

## RF Exposure Report

**Report No.:** SA160910C09

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

**Test Model:** WVB2

**Received Date:** Jul. 28, 2016

**Test Date:** Aug. 02 ~ Dec. 27, 2016

**Issued Date:** Jan. 03, 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
SA160910C09	Original release.	Jan. 03, 2017

## 1 Certificate of Conformity

**Product:** Wireless Gateway  
**Brand:** Arris  
**Test Model:** WVB2  
**Sample Status:** Engineering sample  
**Applicant:** ARRIS Group, Inc.  
**Test Date:** Aug. 02 ~ Dec. 27, 2016  
**Standards:** FCC Part 2 (Section 2.1091)  
KDB 447498 D01 (October 23, 2015)  
IEEE C95.1

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:** Jan. 03, 2017  
Polly Chien / Specialist

**Approved by :** , **Date:** Jan. 03, 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

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

where

Pd = power density in mW/cm<sup>2</sup>

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 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 A (4T1S)					
5180-5240	28.86	1.5	20	0.216	1
5260-5320	23.21	1.1	20	0.054	1
5500-5720	23.86	2.2	20	0.080	1
5745-5825	29.25	2.8	20	0.319	1
CDD mode: Mode E (4T4S)					
5180-5240	28.17	1.5	20	0.184	1
5260-5320	23.97	1.1	20	0.064	1
5500-5720	23.99	2.2	20	0.083	1
5745-5825	27.37	2.8	20	0.207	1
Beamforming mode: Mode A (4T1S)					
5180-5240	24.61	7.5	20	0.323	1
5260-5320	21.48	7.1	20	0.143	1
5500-5720	21.59	8.2	20	0.190	1
5745-5825	26.94	8.7	20	0.729	1
Beamforming mode: Mode E (4T4S)					
5180-5240	28.13	1.5	20	0.183	1
5260-5320	23.96	1.1	20	0.064	1
5500-5720	23.93	2.2	20	0.082	1
5745-5825	27.33	2.8	20	0.205	1

Note:

CDD mode: Mode A (4T1S) & Mode E (4T4S)

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 A (4T1S)

5180-5324MHz: Directional gain = 7.5dBi

5260-5320MHz: Directional gain = 7.1dBi

5500~5720MHz: Directional gain = 8.2dBi

5745~5825MHz: Directional gain = 8.7dBi

Beamforming mode: Mode E (4T4S)

5180-5320MHz: Directional gain = 1.5dBi

5260-5320MHz: Directional gain = 1.1dBi

5500~5720MHz: Directional gain = 2.2dBi

5745~5825MHz: Directional gain = 2.8dBi

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