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# RF EXPOSURE REPORT

**REPORT NO.:** SA131126D16A

**MODEL NO.:** TR10Cxy

**FCC ID:** WL6-TRBC1CD1

**RECEIVED:** Dec. 18, 2013

**TESTED:** Dec. 19, 2013 ~ Jan. 16, 2014

**ISSUED:** Jan. 17, 2014

**APPLICANT:** Elitegroup Computer Systems Co., Ltd

**ADDRESS:** No. 239, Ti Ding Blvd., Sec. 2, Taipei, Taiwan 11493

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

**LAB ADDRESS:** No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist.,  
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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA131126D16A	Original release	Jan. 17, 2014



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# 1. CERTIFICATION

**PRODUCT:** Wireless Motherboard  
**BRAND NAME:** ECS ELITEGROUP  
**MODEL NO.:** TR10Cxy (x=0~9, A~Z or blank or "-";y=0~9, A~Z or blank or "-")  
**APPLICANT:** Elitegroup Computer Systems Co., Ltd  
**TESTED:** Dec. 19, 2013 ~ Jan. 16, 2014  
**TEST SAMPLE:** ENGINEERING SAMPLE  
**STANDARDS:** FCC Part 2 (Section 2.1091)  
FCC OET Bulletin 65, Supplement C (01-01)  
IEEE C95.1

The above equipment has (model no.: TR10CD1) 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 :** Annie Chang , **DATE:** Jan. 17, 2014  
( Annie Chang / Supervisor )

**APPROVED BY :** Rex Lai , **DATE:** Jan. 17, 2014  
( Rex Lai / Assistant 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

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

where

P<sub>d</sub> = power density in mW/cm<sup>2</sup>

P<sub>out</sub> = 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

## 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**.



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## 5. 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> )
2412 ~ 2462	19.99	4.20	20	0.0522	1.00
5180 ~ 5320	9.67	4.20	20	0.0048	1.00
5745 ~ 5825	22.33	4.20	20	0.0895	1.00
2402 ~ 2480	4.31	3.37	20	0.0012	1.00

### CONCLUSION:

Both of the modules 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

1. WLAN (2.4G) + BLUETOOTH =  $0.0522/1 + 0.0012/1 = 0.0534$

2. WLAN (5.0G) + BLUETOOTH =  $0.0895/1 + 0.0012/1 = 0.0907$

Therefore, the maximum calculation of this situation is 0.1441, which is less than the "1" limit.

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