# MPE TEST REPORT



| | | |
|---|---|---|
| **Applicant** | : | SKYTECH USA LLC. |
| **Address of Applicant** | : | INCORP SERVICES, INC. 3458 LAKESHORE DRIVE TALLAHASSEE, FL 32312 US |
| **Product Name** | : | ALL IN ONE |
| **Brand Name** | : | STGsivir & STGSivir |
| **Model Name** | : | SIV0323 |
| **Sample Acquisition Method** | : | Sent by Client |
| **Sample No.** | : | E24080045-02#03 |
| **FCC ID** | : | 2BGCASIV0323 |
| **Standard** | : | FCC Part 2.1091 |
| **Date of Receipt** | : | 2024-09-10 |
| **Date of Test** | : | 2024-09-10~ 2024-11-22 |
| **Date of Issue** | : | 2024-11-22 |

***Remark:***

*This report details the results of the testing carried out on one sample, the results contained in this report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.*

Prepared by: Erik. Yang (Erik Yang) Reviewed by: Jennifer zhou (Jennifer Zhou) Approved by: Echo Mu (Authorized signatory: Echo Mu)

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# Contents

# 1 General Information

## 1.1 Testing Laboratory

| | |
|---|---|
| **Company Name** | ICAS Testing Technology Service (Shanghai) Co., Ltd. |
| **Address** | No.1298, Pingan Road, Minhang District, Shanghai, China |
| **Telephone** | 0086 21-51682999 |
| **Fax** | 0086 21-54711112 |
| **Homepage** | www.icasiso.com |

## 1.2 Environmental conditions

| | |
|---|---|
| **Temperature (°C)** | 15-35 |
| **Humidity (%RH)** | 30-60 |
| **Barometric Pressure (mbar)** | 860-1060 |
| **Ambient noise & Reflection（W/kg）** | < 0.012 |

## 1.3 Details of Application

| | |
|---|---|
| **Applicant Company Name** | SKYTECH USA LLC. |
| **Address** | INCORP SERVICES, INC. 3458 LAKESHORE DRIVE TALLAHASSEE, FL 32312 US |
| **Contact Person** | Hu yan |
| **Telephone** | 001-647-8892-868 |
| **Email** | yan.hu@astsys.com |
| **Manufacturer Company Name** | SKYTECH USA LLC. |
| **Address** | INCORP SERVICES, INC. 3458 LAKESHORE DRIVE TALLAHASSEE, FL 32312 US |
| **Factory Company Name** | SKYTECH USA LLC. |
| **Address** | INCORP SERVICES, INC. 3458 LAKESHORE DRIVE TALLAHASSEE, FL 32312 US |

## 1.4 Details of EUT

| | | |
|---|---|---|
| **Product Name** | ALL IN ONE | |
| **Brand Name** | STGsivir & STGSivir | |
| **Test Model Name** | SIV0323 | |
| **FCC ID** | 2BGCASIV0323 | |
| **Mode of Operation** | WIFI 802.11b/g/n(HT20/40) for 2.4GHz<br>WIFI 802.11a/n(HT20/HT40)/ac(VHT20/VHT40/VHT80) for 5GHz<br>Bluetooth dual mode | |
| **Frequency Range** | Mode of Operation | Frequency Range (MHz) |
| | 802.11b/g/n(HT20/HT40) | 2412~2462 |

| | | |
|---|---|---|
| | 802.11a/n(20M/40M)/ac(20M/40M/80M) | 5180~5240 |
| | | 5745~5825 |
| | Bluetooth | 2402~2480 |
| **Modulation Type** | DSSS/OFDM for WLAN 2.4GHz and OFDM for WIFI 5GHz<br>GFSK/8DPSK/Π/4DQPSK for Bluetooth | |
| **Antenna Type** | Internal Antenna | |
| **Antenna Gain** | WIFI 2.4GHz: 1.83dBi<br>WIFI 5GHz: 2.97dBi<br>Bluetooth: 1.83dBi | |
| **Hardware version** | 4.6.5.4 | |
| **Software version** | 10.0.19045.4894 | |

*Note:*

1. *The above information was declared by the manufacture.*
2. *For more details, please refer to the User's manual of the EUT.*

# 2 Maximum Permissible Exposure (MPE)

## 2.1 Limits

According to KDB 447498 D01 General RF Exposure Guidance v06, Per § 1.1310(d)(2) MPE limits in § 1.1310(e)(1) - Table 1, systems operating under the provisions of this section shall be operated in a manner the ensures that the public is not exposed to radio frequency energy level in excess of the commission's guidelines.

TABLE 1 TO § 1.1310(E)(1)—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

| Frequency range (MHz) | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density ($mW/cm^2$) | Averaging time (minutes) |
|---|---|---|---|---|
| **(i) Limits for Occupational/Controlled Exposure** | | | | |
| 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 |
| 300–1,500 | | | f/300 | <6 |
| 1,500–100,000 | | | 5 | <6 |
| **(ii) 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 |
| 300–1,500 | | | f/1500 | <30 |
| 1,500–100,000 | | | 1.0 | <30 |

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

## 2.2 Assessment methods

Calculation Formula from FCC OET 65:

$$S = \frac{\mathrm{P} * \mathrm{G}}{4 * \pi * R^2}$$

Where:

S = Power Density (mW/cm2)

P = Input Power of the Antenna (mW)

G = Antenna Gain Relative to an Isotropic Antenna

R = Distance from the Antenna to the Point of Investigation (cm)

## 2.3 Test Result

| Operation Mode | Frequency Range (MHz) | Max Conducted Power (dBm) | Antenna Gain (dBi) | Max EIRP (mW) | Power Density at R = 20 cm ($mW/cm^2$) | Limit ($mW/cm^2$) |
|---|---|---|---|---|---|---|
| WIFI 2.4GHz | 2412~2462 | 12.93 | 1.83 | 29.92 | 0.00595 | 1.0 |
| BR/EDR | 2402~2480 | 7.82 | 1.83 | 9.23 | 0.00184 | 1.0 |
| BLE | 2402~2480 | 5.27 | 1.83 | 5.13 | 0.00102 | 1.0 |
| WIFI 5GHz | 5180~5240 | 12.71 | 2.97 | 36.98 | 0.00736 | 1.0 |
| | 5745~5825 | 13.50 | 2.97 | 44.36 | 0.00882 | 1.0 |

**Note(s):**

1. For 300 – 1,500MHz: Power Density limit is f/1500 mW/cm2

2. For 1,500 – 100,000MHz: Power Density limit is 1.0 $mW/cm^2$

3. The device can not transmit with WIFI and BT simultaneously, In addition, the chain interface of 2.4Gwifi and 5Gwifi cannot be transmitted simultaneously, so MPE is not evaluated in this configuration.

## 2.4 Conclusion

The Power Density at the position which is 20 cm far from the EUT is smaller than the General Population/Uncontrolled Exposure limit.

