

RF Exposure Evaluation Report

Product : JCV PayPad PLUS
Trade mark : JCV
Model/Type reference : G1
Serial Number : N/A
Report Number : EED32O80125305
FCC ID : 2AW3VPAYPADPLUS001
Date of Issue : Mar. 08, 2022
Test Standards : 47 CFR Part 1.1307
47 CFR Part 2.1093
KDB447498D01 General RF
Exposure Guidance v06
Test result : PASS

Prepared for:

Japan Computer Vision Corp
2-5-1 Kojimachi, Hanzomon PREX South 6F, Chiyoda-ku, Tokyo Japan

Prepared by:

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Check No.: 5140250122



1 Version

Version No.	Date	Description
00	Mar. 08, 2022	Original

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3 General Information

3.1 Client Information

Applicant:	Japan Computer Vision Corp
Address of Applicant:	2-5-1 Kojimachi, Hanzomon PREX South 6F, Chiyoda-ku, Tokyo Japan
Manufacturer:	Japan Computer Vision Corp
Address of Manufacturer:	2-5-1 Kojimachi, Hanzomon PREX South 6F, Chiyoda-ku, Tokyo Japan
Factory:	Japan Computer Vision Corp
Address of Factory:	2-5-1 Kojimachi, Hanzomon PREX South 6F, Chiyoda-ku, Tokyo Japan

3.2 General Description of EUT

Product Name:	JCV PayPad PLUS
Mode No.:	G1
Trade mark:	JCV
EUT Supports Radios application:	BLE:2402MHz to 2480MHz; BT Classic:GFSK, $\pi/4$ DQPSK, 8DPSK; 2.4GHz WiFi:IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz; 5GHz WiFi:IEEE 802.11a: OFDM (BPSK, QPSK, 16QAM, 64QAM) IEEE 802.11n(HT20/HT40): OFDM (BPSK, QPSK, 16QAM, 64QAM) IEEE 802.11ac(VHT20/VHT40/VHT80): OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM);
Operation Frequency:	BLE:2402MHz to 2480MHz; BT Classic:2402MHz to 2480MHz; 2.4GHz WiFi:2412MHz to 2462MHz; 5GHz WiFi:U-NII-1: 5180-5240MHz,U-NII-3: 5745-5825MHz;
Modulation Type:	BLE:GFSK; BT Classic:GFSK, $\pi/4$ DQPSK, 8DPSK; 2.4GHz WiFi:IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g :OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20):OFDM (64QAM, 16QAM,QPSK,BPSK); 5GHz WiFi:IEEE 802.11a: OFDM (BPSK, QPSK, 16QAM, 64QAM) IEEE 802.11n(HT20/HT40): OFDM (BPSK, QPSK, 16QAM, 64QAM) IEEE 802.11ac(VHT20/VHT40/VHT80): OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM);
Number of Channel:	BLE:40; BT Classic:79; 2.4GHz WiFi:IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels 5GHz WiFi:U-NII-1: 48 Channel,U-NII-3: 165 Channel;
Product Type:	☐ Mobile ☐ Portable ☒ Fix Location
Antenna Type:	Loop Antenna
Antenna Gain:	BLE:4.86dBi; BT Classic:4.86dBi; 2.4GHz WiFi:4.86dBi; 5GHz WiFi:U-NII-1: 2.73dBi and U-NII-3: 2.60dBi.
Power Supply:	Switching adapter Model: ASSA79W-120300 Input: AC 100-240V,50/60Hz,1.2A

	Output: DC 12.0V,3.0A,36.0W
Test Voltage:	AC 120V/60Hz
Sample Received Date:	Jan. 27, 2022
Sample tested Date:	Feb. 15, 2022 to Feb. 26, 2022
Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.	

3.3 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

3.4 Deviation from Standards

None.

3.5 Abnormalities from Standard Conditions

None.

3.6 Other Information Requested by the Customer

None.

4 RF Exposure Evaluation

4.1 RF Exposure Compliance Requirement

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{377}$

Where E = Field strength in Volts / meter

P = Power in Watts

G = Numeric antenna gain

d = Distance in meters

S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377 d^2}$$

Changing to units of mW and cm, using:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \quad \text{Equation 1}$$

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

4.2 Maximum Permissible Exposure

Substituting the MPE safe distance using $d = 20$ cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

BLE :

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
0	2440	1.828000	3.062	20	0.0011	1

BT Classic:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
0	2441	6.383000	3.062	20	0.0039	1

2.4G WiFi:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
11	2462	47.863000	3.062	20	0.0292	1

5G WiFi:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
11	5200	31.117000	1.875	20	0.0116	1
149	5745	29.444000	1.820	20	0.0107	1

Note: Refer to report No. EED32O80125301,EED32O80125302,EED32O80125303,EED32O80125304.

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32O80125301 for EUT external and internal photos.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***