RF Exposure Report

Report No.: SA180717C29

FCC ID: LY5-PCITP1

Contains FCC ID: LY5-PCITP100

Test Model: PCI-TP1

Received Date: Jul. 17, 2018

Date of Evaluation: Mar. 21, 2019

Issued Date: Mar. 27, 2019

Applicant: PCI Private Limited

Address: 35 Pioneer Rd North, Singapore 628475

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
SA180717C29	Original Release	Mar. 27, 2019

1   Certificate of Conformity

Product: Telematics Platform 1

Brand: PCI

Test Model: PCI-TP1

Sample Status: Production Unit

Applicant: PCI Private Limited

Date of Evaluation: Mar. 21, 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:** _____Mar. 27, 2019_____

Lena Wang / Specialist

Approved by : _____ , **Date:** _____Mar. 27, 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^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 28cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Antenna Gain

WWAN Antenna:

Antenna Type	Antenna Gain (dBi)							
	GSM850	PCS1900	WCDMA II	WCDMA IV	WCDMA V	LTE 2	LTE 4	LTE 12
Metal stamp	0.65	2.68	2.68	2.26	0.65	2.68	2.26	-0.8

WLAN Antenna:

Antenna Type	Antenna Gain (dBi)				
	BT/ WLAN 2.4GHz	WLAN 5.18~5.24 GHz	WLAN 5.26~5.32 GHz	WLAN 5.47~5.725 GHz	WLAN 5.725~5.85 GHz
Flex	4.21	4.3	4.14	3.62	4.16.:

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)
GSM850	824-849	33	0.65	28	0.235	0.55
PCS1900	1850-1910	30	2.68	28	0.188	1
WCDMA II	1850-1910	24	2.68	28	0.047	1
WCDMA IV	1710-1755	24	2.26	28	0.043	1
WCDMA V	824-849	24	0.65	28	0.03	0.55
LTE 2	1850-1910	23	2.68	28	0.038	1
LTE 4	1710-1755	23	2.26	28	0.034	1
LTE 12	699-716	23	-0.8	28	0.017	0.47
WLAN	2412-2462	16	4.21	28	0.011	1
	5180-5240	16	4.3	28	0.011	1
	5260-5320	16	4.14	28	0.01	1
	5500-5700	16	3.62	28	0.009	1
	5745-5825	16	4.16	28	0.011	1
BT	2402-2480	6.32	4.21	28	0.001	1

Note: Above use Max. Output Power is Max. Tune-up Power.

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 = 0.011/1 + 0.235/0.55 + 0.001/1 = 0.439

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

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