



# RF EXPOSURE REPORT

**REPORT NO.:** SA991103C11

**MODEL NO.:** WZR-HP-AG300H

**FCC ID:** FDI-09101889-0

**ACCORDING:** FCC Guidelines for Human Exposure  
IEEE C95.1

**APPLICANT:** Buffalo Inc.

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**ISSUED BY:** Bureau Veritas Consumer Products Services  
(H.K.) Ltd., Taoyuan Branch

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**TEST LOCATION:** No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei  
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R.O.C.

## 1. RF EXPOSURE LIMIT

### 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)
<b>LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE</b>				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

## 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

## 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**.

#### 4. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

MODULATION MODE	FREQUENCY BAND (MHz)	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
802.11b	2412-2462	19.4	6.14	20	0.071	1
802.11g	2412-2462	29.6	6.14	20	0.746	1
802.11n (20MHz)	2412-2462	29.7	3.13	20	0.382	1
802.11n (40MHz)	2422-2452	27.2	3.13	20	0.215	1
802.11a	5180-5240	15.6	6.04	20	0.029	1
802.11n (20MHz)	5180-5240	15.4	3.03	20	0.014	1
802.11n (40MHz)	5190-5230	15.3	3.03	20	0.014	1
802.11a	5745-5825	29.6	6.05	20	0.731	1
802.11n (20MHz)	5745-5825	29.6	3.04	20	0.365	1
802.11n (40MHz)	5755-5795	29.5	3.04	20	0.357	1

**NOTE:**

**For 2.4GHz Band (802.11b/802.11g):** Directional gain =  $3.13\text{dBi} + 10\log(2) = 6.14\text{dBi} > 6\text{dBi}$

**For 5.180 ~ 5.240GHz Band (802.11a):** Directional gain =  $3.03\text{dBi} + 10\log(2) = 6.04\text{dBi} > 6\text{dBi}$

**For 5.745 ~ 5.825GHz Band (802.11a):** Directional gain =  $3.04\text{dBi} + 10\log(2) = 6.05\text{dBi} > 6\text{dBi}$