

## RF Exposure Report

**Report No.:** SA180503C11B

**FCC ID:** UCC-CX200

**Test Model:** CX200

**Received Date:** May 03, 2018

**Test Date:** Jun. 06, 2018 and Nov. 23, 2018

**Issued Date:** Dec. 10, 2018

**Applicant:** Altai technologies limited

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

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**Test Location:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

**FCC Registration /** 788550 / TW0003  
**Designation Number:**



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### Release Control Record

Issue No.	Description	Date Issued
SA180503C11B	Original release	Dec. 10, 2018

## 1 Certificate of Conformity

**Product:** CX200 Outdoor 2x2 802.11ac Wave 2 AP

**Brand:** Altai

**Test Model:** CX200

**Sample Status:** Engineering sample

**Applicant:** Altai technologies limited

**Test Date:** Jun. 06, 2018 and Nov. 23, 2018

**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 :** Celine Chou , **Date:** Dec. 10, 2018  
Celine Chou / Senior Specialist

**Approved by :** Bruce Chen , **Date:** Dec. 10, 2018  
Bruce Chen / 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 <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

### 2.2 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

### 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**.

### 3 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
CDD Mode					
2412-2462	23.72	8.18	20	0.308	1
5180-5240	16.20	8.18	20	0.055	1
5745-5825	23.18	8.18	20	0.272	1
Beamforming Mode					
2412-2462	20.11	8.18	20	0.134	1
5180-5240	13.19	8.18	20	0.027	1
5745-5825	20.17	8.18	20	0.136	1

Note: Directional gain = 5.17dBi + 10log(2) = 8.18dBi

#### Conclusion:

Both of the WLAN 2.4G & WLAN 5G can transmit simultaneously, the formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

$2.4G + 5G = 0.308 / 1 + 0.272 / 1 = 0.580$

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

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