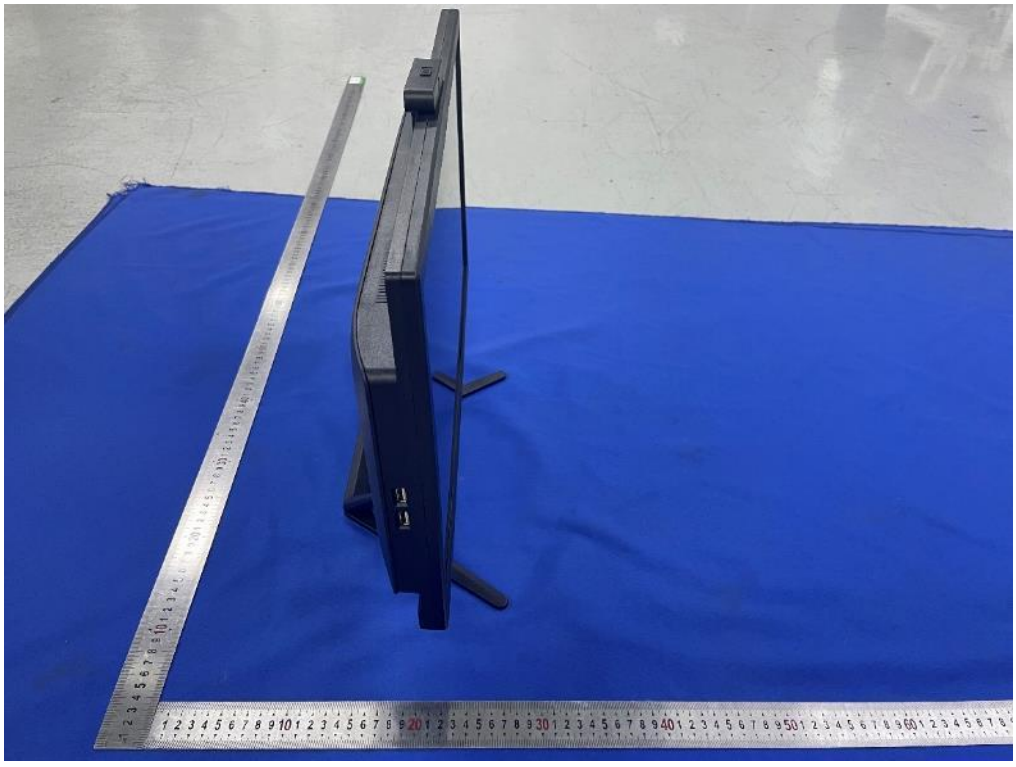
# 3 Appendixes

## 3.1 Sample Photograph

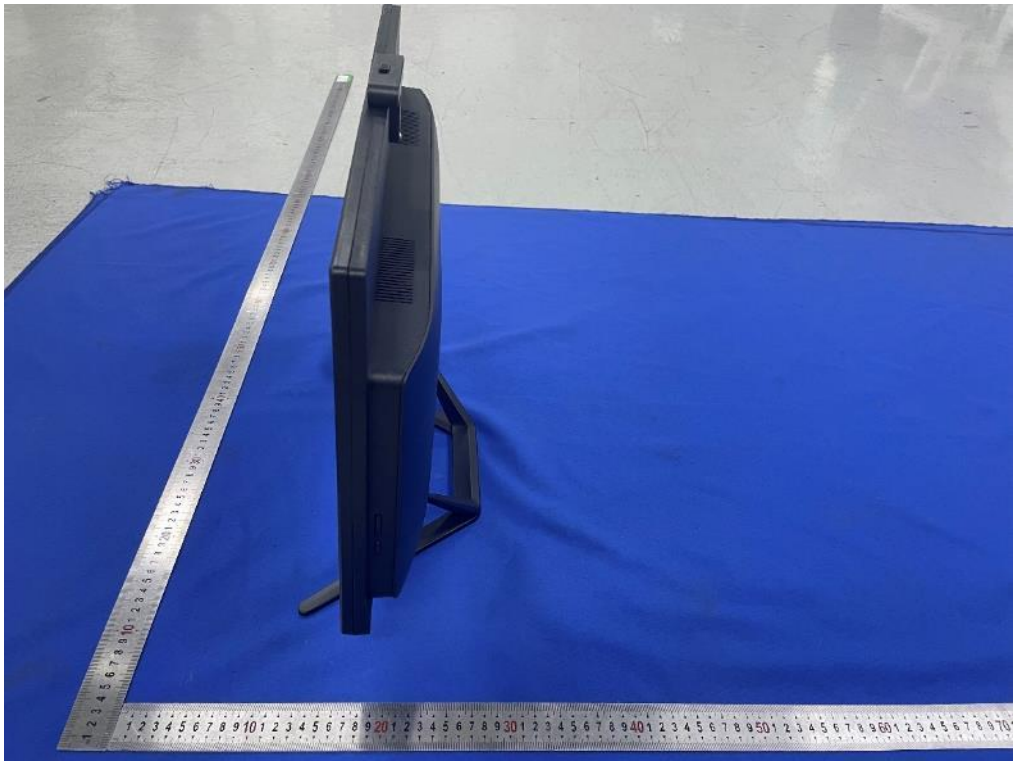
**All of the sample**

**Front of the sample**

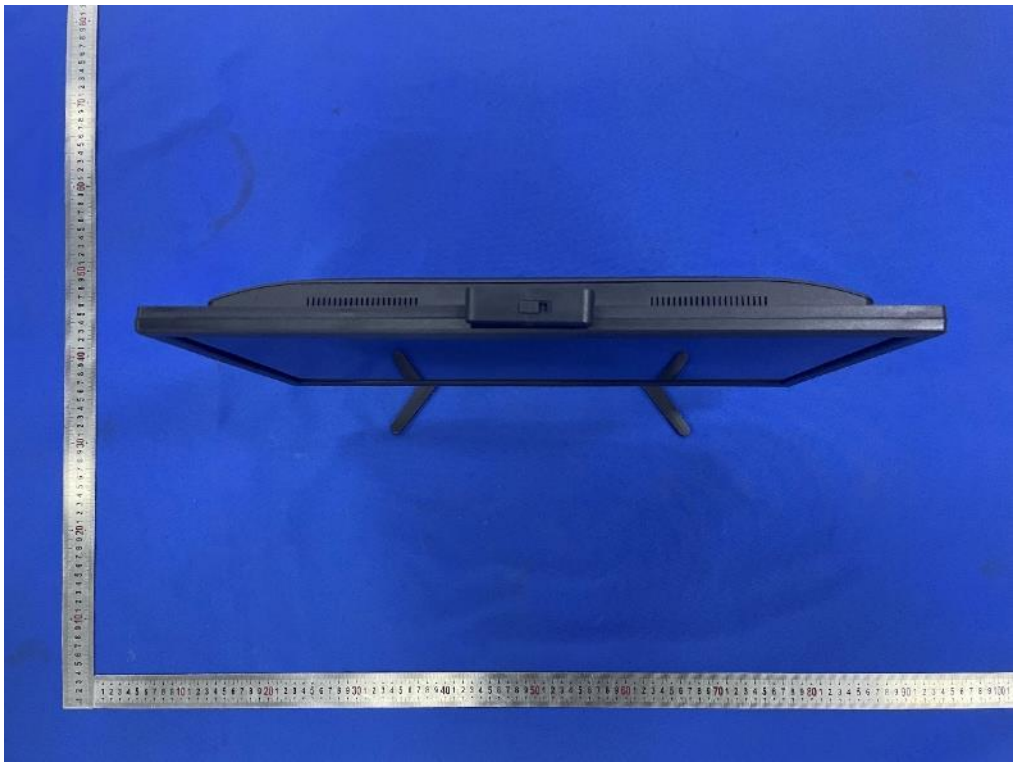
