FCC RF Exposure Report

Report No.:	MFBHQC-WTW-P21100439D
FCC ID:	2AQ68RPQN7801
Model No.:	RPQN-7801E, RPQN-7801I
Received Date:	2023/9/23
Issued Date:	2023/10/13
Applicant:	HON LIN Technology Co., Ltd.
Address:	11F., No.32, Jihu Rd., Neihu Dist, Taipei City 114, Taiwan R.O.C.
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:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	788550 / TW0003

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Release Control Record

Issue No.	Description	Date Issued
MFBHQC-WTW-P21100439D	Original release	2023/10/13

1 Certificate of Conformity

Product:	5G NR indoor O-RU RPQN-7801
Test Model:	RPQN-7801E, RPQN-7801I
Sample Status:	Mass Production
Applicant:	HON LIN Technology Co., Ltd.
FCC Rule Part:	FCC Part 2 (Section 2.1091)
Standards:	KDB 447498 D01 General RF Exposure Guidance v06

We, **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, declare that the equipment above has been found compliance with the requirement limits of applicable standards. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate under the standards herein specified.

Prepared by : Pettie Chen , **Date:** 2023/10/13

Pettie Chen / Senior Specialist

Approved by : Jeremy Lin , **Date:** 2023/10/13

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

$Pd = (Pout*G) / (4*pi*r^2)$
where
Pd = power density in mW/cm^2
Pout = output power to antenna in mW
G = gain of antenna in linear scale
pi = 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 35cm away from the body of the user. So, this device is classified as **Mobile 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 - Totaol (dBm)	Directional Gain (dBi)	Max EIRP Power (dBm)	Max EIRP Power (W)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
	ANT0	ANT1	ANT2	ANT3							
3750	24.11	24.24	24.67	24.73	30.47	11.32	41.79	15.10	35	0.981	1

10MHz: QPSK

Frequency Band (MHz)	Conducted Average Power - Per Chain (dBm)				Max Conducted Average Power - Totaol (dBm)	Directional Gain (dBi)	Max EIRP Power (dBm)	Max EIRP Power (W)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
	ANT0	ANT1	ANT2	ANT3							
3795	22.50	22.49	22.52	22.61	28.55	11.32	39.87	9.71	35	0.630	1

Note:

1. Directional gain=5.3 dBi +Array Gain(6.02)= 11.32 dBi
2. EIRP = Conducted + antenna gain (11.32dBi)
3. The antenna gain was declared by client.
4. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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