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Report No.: T200521W01-MF Rev.: 01

## 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

#### RF EXPOSURE REPORT

For

**Tablet** 

Model: MP21-ARGON-C

Trade Name: ICON/iFit

Issued to

Compal Electronics Inc
No.581 & 581-1, Ruiguang Rd., Neihu District, Taipei city, 11492 Taiwan

Issued by

Compliance Certification Services Inc.
Wugu Laboratory

No.11, Wugong 6th Rd., Wugu Dist., New Taipei City, Taiwan. (R.O.C.) Issue Date: July 13, 2020

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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# **Revision History**

| Rev. | Issue Date    | Revisions                       | Effect Page | Revised By   |
|------|---------------|---------------------------------|-------------|--------------|
| 00   | July 10, 2020 | Initial Issue                   | ALL         | Allison Chen |
| 01   | July 13, 2020 | See the following note Rev.(01) | P.7, P.9    | Allison Chen |

#### Rev.(01)

<sup>1.</sup> Revised max. measurement average power.



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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   |                             |  |  |  |  |  |  |  |
| KDB 447498 D03   |                             |  |  |  |  |  |  |  |
| 47 C.F.R. Part 1, Subpart I, Section 1.1310  | No non-compliance noted     |  |  |  |  |  |  |  |
| 47 C.F.R. Part 2, Subpart J, Section 2.1091  |                             |  |  |  |  |  |  |  |
| Statements of Conformity   |                             |  |  |  |  |  |  |  |
| Determination of compliance is based on the results of the compliance measurement, |                             |  |  |  |  |  |  |  |
| not taking into account measurement i  | nstrumentation uncertainty. |  |  |  |  |  |  |  |

Approved by:

Kevin Tsai

**Deputy Manager** 

Compliance Certification Services Inc.

Konil Tson



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## 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.



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## 3. EUT SPECIFICATION

| EUT                        | Tablet   |  |  |  |  |  |  |
|----------------------------|--|--|--|--|--|--|--|
| Model                      | MP21-ARGON-C   |  |  |  |  |  |  |
| Model<br>Discrepancy       | N/A  |  |  |  |  |  |  |
| Frequency band (Operating) | <ul> <li>☑ Bluetooth: 2402MHz-2480MHz</li> <li>☑ 802.11b/g/n HT20: 2412MHz ~ 2462 MHz</li> <li>☑ 802.11n HT40: 2422MHz ~ 2452MHz</li> <li>☑ 802.11a/n HT20: 5180MHz ~ 5240MHz / 5260 ~ 5320MHz</li> <li>□ 5500 ~ 5700MHz / 5745MHz ~ 5825MHz</li> <li>802.11n HT40: 5190MHz ~ 5230MHz / 5270 ~ 5310MHZ</li> <li>□ 5510 ~ 5670MHz / 5755MHz ~ 5795MHz</li> <li>□ 802.11ac VHT80: 5210MHz / 5290MHz /</li> <li>□ 5530 MHz~5610MHz / 5775MHz</li> <li>□ Others</li> </ul> |  |  |  |  |  |  |
| Device category            | <ul><li>□ Portable (&lt;20cm separation)</li><li>□ Mobile (&gt;20cm separation)</li><li>□ Others</li></ul>   |  |  |  |  |  |  |
| Exposure classification    | <ul> <li>☐ Occupational/Controlled exposure (S = 5mW/cm²)</li> <li>☐ General Population/Uncontrolled exposure (S=1mW/cm²)</li> </ul>   |  |  |  |  |  |  |
| Antenna<br>Specification   | PIFA Antenna  BT & WIFI 2.4GHz: 1.37 dBi WIFI 5GHz: 0.19 dBi  BT: Directional Gain: 1.37 dBi (Numeric gain: 1.37) Worst 2.4GHz: Directional Gain: 1.37 dBi (Numeric gain: 1.37) Worst 5GHz: Directional Gain: 0.19 dBi (Numeric gain: 1.04) Worst  |  |  |  |  |  |  |





