

RF Exposure Report

Report No.: SA160509E03B

FCC ID: MQT-200I10YXF

Test Model: xCE_E200I-10YXF

Series Model: xCE_E200I-10NXF, xCE_E200I-10YXX, xCE_E200I-10NXX

Received Date: May 09, 2016

Test Date: June 06, 2016

Issued Date: Aug. 24, 2016

Applicant: XAC AUTOMATION CORP.

Address: 4F, No. 30, INDUSTRY E. RD. IX, SCIENCE-BASED INDUSTRIAL
PARK,HSINCHU,TAIWAN

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

Lab Address: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan R.O.C.



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Release Control Record

Issue No.	Description	Date Issued
SA160509E03B	Original release.	Aug. 24, 2016

1 Certificate of Conformity

Product: Terminal

Brand: XAC

Test Model: xCE_E200I-10YXF

Series Model: xCE_E200I-10NXF, xCE_E200I-10YXX, xCE_E200I-10NXX

Sample Status: ENGINEERING SAMPLE

Applicant: XAC AUTOMATION CORP.

Test Date: June 06, 2016

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 : Midoli Peng , **Date:** Aug. 24, 2016
Midoli Peng / Specialist

Approved by : May Chen , **Date:** Aug. 24, 2016
May Chen / 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				
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

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

Brand	Model	Antenna Type	Connector Type	Antenna Gain(dBi)	Frequency range
INPAQ	ACM3-5036-A1-CC-S	Chip	NA	3	2.4~2.4835GHz 5.15~5.85GHz

3 Calculation Result of Maximum Conducted Power

WLAN

Frequency (MHz)	Conducted Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2412-2462	80.168	3	20	0.03182	1
5180-5240	11.324	3	20	0.00449	1
5260-5320	11.429	3	20	0.00454	1
5500-5700	7.925	3	20	0.00315	1
5745-5825	7.709	3	20	0.00306	1

BT-EDR

Frequency (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2402-2480	11.455	3	20	0.00455	1

BT-LE

Frequency (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2402-2480	4.121	3	20	0.00164	1

Conclusion:

The formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4GHz + BT-EDR = $0.03182/1 + 0.00455/1 = 0.03637$

WLAN 5GHz + BT-EDR = $0.00449/1 + 0.00455/1 = 0.00909$

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

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