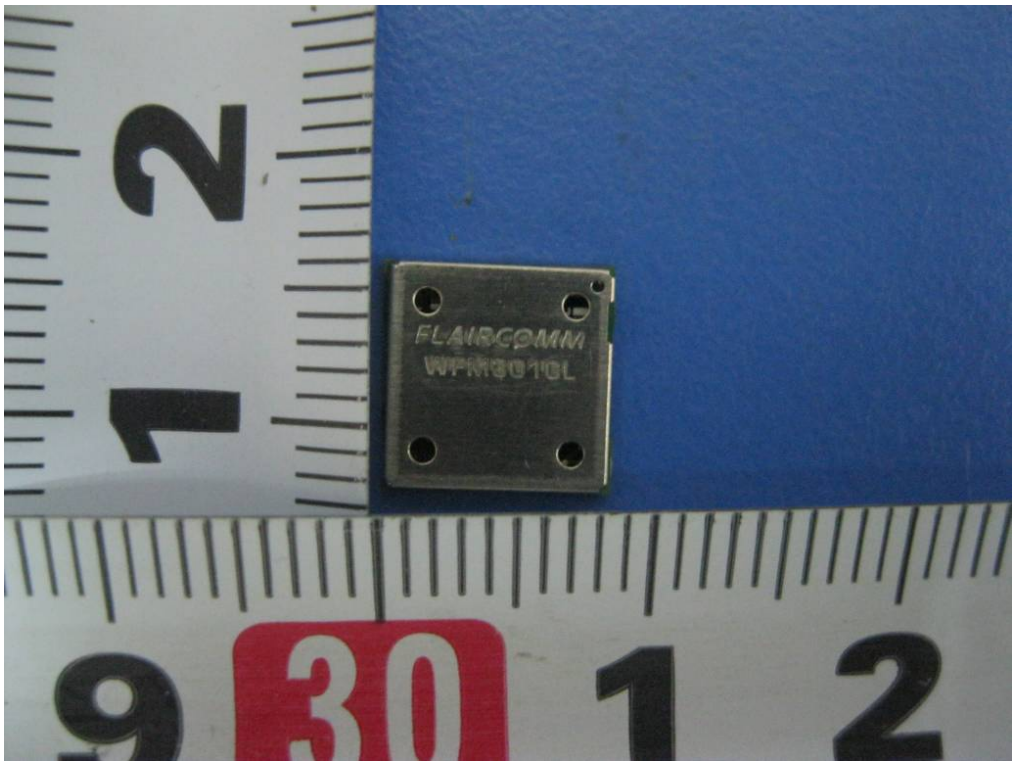
Fujian Flaircomm Microelectronics,Inc.

WIFI Module

Main Model: FLC-WFM301
Serial Model: See P5

November 02, 2012
Report No.: 12020823-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 Evalution 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 Fujian Flaircomm Microelectronics,Inc. WIFI Module and model: FLC-WFM301against the current Stipulated Standards. The WIFI Module has demonstrated compliance with the FCC 2.1091: 2012.

EUT Information

EUT Description	:	**WIFI Module**
Main Model	:	**FLC-WFM301**
Serial Model		**FLC-WFM301IL2B; FLC-WFM301VL2B; FLC-WFM301CL2B**
Antenna Gain	:	**2.8dBi**
Input Power	:	**1.7 ~ 3.6V DC**
Maximum Conducted Peak Power to Antenna	:	**802.11b:26.00dBm** **802.11g:26.30dBm** **802.11n:26.50dBm**
Classification Per Stipulated Test Standard	:	**FCC 2.1091: 2012**

Note: in this report, we choice model FLC-WFM301 to test. FLC-WFM301IL2B is similar to FLC-WFM301, the only difference between them is the model names; FLC-WFM301VL2B and FLC-WFM301CL2B are similar to FLC-WFM301, the only difference between them is only the product grade.

2. TECHNICAL DETAILS

Purpose	**Compliance testing of WIFI Module with stipulated standard**
Applicant / Client	**Fujian Flaircomm Microelectronics,Inc. 7F,Guomai Building,116 East JiangBin Ave,Fuzhou,Fujian,China**
Manufacturer	**Fujian Flaircomm Microelectronics,Inc. 7F,Guomai Building,116 East JiangBin Ave,Fuzhou,Fujian,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	**12020823-FCC-H1**
Date EUT received	**September 25, 2012**
Standard applied	**FCC 2.1091: 2012**
Dates of test	**September 28 to October 09, 2012**
No of Units	**#1**
Equipment Category	**DTS**
Trade Name	**N/A**
RF Operating Frequency (ies)	**2.4GHz band: 802.11b/g/n: 2412-2462 MHz**
Number of Channels	**802.11b/g /n: 11CH**
Modulation	**DSSS/OFDM**
FCC ID	**P4IWFM301**

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: 26.00 (dBm)
Maximum peak output power at antenna input terminal: 398.11 (mW)

Prediction distance: >20 (cm)
Predication frequency: 2412 (MHz)
Antenna Gain (typical): 2.8 (dBi)
Antenna Gain (typical): 1.905 (numeric)

The worst case is power density at predication frequency at 20 cm: 0.151 (mW/cm2)
MPE limit for general population exposure at prediction frequency: 1.0 (mW/cm2)

0.151(mW/cm2) < 1.0(mW/cm2)

802.11g:

Maximum peak output power at antenna input terminal: 26.30 (dBm)
Maximum peak output power at antenna input terminal: 426.58 (mW)

Prediction distance: >20 (cm)
Predication frequency: 2412 (MHz)
Antenna Gain (typical):2.8 (dBi)
Antenna Gain (typical): 1.905 (numeric)

The worst case is power density at predication frequency at 20 cm: 0.162 (mW/cm2)
MPE limit for general population exposure at prediction frequency:1.0 (mW/cm2)

0.162 (mW/cm2) < 1.0(mW/cm2)

802.11n:

Maximum peak output power at antenna input terminal: 26.50 (dBm)
Maximum peak output power at antenna input terminal: 446.68 (mW)

Prediction distance: >20 (cm)
Predication frequency: 2412 (MHz)
Antenna Gain (typical):2.8 (dBi)
Antenna Gain (typical): 1.905 (numeric)

The worst case is power density at predication frequency at 20 cm: 0.169 (mW/cm2)
MPE limit for general population exposure at prediction frequency:1.0 (mW/cm2)

0.169 (mW/cm2) < 1.0(mW/cm2)

Result: Pass