RF Exposure Report

Report No.:	SA160323C19
FCC ID:	GZ5NVG37XXR2
Test Model:	NVG378QR2
Series Model:	NVG373QR2
Received Date:	Mar. 22, 2016
Test Date:	Apr. 28 ~ May 18, 2016
Issued Date:	May 23, 2016
Applicant:	ARRIS Group, Inc.
Address:	2500 Walsh Ave. Santa Clara, CA 95051,United State
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
SA160323C19	Original release	May 23, 2016

1 Certificate of Conformity

Product:	ARRIS FTTH
Brand:	ARRIS
Test Model:	NVG378QR2
Series Model:	NVG373QR2
Sample Status:	Engineering sample
Applicant:	ARRIS Group, Inc.
Test Date:	Apr. 28 ~ May 18, 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:** May 23, 2016
Polly Chien / Specialist

Approved by : _____ , **Date:** May 23, 2016
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^2)	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^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 24cm 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^2)	Limit (mW/cm^2)
(CDD Mode)					
2412-2462	27.06	7.71	24	0.414	1
5180-5240	23.16	11.84	24	0.437	1
5745-5825	23.91	11.84	24	0.519	1
(Beamforming Mode)					
5180-5240	23.09	11.84	24	0.430	1
5745-5825	23.91	11.84	24	0.519	1

Note:

2.4GHz:

Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2/2$]= 7.71 dBi

5.0GHz:

Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20 + ... +} 10^{GN/20})^2/4$]= 11.84 dBi

CONCULSION:

Both of the WLAN 2.4G & WLAN 5G can transmit simultaneously, the formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4G + WLAN 5.0G = 0.414 + 0.519 = 0.933

Therefore, the maximum calculation of this situation is 0.933, which is less than the “1” limit.

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