**Rear of the sample**



**Left of the sample**

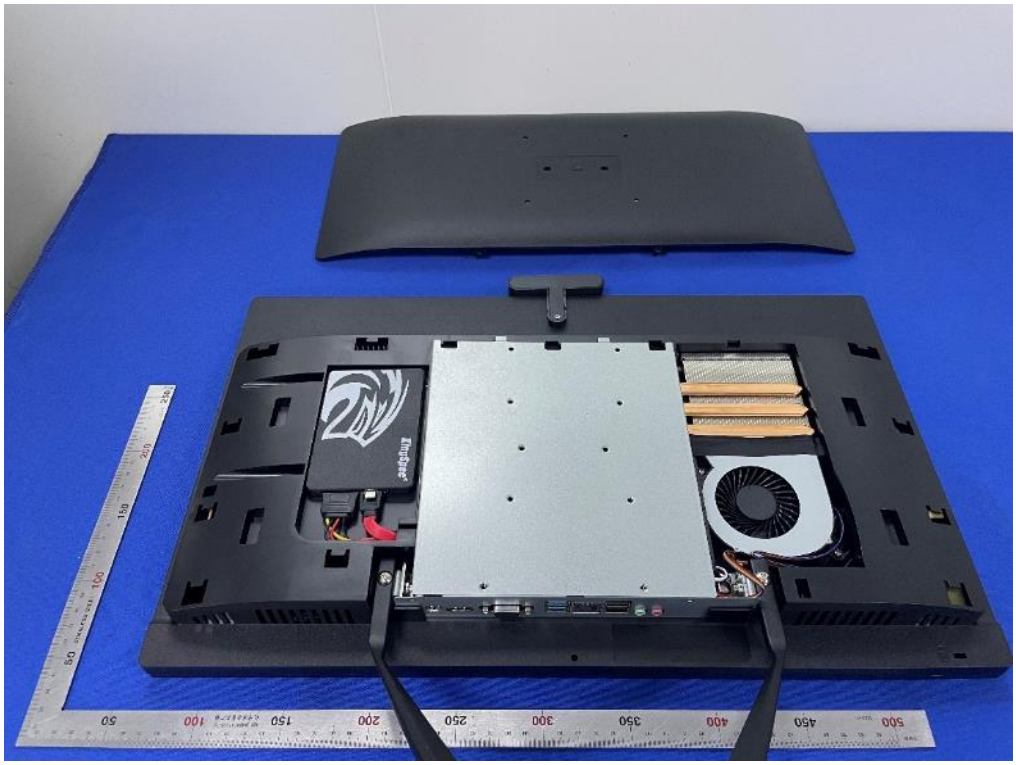


**Right of the sample**

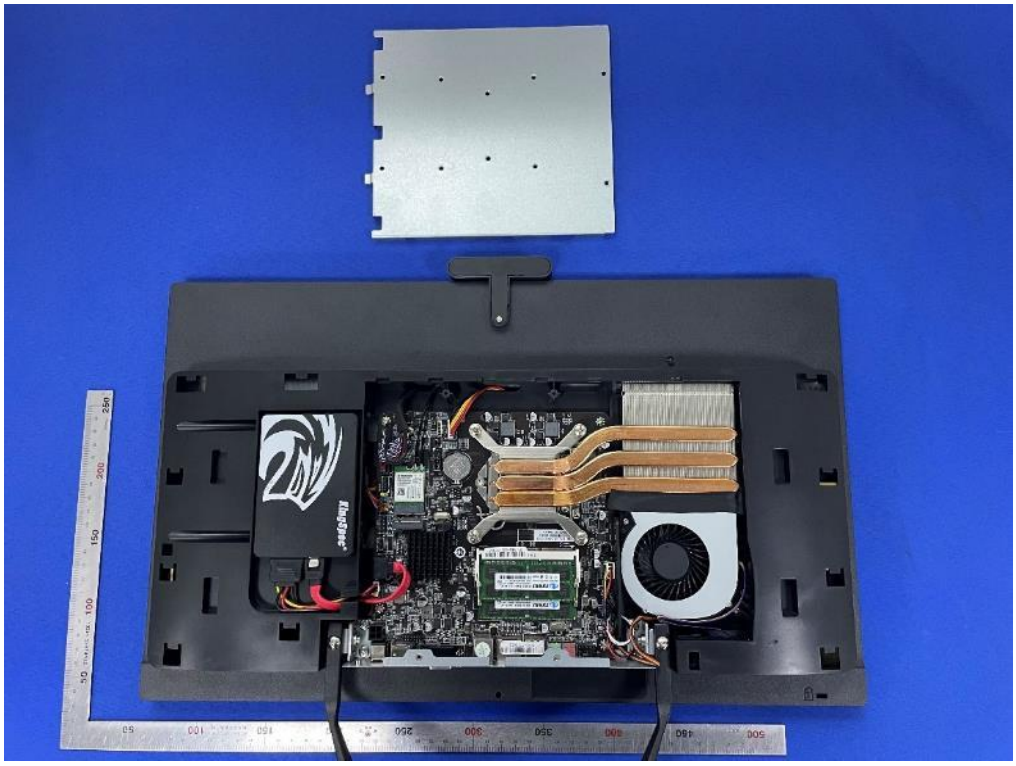


**Top of the sample**

**Bottom of the sample**



