

Radio Exposure Evaluation Report

FCC ID : 2AEUPBHASC052
Equipment : Stick Up Cam Elite
Brand Name : Ring LLC
Model Name : Stick Up Cam Wired
Applicant : Ring LLC
: 1523 26th St, Santa Monica, CA 90404, USA
Manufacturer : Chicony Electronics Co.,Ltd.
: No.69, Sec. 2, Guangfu Rd., Sanchong Dist. New Taipei
City 241 Taiwan
Standard : 47 CFR Part 2.1091

The product was received on Jun. 01, 2018, and testing was started from Jun. 17, 2018 and completed on Sep. 24, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in 47 CFR Part 2.1091 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of United States government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.



Approved by: Allen Lin

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



Table of Contents

HISTORY OF THIS TEST REPORT3

1 GENERAL DESCRIPTION4

1.1 EUT General Information4

1.2 Testing Location4

1.3 Table for Existing Change4

2 MAXIMUM PERMISSIBLE EXPOSURE5

2.1 Limit of Maximum Permissible Exposure5

2.2 MPE Calculation Method5

2.3 Calculated Result and Limit6

Photographs of EUT V01



History of this test report

| Report No. | Version | Description | Issued Date |
|-------------|---------|--|---------------|
| FA852814-03 | 01 | Initial issue of report | Oct. 04, 2019 |
| FA852814-03 | 02 | The Manufacturer information was update This report is the latest version replacing for the report issued on Oct. 04, 2019 | Oct. 16, 2019 |
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Reviewed by: Sam Tsai

Report Producer: Debby Hung

1 General Description

1.1 EUT General Information

| RF General Information | | | |
|------------------------|------------------------|---------------------------|---|
| Evaluation Mode | Frequency Range (MHz) | Operating Frequency (MHz) | Modulation Type |
| 2.4GHz WLAN | 2400-2483.5 | 2412-2462 | 802.11b: DSSS (DBPSK, DQPSK, CCK) 802.11g/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) |
| 5GHz WLAN | 5150-5250 5725-5850 | 5180-5240 5745-5825 | 802.11a/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) |
| Bluetooth | 2400-2483.5 | 2402-2480 | LE: DSSS (GFSK) |

1.2 Testing Location

| Testing Location | | | |
|--|--------|--|----------------------|
| <input checked="" type="checkbox"/> | HWA YA | ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) | |
| | | TEL : 886-3-327-3456 | FAX : 886-3-327-0973 |
| Test site Designation No. TW1190 with FCC. | | | |
| <input type="checkbox"/> | JHUBEI | ADD : No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County, Taiwan (R.O.C.) | |
| | | TEL : 886-3-656-9065 | FAX : 886-3-656-9085 |
| Test site Designation No. TW0006 with FCC. | | | |

1.3 Table for Existing Change

This product is an extension of original one reported under Sporton project number: FA852814-02

Below is the table for the change of the product with respect to the original one.

| Modifications | Performance Checking |
|---|----------------------|
| Two PoE Adapter and Ethernet Cable was added. | N/A |

2 Maximum Permissible Exposure

2.1 Limit of Maximum Permissible Exposure

(A) Limits for Occupational / Controlled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm ²) | Averaging Time E ² , H ² or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|--|--|
| 0.3-3.0 | 614 | 1.63 | (100)* | 6 |
| 3.0-30 | 1842 / f | 4.89 / f | (900 / f ²)* | 6 |
| 30-300 | 61.4 | 0.163 | 1.0 | 6 |
| 300-1500 | - | - | F/300 | 6 |
| 1500-100,000 | - | - | 5 | 6 |

(B) Limits for General Population / Uncontrolled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm ²) | Averaging Time E ² , H ² or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|--|--|
| 0.3-1.34 | 614 | 1.63 | (100)* | 30 |
| 1.34-30 | 824/f | 2.19/f | (180/f ²)* | 30 |
| 30-300 | 27.5 | 0.073 | 0.2 | 30 |
| 300-1500 | - | - | F/1500 | 30 |
| 1500-100,000 | - | - | 1.0 | 30 |

Note: f = frequency in MHz ; *Plane-wave equivalent power density

2.2 MPE Calculation Method

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

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



2.3 Calculated Result and Limit

Exposure Environment: General Population / Uncontrolled Exposure

Wi-Fi 2.4G Function:

| Mode | DG (dBi) | Power (dBm) | EIRP (dBm) | Tolerance (dB) | Tune-up EIRP (dBm) | Tune-up EIRP (W) | Distance (cm) | S (mW/cm ²) | S Limit (mW/cm ²) |
|----------|----------|-------------|------------|----------------|--------------------|------------------|---------------|-------------------------|-------------------------------|
| 2.4G;G1D | 0.94 | 19.75 | 20.69 | 0.50 | 21.19 | 0.13152 | 20 | 0.02617 | 1.00000 |
| 2.4G;D1D | 0.94 | 18.63 | 19.57 | 0.50 | 20.07 | 0.10162 | 20 | 0.02022 | 1.00000 |

Wi-Fi BT Function:

| Mode | DG (dBi) | Power (dBm) | EIRP (dBm) | Tolerance (dB) | Tune-up EIRP (dBm) | Tune-up EIRP (W) | Distance (cm) | S (mW/cm ²) | S Limit (mW/cm ²) |
|------------|----------|-------------|------------|----------------|--------------------|------------------|---------------|-------------------------|-------------------------------|
| 2.4G;BT-LE | 0.69 | 6.51 | 7.20 | 0.50 | 7.70 | 0.00589 | 20 | 0.00117 | 1.00000 |

Wi-Fi 5G Function:

| Mode | DG (dBi) | Power (dBm) | EIRP (dBm) | Tolerance (dB) | Tune-up EIRP (dBm) | Tune-up EIRP (W) | Distance (cm) | S (mW/cm ²) | S Limit (mW/cm ²) |
|----------|----------|-------------|------------|----------------|--------------------|------------------|---------------|-------------------------|-------------------------------|
| 5.2G;D1D | 2.77 | 17.44 | 20.21 | 0.50 | 20.71 | 0.11776 | 20 | 0.02343 | 1.00000 |
| 5.8G;D1D | 3.12 | 16.86 | 19.98 | 0.50 | 20.48 | 0.11169 | 20 | 0.02222 | 1.00000 |

————THE END————