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RF Exposure Evaluation Report

Report No.:	CQASZ20251202954E-03
Applicant:	Shenzhen PioCreat 3d Technology Co., Ltd.
Address of Applicant:	3rd Floor, Building 1, No. 156 Huawang Road,Lang kou Community, Dalang Street, Longhua District,shenzhen,China
Equipment Under Test (EUT):	
EUT Name:	3D Printer
Model No.:	PioNext Mini, PioNext Ultra
Test Model No.:	PioNext Mini
Brand Name:	N/A
FCC ID:	2A2DOPIONEXT-MINI
Standards:	47 CFR Part 1.1307 47 CFR Part 1.1310 447498 D04 Interim General RF Exposure Guidance v01
Date of Receipt:	2025-12-17
Date of Test:	2025-12-17 to 2025-12-31
Date of Issue:	2026-01-13
Test Result:	**PASS***

***In the configuration tested, the EUT complied with the standards specified above**

Tested By: lewis zhou
(Lewis Zhou)

Reviewed By: Timo Lei
(Timo Lei)

Approved By: Jack Ai
(Jack Ai)

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 CQA, this report can't be reproduced except in full.

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20251202954E-03	Rev.01	Initial report	2026-01-13

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3 General Information

3.1 Client Information

Applicant:	Shenzhen PioCreat 3d Technology Co., Ltd.
Address of Applicant:	3rd Floor, Building 1, No. 156 Huawang Road,Lang kou Community, Dalang Street, Longhua District,shenzhen,China
Manufacturer:	Shenzhen PioCreat 3d Technology Co., Ltd.
Address of Manufacturer:	3rd Floor, Building 1, No. 156 Huawang Road,Lang kou Community, Dalang Street, Longhua District,shenzhen,China
Factory:	Shenzhen PioCreat 3d Technology Co., Ltd.
Address of Factory:	3rd Floor, Building 1, No. 156 Huawang Road,Lang kou Community, Dalang Street, Longhua District,shenzhen,China

3.2 General Description of EUT

Product Name:	3D Printer
Model No.:	PioNext Mini, PioNext Ultra
Test Model No.:	PioNext Mini
Trade Mark:	N/A
Software Version:	V1.0
Hardware Version:	V1.1
EUT Power Supply:	Power supply DC24V form adapter
	Adapter: Model:AK120WG-2400500W1 Input:100-240V~50/60Hz 2.0A Output:24V⎓5.0A 120.0W

3.3 General Description of 2.4G WIFI Classic

Operation Frequency:	2412MHz~2462MHz
Type of Modulation:	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)
Number of Channel:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels
Channel Separation:	5MHz
Transfer Rate:	IEEE for 802.11b: 1Mbps/2Mbps/5.5Mbps/11Mbps IEEE for 802.11g : 6Mbps/9Mbps/12Mbps/18Mbps/24Mbps/36Mbps/48Mbps/54Mbps IEEE for 802.11n(HT20) : 6.5Mbps/13Mbps/19.5Mbps/26Mbps/39Mbps/52Mbps/58.5Mbps/65Mbps
Sample Type:	☒ Mobile ☐ Portable ☐ Fix Location
Antenna Type:	FPC antenna
Antenna Gain:	1.96dBi

3.4 General Description of 5G WIFI Classic

Operation Frequency:	5150MHz ~5250 MHz
Type of Modulation:	OFDM
Number of Channel:	IEEE 802.11a/n/ac(20M): 5150MHz ~5250MHz/ 4 channel IEEE 802.11n/ac(40M): 5150MHz ~5250MHz/ 2 channel IEEE 802.11ac(80M): 5150MHz ~5250MHz/ 1 channel
Channel Separation:	5MHz
Operation Frequency:	IEEE 802.11a/n/ac(20M): 5150MHz ~5250 MHz IEEE802.11n/ac(40M): 5150MHz ~5250 MHz IEEE802.11ac(80M): 5150MHz ~5250 MHz
Sample Type:	☒ Mobile ☐ Portable ☐ Fix Location
Antenna Type:	FPC antenna
Antenna Gain:	4.09dBi

Note：

The above parameters will directly affect the test results. The information is provided by the applicant.

