

## RF Exposure Report

**Report No.:** SA171116C13

**FCC ID:** 2AIHD2024

**Test Model:** 010-2024

**Received Date:** Nov. 03, 2017

**Test Date:** Nov. 03 ~ Nov. 20, 2017

**Issued Date:** Nov. 21, 2017

**Applicant:** SAMSARA NETWORKS INC

**Address:** 444 De Haro Street, San Francisco, California, United States, 94107

**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.)

**FCC Registration / Designation Number:** 788550 / TW0003



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### Release Control Record

Issue No.	Description	Date Issued
SA171116C13	Original release.	Nov. 21, 2017

## 1 Certificate of Conformity

**Product:** AG24

**Brand:** SAMSARA

**Test Model:** 010-2024

**Sample Status:** Engineering sample

**Applicant:** SAMSARA NETWORKS INC

**Test Date:** Nov. 03 ~ Nov. 20, 2017

**Standards:** FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

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 :** Celine Chou , **Date:** Nov. 21, 2017  
Celine Chou / Specialist

**Approved by :** Ken Liu , **Date:** Nov. 21, 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 Tune up Power

For WLAN and BT LE:

Function	Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
WLAN	2412-2462	17.82	3.80	20	0.029	1
BT LE	2402-2480	9.67	3.80	20	0.004	1

For WWAN: (Base on WWAN module report (model no.: M14Q2FG-1, brand name: WNC, FCC ID: NKRM18Q2))

Function	Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
WCDMA Band 2	1852.4-1907.6	24.13	4.50	20	0.145	1
WCDMA Band 5	826.4-846.6	24.44	4.70	20	0.163	0.550
LTE Band 2	1850.7-1909.3	23.07	4.50	20	0.114	1
LTE Band 4	1710.7-1754.3	23.77	3.50	20	0.106	1
LTE Band 5	824.7-848.3	23.43	4.70	20	0.129	0.549
LTE Band 12	699.7-715.3	23.50	4.30	20	0.120	0.466

2.4GHz and BT LE technology cannot transmit simultaneously.

2.4GHz and WWAN or BT LE and WWAN technology can transmit simultaneously.

#### Conclusion:

The formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

1.  $WLAN + WWAN = 0.029 / 1 + 0.163 / 0.550 = 0.325$

2.  $BT LE + WWAN = 0.004 / 1 + 0.163 / 0.550 = 0.300$

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

---END---