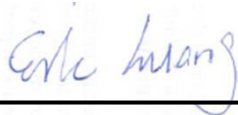


RF Exposure Evaluation Report

APPLICANT : Samsara Networks
EQUIPMENT : VG33
BRAND NAME : SAMSARA
MODEL NAME : 010-0033
MARKETING NAME : VG33
FCC ID : 2AIHD0033
STANDARD : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC., would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091, and pass the limit. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.



Reviewed by: Eric Huang / Deputy Manager



Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL INC.

No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Taoyuan City, Taiwan (R.O.C.)



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1. Administration Data

1.1. Testing Laboratory

| Testing Laboratory | |
|--------------------|--|
| Test Site | SPORTON INTERNATIONAL INC. |
| Test Site Location | No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978 |

| Applicant | |
|--------------|--------------------------------------|
| Company Name | Samsara Networks |
| Address | 501 York St, San Francisco, CA 94110 |

| Manufacturer | |
|--------------|--------------------------------------|
| Company Name | Samsara Networks |
| Address | 501 York St, San Francisco, CA 94110 |



2. Description of Equipment Under Test (EUT)

| Product Feature & Specification | |
|--|---|
| EUT Type | VG33 |
| Brand Name | SAMSARA |
| Model Name | 010-0033 |
| Marketing Name | VG33 |
| FCC ID | 2AIHD0033 |
| Wireless Technology and Frequency Range | WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz |
| Mode | · 802.11a/b/g/n HT20/HT40 · Bluetooth EDR/LE |
| HW Version | 1.0 |
| SW Version | 1.0 |
| Product Marketing Name(PMN) | VG33 |
| Firmware Version Identification Number(FVIN) | 1.0 |
| Host Marketing Name(HMN) | VG33 |
| EUT Stage | Production Unit |

| WWAN Module Information | |
|---|--|
| Product Name | EHS6 |
| Model No. | EHS6 |
| FCC ID | OIPEHS6 |
| Wireless Technology and Frequency Range | GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz |
| Mode | · GSM/GPRS/EGPRS · RMC/AMR 12.2Kbps · HSDPA · HSUPA · HSPA+ (16QAM uplink) |
| Remark: The WWAN module is also integrated into this host to do Sim-Tx analysis. | |



3. Maximum RF average output power among production units

| Mode | Average power(dBm) |
|--------------------------|--------------------|
| GSM 850_GPRS 1 Tx slot | 33 |
| GSM 850_GPRS 2 Tx slots | 31 |
| GSM 850_GPRS 3 Tx slots | 29 |
| GSM 850_GPRS 4 Tx slots | 28 |
| GSM 850_EDGE 1 Tx slot | 28 |
| GSM 850_EDGE 2 Tx slots | 25 |
| GSM 850_EDGE 3 Tx slots | 23 |
| GSM 850_EDGE 4 Tx slots | 22 |
| GSM 1900_GPRS 1 Tx slot | 30 |
| GSM 1900_GPRS 2 Tx slots | 28 |
| GSM 1900_GPRS 3 Tx slots | 26 |
| GSM 1900_GPRS 4 Tx slots | 25 |
| GSM 1900_EDGE 1 Tx slot | 26 |
| GSM 1900_EDGE 2 Tx slots | 23 |
| GSM 1900_EDGE 3 Tx slots | 22 |
| GSM 1900_EDGE 4 Tx slots | 20 |

| Mode | Average power(dBm) |
|---------------|--------------------|
| WCDMA Band V | 24 |
| WCDMA Band II | 24 |

| Mode / Band | Average Power (dBm) | | | LE |
|-------------------|---------------------|-------|-------|----|
| | EDR | | | |
| | 1Mbps | 2Mbps | 3Mbps | |
| 2.4 GHz Bluetooth | -3 | -7 | -7 | 1 |

| Band / Mode | IEEE 802.11 Average Power (dBm) | | |
|-------------|---------------------------------|-----|------|
| | 11b | 11g | HT20 |
| 2.4GHz Band | 16 | 18 | 18 |

| Band / Mode | IEEE 802.11 Average Power (dBm) | | |
|-------------|---------------------------------|----------|----------|
| | 11a | 11n-HT20 | 11n-HT40 |
| 5.2GHz Band | 14 | 14 | 14 |
| 5.8GHz Band | 14 | 14 | 14 |



4. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

| Frequency range (MHz) | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm ²) | Averaging time (minutes) |
|--|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| (A) Limits for Occupational/Controlled Exposures | | | | |
| 0.3-3.0 | 614 | 1.63 | *(100) | 6 |
| 3.0-30 | 1842/f | 4.89/f | *(900/f ²) | 6 |
| 30-300 | 61.4 | 0.163 | 1.0 | 6 |
| 300-1500 | | | f/300 | 6 |
| 1500-100,000 | | | 5 | 6 |
| (B) 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 |

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna



5. Radio Frequency Radiation Exposure Evaluation

5.1. Standalone Power Density Calculation

Table with 10 columns: Band, Frequency (MHz), Antenna Gain (dBi), Maximum Power (dBm), Maximum EIRP (dBm), Maximum EIRP (W), Average EIRP (mW), Power Density at 20cm (mW/cm^2), Limit (mW/cm^2), Power Density / Limit. Rows include GPRS 850, EGPRS 850, GPRS 1900, EGPRS 1900, WCDMA Band 5, WCDMA Band 2, Bluetooth, 2.4GHz WLAN, and 5GHz WLAN.

Note: For conservativeness, the lowest frequency of each band is used to determine the MPE limit of that band.



5.2. Collocated Power Density Calculation

| WWAN Power Density / Limit | WLAN Power Density / Limit | Bluetooth Power Density / Limit | Σ (Power Density / Limit) of WWAN+WLAN+Bluetooth |
|---|---|--|---|
| 0.188 | 0.024 | 0.001 | 0.213 |

Note:

1. For collocation analysis, GPRS850 (4TX slot) is chosen for summation due to the highest (power density/limit) among all WWAN wireless modes.
2. Σ (Power Density / Limit): This is a summation of [(power density for each transmitter/antenna included in the simultaneous transmission)/ (corresponding MPE limit)], for WWAN + WLAN + Bluetooth.
3. Considering the WWAN module collocation with the WLAN and Bluetooth transmitter of the EIRP performance listed in the table above, the aggregated (power density /limit) is smaller than 1, and MPE of 3 collocated transmitters is compliant

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.