

MPE REPORT

Report No.: SRTC2024-9004(F)-24101203(I)
Product Name: Cellular Router
Model Name: CR202-NAC6-WLAN
Series Models NO: CR212-NAC6-WLAN,CR252-NAC6-WLAN,CR292-NAC6-WLAN
Applicant: Beijing InHand Networks Technology Co., Ltd.
FCC ID: 2AANY- CR202LITE

Reference Specification
FCC Part §1.1310

The State Radio_monitoring_center Testing Center (SRTC)

15th Building, No.30 Shixing Street, ShijingshanDistrict, Beijing,P.R.China

Tel: 86-10-57996183 Fax: 86-10-5799638

TABLE OF CONTENTS

1 GENERAL INFORMATION 3

1.1 Notes of the test report3

1.2 Information about the testing laboratory3

1.3 Applicant’s details 3

1.4 Manufacturer’s details 3

1.5 Test environment 4

2 DESCRIPTION OF THE EQUIPMENT UNDER TEST 5

2.1 Final equipment build status 5

3 SPECIFICATION 6

4 RESULT SUMMARY7

5 CALCULATION RESULT8

5.1 Maximum permissible exposure (MPE)8

1 GENERAL INFORMATION

1.1 Notes of the test report

The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written permission of The State Radio_monitoring_center Testing Center (SRTC).

The certification and accreditation identifiers used in this report shall not be applicable to the tested or calibrated samples thereof. The manufacturer shall not mark the tested samples or items (or a separate part of the item) with the identifiers of certification and accreditation to mislead relevant parties about the tested samples or items.

1.2 Information about the testing laboratory

Company:	The State Radio_monitoring_center Testing Center (SRTC)
Designation number:	CN1267
Registration number:	239125
Certificate Number:	5055.02
Address:	15th Building, No.30 Shixing Street, Shijingshan District, Beijing P.R.China
Contacted person:	Liu Jia
Tel:	+86 10 57996183
Fax:	+86 10 57996388
Email:	liujiaf@srtc.org.cn

1.3 Applicant's details

Company:	Beijing InHand Networks Technology Co., Ltd.
Address:	Room 501, floor 5, building 3, yard 18, ziyue road, chaoyang district, Beijing
City:	Beijing
Country or Region:	China
Contacted person:	GuJichi
Tel:	15281366255
Email:	gujc@inhand.com.cn

1.4 Manufacturer's details

Company:	Beijing InHand Networks Technology Co., Ltd.
Address:	Room 501, floor 5, building 3, yard 18, ziyue road, chaoyang district, Beijing
City:	Beijing
Country or Region:	China
Contacted person:	GuJichi
Tel:	15281366255
Email:	gujc@inhand.com.cn

1.5 Test environment

Date of Receipt of test sample at SRTC:	2024/10/12
Testing Start Date:	2024/10/13
Testing End Date:	2024/10/22

Environmental Data:	Temperature (°C)	Humidity (%)
Ambient	25	40
Maximum Extreme	50	---
Minimum Extreme	-10	---

Normal Supply Voltage (V d.c.):	5
Maximum Extreme Supply Voltage (V d.c.):	5.5
Minimum Extreme Supply Voltage (V d.c.):	4.5

2 DESCRIPTION OF THE EQUIPMENT UNDER TEST

2.1 Final equipment build status

WLAN

Frequency Band:	2.412GHz~2.462GHz
Number of Channel For 20MHz:	11
Number of Channel For 40MHz:	7
Modulation Type:	802.11b 802.11g 802.11n (HT20/HT40)
Power Supply:	DC supply
Antenna gain:	ANT0: 2.1dBi(max)ANT1: 3.2dBi(max)
Directional Gain:	2.68 dBi
Software Revision:	V1.0
Hardware Revision:	V1.0
Antenna type:	PCB Antenna
Antenna connector:	NA
SN:	CR20224378IA7TE

NOTE1: Directional gain = $10 \log[(10^{G1/10} + 10^{G2/10} + \dots + 10^{GN/10}) / N_{ANT}]$ dBi(Uncorrelated)

NOTE2: WWAN are quoted from the report SEWA2208000035RG03

3 SPECIFICATION

Specification	Version	Title
Part 1.1310	Latest	Radio frequency radiation exposure limits.

4 RESULT SUMMARY

Case	Verdict
MPE	Pass

This Test Report Is Issued by: Mr. Peng Zhen 彭振	Checked by: Mr. Li Bin 李彬
Tested by: Mr.Huang Yubin 黄宇斌	Issued date: 20241031

5 CALCULATION RESULT

5.1 Maximum permissible exposure (MPE)

Limit:

(A) Limits for Occupational/Controlled Exposure ☐

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	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 (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

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

Result:

According to §1.1310, 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 of the Commission's guidelines.

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

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

Where S = power density in mW/cm²

P = transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

Standalone Transmission Result

Band	Freq. (MHz)	Maximum Power (dBm)	ANT Gain (dBi)	Maximum EIRP (dBm)	Maximum EIRP (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)
LTEB2	1850.7	25.00	3.5	28.500	707.946	0.141	1.0000
LTEB4	1710.7	25.00	2.6	27.600	575.440	0.114	1.0000
LTE B5	824.7	25.00	-0.8	24.200	263.027	0.052	0.5498
LTEB7	2502.5	25.00	3.00	28.000	630.957	0.126	1.0000
LTE B12	699.7	25.00	-0.8	24.200	263.027	0.052	0.4665
LTE B13	779.5	25.00	-0.8	24.200	263.027	0.052	0.5197
LTE B14	790.5	25.00	-0.8	24.200	263.027	0.052	0.5270
LTE B25	1850.7	25.00	3.5	28.500	707.946	0.141	1.0000
LTE B26(814-824)	814.7	25.00	-0.8	24.200	263.027	0.052	0.5431
LTE B26(824-849)	824.7	25.00	-0.8	24.200	263.027	0.052	0.5498
LTE B30	2307.5	23.00	0.82	23.82	240.991	0.048	1.0000
LTE B41	2498.5	25.00	3.0	28.000	630.957	0.126	1.0000
LTE B48	3552.5	23.00	0.25	23.25	211.349	0.042	1.0000
LTE B66	1710.7	25.00	2.6	27.600	575.440	0.114	1.0000
LTE B71	665.5	25.00	-0.8	24.200	263.027	0.052	0.4437
WiFi 2.4G*	2462	18.74	2.68	21.420	138.676	0.028	1

NOTE: Except for the data marked with *, other data are quoted from the report SEWA2208000035RG03

Simultaneous Transmission Result

Power Density1 / Limit	Power Density2 / Limit	$\Sigma(\text{Power Density} / \text{Limit})$
0.141 (WWAN MAX)	0.028 (WIFI 2.4G)	0.169

Note: Simultaneous Transmission Limit = Power Density_1 / Limit_1 + Power Density_2 / Limit_2 < 1.