

## RF Exposure Report

**Report No.:** SA160910C09A

**FCC ID:** ACQ-WVB2R0-34

**Test Model:** WVB2

**Received Date:** Dec. 09, 2016

**Test Date:** Dec. 09, 2016 ~ Mar. 15, 2017

**Issued Date:** Mar. 16, 2017

**Applicant:** ARRIS Group, Inc.

**Address:** 101 Tournament Drive, Horsham, Pennsylvania, United States, 19044

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

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.

**Test Location:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)



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### Release Control Record

Issue No.	Description	Date Issued
SA160910C09A	Original release.	Mar. 16, 2017

## 1 Certificate of Conformity

**Product:** Wireless Gateway

**Brand:** Arris

**Test Model:** WVB2

**Sample Status:** Engineering sample

**Applicant:** ARRIS Group, Inc.

**Test Date:** Dec. 09, 2016 ~ Mar. 15, 2017

**Standards:** FCC Part 2 (Section 2.1091)  
KDB 447498 D01 General RF Exposure Guidance v06  
IEEE C95.1-1992

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 :** , **Date:** Mar. 16, 2017  
Polly Chien / Specialist

**Approved by :** , **Date:** Mar. 16, 2017  
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**.

### 3 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
CDD mode: Mode F (4T2S)					
5180-5240	27.78	1.5	20	0.169	1
5260-5320	23.91	1.1	20	0.063	1
5500-5720	23.74	2.2	20	0.078	1
5745-5825	27.58	2.8	20	0.217	1
CDD mode: Mode G (4T3S)					
5180-5240	28.27	1.5	20	0.189	1
5260-5320	23.98	1.1	20	0.064	1
5500-5720	23.96	2.2	20	0.082	1
5745-5825	27.51	2.8	20	0.214	1
Beamforming mode: Mode F (4T2S)					
5180-5240	27.75	4.5	20	0.334	1
5260-5320	23.91	4.1	20	0.126	1
5500-5720	23.92	5.2	20	0.162	1
5745-5825	27.54	5.8	20	0.429	1
Beamforming mode: Mode G (4T3S)					
5180-5240	28.27	2.7	20	0.249	1
5260-5320	23.98	2.3	20	0.084	1
5500-5720	23.96	3.4	20	0.108	1
5745-5825	27.49	4	20	0.280	1

**Note:**

CDD mode: Mode F (4T2S) and Mode G (4T3S)

5180-5320MHz: Directional gain = 1.5dBi

5260-5320MHz: Directional gain = 1.1dBi

5500~5720MHz: Directional gain = 2.2dBi

5745~5825MHz: Directional gain = 2.8dBi

Beamforming mode: Mode F (4T2S)

5180-5324MHz: Directional gain = 4.5dBi

5260-5320MHz: Directional gain = 4.1dBi

5500~5720MHz: Directional gain = 5.2dBi

5745~5825MHz: Directional gain = 5.8dBi

Beamforming mode: Mode G (4T3S)

5180-5320MHz: Directional gain = 2.7dBi

5260-5320MHz: Directional gain = 2.3dBi

5500~5720MHz: Directional gain = 3.4dBi

5745~5825MHz: Directional gain = 4dBi

**---END---**