

# **FCC RF EXPOSURE REPORT**

**FCC ID: WS2-WG1400-00**

**Project No. : 1510110**  
**Equipment : Wireless module**  
**Model : WG1400-00**  
**Applicant : Jorjin Technologies Inc.**  
**Address : 17F, No.239, Sec.1, Datong Rd., Xizhi Dist. New Taipei City Taiwan**  
**According: : FCC Guidelines for Human Exposure IEEE C95.1**

**BTL Inc.**

**B1, No. 37, Lane 365, YangGuang St., NeiHu District 114, Taipei, Taiwan**

**TEL : (0769) 8318-3000 FAX : (0769) 8319-6000**

## MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi^2} = \frac{EIRP}{4\pi^2}$$

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Table for Filed Antenna

Group 1

| Ant. | Brand  | Model Name | Antenna Type | Connector | Gain (dBi) |
|------|--------|------------|--------------|-----------|------------|
| 1    | WIESON | N/A        | Dipole       | I-PEX     | 2.45       |

Group 2

| Ant. | Brand                                                                                                           | Model Name     | Antenna Type | Connector | Gain (dBi) |
|------|-----------------------------------------------------------------------------------------------------------------|----------------|--------------|-----------|------------|
| 1    |  Unictron Technologies Corp. | H2B1BE1A1B0200 | PCB          | I-PEX     | 3.73       |

Group 3

| Ant. | Brand | Model Name | Antenna Type | Connector | Gain (dBi) |
|------|-------|------------|--------------|-----------|------------|
| 1    | N/A   | N/A        | Printed      | N/A       | -6.78      |

Note: There are three kinds of antennas, one dipole antenna, one PCB antenna and one printed antenna, but operating in a mode where only one transmit/receive chain is used.

## TEST RESULTS

|                |                             |                    |           |
|----------------|-----------------------------|--------------------|-----------|
| EUT :          | Wireless module             | Model Name :       | WG1400-00 |
| Temperature :  | 25 °C                       | Relative Humidity: | 55 %      |
| Test Voltage : | AC 120V/60Hz                |                    |           |
| Test Mode :    | TX B MODE /CH01, CH06, CH11 |                    |           |

| Antenna Gain (dBi) | Antenna Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 3.73               | 2.3605                 | 17.75                   | 59.5662                | 0.02798661                              | 1                                                | Complies    |
| 3.73               | 2.3605                 | 18.02                   | 63.3870                | 0.02978176                              | 1                                                | Complies    |
| 3.73               | 2.3605                 | 17.52                   | 56.4937                | 0.02654302                              | 1                                                | Complies    |

|                |                             |                    |           |
|----------------|-----------------------------|--------------------|-----------|
| EUT :          | Wireless module             | Model Name :       | WG1400-00 |
| Temperature :  | 25 °C                       | Relative Humidity: | 55 %      |
| Test Voltage : | AC 120V/60Hz                |                    |           |
| Test Mode :    | TX G MODE /CH01, CH06, CH11 |                    |           |

| Antenna Gain (dBi) | Antenna Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 3.73               | 2.3605                 | 20.12                   | 102.8016               | 0.04830036                              | 1                                                | Complies    |
| 3.73               | 2.3605                 | 20.68                   | 116.9499               | 0.05494781                              | 1                                                | Complies    |
| 3.73               | 2.3605                 | 20.29                   | 106.9055               | 0.05022852                              | 1                                                | Complies    |

|                |                                        |                    |           |
|----------------|----------------------------------------|--------------------|-----------|
| EUT :          | Wireless module                        | Model Name :       | WG1400-00 |
| Temperature:   | 25 °C                                  | Relative Humidity: | 55 %      |
| Test Voltage : | AC 120V/60Hz                           |                    |           |
| Test Mode :    | TX N-20M MODE_ Total /CH01, CH06, CH11 |                    |           |

| Antenna Gain (dBi) | Antenna Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 3.73               | 2.3605                 | 20.11                   | 102.5652               | 0.04818927                              | 1                                                | Complies    |
| 3.73               | 2.3605                 | 20.41                   | 109.9006               | 0.05163574                              | 1                                                | Complies    |
| 3.73               | 2.3605                 | 20.17                   | 103.9920               | 0.04885965                              | 1                                                | Complies    |

Note: the calculated distance is 20 cm.