

## RF EXPOSURE REPORT

For

**Vagaro, Inc.**

4430 Rosewood Drive, Suite 500, Pleasanton, CA 94588

**FCC ID: 2BFJHD052**

<b>Report Type:</b> Original Report	<b>Product Name:</b> PayPro
<b>Report Number:</b> <u>RKSA240328001-00D</u>	
<b>Report Date:</b> <u>2024-07-02</u>	
<b>Reviewed By:</b> <u>Jenny Yang</u>	<i>Jenny Yang</i>
<b>Approves By:</b> <u>Kyle Xu</u>	<i>Kyle Xu</i>
<b>Prepared By:</b> Bay Area Compliance Laboratories Corp. (Kunshan) No.248 Chenghu Road, Kunshan, Jiangsu Province, China Tel: +86-512-86175000 Fax: +86-512-88934268 <a href="http://www.baclcorp.com.cn">www.baclcorp.com.cn</a>	

Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Kunshan). This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, or any agency of the U.S.Government.

**TABLE OF CONTENTS**

**REPORT REVISION HISTORY.....3**

**GENERAL INFORMATION.....4**

    PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT) .....4

**FCC §1.1310 & §2.1091 –MAXIMUM PERMISSIBLE EXPOSURE (MPE) .....6**

**EUT PHOTOGRAPHS .....8**

REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	RKSA240328001-00D	R1 V1	2024-07-02	Initial Release

## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

Applicant	Vagaro, Inc.	
Tested Model	D052	
Product Name	PayPro	
Power Supply	DC 24V	
RF Function:	2.4G Wi-Fi; BLE; Classic BT; 5G Wi-Fi	
Maximum Output Power:	2.4G Wi-Fi: 802.11b: 20.74 dBm 802.11g: 20.81 dBm 802.11n20:20.86 dBm 802.11n40: 19.92 dBm BLE(1Mbps): 2.85 dBm Classic BT GFSK: 10.20 dBm $\pi/4$ -DQPSK: 9.63 dBm 8DPSK: 9.29 dBm	
	5G Wi-Fi B1:	5G Wi-Fi B4:
	802.11a:12.95 dBm	12.42 dBm
	802.11ac20:12.64 dBm	12.29 dBm
	802.11n-HT20:12.77 dBm	12.09 Bm
	802.11ac40:10.51 dBm	12.29 dBm
	802.11n-HT40:8.49 dBm	12.21 dBm
	802.11ac80:7.54 dBm	11.89 dBm
Operating Band/Frequency:	2.4G Wi-Fi: 2412~2462 MHz(802.11b/g/n20), 2422~2452 MHz(802.11n40) BLE(1Mbps): 2402-2480 MHz Classic BT: 2402-2480 MHz 5G Wi-Fi B1: 5180-5240 MHz, B4: 5745-5825 MHz	
Channel Number:	2.4G Wi-Fi: 11(802.11b/g/n20), 7(802.11n40) BLE: 40 Classic BT: 79 5G Wi-Fi B1: 7, B4: 8	
Channel Separation:	2.4G Wi-Fi: 5 MHz BLE: 2 MHz Classic BT: 1 MHz 5G Wi-Fi: 802.11a/ac20/n20: 20 MHz, ac40/n40: 40 MHz, ac80: 80 MHz	
Modulation Type:	2.4G Wi-Fi: DSSS, OFDM BLE: GFSK Classic BT: GFSK, $\pi/4$ -DQPSK, 8DPSK 5G Wi-Fi: OFDM	
Antenna Type:	2.4G Wi-Fi/BLE/Classic BT/5G Wi-Fi: FPC Antenna	
★Maximum Antenna Gain:	2.4G Wi-Fi /BLE/Classic BT: 4.62 dBi; 5G Wi-Fi Band 1: 1.10 dBi, 5G Wi-Fi Band 4: 1.45 dBi	

*Adapter Information:*

*Model: ASSA52-240250*

*Input: 100-240V, 50/60Hz, 1.5A*

*Output: 24.0V, 2.5A, 60.0W*

*Note: The maximum antenna gain was declared by the manufacturer.*

*All measurement and test data in this report was gathered from production sample serial number: RKSA240328001-1  
(Assigned by the BACL (Kunshan). The EUT supplied by the applicant was received on 2024-03-28.)*

## **FCC §1.1310 & §2.1091 –MAXIMUM PERMISSIBLE EXPOSURE (MPE)**

### **Applicable Standard**

According to subpart §2.1091 and subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
<b>Frequency Range (MHz)</b>	<b>Electric Field Strength (V/m)</b>	<b>Magnetic Field Strength (A/m)</b>	<b>Power Density (mW/cm<sup>2</sup>)</b>	<b>Averaging Time (minutes)</b>
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

f = frequency in MHz; \* = Plane-wave equivalent power density;

According to §1.1310 and §2.1091 RF exposure is calculated.

### **Calculated Formulary**

Predication of MPE limit at a given distance

$S = PG/4\pi R^2$  = power density (in appropriate units, e.g. mW/cm<sup>2</sup>);

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

**Calculated Data:**

Mode	Frequency Range (MHz)	Antenna Gain		★Tune-up Output Power		Evaluation Distance (cm)	Power Density (mW/cm <sup>2</sup> )	MPE Limit (mW/cm <sup>2</sup> )
		(dBi)	(numeric)	(dBm)	(mW)			
Classic BT	2402~2480	4.62	2.90	10.5	11.22	20	0.0065	1.0
BLE	2402~2480	4.62	2.90	5.0	3.16	20	0.0018	1.0
2.4G Wi-Fi	2412~2462	4.62	2.90	21.0	125.89	20	0.0726	1.0
5G Wi-Fi	5150~5250	1.10	1.29	13.0	19.95	20	0.0051	1.0
	5725~5850	1.45	1.40	12.5	17.78	20	0.0050	1.0

**Note:**

1. For the above tune up power were declared by the manufacturer.
2. Classic BT and WiFi cannot transmit simultaneously.

**Result:** The device meet FCC MPE at 20 cm distance.

## **EUT PHOTOGRAPHS**

---

Please refer to the attachment EXHIBIT A - EUT EXTERNAL PHOTOGRAPHS and EXHIBIT B - EUT INTERNAL PHOTOGRAPHS.



### **Declarations**

1. The laboratory is not responsible for the authenticity of any information provided by the applicant. Information from the applicant that may affect test results is marked with “★”.
2. The test data was only valid for the test sample(s).
3. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.
4. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
5. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor  $k=2$  with the 95.45% confidence interval.

**\*\*\*\*\* END OF REPORT \*\*\*\*\***