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|                    | BT                       | 3.48 dBm  | (2.228 mW)  |
|--------------------|--------------------------|-----------|-------------|
|                    | 2.4GHz                   |           |             |
|                    | IEEE 802.11b Mode:       | 18.22 dBm | (66.374 mW) |
| Maximum            | IEEE 802.11g Mode:       | 16.05 dBm | (40.272 mW) |
| Measurement        | IEEE 802.11n HT 20 Mode: | 17.87 dBm | (61.235 mW) |
| Average Power      | IEEE 802.11n HT 40 Mode: | 18.54 dBm | (71.450 mW) |
|                    | 5GHz                     |           |             |
|                    | IEEE 802.11a Mode:       | 16.43 dBm | (43.954 mW) |
|                    | IEEE 802.11n HT 20 Mode: | 16.34 dBm | (43.053 mW) |
|                    | IEEE 802.11n HT 40 Mode: | 16.46 dBm | (44.259 mW) |
|                    |                          |           |             |
|                    | BT                       | 4.50 dBm  | (2.818 mW)  |
|                    | 2.4GHz                   |           |             |
|                    | IEEE 802.11b Mode:       | 19.00 dBm | (79.433 mW) |
| Maximum            | IEEE 802.11g Mode:       | 17.00 dBm | (50.119 mW) |
|                    | IEEE 802.11n HT 20 Mode: | 18.50 dBm | (70.795 mW) |
| tune up power      | IEEE 802.11n HT 40 Mode: | 19.50 dBm | (89.125 mW) |
|                    | 5GHz                     |           |             |
|                    | IEEE 802.11a Mode:       | 17.00 dBm | (50.119 mW) |
|                    | IEEE 802.11n HT 20 Mode: | 17.50 dBm | (56.234 mW) |
|                    | IEEE 802.11n HT 40 Mode: | 17.50 dBm | (56.234 mW) |
| Evaluation applied | <ul><li></li></ul>       |           |             |



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## 4. TEST RESULTS

No non-compliance noted.

### **Calculation**

Given

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

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

 $S = Power density in mW / cm^2$ 



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## 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

 $S = Power density in mW / cm^2$ 

#### BT:

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm <sup>2</sup> | Limit (mW/cm2) |
|-----|-----------|--------|-------------|--------|---------------------------------------|----------------|
| 39  | 2441      | 2.818  | 1.37        | 20     | 0.0008                                | 1              |

#### **IEEE 802.11b mode:**

|   | Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm <sup>2</sup> | Limit (mW/cm2) |
|---|-----|-----------|--------|-------------|--------|---------------------------------------|----------------|
| I | 6   | 2437      | 79.433 | 1.37        | 20     | 0.0217                                | 1              |

### **IEEE 802.11g mode:**

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm <sup>2</sup> | Limit (mW/cm2) |
|-----|-----------|--------|-------------|--------|---------------------------------------|----------------|
| 6   | 2437      | 50.119 | 1.37        | 20     | 0.0137                                | 1              |

#### **IEEE 802.11n HT20 mode:**

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm <sup>2</sup> | Limit (mW/cm2) |
|-----|-----------|--------|-------------|--------|---------------------------------------|----------------|
| 11  | 2462      | 70.795 | 1.37        | 20     | 0.0193                                | 1              |

#### IEEE 802.11n HT40 mode:

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm <sup>2</sup> | Limit (mW/cm2) |
|-----|-----------|--------|-------------|--------|---------------------------------------|----------------|
| 6   | 2437      | 89.125 | 1.37        | 20     | 0.0243                                | 1              |

#### **IEEE 802.11a mode:**

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm <sup>2</sup> | Limit (mW/cm2) |
|-----|-----------|--------|-------------|--------|---------------------------------------|----------------|
| 36  | 5180      | 50.119 | 1.04        | 20     | 0.0104                                | 1              |

#### IEEE 802.11n HT20 mode:

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm <sup>2</sup> | Limit (mW/cm2) |
|-----|-----------|--------|-------------|--------|---------------------------------------|----------------|
| 36  | 5180      | 56.234 | 1.04        | 20     | 0.0116                                | 1              |

## IEEE 802.11n HT40 mode:

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm <sup>2</sup> | Limit (mW/cm2) |
|-----|-----------|--------|-------------|--------|---------------------------------------|----------------|
| 110 | 5550      | 56.234 | 1.04        | 20     | 0.0116                                | 1              |

#### -- End of Report--