~ 2462MHz for 11b/g/n(HT20) 5180 ~ 5240MHz for 11a/ n(HT20)/ n(HT40) / ac(VHT20)/ ac(VHT40) / ac(VHT80)
	Bluetooth/BT_LE	2402MHz ~ 2480MHz
	GPRS/EDGE	824.2MHz ~ 848.8MHz (FOR GSM 850) 1850.2MHz ~ 1909.8MHz (FOR GSM 1900)
	WCDMA	1852.4MHz ~ 1907.6MHz (FOR WCDMA Band 2) 826.4MHz ~ 846.6MHz (FOR WCDMA Band 5)
	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)
	NFC	13.56 MHz
ANTENNA GAIN	PIFA Antenna with 1dBi gain for Bluetooth/ BT_LE/ WIFI 2.4G PIFA Antenna with 2dBi gain for WIFI 5G Fixed External antenna with 1dBi gain for GPRS850/ WCDMA V/LTE Band 5/ LTE Band 12 Fixed External antenna with 1.5dBi gain for GPRS1900/ WCDMA II/LTE Band 2/ LTE Band 4	
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. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

List of Accessory:

ACCESSORIES	BRAND	MODEL	SPECIFICATION
Battery1	EVE	A0671-LE	Capacity：3.63vdc 2550mAh
Battery2	EVE	A0671B	Capacity：3.6vdc 2550mAh
AC Adapter	HONOTO	ADS-65HI-19A-3 24065E	I/P:100-240Vac, 1.5A O/P: 24Vdc, 2.7A

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 = 3.14

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 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

Worst case as below:

BT & WIFI 2.4G & WIFI 5G

Band	Frequency (MHz)	Antenna Gain (dBi)	Tune-up Conducted Power (dBm)	Tune-up Conducted Power (mW)	Power Density (mW/cm^2)	limit (mW/cm^2)	PASS / FAIL
Bluetooth	2402	1	9.0	7.94	0.0020	1.0	PASS
WIFI 2.4G	2412	1	22.5	177.83	0.0446	1.0	PASS
WIFI 5G B1	5180	2	14.5	28.18	0.0089	1.0	PASS

GPRS:

Band	Frequency (MHz)	Antenna Gain (dBi)	Tune-up Conducted Power (dBm)	Tune-up Conducted Time Average Power (dBm)	Power Density (mW/cm^2)	limit (mW/cm^2)	PASS / FAIL
GPRS 850	824.2	1	34.0	24.97	0.0787	0.55	PASS
GPRS1900	1850.2	1.5	30.0	20.97	0.0352	1.0	PASS

WCDMA

Band	Frequency (MHz)	Antenna Gain (dBi)	Conducted Time Average Power (dBm)	Power Density (mW/cm^2)	limit (mW/cm^2)	PASS / FAIL
WCDMA V	826.4	1	24.0	0.0629	0.55	PASS
WCDMA II	1852.4	1.5	23.5	0.0629	1.0	PASS

LTE

Band	Frequency (MHz)	Antenna Gain (dBi)	Conducted Time Average Power (dBm)	Power Density (mW/cm^2)	limit (mW/cm^2)	PASS / FAIL
Band2	1850.7	1.5	23.0	0.0561	1.0	PASS
Band4	1710.7	1.5	23.0	0.0561	1.0	PASS
Band5	824.7	1	23.0	0.0500	0.55	PASS
Band12	699.7	1	23.0	0.0500	0.47	PASS

3.5 CONCLUSION OF SIMULTANEOUS TRANSMITTER

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

CPD1/LPD1+CPD2/LPD2+……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

Therefore the worst-case situation is 0.0020/1.00+0.0446/1.00+0.0787/0.55 =0.19, which is less than “1”, This confirmed that the device comply with FCC 1.1310 MPE limit.

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