INGEGNERIA DEI SISTEMI S.P.A

LINEAR SCANNER

Model: IBIS-LS

June 13th 2010

Report No.: SL10050401-IDS-001_FCC(IBIS-LS) Rev1.0 (This report supersedes SL10050401-IDS-001_FCC(IBIS-LS))





Serial# SL10050401-IDS-001_FCC(IBIS-LS) Rev1. ssue Date June 13th 2010 Page 2 of 44

CERTIFICATE OF TEST

Date of Issue	: June 13th 2010

Company Name : Ingegneria dei Sistemi S.P.A

Product Name/Model : Linear Scanner / IBIS-LS

Stipulated Standard: (1) FCC Part 15B: 2009

Equipment complied with the specification [X] Equipment did not comply with the specification []

The submission documentation to a National Regulatory Body for type approval purposes shall consist of two parts; Part one: Application Form;

Part two: Test Report;

Modifications made to the product : None

This Test Report is Issued Under the Authority of:	
David Zhang	Bis
David Zhang Compliance Engineer	Leslie Bai Director of Certification

This test report may be reproduced in full only.

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.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management through out a project. Our extensive experience with China, Asia Pacific, North America, <u>European</u>, and international compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

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	Accreditation Body	Scope
USA	FCC TCB, NIST	EMC , RF , Telecom
Canada	IC FCB , NIST	EMC , RF , Telecom
Singapore	iDA, NIST	EMC , RF , Telecom



This page has been left blank intentionally.

CONTENTS

1	EXECUTIVE SUMMARY & EUT INFORMATION	7
2	TECHNICAL DETAILS	8
3	MODIFICATION	9
4	TEST SUMMARY	10
5	MEASUREMENTS, EXAMINATION AND DERIVED RESULTS	11
ANNE	X A. TEST INSTRUMENT & METHOD	16
ANNE	X B. TEST SETUP PHOTOGRAPHS	19
ANNE	X B. I. EUT INTERNAL PHOTOGRAPHS	20
ANNE	X B. II. EUT EXTERNAL PHOTOGRAPHS	21
ANNE	X C. TEST SETUP AND SUPPORTING EQUIPMENT	22
ANNE	X D USER MANUAL, BLOCK & CIRCUIT DIAGRAM	27
ANNF	X E. SIEMIC ACCREDITATION CERTIFICATES	28



This page has been left blank intentionally.

 Serial#
 SL10050401-IDS-001_FCC(IBIS-LS) Rev1.0

 Issue Date
 June 13th 2010

 7 of 44
 .

1 Executive Summary & EUT information

The purpose of this test program was to demonstrate compliance of the Ingegneria dei Sistemi S.P.A Linear Scanner, and model: IBIS-LS against the current Stipulated Standards. The IBIS-LS have demonstrated compliance with the FCC Part 15B: 2009, .

EUT Information

EUT Description

The IBIS Linear scanner is a part of the IBIS-L system.

The IBIS-L system is designed to remotely measure slow displacements with an accuracy as great as a tenth of a millimetre. The IBIS-L system is particularly suitable for terrain and structural monitoring applications, with the aim of detecting quasi-static displacements over long time periods.

The linear scanner is used to move the sensor in along the track orthogonally to the irradiating direction (antenna axis). The trolley is moved in steps for a total effective length of 2 m. There is a waiting period between two successive steps equal to the functioning time of the IBIS sensor.

Model No : IBIS-LS Serial No : N/A Input Power : 24VDC

Classification

Per Stipulated

: Class A

Test Standard



2	TECHNICAL DETAILS
Purpose	Compliance testing of Linear Scanner with stipulated standard
Applicant / Client	Ingegneria dei Sistemi S.P.A
Manufacturer	Ingegneria dei Sistemi S.P.A Via Livornese 1019 Pisa
Laboratory performing the tests	SIEMIC Laboratories
Test report reference number	SL10050401-IDS-001_FCC(IBIS-LS) Rev1.0
Date EUT received	June 9 2010
Standard applied	See page 2
Dates of test (from – to)	June 9-11 2010
No of Units:	# 1
Equipment Category:	ITE
Trade Name:	Ingegneria dei Sistemi S.P.A
Microprocessor (s)	unidentified
RF Operating Frequency (ies)	N/A
Clock/Oscillator Frequency (ies)	
Rated Input Power	24VDC(50W)
Port/Connectors	DC Power Port , USB Communication Port
FCC ID:	UFW-IBIS-LS



3 MODIFICATION

NONE

Serial# SL10050401-10-8 Issue Date June 13th 2010 Page 10 of 44

TEST SUMMARY

The product was tested in accordance with the following specifications. The Pass / Fail Criteria for the immunity tests were specified in Annex Ciii.

