FCC TEST REPORT
FCC ID:2AR6U-R3

Product	:	Wireless Router
Model Name	:	Netduma R3
Brand	:	Netduma
Report No.	:	PTC22102407101E-FC03
Sample ID	:	PTC22102407101E-01#

Prepared for

Netduma Limited

20-22 Wenlock Road, London, N1 7GU, United Kingdom

Prepared by

Precise Testing & Certification Co., Ltd.

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TEST RESULT CERTIFICATION

Applicant's name	:	Netduma Limited
Address	:	20-22 Wenlock Road, London, N1 7GU, United Kingdom
Manufacture's name	:	Netduma Limited
Address	:	20-22 Wenlock Road, London, N1 7GU, United Kingdom
Product name	:	Wireless Router
Model name	:	Netduma R3
Test procedure	:	KDB 447498 D01 General RF Exposure Guidance v06
Test Date	:	Oct. 28, 2022 to Dec. 12, 2022
Date of Issue	:	Dec. 13, 2022
Test Result	:	Pass

This device described above has been tested by PTC, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Test Engineer:

Simon Pu

Simon Pu / Engineer

Technical Manager:

Ronnie Liu

Ronnie Liu / Manager

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2 Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	1.1307(b)(1)	PASS
Remark:		
N/A: Not Applicable		

3 General Information

3.1 General Description of E.U.T.

Product Name	:	Wireless Router
Model Name	:	Netduma R3
Specification	:	802.11b/g/n HT20/HT40
Operation Frequency	:	2412-2462MHz for 802.11b/g/ n(HT20) 2422-2452MHz for 802.11n(HT40) For 802.11a/n-HT20/ac-VHT20: 5180~5240MHz, 5745~5825MHz For 802.11n-HT40/ac-VHT40: 5190~5230MHz, 5755~5795MHz For 802.11ac-VHT80: 5210MHz, 5775MHz
Number of Channel	:	11 channels for 802.11b/g/ n(HT20) 7 channels for 802.11 n(HT40) 9 channels for 802.11a/n-HT20/ac-VHT20 4 channels for 802.11n-HT40/ac-VHT40 2 channels for 802.11ac-VHT80
Type of Modulation	:	GFSK, Π/4-DQPSK, 8DPSK DSSS with DBPSK/DQPSK/CCK； OFDM with BPSK/QPSK/16QAM/64QAM
Antenna Type	:	Rod Antenna
Antenna Gain	:	5.25 dBi for 2.4G 4.95 dBi for 5G
Power supply	:	DC 12V 1.5A adaptor input AC120V 60Hz
Hardware Version	:	V01
Software Version	:	V1.2

4 RF Exposure

Test Requirement   :   FCC Part 1.1307(b)(1)

Evaluation Method   :   FCC Part 2.1091

4.1 Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

4.2 The procedures / limit

(A) Limits for Occupational / Controlled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

4.3 MPE Calculation Method

$$E \ (V/m) \ = \ \frac{\sqrt{30 \times P \times G}}{d} \qquad \text{Power Density: } Pd \ (W/m^2) \ = \ \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

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

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

4.4 Test Result

Item	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Peak Output Power (mw)	Power Density (mW/cm2)	total	Limit of Power Density (mW/cm2)	Result
2412	5.25 （3.35）	25.42	348.34	0.232	0.265	1	Pass
5745	4.95 （3.13）	17.21	52.60	0.033			

******THE END REPORT******