

RF Exposure Evaluation Report

Product : Video Encoder
Trade mark : Kiloview
Model/Type reference : P3, PMD-4G, PMD-5G,
PBM-7000
Serial Number : N/A
Report Number : EED32Q80470303
FCC ID : 2AUYX-P3
Date of Issue : Jun. 24, 2024
Test Standards : 47 CFR Part 1.1307
47 CFR Part 1.1310
47 CFR Part 2.1091
47 CFR Part 2.1093
447498 D04 Interim General RF
Exposure Guidance v01
Test result : PASS

Prepared for:

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2 Version

| Version No. | Date | Description |
|-------------|---------------|-------------|
| 00 | Jun. 24, 2024 | Original |
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4 General Information

4.1 Client Information

| | |
|--------------------------|--|
| Applicant: | ChangSha Kiloview Electronics CO.,LTD. |
| Address of Applicant: | B4-106/109, Jiahua Intelligence Valley Industrial Park, 877 Huijin Road, Yuhua District, Changsha, China |
| Manufacturer: | ChangSha Kiloview Electronics CO.,LTD. |
| Address of Manufacturer: | B4-106/109, Jiahua Intelligence Valley Industrial Park, 877 Huijin Road, Yuhua District, Changsha, China |
| Factory: | ChangSha Kiloview Electronics CO.,LTD. |
| Address of Factory: | B4-106/109, Jiahua Intelligence Valley Industrial Park, 877 Huijin Road, Yuhua District, Changsha, China |

4.2 General Description of EUT

| | |
|-----------------|------------------------------|
| Product Name: | Video Encoder |
| Model No.: | P3, PMD-4G, PMD-5G, PBM-7000 |
| Test Model No.: | P3 |
| Trade mark: | Kiloview |

4.3 Product Specification subjective to this standard

| | | |
|--|---|---|
| Frequency Range: | 2.4G Wi-Fi: IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz 5G Wi-Fi: U-NII-1 & U-NII-2A: 5180-5240MHz U-NII-3:5745-5825MHz | |
| Modulation Type: | 2.4G Wi-Fi: IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g :OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20 and HT40) : OFDM(64QAM, 16QAM,QPSK,BPSK) 5G Wi-Fi: 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) | |
| Test Power Grade: | Default | |
| Test Software of EUT: | Xshell 7 | |
| Antenna Type: | PIFA Antenna | |
| Antenna Gain: | 2.4G Wi-Fi: 0.4dBi 5G Wi-Fi: 2.86dBi | |
| Power Supply: | Adapter: | INPUT: 100-240V 50/60Hz 1.0A OUTPUT:12V/3A 30W |
| | Battery | 7.2V |
| Sample Received Date: | Apr. 12, 2024 | |
| Sample tested Date: | Apr. 22, 2024 to Jun. 14, 2024 | |
| 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. | | |

4.4 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

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Limits

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold P_{th} (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1).

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

5.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

5.1.3 EUT RF Exposure Evaluation

For Stand alone:

For 2.4G Wi-Fi

| Frequency (MHz) | Max. Conducted Output power (dBm) | Antenna Gain (dBi) | EIRP (dBm) | ERP (dBm) | ERP (mW) | Limit (mW) | Result |
|-----------------|-----------------------------------|--------------------|------------|-----------|----------|------------|--------|
| 2437 | 14.49 | 0.4 | 14.89 | 12.74 | 18.793 | 3060 | PASS |

For 5G Wi-Fi

| Frequency (MHz) | Max. Conducted Output power (dBm) | Antenna Gain (dBi) | EIRP (dBm) | ERP (dBm) | ERP (mW) | Limit (mW) | Result |
|-----------------|-----------------------------------|--------------------|------------|-----------|----------|------------|--------|
| 5240 | 14.99 | 2.86 | 17.85 | 15.7 | 37.154 | 3060 | PASS |

Note:

- ① EIRP=conducted power+antenna gain;
- ② ERP=EIRP-2.15;
- ③ $EIRP(dBm) = \text{Field strength of the fundamental signal}(dBuV/m@3m) - 95.23$;
- ④ $ERP(mW) = 10^{(ERP(dBm)/10)}$;
- ⑤ The estimation distance is 20cm;
- ⑥ The test data please refer to the report of EED32Q80470301, EED32Q80470302 and only the worst case data was recorded in the report.

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 ***