Nanolane LLC

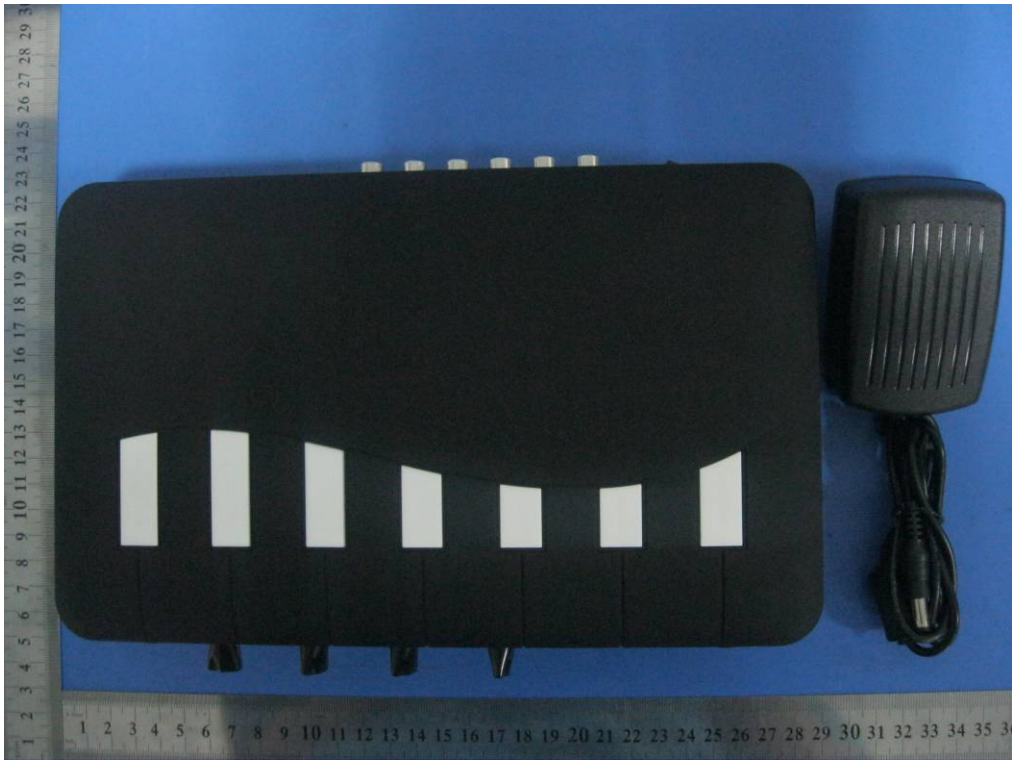
JHOOMBOX

Main Model:J100

September 20, 2012

Report No.: 12020749-FCC-H1

(This report supersedes NONE)



Modifications made to the product : None

This Test Report is Issued Under the Authority of:		
Alan Lv **Compliance Engineer**	**Alex Liu** **Technical Manager**	

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Test result presented in this test report is applicable to the representative sample only.

RF Exposure Report

To: FCC 2.1091: 2012

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Laboratory Introduction

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Accreditations for Conformity Assessment

Country/Region	Accreditation Body	Scope
USA	FCC, A2LA	EMC , RF/Wireless , Telecom
Canada	IC, A2LA, NIST	EMC, RF/Wireless , Telecom
Taiwan	BSMI , NCC , NIST	EMC, RF, Telecom , Safety
Hong Kong	OFTA , NIST	RF/Wireless ,Telecom
Australia	NATA, NIST	EMC, RF, Telecom , Safety
Korea	KCC/RRA, NIST	EMI, EMS, RF , Telecom, Safety
Japan	VCCI, JATE, TELEC, RFT	EMI, RF/Wireless, Telecom
Mexico	NOM, COFETEL, Caniety	Safety, EMC , RF/Wireless, Telecom
Europe	A2LA, NIST	EMC, RF, Telecom , Safety

Accreditations for Product Certifications

Country/Region	Accreditation Body	Scope
USA	FCC TCB, NIST	EMC , RF , Telecom
Canada	IC FCB , NIST	EMC , RF , Telecom
Singapore	iDA, NIST	EMC , RF , Telecom
EU	NB	EMC & R&TTE Directive
Japan	MIC, (RCB 208)	RF , Telecom
Hong Kong	OFTA (US002)	RF , Telecom

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1. EXECUTIVE SUMMARY & EUT INFORMATION

The purpose of this test programme was to demonstrate compliance of the Nanolane LLC JHOOMBOX and model: J100against the current Stipulated Standards. The JHOOMBOX has demonstrated compliance with the FCC 2.1091: 2012.

