

RF Exposure Report

Report No.: MFBHKI-WTW-P22030766

FCC ID: NKRUMC-STD31LFN

Test Model: UMC-STD31LFN

Received Date: Mar. 18, 2022

Test Date: Apr. 06 ~ Apr. 15, 2022

Issued Date: Jul. 04, 2022

Applicant: Wistron NeWeb Corporation

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

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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
MFBHKI-WTW-P22030766	Original release	Jul. 04, 2022

1 Certificate of Conformity

Product: Cellular module

Brand: WNC

Test Model: UMC-STD31LFN

Sample Status: Engineering sample

Applicant: Wistron NeWeb Corporation

Test Date: Apr. 06 ~ Apr. 15, 2022

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 : Pettie Chen , **Date:** Jul. 04, 2022
Pettie Chen / Senior Specialist

Approved by : Jeremy Lin , **Date:** Jul. 04, 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				
300-1500	F/1500	30
1500-100,000	1.0	30

F = Frequency in MHz

2.2 MPE Calculation Formula

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

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 22cm away from the body of the user. So, this device is classified as **Mobile Device**.

3 Calculation Result of Maximum Conducted Power

Mode	Max ERP Power (dBm)	Max EIRP Power (dBm)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
GPRS 850	32.84	34.99	22	0.519	0.549
GPRS 1900	-	31.58	22	0.237	1.000
WCDMA Band 2	-	24.96	22	0.052	1.000
WCDMA Band 5	22.94	25.09	22	0.053	0.549
LTE Band 2	-	24.93	22	0.051	1.000
LTE Band 4	-	24.63	22	0.048	1.000
LTE Band 5	23.03	25.18	22	0.054	0.549
LTE Band 7	-	24.84	22	0.050	1.000
LTE Band 12	22.68	24.83	22	0.050	0.466
LTE Band 17	22.78	24.93	22	0.051	0.471
LTE Band 25	-	24.78	22	0.049	1.000
LTE Band 26 (Part 22)	23.02	25.17	22	0.054	0.543
LTE Band 26 (Part 90)	23.02	25.17	22	0.054	0.543
LTE Band 66	-	24.50	22	0.046	1.000
LTE Band 71	23.19	25.34	22	0.056	0.444

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. EIRP = ERP + 2.15dB

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