

RF Exposure Report

Report No.: SABHQC-WTW-P21123448

FCC ID: 2AQ68RPQN7800

Test Model: RPQN-7800E, RPQN-7800I

Received Date: Dec. 28, 2021

Test Date: Dec. 23 ~ Dec. 28, 2021

Issued Date: Feb. 09, 2022

Applicant: Hon Lin Technology Co., Ltd.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

Test Location (1): No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City
33383, Taiwan

FCC Registration / 788550 / TW0003
Designation Number:

Test Location (2): No. 70, Wenming Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)

FCC Registration / 281270 / TW0032
Designation Number:



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Release Control Record

Issue No.	Description	Date Issued
SABHQC-WTW-P21123448	Original release	Feb. 09, 2022

1 Certificate of Conformity

Product: 5G NR indoor O-RU S4 RPQN-7800

Brand: Foxconn

Test Model: RPQN-7800E, RPQN-7800I

Sample Status: Mass Production

Applicant: Hon Lin Technology Co., Ltd.

Test Date: Dec. 23 ~ Dec. 28, 2021

Standards: FCC Part 2 (Section 2.1091)

References Test Guidance: KDB 447498 D01 General RF Exposure Guidance v06

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Celine Chou , **Date:** Feb. 09, 2022
Celine Chou / Senior Specialist

Approved by : Jeremy Lin , **Date:** Feb. 09, 2022
Jeremy Lin / Project Engineer

2 RF Exposure

2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
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

2.2 MPE Calculation Formula

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

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 center of the radiator in cm

2.3 Classification

The antenna of this product, under normal use condition, is at least 33cm away from the body of the user. So, this device is classified as fixed station and installations by professional service personnel device.

3 Calculation Result of Maximum Conducted Power

For 5G NR Band n78

100MHz: QPSK

Frequency Band (MHz)	Conducted Average Power - Per Chain (dBm)				Max Conducted Average Power - Total (dBm)	Directional Gain (dBi)	Max EIRP Power (dBm)	Max EIRP Power (W)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
	Ant.0	Ant.1	Ant.2	Ant.3							
3500.01	24.20	24.10	24.12	24.23	30.18	11.14	41.32	13.56	33	0.990	1.00

Note:

- Directional Gain = 5.12dBi + Array Gain (6.02) = 11.14dBi
- EIRP = Conducted + Directional gain (11.14dBi)
- The antenna gain was declared by client.
- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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