

RF Exposure Report

Report No.: SA160509E03

FCC ID: MQT-200I15YXF

Test Model: xCE_E200I-15YXF

Series Model: xCE_E200I-15NXF, xCE_E200I-15YXX, xCE_E200I-15NXX

Received Date: May 09, 2016

Test Date: June 06, 2016

Issued Date: Aug. 12, 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.

Test Location (1): E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan R.O.C.

Test Location (2): No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin
Chu Hsien 307, Taiwan R.O.C.



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Table of Contents

Release Control Record	3
1 Certificate of Conformity	4
2 RF Exposure	5
2.1 Limits for Maximum Permissible Exposure (MPE)	5
2.2 MPE Calculation Formula	5
2.3 Classification	5
2.4 Antenna Gain	5
3 Calculation Result of Maximum Conducted Power	6

Release Control Record

Issue No.	Description	Date Issued
SA160509E03	Original release.	Aug. 12, 2016

1 Certificate of Conformity

Product: Terminal

Brand: XAC

Test Model: xCE_E200I-15YXF

Series Model: xCE_E200I-15NXF, xCE_E200I-15YXX, xCE_E200I-15NXX

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 :



Date:

Aug. 12, 2016

Claire Kuan / Specialist

Approved by :



Date:

Aug. 12, 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

$$Pd = (Pout * G) / (4 * \pi * r^2)$$

where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

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

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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