All Testing has been performed according to below product classification:

Class A

Test Results Summary

Emissions						
Test Standard	Description	Product Class	Pass / Fail			
FCC Part 15B: 2009	AC Line Conducted Emissions	See Above	Pass			
FCC Part 15B : 2009	Radiated Spurious Emissions	See Above	Pass			

PS: All Measurement Uncertainty is not taken into consideration for presented test data

 Serial#
 SL10050401-IDS-001_FCC(IBIS-LS) Rev1.0

 Issue Date
 June 13th 2010

 Page
 11 of 44

5 MEASUREMENTS, EXAMINATION AND DERIVED RESULTS

5.1 TEST RESULT

5.1.1 Conducted Emission Test Result

Note:

1. All possible modes of operation were investigated. Only the 6 worst case emissions measured, using the correct CISPR and Average detectors, are reported. All other emissions were relatively insignificant.

2. A "-ve" margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.

3. <u>Conducted Emissions Measurement Uncertainty</u>

Tested by: David Zhang

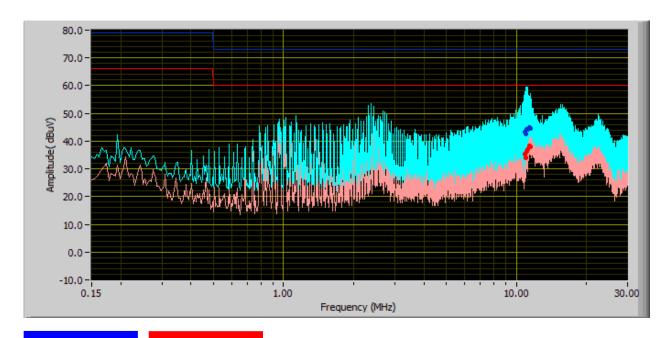
All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 9kHz - 30MHz (Average & Quasi-peak) is $\pm 3.86dB$.

4. Environmental Conditions Temperature 24°C

Relative Humidity 57% Atmospheric Pressure 1011mbar

Atmospheric Pressure 1
Test date: June 9-11 2010

5.1.1.1 AC Line Conducted Emission Test Result



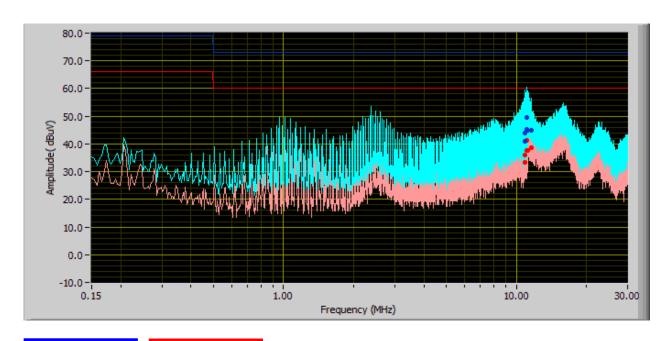
Quasi-Peak Limit

Average Limit

Phase Line Plot at 120VAC

Frequency (MHz)	QP Value (dBµV)	Class A Limit (dB)	Pass / Fail	Margin (dB)	Avg Value (dBµV)	Class A Limit (dB)	Pass / Fail	Margin (dB)	Line
11.11	44.32	73.00	Pass	-28.68	36.32	60.00	Pass	-23.68	Phase
10.99	42.75	73.00	Pass	-30.25	34.07	60.00	Pass	-25.93	Phase
11.21	44.36	73.00	Pass	-28.64	37.13	60.00	Pass	-22.87	Phase
10.88	43.19	73.00	Pass	-29.81	35.42	60.00	Pass	-24.58	Phase
11.50	44.43	73.00	Pass	-28.57	37.88	60.00	Pass	-22.12	Phase
11.38	44.90	73.00	Pass	-28.10	38.41	60.00	Pass	-21.59	Phase

| Serial# | St.10050401-IDS-001_FCC(IBIS-LS) Rev1.0 | Issue Date | June 13th 2010 | 13 of 44 |



