

# RF Exposure Evaluation Report

**Applicant:** PAX Technology Limited

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

**Equipment Under Test (EUT)**

Product Name: Integrated Smart Terminal

Model No.: E770

Trade mark: PAX

**FCC ID:** V5PE770

**Applicable standards:** FCC CFR Title 47 Part 2 (§2.1091)

**Date of sample receipt:** 26 Apr., 2022

**Date of Test:** 27 Apr., to 23 Jun., 2022

**Date of report issue:** 24 Jun., 2022

**Test Result:** PASS\*

**Tested by:** Janet Wei  
Test Engineer

**Date:** 24 Jun., 2022

**Reviewed by:** Wenwen Zhang  
Project Engineer

**Date:** 24 Jun., 2022

**Approved by:** Wenwen Zhang  
Manager

**Date:** 24 Jun., 2022

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in above the application standard version. Test results reported herein relate only to the item(s) tested.

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## 2 Version

| Version No. | Date          | Description |
|-------------|---------------|-------------|
| 00          | 24 Jun., 2022 | Original    |
|             |               |             |
|             |               |             |
|             |               |             |
|             |               |             |

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## 4 General Information

### 4.1 Client Information

|               |   |
|---------------|---|
| 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:      | 401 and 402, Building 3, Shenzhen Software Park, Nanshan District, Shenzhen City, Guangdong Province, P.R.C |

### 4.2 General Description of E.U.T.

|                        |  |
|------------------------|--|
| Product Name:          | Integrated Smart Terminal  |
| Model No.:             | E770   |
| Operation Frequency:   | 2.4G Wi-Fi: 2412MHz~2462MHz<br>5.2G Wi-Fi Band 1: 5180MHz~5240MHz<br>5.3G Wi-Fi Band 2: 5260MHz~5320MHz<br>5.6G Wi-Fi Band 3: 5500MHz~5700MHz<br>5.8G Wi-Fi Band 4: 5725MHz~5875MHz<br>Bluetooth/ BLE: 2402MHz~2480MHz<br>WCDMA band II: 1852.4 MHz - 1907.6 MHz<br>WCDMA band IV: 1712.4 MHz - 1752.6 MHz<br>WCDMA band V: 826.4 MHz - 846.6 MHz<br>LTE band 2: 1850 MHz - 1910 MHz<br>LTE band 4: 1710 MHz - 1755 MHz<br>LTE band 5: 824 MHz - 849 MHz<br>LTE band 12: 699 MHz - 716 MHz<br>LTE band 13: 777 MHz - 787 MHz<br>LTE band 17: 704 MHz - 716 MHz |
| Modulation technology: | 802.11b: DSSS, 802.11a/g/n/ac: OFDM<br>Bluetooth BDR /BLE: GFSK, Bluetooth EDR: $\pi/4$ -DQPSK, 8DPSK<br>WCDMA: RMC(QPSK), HSUPA(QPSK), HSDPA(QPSK,16QAM)<br>LTE: QPSK, 16QAM  |
| Antenna Type:          | Internal Antenna   |
| Antenna gain:          | BT/ BLE: 1.0 dBi; Wi-Fi: 1.0 dBi; WCDMA band II/ IV/ V: 0.5dBi;<br>LTE band 2/4/5/12/13/17: 0.5dBi   |
| Test Sample Condition: | The test samples were provided in good working order with no visible defects.  |

### 4.3 Operating Modes

| Operating mode | Detail description  |
|----------------|---|
| BLE mode       | Keep the EUT in continuously transmitting in BLE mode       |
| BT mode        | Keep the EUT in continuously transmitting in BT mode        |
| 2.4G WIFI mode | Keep the EUT in continuously transmitting in 2.4G WIFI mode |
| 5G WIFI mode   | Keep the EUT in continuously transmitting in 5G WIFI mode   |
| WCDMA mode     | Keep the EUT in continuously transmitting in WCDMA mode     |
| LTE mode       | Keep the EUT in continuously transmitting in LTE mode       |

### 4.4 Additions to, deviations, or exclusions from the method

|    |
|----|
| No |
|----|

#### 4.5 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

● **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

● **CNAS - Registration No.: CNAS L15527**

JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527.

● **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

#### 4.6 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.

Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.

Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info-JYTee@lets.com, Website: <http://jyt.lets.com>

## 5 Technical Requirements Specification in FCC CFR Title 47 Part 2.1091

### 5.1 Limits

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

| Frequency range (MHz)                                   | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm <sup>2</sup> ) | Averaging time (minutes) |
|---|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| (A) Limits for Occupational/Controlled Exposures        |                               |                               |                                     |                          |
| 0.3–3.0   | 614                           | 1.63                          | *(100)                              | 6                        |
| 3.0–30  | 1842/f                        | 4.89/f                        | *(900/f <sup>2</sup> )              | 6                        |
| 30–300  | 61.4                          | 0.163                         | 1.0                                 | 6                        |
| 300–1500  |                               |                               | f/300                               | 6                        |
| 1500–100,000  |                               |                               | 5                                   | 6                        |
| (B) Limits for General Population/Uncontrolled Exposure |                               |                               |                                     |                          |
| 0.3–1.34  | 614                           | 1.63                          | *(100)                              | 30                       |
| 1.34–30   | 824/f                         | 2.19/f                        | *(180/f <sup>2</sup> )              | 30                       |
| 30–300  | 27.5                          | 0.073                         | 0.2                                 | 30                       |
| 300–1500  |                               |                               | f/1500                              | 30                       |
| 1500–100,000  |                               |                               | 1.0                                 | 30                       |

