# RF Exposure Report

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|---|---|
| **Report No.:** | SA200312E01 |
| **FCC ID:** | SWX-AF60LR |
| **Test Model:** | AF60-LR |
| **Received Date:** | Aug. 16, 2019 |
| **Test Date:** | Apr. 20, 2020 |
| **Issued Date:** | May 08, 2020 |
| **Applicant:** | Ubiquiti Inc. |
| **Address:** | 685 Third Avenue, New York, New York 10017 USA |
| **Issued By:** | Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory |
| **Lab Address:** | E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan |
| **Test Location:** | E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan |
| **FCC Registration / Designation Number:** | 723255 / TW2022 |

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## Release Control Record

| Issue No. | Description | Date Issued |
|---|---|---|
| SA200312E01 | Original release. | May 08, 2020 |

## 1 Certificate of Conformity

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|---|---|
| **Product:** | airFiber 60 LR |
| **Brand:** | UBIQUITI |
| **Test Model:** | AF60-LR |
| **Sample Status:** | ENGINEERING SAMPLE |
| **Applicant:** | Ubiquiti Inc. |
| **Test Date:** | Apr. 20, 2020 |
| **Standards:** | FCC Part 2 (Section 2.1091)<br>IEEE C95.3 -2002 |
| **References Test Guidance:** | KDB 447498 D01 General RF Exposure Guidance v06 |

The above equipment has 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 :** Joyce Kuo , **Date:** May 08, 2020

Joyce Kuo / Specialist

**Approved by :** , **Date:** May 08, 2020

Clark Lin / Technical Manager

## 2 RF Exposure

### 2.1 Limits for Maximum Permissible Exposure (MPE)

| Frequency Range (MHz) | Electric Field Strength (V/m) | Magnetic Field Strength (A/m) | Power Density ($mW/cm^2$) | Average Time (minutes) |
|---|---|---|---|---|
| Limits For General Population / Uncontrolled Exposure | | | | |
| 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 |

f = Frequency in MHz ; *Plane-wave equivalent power density

### 2.2 MPE Calculation Formula

$Pd = (Pout*G) / (4*pi*r^2)$

where

Pd = power density in $mW/cm^2$

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

### 2.3 Classification

The antenna of this product, under normal use condition, is at least 110 cm away from the body of the user.

## 2.4 Calculation Result

| Operation Mode | Evaluation Frequency (MHz) | Max.Avg. EIRP (dBm) | Max. EIRP (mW) | Distance (cm) | Power Density ($mW/cm^2$) | Limit ($mW/cm^2$) |
|---|---|---|---|---|---|---|
| BT-LE | 2480 | 7.09 | 5.117 | 110 | 0.00003 | 1 |
| Wigig | 69120 | 51.25 | 133352.1432 | 110 | 0.87701 | 1 |

**Conclusion:**

The formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

**Simultaneously transmission condition:**

BT-LE+ Wigig = 0.00003 / 1 +0.87701 / 1 = 0.87704

**Therefore the maximum calculations of above situations are less than the "1" limit.**

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