

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 Lin, **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 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/cm²

Pout = 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 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 ²)	Limit (mW/cm ²)
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 ²)	Limit (mW/cm ²)
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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