

## RF Exposure Report

**Report No.:** SA180112C19

**FCC ID:** XIA-NTC100

**Test Model:** NTC-100, NTC-100G

**Received Date:** Jan. 12, 2018

**Date of Evaluation:** Aug. 27, 2018

**Issued Date:** Sep. 20, 2018

**Applicant:** NetComm Wireless Limited

**Address:** 18-20 Orion Road, Lane Cove, NSW 2066, Sydney Australia

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

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, 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   |
|-------------|------------------|---------------|
| SA180112C19 | Original Release | Sep. 20, 2018 |

## 1 Certificate of Conformity

**Product:** 4G LTE Cat M1 / NB1 Industrial IoT Serial Modem

**Brand:**  NetCommWireless

**Test Model:** NTC-100, NTC-100G

**Applicant:** NetComm Wireless Limited

**Date of Evaluation:** Aug. 27, 2018

**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 EMC characteristics under the conditions specified in this report.

**Prepared by :** Evonne Liu, **Date:** Sep. 20, 2018  
Evonne Liu / Specialist

**Approved by :** Dylan Chiou, **Date:** Sep. 20, 2018  
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 20 cm away from the body of the user.  
So, this device is classified as **Mobile Device**.

## 2.4 Calculation Result of Maximum Conducted Power

### Cat-M1

| 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 2  | 1850-1910            | 22.44           | 3.42               | 20            | 0.077                               | 1.00                        |
| LTE 4  | 1710-1755            | 22.66           | 3.28               | 20            | 0.078                               | 1.00                        |
| LTE 5  | 824-849              | 23.34           | 3.13               | 20            | 0.088                               | 0.55                        |
| LTE 12 | 699-716              | 23.24           | 4.71               | 20            | 0.124                               | 0.47                        |
| LTE 13 | 777-787              | 23.01           | 4.71               | 20            | 0.118                               | 0.52                        |

### NB-IOT

| 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 2  | 1850-1910            | 22.91           | 3.42               | 20            | 0.085                               | 1.00                        |
| LTE 4  | 1710-1755            | 23.15           | 3.28               | 20            | 0.087                               | 1.00                        |
| LTE 5  | 824-849              | 23.67           | 3.13               | 20            | 0.095                               | 0.55                        |
| LTE 12 | 699-716              | 24.19           | 4.71               | 20            | 0.154                               | 0.47                        |
| LTE 13 | 777-787              | 24.1            | 4.71               | 20            | 0.151                               | 0.52                        |

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