IEEE C95.1 2005
KDB 447498 D01 V06
47 C.F.R. Part 1, Subpart I, Section 1.1310
47 C.F.R. Part 2, Subpart J, Section 2.1091

RF EXPOSURE REPORT

For

Wireless Console Module

Model: Hercules

Trade Name: InnoComm Mobile

Issued to

InnoComm Mobile Technology Corp.
3F, No. 6, Hsin Ann Rd., Hsinchu Science Park, Hsinchu , Taiwan , 30078

Issued by

Compliance Certification Services Inc.
No.11, Wugong 6th Rd., Wugu Dist.,
New Taipei City 24891, Taiwan. (R.O.C.)
http://www.ccsrf.com
Issued Date: September 18, 2018

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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	September 18, 2018	Initial Issue	ALL	May Lin

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1. TEST RESULT CERTIFICATION

We hereby certify that:

The above equipment was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10: 2013 and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules Part 15.207, 15.209, 15.247.

The test results of this report relate only to the tested sample EUT identified in this report.

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
IEEE C95.1 2005 KDB 447498 D03 47 C.F.R. Part 1, Subpart I, Section 1.1310 47 C.F.R. Part 2, Subpart J, Section 2.1091	No non-compliance noted

Approved by:

Sam Chuang
Manager
Compliance Certification Services Inc.

Reporter:

May Lin
Report coordinator
Compliance Certification Services Inc.

2. LIMIT

According to §15.247(i), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this chapter.

3. EUT SPECIFICATION

<table>
<tr><td>EUT</td><td>Wireless Console Module</td></tr>
<tr><td>Model</td><td>Hercules</td></tr>
<tr><td>Trade Name</td><td>InnoComm Mobile</td></tr>
<tr><td>Model Discrepancy</td><td>N/A</td></tr>
<tr><td>Frequency band (Operating)</td><td>☒ EDR / 4.0: 2402 ~ 2480 MHz
IEEE 802.11b/g/n HT20: 2.412GHz ~ 2.462GHz
IEEE 802.11n HT40: 2.422GHz ~ 2.452GHz
IEEE 802.11a/n HT20: 5180MHz ~ 5240MHz / 5745MHz ~ 5825MHz
IEEE 802.11n HT40: 5190MHz ~ 5230MHz / 5755MHz ~ 5795MHz
Ant+: 2402 ~ 2480 MHz
☐ Others</td></tr>
<tr><td>Device category</td><td>☐ Portable (<20cm separation)
☒ Mobile (>20cm separation)
☐ Others</td></tr>
<tr><td>Exposure classification</td><td>☐ Occupational/Controlled exposure (S = 5mW/cm^2)
☒ General Population/Uncontrolled exposure (S=1mW/cm^2)</td></tr>
<tr><td>Antenna Specification</td><td>Bluetooth : Antenna Gain : 3.76 dBi (Numeric gain: 2.38)
2.4GHz : Antenna Gain : 3.76 dBi (Numeric gain: 2.38)
5GHz : Antenna Gain : 4.66 dBi (Numeric gain: 2.92)
Ant+ : Antenna Gain : 3.67 dBi (Numeric gain: 2.33)</td></tr>
<tr><td>Max tune up Power</td><td><table>
<tr><td>Bluetooth:</td><td>1.50 dBm</td><td>(1.413 mW)</td></tr>
<tr><td>IEEE 802.11b Mode:</td><td>18.50 dBm</td><td>(70.795 mW)</td></tr>
<tr><td>IEEE 802.11g Mode:</td><td>16.00 dBm</td><td>(39.811 mW)</td></tr>
<tr><td>IEEE 802.11n HT 20 Mode:</td><td>16.00 dBm</td><td>(39.811 mW)</td></tr>
<tr><td>IEEE 802.11n HT 40 Mode:</td><td>17.50 dBm</td><td>(56.234 mW)</td></tr>
<tr><td>IEEE 802.11a Mode:</td><td>16.00 dBm</td><td>(39.811 mW)</td></tr>
<tr><td>IEEE 802.11n HT 20 Mode:</td><td>16.00 dBm</td><td>(39.811 mW)</td></tr>
<tr><td>IEEE 802.11n HT 40 Mode:</td><td>16.00 dBm</td><td>(39.811 mW)</td></tr>
<tr><td>Ant+ Mode:</td><td>-9.00 dBm</td><td>(0.126 mW)</td></tr>
</table></td></tr>
<tr><td>Evaluation applied</td><td>☒ MPE Evaluation*
☐ SAR Evaluation
☐ N/A</td></tr>
</table>

Notes: For Bluetooth、WIFI and Ant+ could not be use as transmit/receive at the same time.

4. TEST RESULTS

No non-compliance noted.

Calculation

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{377}$

Where E = Field strength in Volts / meter
P = Power in Watts
G = Numeric antenna gain
d = Distance in meters
S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377 d^2}$$

Changing to units of mW and cm, using:

P (mW) = P (W) / 1000 and

d (cm) = d(m) / 100

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$ ***Equation 1***

Where d = Distance in cm
P = Power in mW
G = Numeric antenna gain
S = Power density in mW / cm²

5. MAXIMUM PERMISSIBLE EXPOSURE

Substituting the MPE safe distance using d = 20 cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where P = Power in mW
G = Numeric antenna gain
S = Power density in mW / cm²

Bluetooth mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm^2)
0	2402	1.413	2.38	20	0.0007	1

IEEE 802.11b mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm^2)
6	2437	70.795	2.38	20	0.0335	1

IEEE 802.11g mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm^2)
6	2437	39.811	2.38	20	0.0189	1

IEEE 802.11n HT20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm^2)
6	2437	39.811	2.38	20	0.0189	1

IEEE 802.11n HT40 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm^2)
6	2437	56.234	2.38	20	0.0266	1

IEEE 802.11 a mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
165	5825	39.811	2.92	20	0.0231	1

IEEE 802.11 n HT20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
165	5825	39.811	2.92	20	0.0231	1

IEEE 802.11 n HT40 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
151	5755	39.811	2.92	20	0.0231	1

Ant+ Mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
79	2480	0.126	2.33	20	0.0001	1

--End of Report--