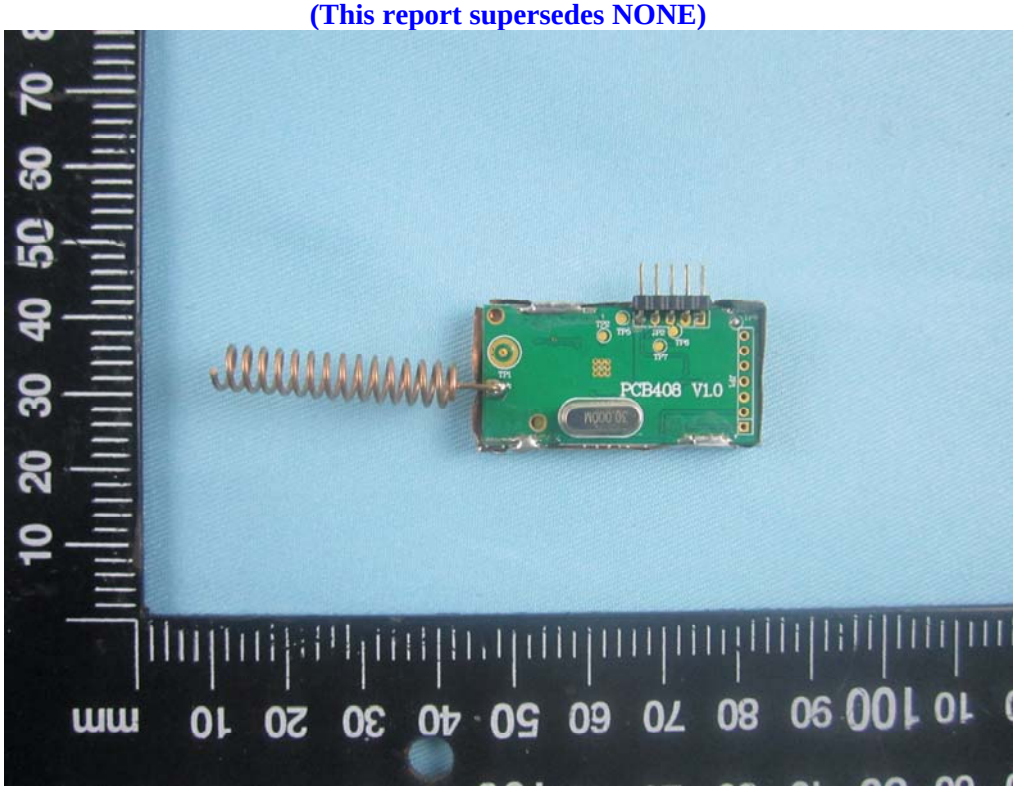
EDMI (Shenzhen) Co., Ltd

RF Module

Main Model: MSi4432
Serial Model: N/A

September 29, 2014

Report No.: 14070483-FCC-H1
(This report supersedes NONE)



Modifications made to the product : None

This Test Report is Issued Under the Authority of:		
Herith shi	Alex Liu	
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.

EMC Test Report
To: FCC 2.1091

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Laboratory Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.

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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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CONTENTS

1 EXECUTIVE SUMMARY & EUT INFORMATION

The purpose of this test programmers was to demonstrate compliance of the EDMI (Shenzhen) Co., Ltd , RF Module and Model: MSi4432 against the current Stipulated Standards. The RF Module has demonstrated compliance with the FCC 2.1091.

EUT Information

EUT Description	:	**RF Module**
Main Model	:	**MSi4432**
Serial Model		**N/A**
Antenna Gain	:	**-4dBi**
Input Power	:	**Host output to the module: DC 3.3V**
Classification Per Stipulated Test Standard	:	**Class B Emission Product Per FCC 2.1091**

2 TECHNICAL DETAILS

Purpose	**Compliance testing of RF Module with stipulated standards**
Applicant / Client	**EDMI (Shenzhen) Co., Ltd** **5th Floor 5 Building 5, Zhong Yuntai Industrial Park, Tang Tou 1st Road, Shi Yan, Bao An, Shen Zhen, GuangDong 518108 P.R.China**
Manufacturer	**EDMI (Shenzhen) Co., Ltd** **5th Floor 5 Building 5, Zhong Yuntai Industrial Park, Tang Tou 1st Road, Shi Yan, Bao An, Shen Zhen, GuangDong 518108 P.R.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	**14070483-FCC-H1**
Date EUT received	**September 5, 2014**
Standard applied	**FCC 2.1091**
Dates of test (from – to)	**September 29, 2014**
No of Units	**#1**
Equipment Category	**DXX**
Trade Name	**EDMI**
RF Operating Frequency (ies)	**903-927 MHz**
Number of Channels	**61**
Modulation	**GFSK**
FCC ID	**2AC6H4432-A**

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)

For the antenna manufacturer provide only used limited to ERP/EIRP or radiated spurious emission test. The MPE evaluation as below:

Maximum peak output power at antenna input terminal: 1.2dBm)
Maximum peak output power at antenna input terminal: 1.318 (mW)
The Max Tune up power output at antenna input terminal: 3= 1.995 mW

Prediction distance: >20 (cm)
Predication frequency: 927 (MHz) lowest frequency
Antenna Gain (typical): -4 (dBi)
Antenna Gain (typical): 0.398 (numeric)
The worst case is power density at predication frequency at 20 cm: 0.0002(mW/cm^2)
MPE limit for general population exposure at prediction frequency: 0.618 (mW/cm^2)

0.0002(mW/cm^2) < 0.618 (mW/cm^2)

Result: Pass