RF Exposure Evaluation Report

Product	:	Hachi Infinite K1
Trade mark	:	N/A
Model/Type reference	:	HP23ATQC
Serial Number	:	N/A
Report Number	:	EED32N80153705
FCC ID	:	2AWMI-HP23ATQC
Date of Issue	:	Nov. 11, 2021
Test Standards	:	47 CFR Part 1.1307 47 CFR Part 2.1091 KDB447498D01v06
Test result	:	PASS

Prepared for:

Beijing Puppy Robotics Co., Ltd.
Room 710, 63 E 3rd Ring Rd Middle, Chaoyang, Beijing, China

Prepared by:

Centre Testing International Group Co., Ltd.
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Approved by:	David Wang	Date:	Nov. 11, 2021
	David Wang		

Check No.:9113240321

2 Version

Version No.	Date	Description
00	Nov. 11, 2021	Original

3 Contents

4 General Information

4.1 Client Information

Applicant:	Beijing Puppy Robotics Co., Ltd.
Address of Applicant:	Room 710, 63 E 3rd Ring Rd Middle, Chaoyang, Beijing, China
Manufacturer:	Beijing Puppy Robotics Co., Ltd.
Address ofManufacturer:	Room 710, 63 E 3rd Ring Rd Middle, Chaoyang, Beijing, China
Factory:	Zhangzhou Wanlida Technology Co., Ltd.
Address of Factory:	Wanlida Industrial Zone, Jingcheng Town, Nanjing, Zhangzhou, Fujian, China

4.2 General Description of EUT

Product Name:	Hachi Infinite K1
Model No.(EUT):	HP23ATQC
Trade Mark:	N/A
EUT Supports Radios application	BT: 2402MHz to 2480MHz 2.4GHz Wi-Fi: 2412MHz ~2462 MHz 5GHz Wi-Fi: 5.15-5.25GHz; 5.25-5.35GHz; 5.47-5.725GHz 5.725-5.850GHz
Test Power Grade:	Default
Test Software of EUT:	QRCT
Antenna Type:	FPC antenna
Antenna Gain	BT/2.4GWIFI:3.4dBi 5G WIFI::5.5dBi

Power Supply:	AC Adapter	Model:TPA-131A120300CW01 Input:100-240V~ 50/60Hz 1.2A Output:12.0V⎓3.0A
Sample Received Date:	May 05, 2021	
Sample tested Date:	May 05, 2021 to Nov. 04, 2021	
Company Name and Address shown on Report, the sample(s) and sample Information were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.		

4.3 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

4.4 Deviation from Standards

None.

4.5 Abnormalities from Standard Conditions

None.

4.6 Other Information Requested by the Customer

None.

5 RF Exposure Evaluation

5.1 RF Exposure Compliance Requirement

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{377}$

Where E = Field strength in Volts / meter

P = Power in Watts

G = Numeric antenna gain

d = Distance in meters

S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377 d^2}$$

Changing to units of mW and cm, using:

P (mW) = P (W) / 1000 and

d (cm) = d(m) / 100

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$ **Equation 1**

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm^2

5.2 Maximum Permissible Exposure

Substituting the MPE safe distance using d = 20 cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm^2

The worst case are recorded:

Mode	Antenna Gain(dBi)	Antenna numeric gain	Power (dBm)	Power (mW)	Distance (cm)	S (mW/cm2)	S Limit (mW/cm2)
BT Classic	3.400	2.190	-1.480	0.711	20.000	0.0003	1.000
BLE	3.400	2.190	1.830	1.524	20.000	0.0006	1.000
2.4G WIFI	3.400	2.190	11.140	13.001	20.000	0.0060	1.000
5G WIFI	5.500	3.550	17.750	59.556	20.000	0.0420	1.000

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32N80153701 for EUT external and internal photos.

*** End of Report ***