

3Dconnexion

USB Receiver

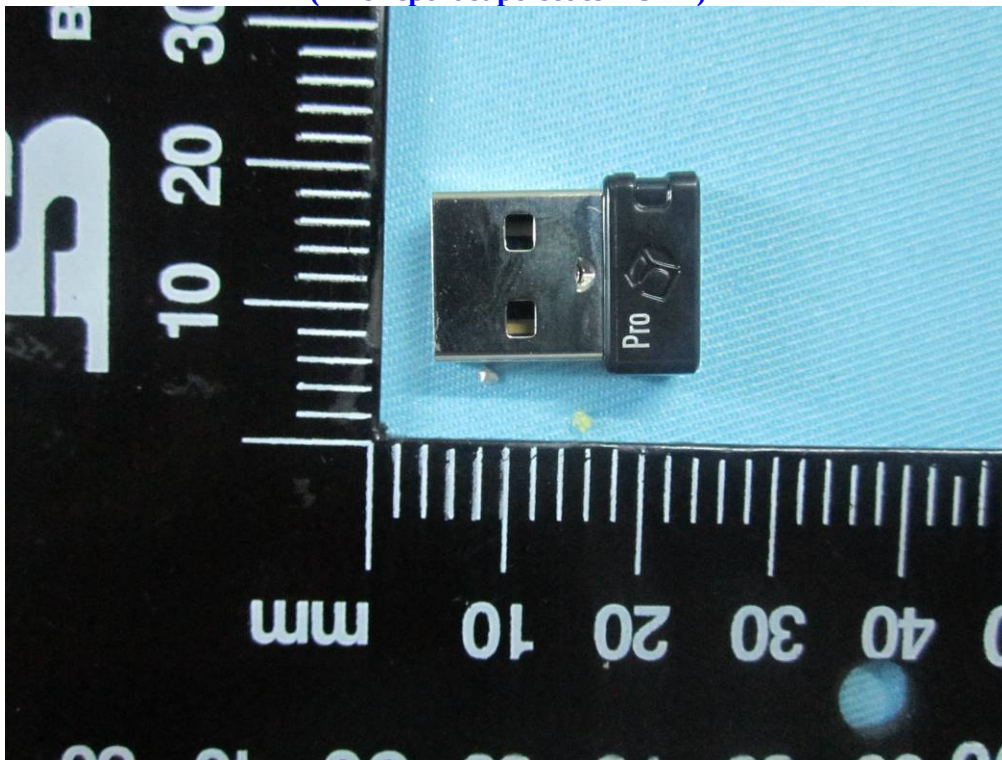
Main Model: 3DX-600048

Serial Model: N/A

June 18, 2014

Report No.: 14070248-FCC-H3

(This report supersedes NONE)



Modifications made to the product : None

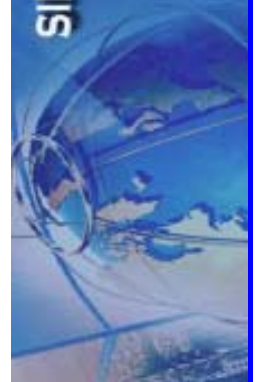
This Test Report is Issued Under the Authority of:

		
Herith Shi Compliance Engineer	Alex Liu Technical Manager	

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

MPE Calculation Report
To: FCC 2.1091

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Laboratory Introduction

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SIEMIC (Shenzhen-China) Laboratories Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC , RF/Wireless , Telecom
Canada	EMC, RF/Wireless , Telecom
Taiwan	EMC, RF, Telecom , Safety
Hong Kong	RF/Wireless ,Telecom
Australia	EMC, RF, Telecom , Safety
Korea	EMI, EMS, RF , Telecom, Safety
Japan	EMI, RF/Wireless, Telecom
Singapore	EMC , RF , Telecom
Europe	EMC, RF, Telecom , Safety

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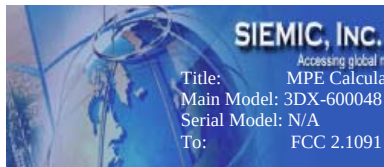
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SIEMIC, INC.
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Title: MPE Calculation Report for USB Receiver
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Issue Date: June 18, 2014
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1 EXECUTIVE SUMMARY & EUT INFORMATION

The purpose of this test programmers was to demonstrate compliance of the 3Dconnexion, USB Receiver and Model: 3DX-600048 against the current Stipulated Standards. The USB Receiver has demonstrated compliance with the FCC 2.1091.

EUT Information

EUT Description : USB Receiver

Main Model : 3DX-600048

Serial Model : N/A

Antenna Gain : -2.36 dBi

Classification Per Stipulated Test Standard : Class B Emission Product Per FCC 2.1091

**SIEMIC, Inc.**

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2 TECHNICAL DETAILS

Purpose	Compliance testing of USB Receiver with stipulated standards
Applicant / Client	3Dconnexion 5 Ave. des Citronniers, Monaco
Manufacturer	Xiamen Intretech Inc No. 588, Jiahe road, Xiamen, Fujian, China
Laboratory performing the tests	SIEMIC (Shenzhen-China) Laboratories Zone A, Floor 1, Building 2, Wan Ye Long Technology Park, South Side of Zhoushi Road, Bao'an District, Shenzhen, Guangdong, China Tel: +86-0755-2601 4629 / 2601 4953 Fax: +86-0755-2601 4953-810 Email: China@siemic.com.cn
Test report reference number	14070248-FCC-H3
Date EUT received	June 03, 2014
Standard applied	FCC 2.1091
Dates of test (from – to)	June 18, 2014
No of Units	#1
Equipment Category	DXX
Trade Name	3Dconnexion
RF Operating Frequency (ies)	2404-2477 MHz
Number of Channels	5
Modulation	GFSK
FCC ID	2AAHQ-SMPW-RC

3 FCC §2.1091 - Maximum Permissible exposure (MPE)

3.1 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/cm ²)	Averaging Time (minutes)
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

3.2 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)

2.4GHz Mode:

Maximum peak output power at antenna input terminal: -1.266(dBm)
Maximum peak output power at antenna input terminal: 0.747 (mW)

Prediction distance: >20 (cm)
Predication frequency: 2477(MHz)
Antenna Gain (typical): -2.36 (dBi)

Antenna Gain (typical): 0.581 (numeric)

The worst case is power density at predication frequency at 20 cm: 0.00009 (mW/cm²)

MPE limit for general population exposure at prediction frequency: 1 (mW/cm²)

0.00009 (mW/cm²) < 1 (mW/cm²)

Result: Pass