

RF Exposure Evaluation Report

Product : Smart Cat Litter Box
Trade mark : N/A
Model/Type reference : UCAT C30, UCAT C31,
UCAT C32
Serial Number : N/A
Report Number : EED32R80465903
FCC ID : 2AHJX-UCATC30
Date of Issue : May 09, 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:

UBTECH ROBOTICS CORP LTD

**Room 2201, Building C1 Nanshan Smart Park No. 1001 Xueyuan Avenue
Changyuan Community Taoyuan Street Nanshan District Shenzhen PRC**

Prepared by:

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1 Version

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2 Contents

	Page
1 VERSION	2
2 CONTENTS	3
3 GENERAL INFORMATION	4
3.1 CLIENT INFORMATION	4
3.2 GENERAL DESCRIPTION OF EUT	4
3.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD	4
3.4 TEST LOCATION	5
3.5 DEVIATION FROM STANDARDS	5
3.6 ABNORMALITIES FROM STANDARD CONDITIONS	5
3.7 OTHER INFORMATION REQUESTED BY THE CUSTOMER	5
4 SAR EVALUATION	6
4.1 RF EXPOSURE COMPLIANCE REQUIREMENT	6
4.1.1 Limits	6
4.1.2 Test Procedure	6
4.1.3 EUT RF Exposure Evaluation	7

3 General Information

3.1 Client Information

Applicant:	UBTECH ROBOTICS CORP LTD
Address of Applicant:	Room 2201, Building C1 Nanshan Smart Park No. 1001 Xueyuan Avenue Changyuan Community Taoyuan Street Nanshan District Shenzhen PRC
Manufacturer:	UBTECH ROBOTICS CORP LTD
Address of Manufacturer:	Room 2201, Building C1 Nanshan Smart Park No. 1001 Xueyuan Avenue Changyuan Community Taoyuan Street Nanshan District Shenzhen PRC
Factory:	UBTECH ROBOTICS CORP LTD BAOAN BRANCH
Address of Factory:	1-2Floor, Block B, Huilongda Industry Park, Shilongzai, Shiyan Street, Baoan District, Shenzhen City, P.R.CHINA

3.2 General Description of EUT

Product Name:	Smart Cat Litter Box
Model No.(EUT):	UCAT C30, UCAT C31, UCAT C32
Test Model:	UCAT C30
Trade Mark:	N/A

3.3 Product Specification subjective to this standard

Frequency Range:	BLE: 2402MHz~2480MHz 2.4G Wi-Fi: IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz	
Modulation Type:	BLE: GFSK 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) : OFDM (64QAM, 16QAM,QPSK,BPSK)	
Test Power Grade:	Default	
Test Software of EUT:	EspRFTestTool_v3.6_Manual	
Antenna Type:	PCB Antenna	
Antenna Gain:	3.96dBi	
Power Supply:	Adapter:	Model: A241-1202000P Input: 100-240V, 50/60Hz Output: 12V/2A
Sample Received Date:	Apr. 15, 2025	
Sample tested Date:	Apr. 15, 2025 to Apr. 20, 2025	
Model No.: UCAT C30, UCAT C31, UCAT C32 Only the model UCAT C30 was tested, Their electrical circuit design, layout, components used and internal wiring are identical. Only the shell structure appearance is different.		

3.4 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

3.5 Deviation from Standards

None.

3.6 Abnormalities from Standard Conditions

None.

3.7 Other Information Requested by the Customer

None.

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 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.

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 Evaluation

For Stand alone:

BLE:

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	7.19	3.96	9.00	7.9433	3060	0.0026	Pass

2.4G Wi-Fi:

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	16.87	3.96	18.68	73.7904	3060	0.0241	Pass

Note:

- ① EIRP=conducted power+antenna gain;
- ② ERP=EIRP-2.15;
- ③ EIRP(dBm) = Field strength of the fundamental signal(dBuV/m@3m) – 95.23;
- ④ ERP(mW) = $10^{(ERP \text{ (dBm)}/10)}$;
- ⑤ The estimation distance is 20cm;
- ⑥ The test data please refer to the report of EED32R80465901, EED32R80465902 and only the worst case data was recorded in the report.

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;
4. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule stated in ILAC-G8:09/2019/CNAS-GL015:2022;
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*** End of Report ***