Quasi-Peak Limit

Average Limit

Neutral Line Plot at 120VAC

Frequency (MHz)	QP Value (dBµV)	Class A Limit (dB)	Pass / Fail	Margin (dB)	Avg Value (dBµV)	Class A Limit (dB)	Pass / Fail	Margin (dB)	Line
11.10	45.39	73.00	Pass	-27.61	37.58	60.00	Pass	-22.42	Neutral
10.93	43.94	73.00	Pass	-29.06	36.06	60.00	Pass	-23.94	Neutral
11.21	44.81	73.00	Pass	-28.19	37.66	60.00	Pass	-22.34	Neutral
11.03	49.66	73.00	Pass	-23.34	41.12	60.00	Pass	-18.88	Neutral
10.87	41.00	73.00	Pass	-32.00	33.23	60.00	Pass	-26.77	Neutral
11.55	44.96	73.00	Pass	-28.04	38.52	60.00	Pass	-21.48	Neutral

| Serial# | SL10050401-IDS-001_FCC(IBIS-LS) | | Issue Date | June 13th 2010 | | Page | 14 of 44 |

5.1.2 Radiated Spurious Emission Test Results

Note: Not Applicable

1. All possible modes of operation were investigated. Only the 6 worst case emissions measured, using the correct CISPR detectors, are reported. All other emissions were relatively insignificant.

2. A "-ve" margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.

3. <u>Radiated Emissions Measurement Uncertainty</u>

All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz - 1GHz (QP only @ 3m & 10m) is $\pm 6.0dB$ (for EUTs < $0.5m \times 0.5m \times 0.5m$).

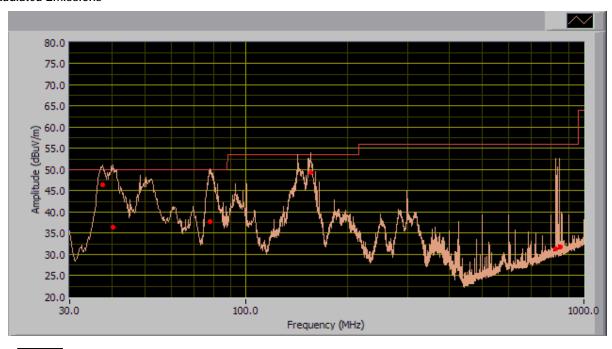
4. Environmental Conditions Temperature 24°C

Relative Humidity 60% Atmospheric Pressure 1009mbar

Test date : June 9-11 2010 Tested by : David Zhang

5.1.2.1 Radiated Emission Test Result

Radiated Emissions



Limit

Note: Emission at around 824MHz and 846MHz is cell phone signal.

30MHz ~1000MHz Result @ 3m

Frequency (MHz)	Corrected Quasi- Peak (dBµV/m) @ 3m	Turntable position (deg)	Polarity	Antenna height (cm)	Limit (dBµV/m)	Margin (dB)
846.21	32.21	217.00	V	315.00	56.00	-23.79
824.73	31.23	180.00	Н	113.00	56.00	-24.77
40.25	36.47	352.00	V	229.00	50.00	-13.53
37.69	46.47	349.00	V	376.00	50.00	-3.53
155.22	49.26	43.00	V	114.00	53.50	-4.24
77.93	37.85	134.00	Н	326.00	50.00	-12.15

Annex A. TEST INSTRUMENT & METHOD

Annex A.i. TEST INSTRUMENTATION & GENERAL PROCEDURES

Instrument	Model	Serial #	Calibration Due
Conducted Emissions			
R & S Receiver	ESIB 40	100179	04/25/2011
R&S LISN	ESH2-Z5	861741/013	04/27/2011
CHASE LISN	MN2050B	1018	04/26/2011
Radiated Emissions			
R & S Receiver	ESIB 40	100179	04/25/2011
Sunol Sciences, Inc. antenna (30MHz~2GHz)	JB1	A030702	6/1/2011
ETS-Lingren Loop Antenna	6512	00049120	05/13/2010
DMM	Fluke	73III	05/01/2011
Variac	KRM	AEEC-2090	Functional verification
Environment Chamber	Test Equity	1007H	01/24/2011

