

# RF EXPOSURE REPORT

**REPORT NO.:** SA140825C09

**MODEL NO.:** WZR-450HP2D

**FCC ID:** FDI000000026

**RECEIVED:** Jul. 25, 2014

**TESTED:** Aug. 20 ~ Sep. 10, 2014

**ISSUED:** Sep. 12, 2014

**APPLICANT:** Buffalo Inc.

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**ISSUED BY:** Bureau Veritas Consumer Products Services  
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## RELEASE CONTROL RECORD

| ISSUE NO.   | REASON FOR CHANGE | DATE ISSUED   |
|-------------|-------------------|---------------|
| SA140825C09 | Original release. | Sep. 12, 2014 |

## 1. CERTIFICATION

**PRODUCT:** AirStation  
**MODEL:** WZR-450HP2D  
**BRAND:** BUFFALO  
**TRADE NAME:** Buffalo Inc.  
**APPLICANT:** Buffalo Inc.  
**TESTED:** Aug. 20 ~ Sep. 10, 2014  
**TEST SAMPLE:** ENGINEERING SAMPLE  
**STANDARDS:** FCC Part 2 (Section 2.1091)  
KDB 447498 D03  
IEEE C95.1

The above equipment (Model: WZR-450HP2D) 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 :** Polly Chien , **DATE :** Sep. 12, 2014  
Polly Chien / Specialist

**APPROVED BY :** Ken Liu , **DATE :** Sep. 12, 2014  
Ken Liu / Senior 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 <sup>2</sup> ) | AVERAGE TIME (minutes) |
|-------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|------------------------|
| LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE |                               |                               |                                     |                        |
| 300-1500                                              | ...                           | ...                           | F/1500                              | 30                     |
| 1500-100,000                                          | ...                           | ...                           | 1.0                                 | 30                     |

F = Frequency in MHz

### 2.2 MPE CALCULATION FORMULA

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = 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 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

### 2.4 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

| MAX POWER (dBm) | ANTENNA GAIN (dBi) | DISTANCE (cm) | POWER DENSITY (mW/cm <sup>2</sup> ) | LIMIT (mW/cm <sup>2</sup> ) |
|-----------------|--------------------|---------------|-------------------------------------|-----------------------------|
| 26.72           | 9.51               | 20            | 0.835                               | 1                           |

**NOTE:** Directional gain = 4.74dBi + 10log(3) = 9.51dBi