**Open-1 of the sample**



**Open-2 of the sample**

**Open-3 of the sample**

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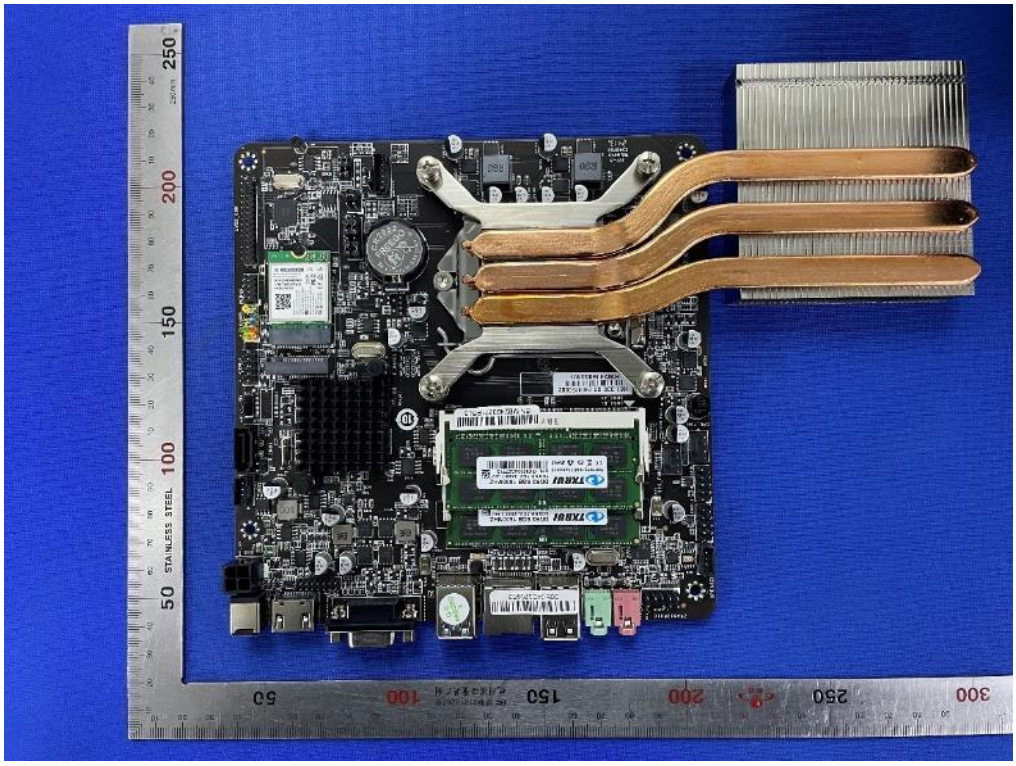
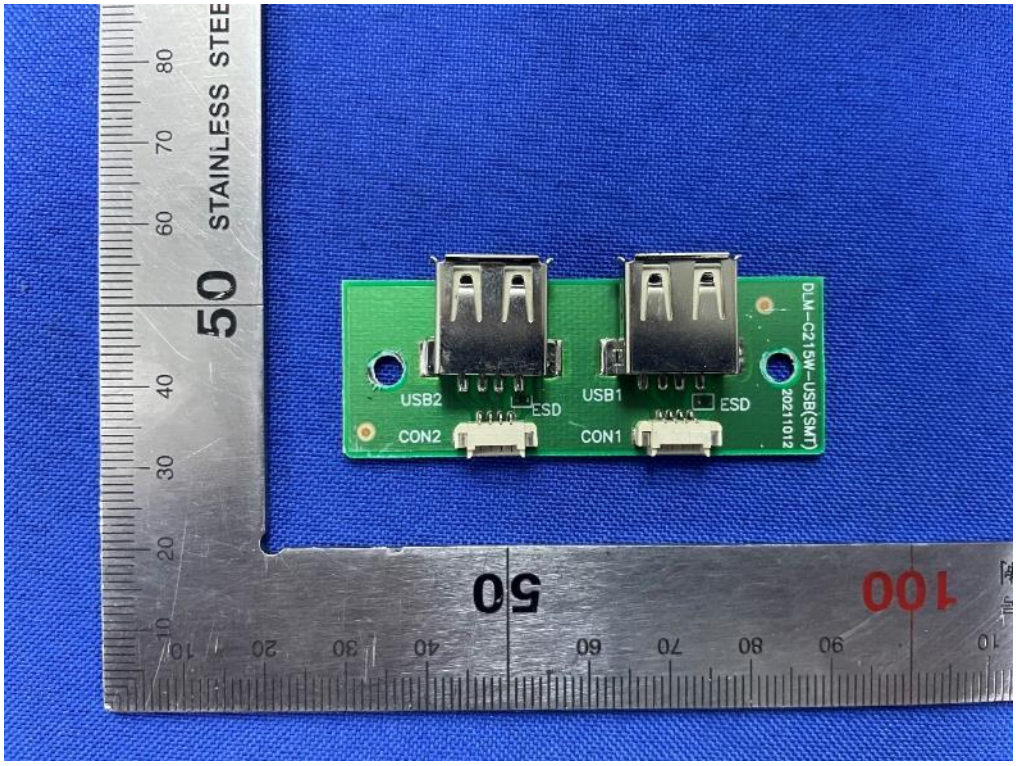


