

RF Exposure Evaluation Report

Product : Player
Trade mark : Colorlight
Model/Type reference : A500
Serial Number : N/A
Report Number : EED32R80345603
FCC ID : 2AVV2A500CLT
Date of Issue : Jul. 16, 2025
Test Standards : 47 CFR Part 1.1307
47 CFR Part 1.1310
47 CFR Part 2.1091
47 CFR Part 2.1093
KDB 447498 D04 Interim General RF
Exposure Guidance v01
Test result : PASS

Prepared for:

Colorlight Cloud Tech Ltd

**Room 3801(37-39F), Tower A, Building 8, Block C, Phase 3, Vanke Cloud
City, Xili Community, Xili Street, Nanshan District, Shenzhen City, China**

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Check No.: 1341140325

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2 General Information

2.1 Client Information

Applicant:	Colorlight Cloud Tech Ltd
Address of Applicant:	Room 3801(37-39F), Tower A, Building 8, Block C, Phase 3, Vanke Cloud City, Xili Community, Xili Street, Nanshan District, Shenzhen City, China
Manufacturer:	Colorlight Cloud Tech Ltd
Address of Manufacturer:	Room 3801(37-39F), Tower A, Building 8, Block C, Phase 3, Vanke Cloud City, Xili Community, Xili Street, Nanshan District, Shenzhen City, China
Factory:	Colorlight Cloud Tech Ltd
Address of Factory:	4F/5F, 4th Building, Zhongyuntai Technology Industrial Park, Shiyao, Baoan District, Shenzhen City, China

2.2 General Description of EUT

Product Name:	Player
Model No.(EUT):	A500
Trade Mark:	Colorlight

2.3 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: 5150-5250MHz	
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:	Adb.exe	
Antenna Type:	Rod antenna	
Antenna Gain:	5G Wi-Fi: ANT0: 3.18 dBi, ANT1: 3.18 dBi 2.4G Wi-Fi: ANT0: 4.73 dBi, ANT1: 4.73 dBi	
Power Supply:	Adapter:	AC 100~240V
Sample Received Date:	Apr. 08, 2025	
Sample tested Date:	Apr. 08, 2025 to May 19, 2025	

2.4 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

2.5 Deviation from Standards

None.

2.6 Abnormalities from Standard Conditions

None.

2.7 Other Information Requested by the Customer

None.

3 SAR Evaluation

3.1 RF Exposure Compliance Requirement

3.1.1 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 Pth (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). Pth 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 ERP20cm 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.

3.1.2 Test Procedure

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

3.1.3 EUT RF Exposure Evaluation

For Stand alone:

2.4G Wi-Fi SISO:

Frequency (MHz)	Estimation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE ratio	Result
@2.4GHz	20	15.83	4.73	18.41	69.3426	3060	0.0227	Pass

2.4G Wi-Fi MIMO:

Frequency (MHz)	Estimation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE ratio	Result
@2.4GHz	20	16.88	4.73	19.46	88.3080	3060	0.0289	Pass

5G Wi-Fi SISO:

Frequency (MHz)	Estimation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE ratio	Result
@5GHz	20	16.92	3.18	17.95	62.3735	3060	0.0204	Pass

5G Wi-Fi MIMO:

Frequency (MHz)	Estimation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE ratio	Result
@5GHz	20	15.95	3.18	16.98	49.8884	3060	0.0163	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 EED32R80345601, EED32R803456012 and only the worst case data was recorded in the report.

For Simultaneous Transmission:

As MPE ratio (2.4G Wi-Fi+5G Wi-Fi)= $0.0289^2 + 0.0204^2 = 0.00125 < 1$, it's deemed to fulfil the RF exposure requirement.

Statement

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, 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. The result(s) shown in this report refer(s) only to the sample(s) tested;
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*** End of Report ***