

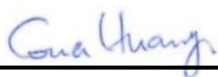
# RF EXPOSURE EVALUATION REPORT

FCC ID : HFS-IRONRAN-RU5PI  
Equipment : Remote Radio Unit  
Brand Name : Quanta Computer Inc.  
Model Name : IronRAN-RU5 PI GenA  
Applicant : Quanta Computer Inc.  
188, WEN HUA 2ND RD., GUISHAN  
DIST., TAO YUAN CITY 33377, TAIWAN  
Manufacturer : Quanta Computer Inc.  
188, WEN HUA 2ND RD., GUISHAN  
DIST., TAO YUAN CITY 33377, TAIWAN  
Standard : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part2.1091 and it complies with applicable limit.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

The results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Laboratory, the test report shall not be reproduced except in full



Approved by: Cona Huang / Deputy Manager



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## History of this test report

| Report No. | Version | Description             | Issued Date   |
|------------|---------|-------------------------|---------------|
| FA230835   | Rev. 01 | Initial issue of report | Jun. 30, 2022 |
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## 1. Description of Equipment Under Test (EUT)

| Product Feature & Specification         |                                                              |
|-----------------------------------------|--------------------------------------------------------------|
| EUT Type                                | Remote Radio Unit                                            |
| Brand Name                              | Quanta Computer Inc.                                         |
| Model Name                              | IronRAN-RU5 PI GenA                                          |
| FCC ID                                  | HFS-IRONRAN-RU5PI                                            |
| Wireless Technology and Frequency Range | 5G NR n48/n77/n78 : 3550 MHz ~ 3700 MHz                      |
| Mode                                    | 5G NR: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM |
| EUT Stage                               | Identical Prototype                                          |

**Remark:** The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

Reviewed by: Jason Wang

Report Producer: Carlie Tsai

## 2. Maximum RF average output power among production units

| Radio Tech | Band Number | Maximum Transmit Power Level (dBm) |       |
|------------|-------------|------------------------------------|-------|
|            |             | Per antenna                        | Total |
| FR1        | n48         | 18.00                              | 24.00 |
| FR1        | n77         | 18.00                              | 24.00 |
| FR1        | n78         | 18.00                              | 24.00 |

### **3. RF Exposure Limit Introduction**

According to Part1.1307b, Or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold Pth (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). Pth is given by:

$$P_{th} \text{ (mW)} = ERP_{20cm} (d / 20)^x \text{ for distance } d \leq 20cm$$

$$P_{th} \text{ (mW)} = ERP_{20cm} \text{ for distance } 20cm < d \leq 40cm$$

$$x = -\log_{10} \left( \frac{60}{ERP_{20cm} \sqrt{f}} \right)$$

$$ERP_{20cm} \text{ (mW)} \begin{matrix} 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz:} & 2040 f \\ 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz:} & 3060 \end{matrix}$$

### **4. Radio Frequency Radiation Exposure Evaluation**

#### **4.1. RF Exposure evaluation**

| Band      | Antenna Gain (dBi) | Maximum Conducted Power (dBm) | Maximum EIRP (dBm) | Maximum ERP (dBm) | Maximum EIRP (mW) | Maximum ERP (mW) | P <sub>th</sub> | P <sub>th</sub> (mW) | Part1.1307 option(b) Threshold (mW) |
|-----------|--------------------|-------------------------------|--------------------|-------------------|-------------------|------------------|-----------------|----------------------|-------------------------------------|
| 5G NR n48 | 7.00               | 24.00                         | 31.0               | 28.85             | 1258.93           | 767.36           | 28.85           | 767.36               | 3060.000                            |
| 5G NR n77 | 7.00               | 24.00                         | 31.0               | 28.85             | 1258.93           | 767.36           | 28.85           | 767.36               | 3060.000                            |
| 5G NR n78 | 7.00               | 24.00                         | 31.0               | 28.85             | 1258.93           | 767.36           | 28.85           | 767.36               | 3060.000                            |

### **Conclusion:**

According to 47 CFR §1.1307, the RF exposure analysis concludes that the RF Exposure is FCC compliant.