RF Exposure Report

Report No.:	SA151111E04A
FCC ID:	U8G-P1930
Test Model:	MAX BR1
Series Model:	MAX, Surf Pro, AP One, AP Pro, Device Connector, Express, Balance, Pismo 930
Received Date:	Nov. 20, 2015
Test Date:	Nov. 27, 2015
Issued Date:	Dec. 16, 2015
Applicant:	Pismo Labs Technology Limited
Address:	FLAT/RM A5, 5/F, HK SPINNERS IND BLDG PHASE 6, 481 CASTLE PEAK ROAD, CHEUNG SHA WAN, HONG KONG.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location (1):	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location (2):	No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.

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Release Control Record

Issue No.	Description	Date Issued
SA151111E04A	Original release.	Dec. 16, 2015

1 Certificate of Conformity

Product:	Pepwave / Peplink / Pismo Wireless Product
Brand:	Pepwave / Peplink / Pismo
Test Model:	MAX BR1
Series Model:	MAX, Surf Pro, AP One, AP Pro, Device Connector, Express, Balance, Pismo 930
Sample Status:	MASS-PRODUCTION
Applicant:	Pismo Labs Technology Limited
Test Date:	Nov. 27, 2015
Standards:	FCC Part 2 (Section 2.1091) 447498 D01 General RF Exposure Guidance v06 IEEE Std C95.1-2005

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:** Dec. 16, 2015

Midoli Peng / Specialist

Approved by : _____ , **Date:** Dec. 16, 2015

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

3 Antenna Gain

The antennas provided to the EUT, please refer to the following table:

WLAN antenna					
Brand	Model No.	Antenna Gain (dBi)	Frequency range (GHz to GHz)	Antenna Type	Connecter Type
WNC	9E.XCI15.001	5.1	2.40~2.50	Dipole	Reverse SMA Plug

GPS antenna					
Brand	Model No.	Antenna Gain (dBi)	Frequency range (GHz)	Antenna Type	Connecter Type
Chang Hong	GPS-01	-1	1575.42 (+/- 1.023MHz)	Magnetic	R-SMA Male

LTE antenna						
PCB Chain No.	Brand	Model No.	Antenna Gain (dBi)	Frequency range (MHz to MHz)	Antenna Type	Connecter Type
Cellular Main	Pulse	SPDA24700/2700	2	698~960	Dipole	SMA Male
				1710~2170		
				2500-2700		
Cellular Diversity / Aux	Pulse	SPDA24700/2700	2	698~960	Dipole	SMA Male
				1710~2170		
				2500-2700		

4 Calculation Result Of Maximum Conducted Power

WLAN

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2412-2462	995.405	5.1	20	0.64081	1

For WWAN(3G), LTE(4G) module_FCC ID: N7NMC7355 (Model: MC7354)

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
817-824	500	2	20	0.10090	0.5447

Note: 1. Limit of Power Density = F/1500

2. Calculations for RF Exposure compliance in the cellular and PCS bands are base on the maximum source based time-average power obtained from 2-Slot GPRS operation. The resulting duty cycle factor is 2/8, or 6.02dB.

Conclusion:

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

WLAN + 2G =0.64081 + 0.10090/0.5447 = 0.82606

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

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