**Internal-1 of the sample**

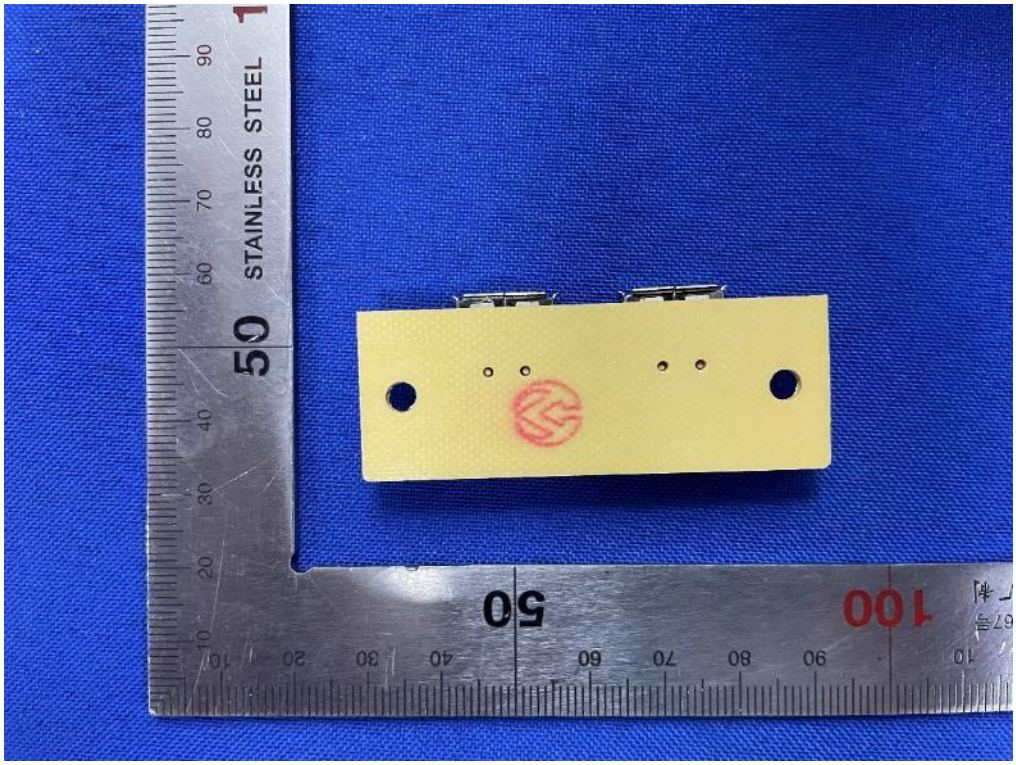
**Internal-2 of the sample**

**Internal-3 of the sample**

**Internal-4 of the sample**




**Internal-5 of the sample**




**Internal-6 of the sample**

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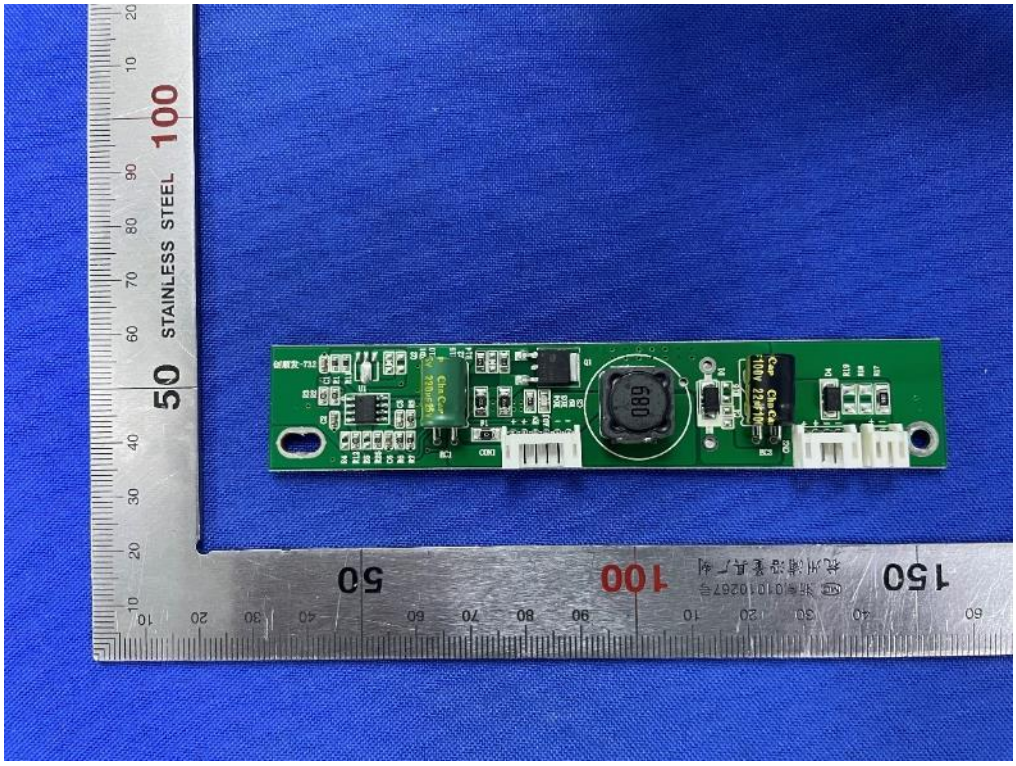
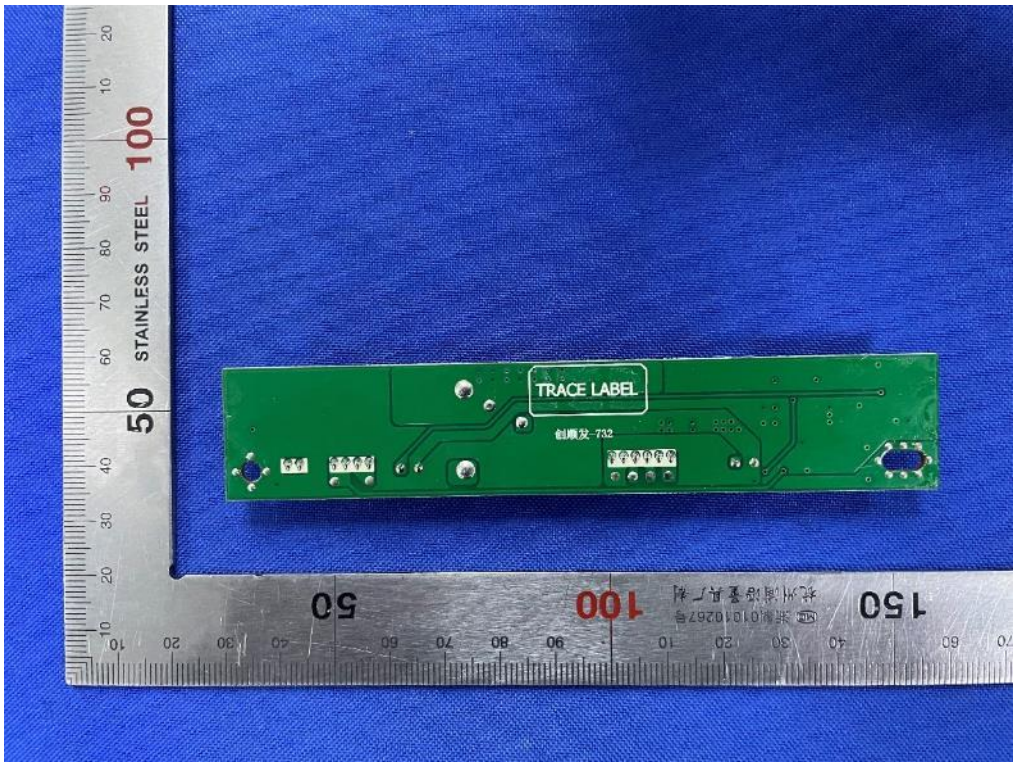
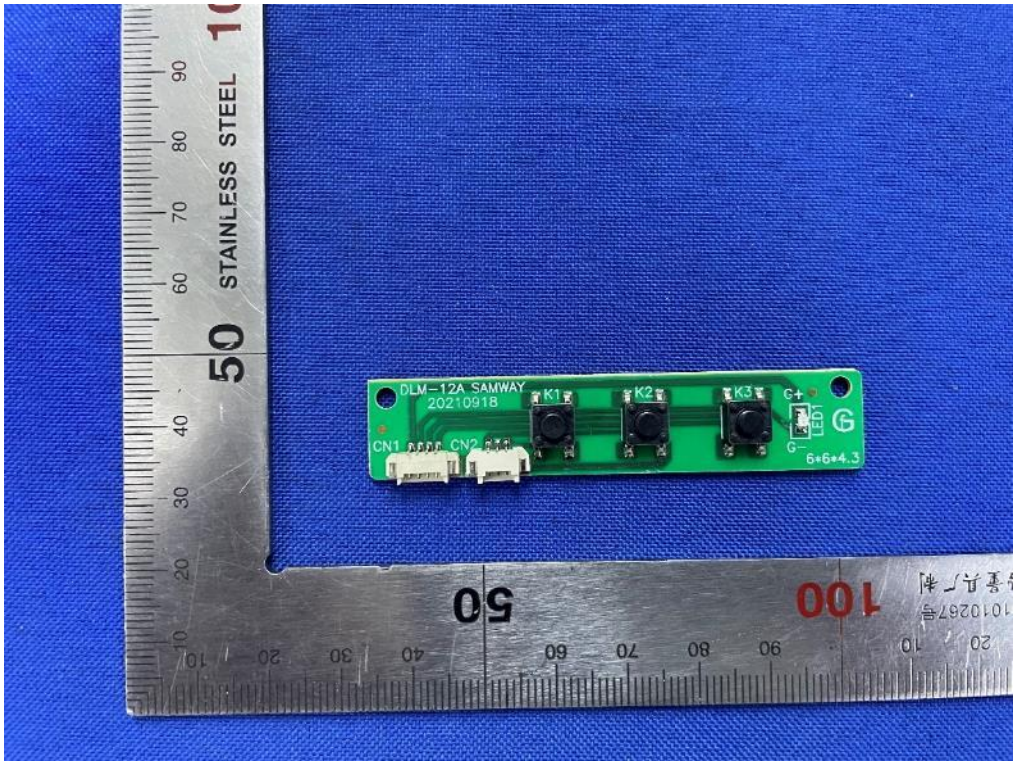