EUT Information

EUT Description	:	**JHOOMBOX**
Main Model	:	**J100**
Antenna Gain	:	**2dBi**
Input Power	:	**JHOOMBOX AC Adapter Model: FY1201001 Input: AC 100-240V 50/60Hz Output: DC 12.0V 1A**
Maximum Conducted Peak Power to Antenna	:	**802.11b:25.60dBm 802.11g:27.50dBm 802.11n(20M):26.00dBm 802.11n(40M):25.60dBm**
Classification Per Stipulated Test Standard	:	**FCC 2.1091: 2012**

2. TECHNICAL DETAILS

Purpose	**Compliance testing of JHOOMBOX with stipulated standard**
Applicant / Client	**Nanolane LLC 13554 Lavender Mist Lane, Centreville, VA 20120**
Manufacturer	**SHENZHEN VISSON TECHNOLOGY CO.,LTD. Blk A ,Fujinshun Industrial Park,Yabian,Houting,Shajing Town, Bao An,Shenzhen,China**
Laboratory performing the tests	**SIEMIC Nanjing (China) Laboratories NO.2-1,Longcang Dadao, Yuhua Economic Development Zone, Nanjing, China Tel:+86(25)86730128/86730129 Fax:+86(25)86730127 Email:info@siemic.com**
Test report reference number	**12020749-FCC-H1**
Date EUT received	**September 9, 2012**
Standard applied	**FCC 2.1091: 2012**
Dates of test	**September 10 to September 19, 2012**
No of Units	**#1**
Equipment Category	**DTS**
Trade Name	**N/A**
RF Operating Frequency (ies)	**WLAN:2.4GHz band: 802.11b/g/n(20M) : 2412-2462 MHz 802.11 n(40M) : 2422-2452 MHz**
Number of Channels	**802.11b/g /n(20M):11CH 802.11n(40M):7CH**
Modulation	**WLAN: DSSS/OFDM**
FCC ID	**PTQ-J100**

3. MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FCC §2.1091 - MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm2)	Averaging Time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	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

Test Data

Predication of MPE limit at a given distance

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

Where: S = power density (in appropriate units, e.g. mW/cm2)
P = power input to the antenna (in appropriate units, e.g., mW).
G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

802.11b:
Maximum peak output power at antenna input terminal: 25.60 (dBm)
Maximum peak output power at antenna input terminal: 363.08 (mW)

Prediction distance: >20 (cm)
Predication frequency:2437 (MHz)
Antenna Gain (typical):2 (dBi)
Antenna Gain (typical): 1.58 (numeric)

The worst case is power density at predication frequency at 20 cm: 0.114 (mW/cm2)
MPE limit for general population exposure at prediction frequency:1.0 (mW/cm2)

0.114 (mW/cm2) < 1.0(mW/cm2)

802.11g:

Maximum peak output power at antenna input terminal: 27.50 (dBm)
Maximum peak output power at antenna input terminal: 562.30 (mW)

Prediction distance: >20 (cm)
Predication frequency: 2462 (MHz)
Antenna Gain (typical):2 (dBi)
Antenna Gain (typical): 1.58 (numeric)

The worst case is power density at predication frequency at 20 cm: 0.177 (mW/cm2)
MPE limit for general population exposure at prediction frequency:1.0 (mW/cm2)

0.177 (mW/cm2) < 1.0(mW/cm2)

802.11n(20M):

Maximum peak output power at antenna input terminal: 26.00 (dBm)
Maximum peak output power at antenna input terminal: 398.10 (mW)

Prediction distance: >20 (cm)
Predication frequency:2412 (MHz)
Antenna Gain (typical):2 (dBi)
Antenna Gain (typical): 1.58 (numeric)

The worst case is power density at predication frequency at 20 cm: 0.126 (mW/cm2)
MPE limit for general population exposure at prediction frequency:1.0 (mW/cm2)

0.126 (mW/cm2) < 1.0(mW/cm2)

802.11n(40M):

Maximum peak output power at antenna input terminal: 25.60 (dBm)
Maximum peak output power at antenna input terminal: 363.08 (mW)

Prediction distance: >20 (cm)
Predication frequency: 2422 (MHz)
Antenna Gain (typical):2 (dBi)
Antenna Gain (typical): 1.58 (numeric)

The worst case is power density at predication frequency at 20 cm: 0.114 (mW/cm2)
MPE limit for general population exposure at prediction frequency:1.0 (mW/cm2)

0.114 (mW/cm2) < 1.0(mW/cm2)

Result: Pass