RF Exposure Report

Report No.:	SA191211C28 R1
FCC ID:	2AEDS110LTEWIFI
Test Model:	SD-WAN 110-LTE-WiFi
Received Date:	Dec. 11, 2019
Date of Evaluation:	Feb. 27, 2020
Issued Date:	Mar. 02, 2020
Applicant:	CITRIX SYSTEMS,INC
Address:	4988 Great America Parkway Santa Clara,CA 95054 USA
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN
FCC Registration / Designation Number:	788550 / TW0003

Cancels and replaces the report No. SA191211C28 dated Feb. 03, 2020

Table of Contents

Cancels and replaces the report No. SA191211C28 dated Feb. 03, 2020

Release Control Record

Issue No.	Description	Date Issued
SA191211C28	Original Release	Feb. 03, 2020
SA191211C28 R1	1. Add FCC ID of WLAN module 2. Remove WLAN 5GHz Band 2 & 3 3. Update WWAN antenna gain 4. Update WLAN power & recalculate MPE	Mar. 02, 2020

Cancels and replaces the report No. SA191211C28 dated Feb. 03, 2020

1   Certificate of Conformity

Product:	Networking device
Brand:	**CITRIX**®
Test Model:	SD-WAN 110-LTE-WiFi
Sample Status:	Engineering Sample
Applicant:	CITRIX SYSTEMS,INC
Date of Evaluation:	Feb. 27, 2020
Standards:	FCC Part 2 (Section 2.1091)
References Test Guidance :	KDB 447498 D01 General RF Exposure Guidance v06
	IEEE C95.3 -2002

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 RF characteristics under the conditions specified in this report.

Prepared by : *Rona Chen* , **Date:** Mar. 02, 2020

Rona Chen / Specialist

Approved by : *Dylan Chiou* , **Date:** Mar. 02, 2020

Dylan Chiou / Senior Project Engineer

Cancels and replaces the report No. SA191211C28 dated Feb. 03, 2020

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				
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f^2)*	30
30-300	27.5	0.073	0.2	30
300-1500	…	…	f/1500	30
1500-100,000	…	…	1.0	30

f = Frequency in MHz ; *Plane-wave equivalent power density

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 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

The WWAN module (Brand: Quectel, Model: EG25-G, EG25-G MINIPCIE) was installed in EUT.

Cancels and replaces the report No. SA191211C28 dated Feb. 03, 2020

2.4 Calculation Result of Maximum Conducted Power

Band	Frequency Band (MHz)	Max Average Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm²)	Limit (mW/cm²)
WCDMA II	1850-1910	25.00	4.5	20	0.177	1.00
WCDMA IV	1710-1755	25.00	4.5	20	0.177	1.00
WCDMA V	824-849	25.00	1.5	20	0.089	0.55
LTE 2	1850-1910	25.00	4.5	20	0.177	1.00
LTE 4	1710-1755	25.00	4.5	20	0.177	1.00
LTE 5	824-849	25.00	1.5	20	0.089	0.55
LTE 7	2500-2570	25.00	4	20	0.158	1.00
LTE 12	699-716	25.00	2.6	20	0.114	0.47
LTE 13	777-787	25.00	2.6	20	0.114	0.52
LTE 25	1850-1915	25.00	4.5	20	0.177	1.00
LTE 26	814-849	25.00	1.5	20	0.089	0.54
LTE 38	2570-2620	25.00	4	20	0.158	1.00
LTE 41	2496-2690	25.00	4	20	0.158	1.00
The End-product has a WLAN module						
WLAN	2412-2462	21.99	5.61	20	0.114	1.00
	5180-5240	21.71	8.01	20	0.187	1.00
	5745-5825	24.33	8.01	20	0.341	1.00

Note:

1. WLAN 2.4GHz and WLAN 5GHz Band cannot transmit simultaneously.
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
3. 2.4GHz: Directional gain = 2.6 dBi + 10log(2) = 5.61 dBi
   5.0GHz: Directional gain = 5.0 dBi + 10log(2) = 8.01 dBi

Conclusion:

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

WWAN + WLAN 2.4G = 0.114 / 0.47 + 0.114 / 1.00 = 0.358

WWAN + WLAN 5G = 0.114 / 0.47 + 0.341 / 1.00 = 0.585

Therefore the maximum calculations of above situations are less than the "1" limit.

--- END ---