


Report No.: SEWM2306000198RG04
 Rev.: 01
 Page: 1 of 7

TEST REPORT

Application No.: SEWM2306000198RG
Applicant: Beijing InHand Networks Technology Co., Ltd.
Address of Applicant: Room 501, floor 5, building 3, yard 18, ziyue road, chaoyang district, Beijing
Manufacturer: Beijing InHand Networks Technology Co., Ltd.
Address of Manufacturer: Room 501, floor 5, building 3, yard 18, ziyue road, chaoyang district, Beijing
EUT Description: Edge Computer
Test Model No.: EC900-NRQ3
Series Model No.: EC9x2-NRQ3, EC9x4-NRQ3
Trade Mark: 
FCC ID: 2AANY-EC9005G
Standards: 47 CFR Part 2.1091
 FCC KDB 447498 D01 v06
Date of Receipt: 2023/06/13
Date of Issue: 2023/08/23

Test Result:	PASS*
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* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Well Wei
 Wireless Laboratory Manager



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Report No.: SEWM2306000198RG04

Rev.: 01

Page: 2 of 7

1 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2023/08/23		Original

Prepared By		 <hr/> (Nick Hu) / Test Engineer
Checked By		 <hr/> (Stone Gu) / Reviewer



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Contents

1	Version	2
2	General Information	4
2.1	Client Information	4
2.2	Test Facility	4
2.3	General Description of EUT	5
3	RF Exposure Evaluation	6
3.1	RF Exposure Compliance Requirement	6
3.1.1	Limits	6
3.1.2	Test Procedure	7
3.1.3	EUT RF Exposure Evaluation	7



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2 General Information

2.1 Client Information

Applicant:	Beijing InHand Networks Technology Co., Ltd.
Address of Applicant:	Room 501, floor 5, building 3, yard 18, ziyue road, chaoyang district, Beijing
Manufacturer:	Beijing InHand Networks Technology Co., Ltd.
Address of Manufacturer:	Room 501, floor 5, building 3, yard 18, ziyue road, chaoyang district, Beijing

2.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• **A2LA (Certificate No. 6336.01)**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6336.01.

• **Innovation, Science and Economic Development Canada**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0120.

IC#: 27594.

• **FCC –Designation Number: CN1312**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized as an accredited testing laboratory.

Designation Number: CN1312.

Test Firm Registration Number: 717327



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2.3 General Description of EUT

EUT Description:	Edge Computer
Test Model No.:	EC900-NRQ3
Series Model No.:	EC9x2-NRQ3, EC9x4-NRQ3
Trade Mark:	
Hardware Version:	NA
Software Version:	NA
Power Supply:	DC 12V
Antenna Type:	External Antenna
Antenna Gain:	LTE Band 48: -0.22dBi (Ant0)
	NR Band n48: -0.22dBi (Ant0)
	2.4GWIFI: 2.72dBi (Ant0); 2.72dBi (Ant1)
	5150MHz to 5250MHz: -0.01dBi (Ant0); -0.01dBi (Ant1);
	5725MHz to 5850MHz: -0.14dBi (Ant0); -0.14dBi (Ant1);
	Note: The antenna gain are derived from the gain information report provided by the manufacturer.
Remark:	As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.



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3 RF Exposure Evaluation

3.1 RF Exposure Compliance Requirement

3.1.1 Limits

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
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				
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

RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

Friis Formula

$$\text{Friis transmission formula: } Pd = (\text{Pout} * G) / (4 * \text{Pi} * R^2)$$

Where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

Pd is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.



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3.1.2 Test Procedure

Software provided by client enabled the EUT to transmit data at lowest, middle and highest channel individually

3.1.3 EUT RF Exposure Evaluation

Output Power Into Antenna & RF Exposure Evaluation Distance:
 This confirmed that the device comply with MPE limit.

Operating Band	Frequency (MHz)	Antenna Gain (dBi)	MIMO Directional gain	Max Conducted Power (dBm)	EIRP(ERP) (dBm)	EIRP(ERP) Limit (dBm)	Power Density at R = 20 cm (mW/cm ²)	Limit (mW/cm ²)	conclusion
LTE Band 48	3552.5	-0.22	NA	23.00	22.78	23.00	0.0377	1.0000	Pass
NR Band n48	3555.0	-0.22	NA	23.00	22.78	23.00	0.0377	1.0000	Pass
2.4G Wifi	2412.0	2.72	2.72	20.50	23.22	30.00	0.0418	1.0000	Pass
5G Wifi	5180.0	-0.01	-0.01	20.50	20.49	30.00	0.0223	1.0000	Pass

---End of Report---



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