



FCC Test Report

Report No: FCS202412162H01

Issued for

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| Applicant: | Shenzhen Dahao Technology Co., Ltd |
| Address: | 16D, Fuchun Pavilion, Haifu Garden, 1017 Shennan East Road, Wenhua Community, Huangbei Street, Luohu District, Shenzhen, China |
| Product Name: | Mini PC |
| Brand Name: | ACNARL |
| Model Name: | ACN-07 |
| Series Model: | N/A |
| FCC ID: | 2B MQ5-ACN-07 |
| Test Standard: | FCC 47CFR §2.1091 |
| Issued By: Flux Compliance Service Laboratory Add: Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan Tel: 769-27280901 Fax:769-27280901 http://www.FCS-lab.com | |



TEST RESULT CERTIFICATION

Applicant's Name.....: Shenzhen Dahao Technology Co., Ltd
Address: 16D, Fuchun Pavilion, Haifu Garden, 1017 Shennan East Road, Wenhua Community, Huangbei Street, Luohu District, Shenzhen, China
Manufacturer's Name.....: Shenzhen Dahao Technology Co., Ltd
Address: 16D, Fuchun Pavilion, Haifu Garden, 1017 Shennan East Road, Wenhua Community, Huangbei Street, Luohu District, Shenzhen, China

Product Description

Product Name: Mini PC
Brand Name: ACNARL
Model Name: ACN-07
Series Model: N/A
Test Standards: FCC 47CFR §2.1091
447498 D01 Interim General RF Exposure Guidance v06

This device described above has been tested by Flux Compliance Service Laboratory, 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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Date of Test.....:

Date (s) of performance of tests.: Dec.04, 2024 ~ Dec.14, 2024

Date of Issue.....: Dec.14, 2024

Test Result: Pass

Tested by

Scott Shen

(Scott Shen)

Reviewed by

Duke Qian

(Duke Qian)

Approved by

Jack Wang

(Jack Wang)



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Revision History

| Rev. | Issue Date | Contents |
|------|--------------|---------------|
| 00 | Dec.14, 2024 | Initial Issue |
| | | |

1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

| | | |
|-------------------------|---|--|
| Product Name | Mini PC | |
| Brand | ACNARL | |
| Model Number | ACN-07 | |
| Series Model(s) | N/A | |
| Model Difference | N/A | |
| Product Description | Operation Frequency: | BLE: 2402~2480 MHz 802.11b/g/n 20: 2412~2462 MHz |
| | Modulation Type: | BLE: GFSK 2.4G WiFi: 802.11b(DSSS):CCK,DQPSK,DBPSK 802.11g(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM |
| | Antenna gain: | BLE: 1.71 dBi 2.4G WiFi: Ant 1: 1.71 dBi, Ant 2: 1.71 dBi |
| | Antenna Designation: | PIFA antenna |
| Power Supply | Input: AC 100 -240V, 50/60Hz Output: DC 19V, 4.74A 90W | |
| Hardware version number | V1.0 | |
| Software version number | V1.0 | |



1.2 TEST FACTORY

| | |
|--|--|
| Company Name: | Flux Compliance Service Laboratory |
| Address: | Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan |
| Telephone: | +86-769-27280901 |
| Fax: | +86-769-27280901 |
| FCC Test Firm Registration Number: 514908 Designation number: CN0127 A2LA accreditation number: 5545.01 ISED Number: 25801 CAB ID : CN0097 | |
| | |

2. FCC 47CFR §2.1091 REQUIREMENT

2.1 TEST STANDARDS

According to §1.1307(b)(1), 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 level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure requirement

KDB447498 D01v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies

The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The gain of the antennas used in the product is extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

2.2 LIMIT

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of the human exposure to radio-frequency (RF) radiation as specified in 1.1307 (b)

Limits for Maximum Permissible Exposure (MPE)

| Frequency Range (MHz) | Electric Field Strength (V/m) | Magnetic Field Strength (A/m) | Power Density (mW/cm ²) |
|---|----------------------------------|----------------------------------|--|
| Limits for Occupational / controlled Exposures | | | |
| 300 - 1500 | -- | -- | F/300 |
| 1500 – 100000 | -- | -- | 5.0 |
| Limits for General population / Uncontrolled Exposure | | | |
| 300 - 1500 | -- | -- | F/1500 |
| 1500 – 100000 | -- | -- | 1.0 |

F= Frequency in MHz

Friss Formula

Friss Transmission Formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

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

If we know the maximum gain of the antenna and the total output power to the antenna, through calculation, we will know MPE value at distance 20cm.

Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. Warning statement to the user for keeping at least 20cm or more separation distance from the antenna should be included in the User manual. So, this device is classified as Mobile device.

2.3 TEST RESULT

Turn up

| Frequency | BLE | | | | | |
|----------------------|---------------------------|------|------|---------------------------|------|------|
| (MHz) | 2402 | 2440 | 2480 | | | |
| Target (dBm) | 1 | 1 | 1 | | | |
| Tolerance \pm (dB) | 1 | 1 | 1 | | | |
| Frequency | 802.11b(Peak) ANT1 | | | 802.11b(Peak) ANT2 | | |
| (MHz) | 2412 | 2412 | 2412 | 2412 | 2412 | 2437 |
| Target (dBm) | 16 | 16 | 16 | 16 | 16 | 16 |
| Tolerance \pm (dB) | 1 | 1 | 1 | 1 | 1 | 1 |
| Frequency | 802.11g(Peak) ANT1 | | | 802.11g(Peak) ANT2 | | |
| (MHz) | 2412 | 2412 | 2412 | 2412 | 2412 | 2437 |
| Target (dBm) | 18 | 18 | 18 | 18 | 18 | 18 |
| Tolerance \pm (dB) | 1 | 1 | 1 | 1 | 1 | 1 |
| Frequency | 802.11n(HT20) (Peak) ANT1 | | | 802.11n(HT20) (Peak) ANT2 | | |
| (MHz) | 2412 | 2412 | 2437 | 2412 | 2412 | 2437 |
| Target (dBm) | 18 | 18 | 18 | 18 | 18 | 18 |
| Tolerance \pm (dB) | 1 | 1 | 1 | 1 | 1 | 1 |
| Frequency | 802.11n(HT20) (Peak) MIMO | | | | | |
| (MHz) | 2412 | 2412 | 2437 | | | |
| Target (dBm) | 21 | 21 | 21 | | | |
| Tolerance \pm (dB) | 1 | 1 | 1 | | | |

| Modulation Type | Output power | | Antenna Gain (dBi) | Antenna Gain (linear) | MPE (mW/cm ²) | MPE Limits (mW/cm ²) |
|-----------------------------------|--------------|--------|--------------------|-----------------------|---------------------------|----------------------------------|
| | dBm | mW | | | | |
| BLE | 2 | 1.58 | 1.71 | 1.483 | 0.00047 | 1 |
| SISO 2.4G WLAN 802.11g ANT1 | 19 | 79.43 | 1.71 | 1.483 | 0.02343 | 1 |
| MIMO 2.4G WLAN 802.11n20 | 22 | 158.49 | 1.71 | 1.483 | 0.04675 | 1 |

Note: BLE & 2.4G WLAN cannot transmit at the same time.

Results: PASS, NO SAR required.

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