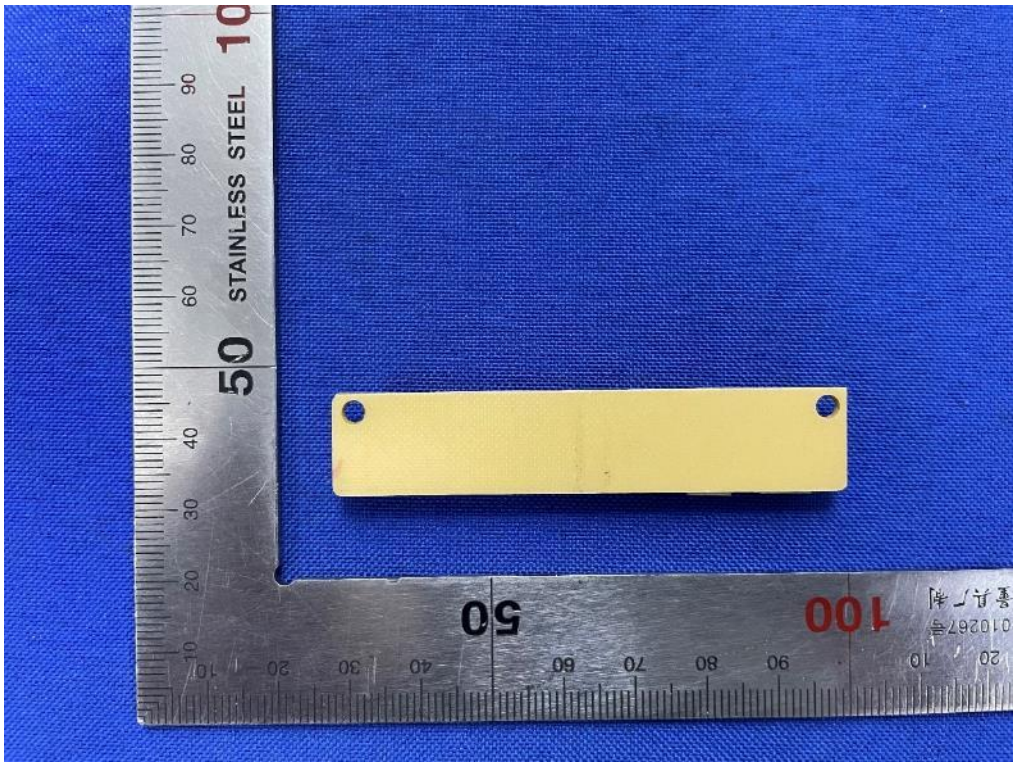

**Internal-7 of the sample**



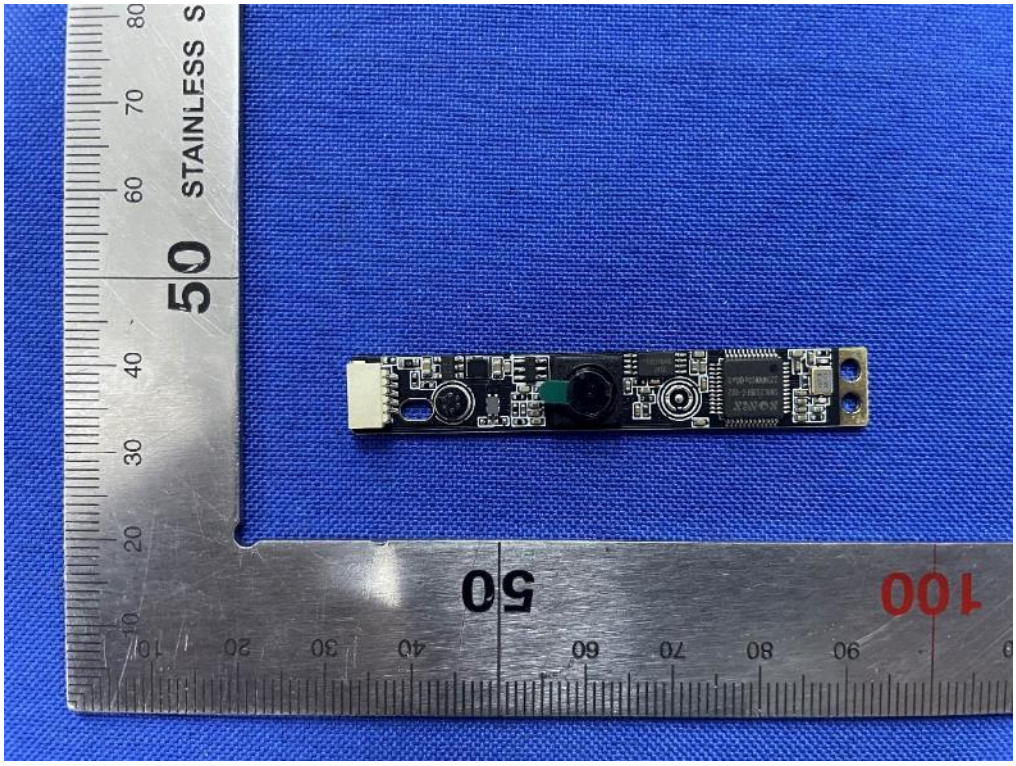

**Internal-8 of the sample**



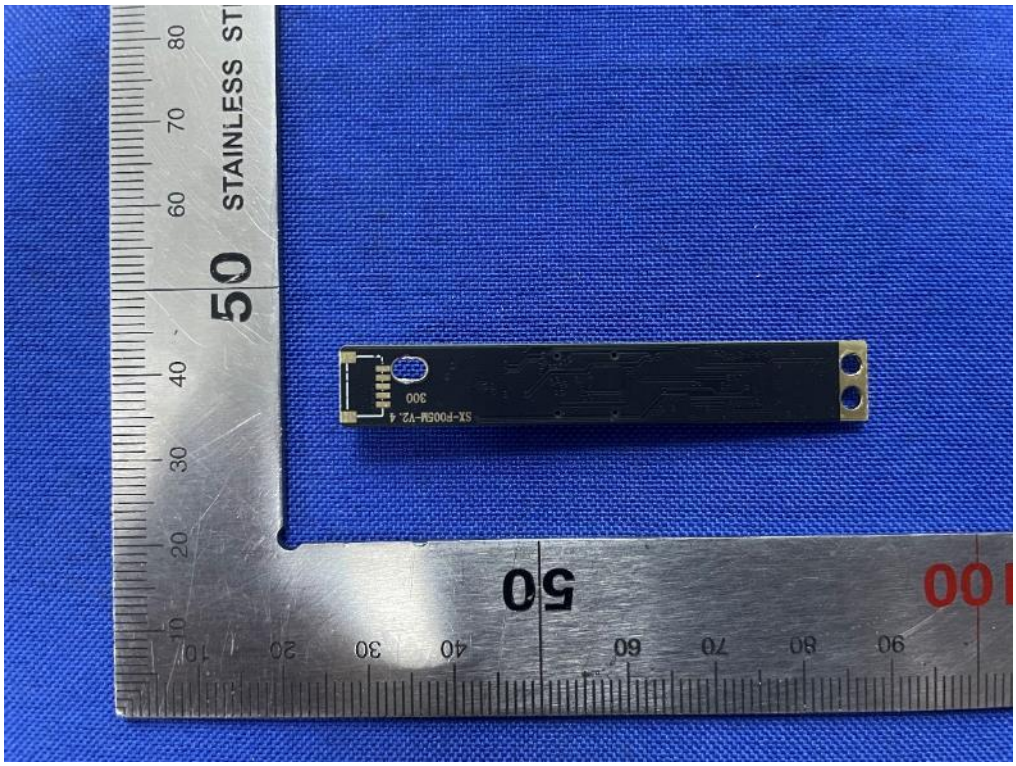

**Internal-9 of the sample**



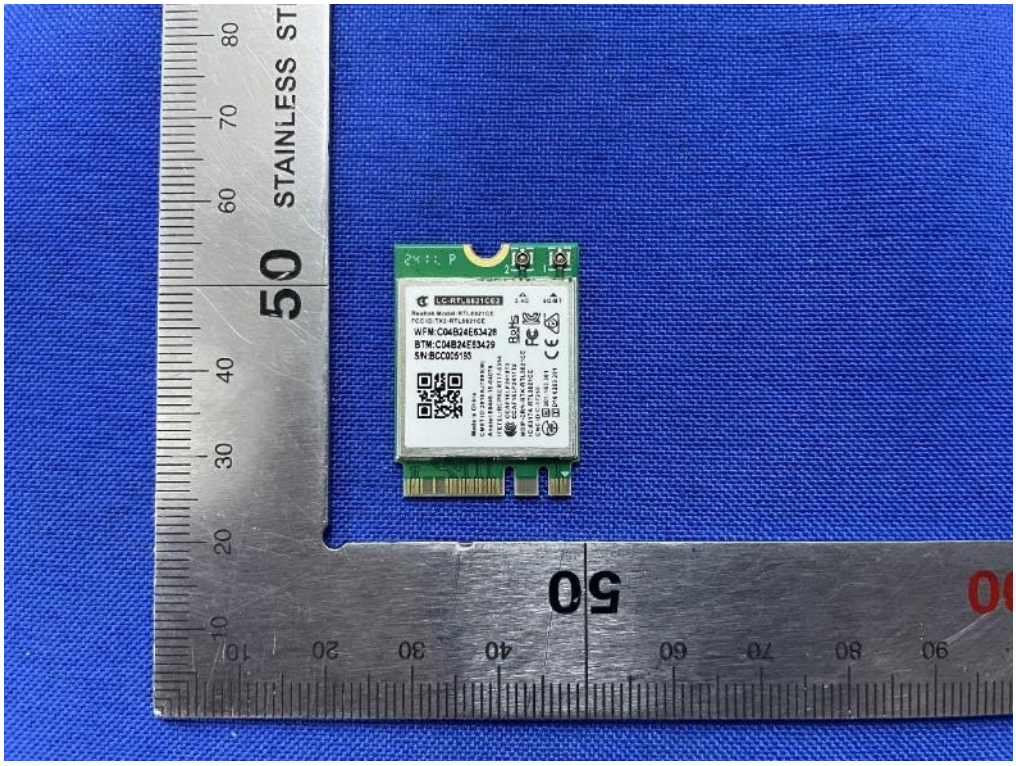

