

# **Ecovacs Home Service Robotics Co., Ltd.**

# **MPE ASSESSMENT REPORT**

### **Report Type:**

FCC Part §2.1091 and §1.1307(b) assessment report

#### Model:

DLX71

#### **REPORT NUMBER:**

2501B1422SHA-002

#### **ISSUE DATE:**

February 25, 2025

#### **DOCUMENT CONTROL NUMBER:**

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Report no.: 2501B1422SHA-002

Applicant: Ecovacs Home Service Robotics Co., Ltd.

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FCC ID: 2A64B-DLX71

#### **SUMMARY:**

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06 FCC Part2.1091, FCC Part1.1307(b)

PREPARED BY: REVIEWED BY:

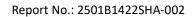
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Zrie.li

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Reviewer





# **Revision History**

Report No.	Version	Description	Issued Date	
2501B1422SHA-002	Rev. 01	Initial issue of report	February 25, 2025	

Report No.: 2501B1422SHA-002



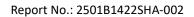
## **1 GENERAL INFORMATION**

# 1.1 Description of Equipment Under Test (EUT)

Product name:	Floor Cleaning Robot
Type/Model:	DLX71
Description of EUT:	The EUT is a Floor Cleaning Robot, it supports WIFI functions, there is one model. We tested it and listed the worst results in this report.
Rating:	DC20V, 2A
Brand Name:	ECOVACS ECOVACS E YEEDI
EUT type:	☐ Table top ☐ Floor standing
Software Version:	/
Hardware Version:	/
Sample Identification No.:	0250108-003-002
Sample received date:	2025.2.8
Date of test:	2025.2.9~2025.2.18

# 1.2 Technical Specification

Frequency Band:	2400MHz ~ 2483.5MHz	
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n-HT20, IEEE 802.11n-HT40	
	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK)	
	IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK)	
	IEEE 802.11n-HT20: OFDM (64-QAM, 16-QAM, QPSK, BPSK)	
Type of Modulation:	IEEE 802.11n-HT40: OFDM (64-QAM, 16-QAM, QPSK, BPSK)	
	11 Channels for 802.11b, 802.11g and 802.11n(HT20)	
Channel Number:	7 Channels for 802.11n(HT40)	
Channel Separation:	5 MHz	
Antenna:	FPC Antenna, gain is 2.82dBi	

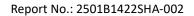




# 1.3 Description of Test Facility

Name:	Intertek Testing Services (Shanghai FTZ) Co., Ltd.
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized,	CNAS Accreditation Lab Registration No. CNAS L21189
certified, or accredited by these organizations:	FCC Accredited Lab Designation Number: CN0175
	IC Registration Lab CAB identifier.: CN0014
	VCCI Registration Lab Member No: 3598 (Registration No.: R-14243, G-10845, C-14723, T-12252)
	A2LA Accreditation Lab Certificate Number: 3309.02





### 2 MPE Assessment

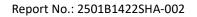
Test result: Pass

#### 2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength	H-field strength	B-field	Equivalent plane wave	
	(V/m)	(A/m)	(uT)	power density	
				S <sub>eq</sub> (W/m <sup>2</sup> )	
0-1 Hz	-	$3,2 \times 10^{4}$	$4 \times 10^{4}$	-	
1-8 Hz	10 000	$3.2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-	
8-25 Hz	10 000	4 000/f	5 000/f	-	
0,025-0,8 kHz	250/f	4/f	5/f	-	
0,8-3 kHz	250/f	5	6,25	-	
3-150 kHz	87	5	6,25	-	
0,15-1 MHz	87	0,73/f	0,92/f	-	
1-10 MHz	87/f <sup>1/2</sup>	0,73/f	0,92/f	-	
10-400 MHz	28	0,073	0,092	2	
400-2 000 MHz	1,375 f <sup>1/2</sup>	0,0037 f <sup>1/2</sup>	0,0046 f <sup>1/2</sup>	f/200	
2-300 GHz	61	0,16	0,20	10	

Mobile device exposure for simultaneous transmission operations: the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is  $\leq$  1.0





2.2 Assessment Results

Power density (S) is calculated according to the formula:

 $S = PG / (4\pi R^2)$ 

Where  $S = power density in mW/cm^2$ 

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

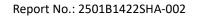
As we can see from the test report 2501B1422SHA-001:

The calculations in the table below use the highest gain of antenna for client EUT. These calculations represent worst case in terms of the exposure levels.

Mode	Frequency band	Max Power	Antenna Gain	R	S	Limits
	(MHz)	dBm	dBi	(cm)	(mW/cm2)	(mW/cm2)
WIFI	2412-2462	14.51	2.82	20	0.0108	1

Note: 1 mW/cm2 from 1.310 Table 1

Therefore, the MPE requirement is deemed to be satisfied without test.





# **Appendix I**

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be
maintained between the antenna of this device and persons during device operation.
To ensure compliance, operations closer than this distance are not recommended.