4 MPE Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Limits

The table applies to any RF source (i.e., single fixed, mobile, and portable transmitters) and specifies power and distance criteria for each of the five frequency ranges used for the MPE limits. These criteria apply at separation distances from any part of the radiating structure of at least $\lambda/2\pi$. The thresholds are based on the general population MPE limits with a single perfect reflection, outside of the reactive near-field, and in the main beam of the radiator.For mobile devices that are not exempt per Table B.1 [Table 1 of § 1.1307(b)(1)(i)(C)] at distances from 20 cm to 40 cm and in 0.3 GHz to 6 GHz, evaluation of compliance with the exposure limits in § 1.1310 is necessary if the ERP of the device is greater than ERP20cm inFormula (B.1) [repeated from § 2.1091(c)(1) and § 1.1307(b)(1)(i)(B)].

$$P_{\text{th}}\,(\text{mW}) = ERP_{20\,\text{cm}}\,(\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases}$$

If the ERP is not easily obtained, then the available maximum time-averaged power may be used (i.e., without consideration of ERP only if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave Dipole.
SAR-based exemptions are constant at separation distances between 20 cm and 40 cm to avoid discontinuities in the threshold when transitioning between SAR-based and MPE-based exemption criteria at 40 cm, considering the importance of reflections.

4.1.2 Test Procedure

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

4.1.3 EUT RF Exposure

1) For 2.4G WIFI Classic

Measurement Data

11B mode					
Test channel	EIRP (dBm)	ERP (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
				(dBm)	(mW)
Lowest(2412MHz)	14.47	12.32	12.5±1	13.5	22.39
Middle(2437MHz)	16.43	14.28	14.5±1	15.5	35.48
Highest(2462MHz)	16.93	14.78	15.0±1	16	39.81
11G mode					
Test channel	EIRP (dBm)	ERP (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
				(dBm)	(mW)
Lowest(2412MHz)	15.23	13.08	13.0±1	14	25.12
Middle(2437MHz)	16.59	14.44	14.5±1	15.5	35.48
Highest(2462MHz)	17.13	14.98	15.0±1	16	39.81
11N20 mode					
Test channel	EIRP (dBm)	ERP (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
				(dBm)	(mW)
Lowest(2412MHz)	15.11	12.96	13.0±1	14	25.12
Middle(2437MHz)	16.64	14.49	14.5±1	15.5	35.48
Highest(2462MHz)	17.02	14.87	15.0±1	16	39.81

The ERP of this product is less than 3060mW

Note: 1) Refer to report No. CQASZ20251202954E-01 for EUT test Max Conducted AV Output Power value.
2) EUT's module is more than 20cm away from the human body.

3) For 5G WIFI Classic

Antenna Gain:4.09dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 2.56 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

Measurement Data

11A mode					
Test channel	EIRP (dBm)	ERP (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
				(dBm)	(mW)
Lowest(5180MHz)	13.53	11.38	11.5±1	12.5	17.78
Middle(5200MHz)	13.04	10.89	11.0±1	12	15.85
Highest(5240MHz)	10.94	8.79	9.0±1	10	10.00
11N20 mode					
Test channel	EIRP (dBm)	ERP (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
				(dBm)	(mW)
Lowest(5180MHz)	13.09	10.94	11.0±1	12	15.85
Middle(5200MHz)	12.46	10.31	10.5±1	11.5	14.13
Highest(5240MHz)	10.42	8.27	9.5±1	10.5	11.22
11N40 mode					
Test channel	EIRP (dBm)	ERP (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
				(dBm)	(mW)
Lowest(5190MHz)	12.86	10.71	11.0±1	12	15.85
Highest(5230MHz)	10.11	7.96	8.0±1	9	7.94
11AC20 mode					
Test channel	EIRP (dBm)	ERP (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
				(dBm)	(mW)
Lowest(5180MHz)	13.01	10.86	11.0±1	12	15.85
Middle(5200MHz)	12.63	10.48	10.5±1	11.5	14.13
Highest(5240MHz)	10.27	8.12	8.0±1	9	7.94
11AC40 mode					
Test channel	EIRP (dBm)	ERP (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
				(dBm)	(mW)
Lowest(5190MHz)	12.81	10.66	10.5±1	11.5	14.13
Highest(5230MHz)	9.96	7.81	8.0±1	9	7.94

11AC80 mode					
Test channel	EIRP (dBm)	ERP (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
				(dBm)	(mW)
Middle(5210MHz)	11.28	9.13	9.0±1	10	10

The ERP of this product is less than 3060mW

Note: 1) Refer to report No. CQASZ20251202954E-03 for EUT test Max Conducted AV Output Power value.
2) EUT's module is more than 20cm away from the human body.

*** END OF REPORT ***