**Internal-10 of the sample**



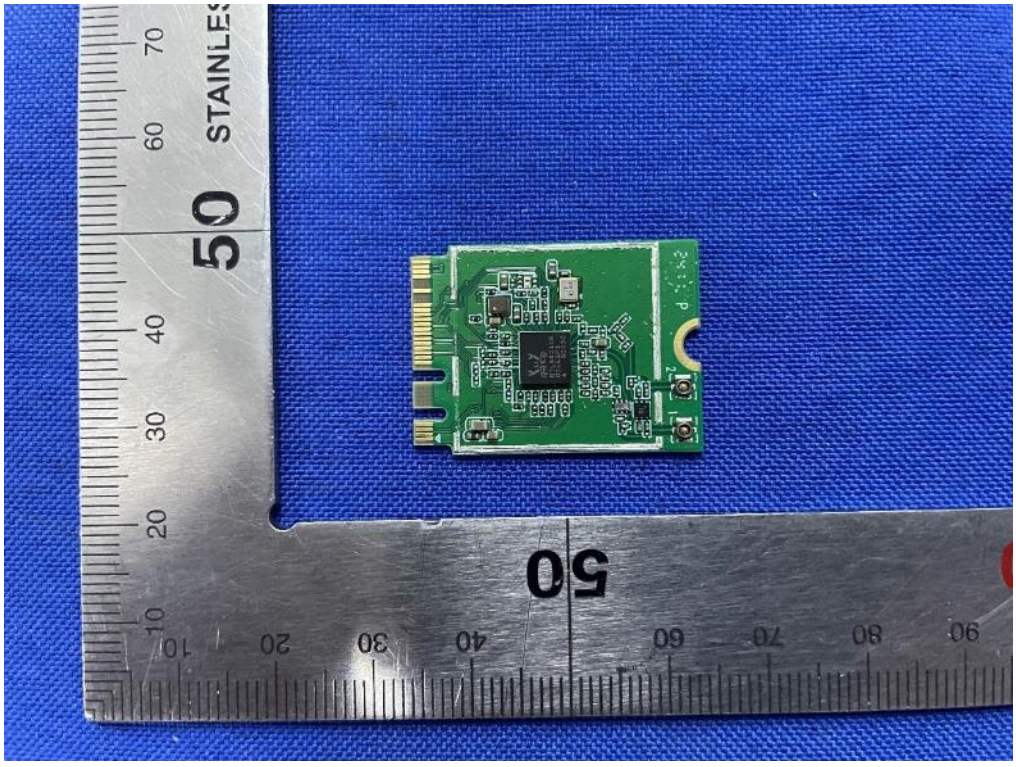

**Internal-11 of the sample**



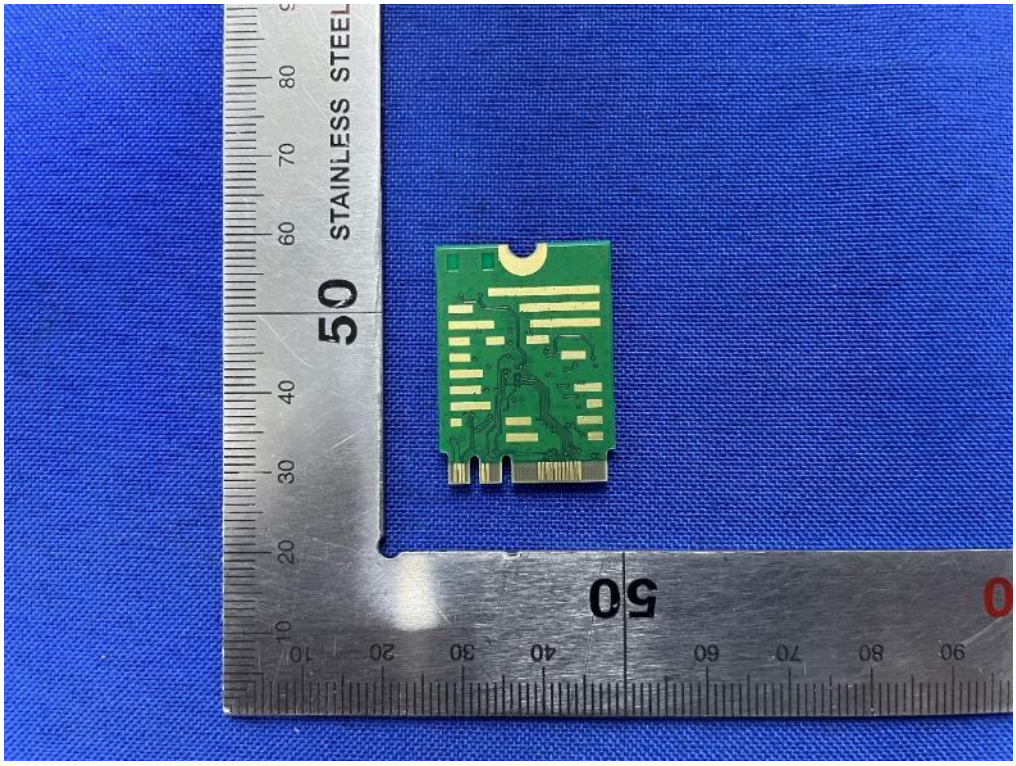

**Internal-12 of the sample**



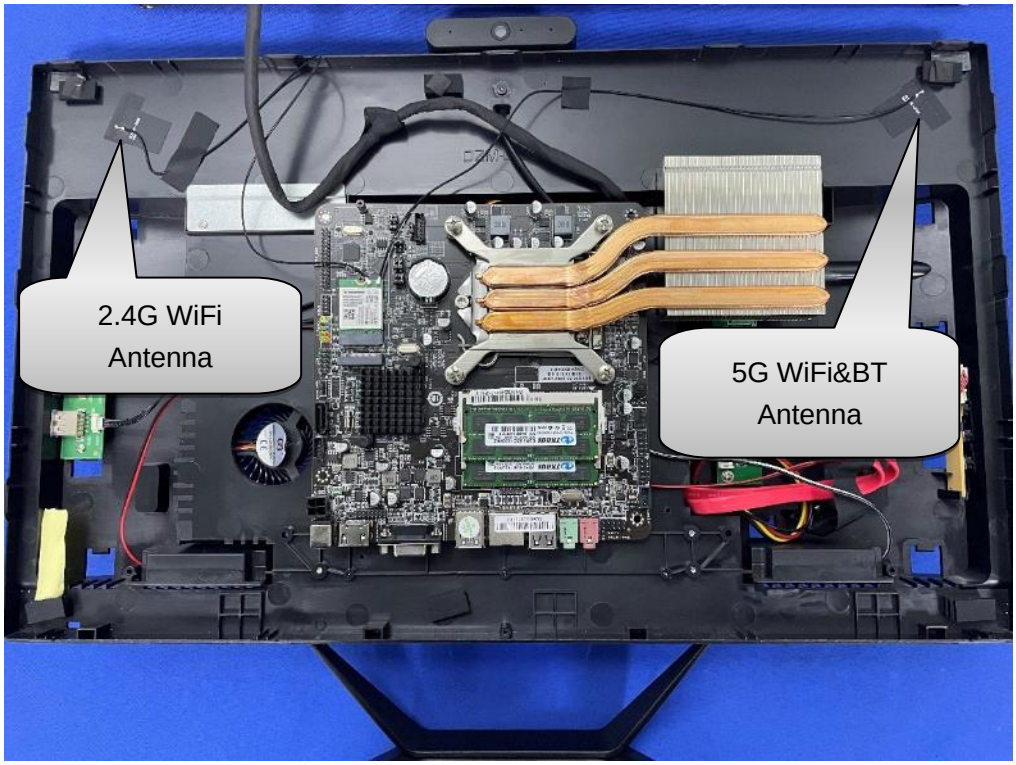

**Internal-13 of the sample**




**Internal-14 of the