

RF Exposure Evaluation Report

Product : MaxiFlash XLink
Trade mark : AUTEL
Model/Type reference : MaxiFlash XLink
Serial Number : N/A
Report Number : EED32P80175804
FCC ID : WQ8-XLINKDC2221
Date of Issue : Feb. 28, 2023
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

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4 General Information

4.1 Client Information

Applicant:	Autel Intelligent Technology Corp.,Ltd.
Address of Applicant:	7th-8th,10th Floor, Building B1, Zhiyuan, Xueyuan Rd, Xili, Nanshan, Shenzhen,518055 China
Manufacturer:	Autel Intelligent Technology Corp.,Ltd.
Address of Manufacturer:	7th-8th,10th Floor, Building B1, Zhiyuan, Xueyuan Rd, Xili, Nanshan, Shenzhen,518055 China
Factory:	Autel Intelligent Technology Corp., Ltd. Guangming Branch
Address of Factory:	7F&6F, East Wing, Building 2, and 6F of Electronical Building, Yanxiang Industrial Zone, Gaoxin Rd, Dongzhou Community of Guangming New District, Shenzhen

4.2 General Description of EUT

Product Name:	MaxiFlash XLink
Model No.(EUT):	MaxiFlash XLink
Trade Mark:	AUTEL

4.3 Product Specification subjective to this standard

Frequency Range:	BT: 2402MHz~2480MHz 2.4G WIFI: IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz 5G WIFI: U-NII-1: 5180-5240MHz U-NII-3: 5745-5825MHz	
Modulation Type:	BT: GFSK, $\pi/4$ DQPSK, 8DPSK 2.4G WIFI: 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 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)	
Test Power Grade:	Default	
Test Software of EUT:	BT: CSR BlueSuite 2.6.2, WIFI: SecureCRT	
Antenna Type:	BT: Chip Antenna, WIFI: FPC antenna	
Antenna Gain:	BT: 0.5dBi, 2.4G WIFI: 2.0dBi, 5G WIFI: 4.4dBi	
Power Supply:	Adapter:	Model:GME36E-120300FDR Input:100-240V~50/60Hz 1.2A Output:12V---3.0A 36.0W
Sample Received Date:	Feb. 16, 2023	
Sample tested Date:	Feb. 16, 2023 to Feb. 22, 2023	
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 BT

Frequency (MHz)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	Result
2402	0.65	0.5	-1	0.794	3060	PASS

For 2.4G Wi-Fi

Frequency (MHz)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	Result
2462	10.72	2.0	10.57	11.402	3060	PASS

For 5G Wi-Fi

Frequency (MHz)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	Result
5180	11.74	4.4	13.99	25.061	3060	PASS

Note:

- ① EIRP=conducted power+antenna gain;
- ② ERP=EIRP-2.15
- ③ 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 ***