RF Exposure Report

Report No.:	SA180817C04
FCC ID:	NKS-DUO-WIFI NKS-DUO-LTE
Test Model:	Trimble Duo
Received Date:	Aug. 17, 2018
Date of Evaluation:	Sep. 07, 2018
Issued Date:	Sep. 10, 2018
Applicant:	PeopleNet Communications Corporation
Address:	4400 Baker Road, Minnetonka, MN 55343, USA
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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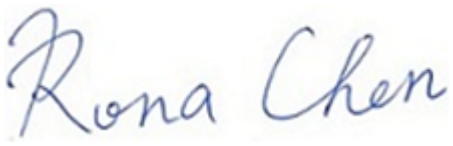
Release Control Record

Issue No.	Description	Date Issued
SA180817C04	Original Release	Sep. 10, 2018

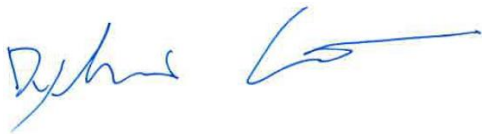
1 Certificate of Conformity

Product:	Tablet
Brand:	Trimble
Test Model:	Trimble Duo
Sample Status:	Mass product
Applicant:	PeopleNet Communications Corporation
Date of Evaluation:	Sep. 07, 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 :  , **Date:** Sep. 10, 2018

Rona Chen / Specialist

Approved by :  , **Date:** Sep. 10, 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/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 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Antenna 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^2)	Limit (mW/cm^2)
WCDMA II	1850-1910	24.22	3.56	20	0.119	1.00
WCDMA IV	1710-1755	24.19	1.24	20	0.069	1.00
WCDMA V	824-849	23.87	4.14	20	0.126	0.55
LTE 2	1850-1910	22.60	3.56	20	0.082	1.00
LTE 4	1710-1755	23.00	1.24	20	0.053	1.00
LTE 5	824-849	22.50	4.14	20	0.092	0.55
LTE 17	704-716	22.00	2.28	20	0.053	0.47
WLAN	2412-2462	26.40	2.54	20	0.156	1.00
	5180-5240	16.40	4.02	20	0.022	1.00
	5745-5825	13.20	3.81	20	0.010	1.00
BT	2402-2480	9.40	2.54	20	0.003	1.00

Conclusion:

The formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

WLAN + WWAN + BT = 0.156/1 + 0.126/0.55 + 0.003/1 = 0.388

Therefore the maximum calculations of above situations are less than the "1" limit.

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