

RF Exposure Report

Report No.: SA161028C01

FCC ID: VPQ-PIXIUMDHXA222 & VPQ-PN7120

Test Model: DHXA-222 & PN7120

Received Date: Nov. 11, 2016

Test Date: Jan. 21 ~ Feb. 23, 2017

Issued Date: Mar. 07, 2017

Applicant: TRIXELL

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

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Release Control Record

Issue No.	Description	Date Issued
SA161028C01	Original release.	Mar. 07, 2017

1 Certificate of Conformity

Product: pixium 3543 DR & NFC Module

Brand: TRIXELL

Test Model: DHXA-222 & PN7120

Sample Status: Engineering sample

Applicant: TRIXELL

Test Date: Jan. 21 ~ Feb. 23, 2017

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1

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.

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Approved by : *Ken Liu* , **Date:** Mar. 07, 2017
Ken Liu / Senior Manager

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

2.2 MPE Calculation Formula

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

P_d = power density in mW/cm²

P_{out} = 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

3 Calculation Result of Maximum Conducted Power

This is X-ray detector device, it will not be closed to the human bodies while radio operation, so it is declared as a mobile device. However it will be closed to the bodies if using X-ray.

Module DHXA-222					
Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
WLAN 2412~2462	20.21	2.24	20	0.035	1
WLAN 5180~5240	17.78	4.84	20	0.036	1
WLAN 5260~5320	18.21	4.84	20	0.040	1
WLAN 5500~5700	18.26	4.84	20	0.041	1
WLAN 5745~5825	17.42	4.84	20	0.033	1

Note:

2.4GHz: Directional gain = -0.77dBi + 10log(2) = 2.24dBi

5GHz: Directional gain = 1.83dBi + 10log(2) = 4.84dBi

Module PN7120				
Frequency Band (MHz)	Electric field (dBuV/m) @3m	Max Power (dBm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
NFC 13.56	59.10	-36.13	0.00000005	0.978

Conclusion:

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

Module DHXA-222 + Module PN7120 = 0.041/1 + 0.00000005/0.978 = 0.041 < 1

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