

## Variant RF Exposure Report

**Report No.:** SA170817C03A

**FCC ID:** NKR-LMA12Q7

**Test Model:** UMC-A12Q7-R

**Received Date:** Apr. 22, 2019

**Date of Evaluation:** May 07, 2019

**Issued Date:** May 09, 2019

**Applicant:** Wistron Neweb Corporation

**Address:** 20 Park Avenue II (or Yuanchiu 2nd Rd), Hsinchu Science Park, Hsinchu  
308, Taiwan

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

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R.O.C.

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

**FCC Registration /  
Designation Number:** 788550 / TW0003



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### Release Control Record

Issue No.	Description	Date Issued
SA170817C03A	Original Release	May 09, 2019

## 1 Certificate of Conformity

**Product:** LTE CAT M1 module

**Brand:** WNC

**Test Model:** UMC-A12Q7-R

**Sample Status:** Identical Prototype

**Applicant:** Wistron Neweb Corporation

**Date of Evaluation:** May 07, 2019

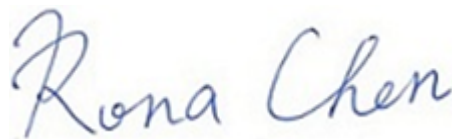
**Standards:** FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

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 :**



**Date:**

May 09, 2019

Rona Chen / Specialist

**Approved by :**



**Date:**

May 09, 2019

Dylan Chiou / 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 <sup>2</sup> )	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 <sup>2</sup> )*	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<sup>2</sup>

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 20cm away from the body of the user.

So, this device is classified as **Mobile Device**.

### 2.4 Antenna Gain

LTE Band 4: Fixed External Antenna with 2 dBi gain

### 2.5 Calculation Result of Maximum Conducted Power

Band	Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
LTE 4	1710-1755	23.21	2	20	0.066	1.00

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