

RF EXPOSURE EVALUATION REPORT

FCC ID : HFS-IRONRAN-RU4MO
Equipment : Remote Radio Unit
Brand Name : Quanta Computer Inc.
Model Name : IronRAN-RU4 MO 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 1.1307

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part 1.1307 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
FA272811	Rev. 01	Initial issue of report	Nov. 08, 2022

**1. Description of Equipment Under Test (EUT)**

Product Feature & Specification	
EUT Type	Remote Radio Unit
Brand Name	Quanta Computer Inc.
Model Name	IronRAN-RU4 MO GenA
FCC ID	HFS-IRONRAN-RU4MO
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
HW Version	V2.4.4.5.4.0.0
EUT Stage	Identical Prototype

Reviewed by: Jason Wang**Report Producer: Daisy Peng****2. Maximum RF average output power among production units**

Radio Tech	Band Number	Maximum Transmit Power Level (dBm)
		total
FR1	n48/n77/n78	38

3. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

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

The MPE was calculated at 179 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna

4. Radio Frequency Radiation Exposure Evaluation

4.1. Standalone Power Density Calculation

Band	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 179cm (mW/cm ²)	Limit (mW/cm ²)
5G FR1 n48/n77/n78	18.00	38.00	56.0	398.11	398107.17	0.989	1.000

Conclusion:

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