

# RF EXPOSURE REPORT

**REPORT NO.:** SA140522E04  
**MODEL NO.:** xCE-200T  
**FCC ID:** MQT-XCE200T  
**RECEIVED:** May 22, 2014  
**TESTED:** Aug. 14 to 21, 2014  
**ISSUED:** Sep. 04, 2014

**APPLICANT:** XAC AUTOMATION CORP.

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**ISSUED BY:** Bureau Veritas Consumer Products Services  
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## RELEASE CONTROL RECORD

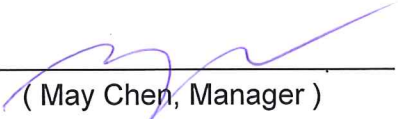
| ISSUE NO.   | REASON FOR CHANGE | DATE ISSUED   |
|-------------|-------------------|---------------|
| SA140522E04 | Original release  | Sep. 04, 2014 |

## 1. CERTIFICATION

**PRODUCT:** Terminal  
**BRAND NAME:** XAC  
**MODEL NO.:** xCE-200T  
**TEST SAMPLE:** ENGINEERING SAMPLE  
**APPLICANT:** XAC AUTOMATION CORP.  
**TESTED DATE:** Aug. 14 to 21, 2014  
**STANDARDS:** FCC Part 2 (Section 2.1091)  
KDB 447498 D03  
IEEE C95.1

The above equipment (Model: xCE-200T) 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. 04, 2014  
( Elsie Hsu, Specialist )

**APPROVED BY :**  , **DATE:** Sep. 04, 2014  
( May Chen, Manager )

## 2. RF EXPOSURE LIMIT

### LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

| FREQUENCY RANGE (MHz)                                 | ELECTRIC FIELD STRENGTH (V/m) | MAGNETIC FIELD STRENGTH (A/m) | POWER DENSITY (mW/cm <sup>2</sup> ) | AVERAGE TIME (minutes) |
|-------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|------------------------|
| LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE |                               |                               |                                     |                        |
| 300-1500                                              | ...                           | ...                           | F/1500                              | 30                     |
| 1500-100,000                                          | ...                           | ...                           | 1.0                                 | 30                     |

F = Frequency in MHz

### 3. MPE CALCULATION FORMULA

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

where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = 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

### 4. 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**.

## 5. ANTENNA GAIN

1. The antenna provided to the EUT, please refer to the following table:

| Brand | Model          | Antenna Gain(dBi) | Frequency range<br>(GHz to GHz) | Antenna<br>Type | Connector Type |
|-------|----------------|-------------------|---------------------------------|-----------------|----------------|
| ACX   | AT3216-T2R4PAA | 1.5               | 2.4~2.5                         | Chip            | NA             |

## 6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

**For WLAN: 15.247(2.4GHz)**

**802.11b**

| FREQUENCY (MHz) | CONDUCTED POWER (mW) | ANTENNA GAIN (dBi) | DISTANCE (cm) | POWER DENSITY (mW/cm <sup>2</sup> ) | LIMIT (mW/cm <sup>2</sup> ) |
|-----------------|----------------------|--------------------|---------------|-------------------------------------|-----------------------------|
| 2412 - 2462     | 70.958               | 1.5                | 20            | 0.01994                             | 1.00                        |

**802.11g**

| FREQUENCY (MHz) | CONDUCTED POWER (mW) | ANTENNA GAIN (dBi) | DISTANCE (cm) | POWER DENSITY (mW/cm <sup>2</sup> ) | LIMIT (mW/cm <sup>2</sup> ) |
|-----------------|----------------------|--------------------|---------------|-------------------------------------|-----------------------------|
| 2412 - 2462     | 181.552              | 1.5                | 20            | 0.05102                             | 1.00                        |

**802.11n (HT20)**

| FREQUENCY BAND (MHz) | CONDUCTED POWER (mW) | ANTENNA GAIN (dBi) | DISTANCE (cm) | POWER DENSITY (mW/cm <sup>2</sup> ) | LIMIT (mW/cm <sup>2</sup> ) |
|----------------------|----------------------|--------------------|---------------|-------------------------------------|-----------------------------|
| 2412 - 2462          | 119.399              | 1.5                | 20            | 0.03355                             | 1.00                        |

**For Bluetooth:**

**GFSK**

| FREQUENCY (MHz) | CONDUCTED POWER (mW) | ANTENNA GAIN (dBi) | DISTANCE (cm) | POWER DENSITY (mW/cm <sup>2</sup> ) | LIMIT (mW/cm <sup>2</sup> ) |
|-----------------|----------------------|--------------------|---------------|-------------------------------------|-----------------------------|
| 2402-2480       | 7.362                | 1.5                | 20            | 0.00207                             | 1.00                        |

**8DPSK**

| FREQUENCY (MHz) | CONDUCTED POWER (mW) | ANTENNA GAIN (dBi) | DISTANCE (cm) | POWER DENSITY (mW/cm <sup>2</sup> ) | LIMIT (mW/cm <sup>2</sup> ) |
|-----------------|----------------------|--------------------|---------------|-------------------------------------|-----------------------------|
| 2402-2480       | 5.188                | 1.5                | 20            | 0.00146                             | 1.00                        |

**BT-LE (GFSK)**

| FREQUENCY (MHz) | CONDUCTED POWER (mW) | ANTENNA GAIN (dBi) | DISTANCE (cm) | POWER DENSITY (mW/cm <sup>2</sup> ) | LIMIT (mW/cm <sup>2</sup> ) |
|-----------------|----------------------|--------------------|---------------|-------------------------------------|-----------------------------|
| 2402 - 2480     | 6.324                | 1.5                | 20            | 0.00178                             | 1.00                        |

--- END ---