sample**




**Internal-15 of the sample**




**Antenna Position**

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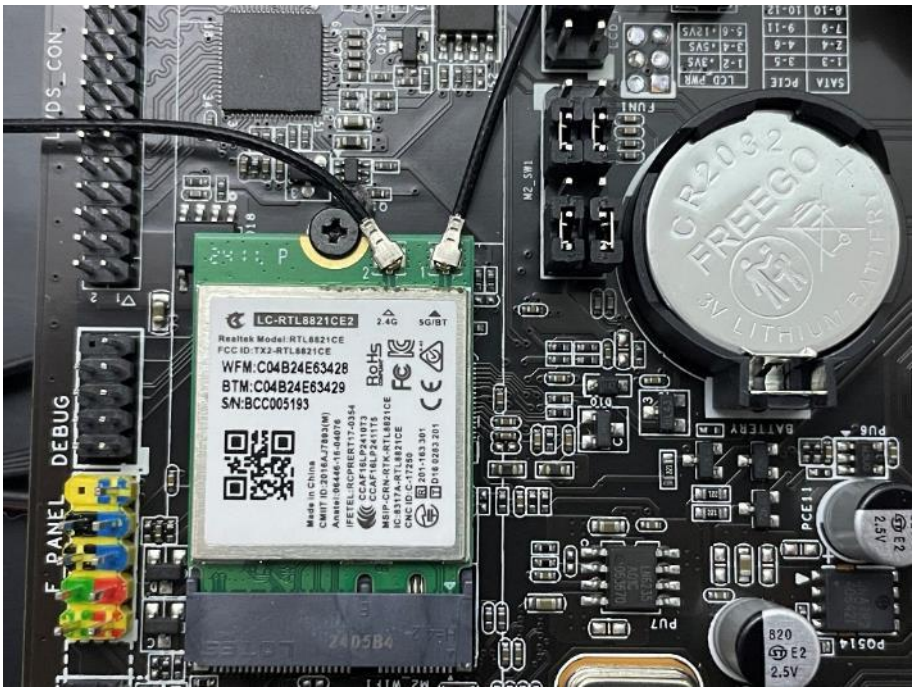
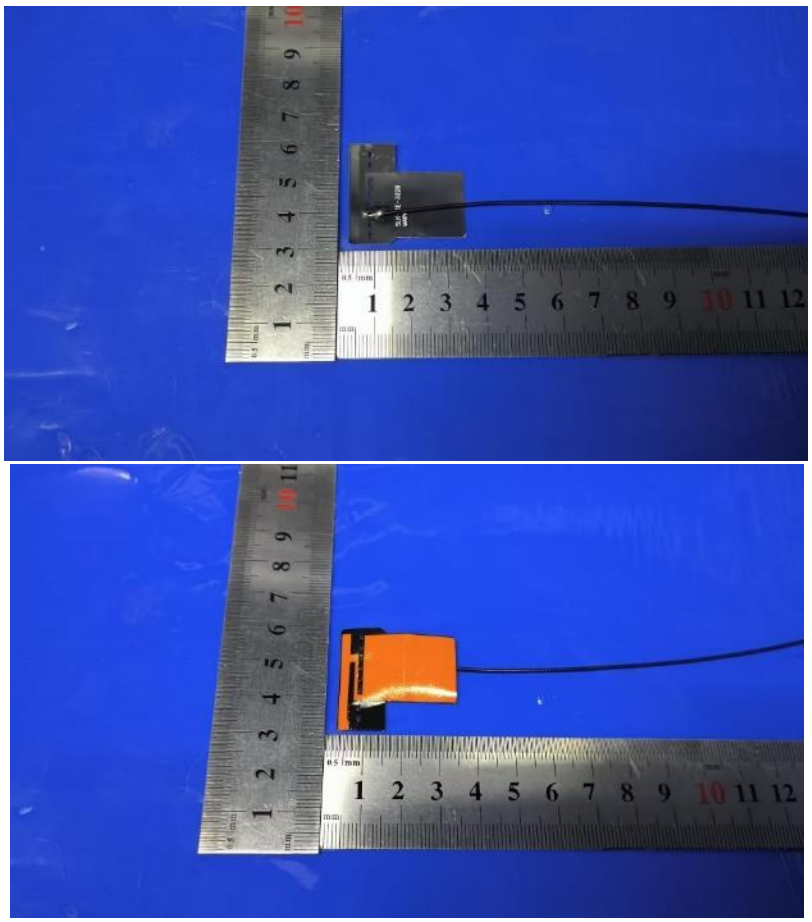



**Antenna Interface**



**Antenna Photo**

***End of the report***