### 5.2 Test Procedure

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

Where:

S = power density

P = power input to the antenna

G = numeric gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the centre of radiation of the antenna

### 5.3 Result

| Frequency (MHz) | Maximum Output power (dBm) | Maximum Output power (mW) | Antenna Gain (dBi) | Antenna Gain (numeric) | Distance (cm) | Result (mW/cm <sup>2</sup> ) | Limits for General Population/ Uncontrolled Exposure (mW/cm <sup>2</sup> ) |
|-----------------|----------------------------|---------------------------|--------------------|------------------------|---------------|------------------------------|--|
| 2.4G Wi-Fi      |                            |                           |                    |                        |               |                              |  |
| 2437            | 16.83                      | 48.19                     | 1.0                | 1.26                   | 20.00         | 0.012                        | 1.0  |
| 5.2G Wi-Fi      |                            |                           |                    |                        |               |                              |  |
| 5180            | 16.82                      | 48.08                     | 1.0                | 1.26                   | 20.00         | 0.012                        | 1.0  |
| 5.3G Wi-Fi      |                            |                           |                    |                        |               |                              |  |
| 5320            | 15.13                      | 32.58                     | 1.0                | 1.26                   | 20.00         | 0.008                        | 1.0  |
| 5.6G Wi-Fi      |                            |                           |                    |                        |               |                              |  |
| 5600            | 16.56                      | 45.29                     | 1.0                | 1.26                   | 20.00         | 0.011                        | 1.0  |
| 5.8G Wi-Fi      |                            |                           |                    |                        |               |                              |  |
| 5785            | 17.42                      | 55.21                     | 1.0                | 1.26                   | 20.00         | 0.014                        | 1.0  |
| BLE             |                            |                           |                    |                        |               |                              |  |
| 2402            | 5.892                      | 3.88                      | 1.0                | 1.26                   | 20.00         | 0.001                        | 1.0  |
| BT              |                            |                           |                    |                        |               |                              |  |
| 2402            | 7.426                      | 5.53                      | 1.0                | 1.26                   | 20.00         | 0.001                        | 1.0  |
| WCDMA band II   |                            |                           |                    |                        |               |                              |  |
| 1907.6          | 23.07                      | 202.77                    | 0.5                | 1.12                   | 20.00         | 0.045                        | 1.0  |
| WCDMA band VI   |                            |                           |                    |                        |               |                              |  |
| 1752.6          | 22.61                      | 182.39                    | 0.5                | 1.12                   | 20.00         | 0.041                        | 1.0  |
| WCDMA band V    |                            |                           |                    |                        |               |                              |  |
| 826.4           | 22.63                      | 183.23                    | 0.5                | 1.12                   | 20.00         | 0.041                        | 0.55   |
| LTE band 2      |                            |                           |                    |                        |               |                              |  |
| 1907.5          | 23.35                      | 216.27                    | 0.5                | 1.12                   | 20.00         | 0.048                        | 1.0  |
| LTE band 4      |                            |                           |                    |                        |               |                              |  |
| 1732.5          | 23.1                       | 204.17                    | 0.5                | 1.12                   | 20.00         | 0.046                        | 1.0  |
| LTE band 5      |                            |                           |                    |                        |               |                              |  |
| 836.5           | 22.97                      | 198.15                    | 0.5                | 1.12                   | 20.00         | 0.044                        | 0.56   |
| LTE band 12     |                            |                           |                    |                        |               |                              |  |
| 713.50          | 22.84                      | 192.31                    | 0.5                | 1.12                   | 20.00         | 0.043                        | 0.48   |
| LTE band 13     |                            |                           |                    |                        |               |                              |  |
| 784.5           | 22.9                       | 194.98                    | 0.5                | 1.12                   | 20.00         | 0.044                        | 0.52   |
| LTE band 17     |                            |                           |                    |                        |               |                              |  |
| 713.50          | 22.86                      | 193.20                    | 0.5                | 1.12                   | 20.00         | 0.043                        | 0.48   |

Simultaneous transmission evaluation:

| ANT No.       | Mode        | Ratio | Total Ratio | Limit |
|---------------|-------------|-------|-------------|-------|
| Main ANT      | LTE band 17 | 0.090 | 0.104       | 1.0   |
| Secondary ANT | 5.8G Wi-Fi  | 0.014 |             |       |

Note: Just the worst case mode was shown in report.

### 5.4 Conclusion

The device is exempt from the SAR test and satisfies RF exposure evaluation.

-----End of report-----