 Serial#
 SL10050401-IDS-001_FCC(IBIS-LS) Rev1.0

 Issue Date
 June 13th 2010

 Page
 17 of 44

Annex A.ii. CONDUCTED EMISSIONS TEST DESCRIPTION

Test Set-up

- 1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table, as shown in <u>Annex B</u>.
- 2. The power supply for the EUT was fed through a $50\Omega/50\mu$ H EUT LISN, connected to filtered mains.
- 3. The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable.
- 4. All other supporting equipments were powered separately from another main supply.

Test Method

- 1. The EUT was switched on and allowed to warm up to its normal operating condition.
- 2. A scan was made on the NEUTRAL line (for AC mains) or Earth line (for DC power) over the required frequency range using an EMI test receiver.
- 3. High peaks, relative to the limit line, were then selected.
- 4. The EMI test receiver was then tuned to the selected frequencies and the necessary measurements made with a receiver bandwidth setting of 10 KHz. For FCC tests, only Quasi-peak measurements were made; while for CISPR/EN tests, both Quasi-peak and Average measurements were made.
- 5. Steps 2 to 4 were then repeated for the LIVE line (for AC mains) or DC line (for DC power).

Sample Calculation Example

At 20 MHz limit = 250 μ V = 47.96 dB μ V

Transducer factor of LISN, pulse limiter & cable loss at 20 MHz = 11.20 dB

Q-P reading obtained directly from EMI Receiver = $40.00 \text{ dB}\mu\text{V}$

(Calibrated for system losses)

Therefore, Q-P margin = 47.96 - 40.00 = 7.96 i.

i.e. 7.96 dB below limit

RADIATED EMISSIONS TEST DESCRIPTION Annex A. iii

EUT Characterisation

EUT characterisation, over the frequency range from 30MHz to 1GHz (for FCC tests, until the 5th harmonic for operating frequencies > 108MHz), was done in order to minimise radiated emissions testing time while still maintaining high confidence in the test results.

The EUT was placed in the chamber, at a height of about 0.8m on a turntable. Its radiated emissions frequency profile was observed, using a spectrum analyzer /receiver with the appropriate broadband antenna placed 3m away from the EUT. Radiated emissions from the EUT were maximised by rotating the turntable manually, changing the antenna polarisation and manipulating the EUT cables while observing the frequency profile on the spectrum analyzer / receiver. Frequency points at which maximum emissions occurred; clock frequencies and operating frequencies were then noted for the formal radiated emissions test at the Open Area Test Site (OATS).

Test Set-up

- 1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m X 1.0m X 0.8m high, non-metallic table as shown in Annex B.
- 2. The filtered power supply for the EUT and supporting equipment were tapped from the appropriate power sockets located on the
- 3. The relevant broadband antenna was set at the required test distance away from the EUT and supporting equipment boundary.

Test Method

- The EUT was switched on and allowed to warm up to its normal operating condition. 1.
- 2. The test was carried out at the selected frequency points obtained from the EUT characterisation. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner:
 - Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen. a.
 - b. The EUT was then rotated to the direction that gave the maximum emission.
 - Finally, the antenna height was adjusted to the height that gave the maximum emission.
- 3. A Quasi-peak measurement was then made for that frequency point.
- Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured. 4.
- The frequency range covered was from 30MHz to 1GHz (for FCC tests, until the 5th harmonic for operating frequencies > 108MHz), 5. using the Biconical antenna for frequencies from 30MHz to 230MHz, Log-periodical antenna for frequencies from 230MHz to 1GHz, and the Horn antenna above 1GHz.

Sample Calculation Example

At 300 MHz

 $limit = 200 \mu V/m = 46.00 dB\mu V/m$

Log-periodic antenna factor & cable loss at 300 MHz = 18.50 dB

Q-P reading obtained directly from EMI Receiver = 40.00 dBµV/m

(Calibrated level including antenna factors & cable losses)

Therefore, Q-P margin = 46.00 - 40.00 = 6.00

i.e. 6 dB below limit



Annex B. TEST SETUP PHOTOGRAPHS

Please See Attachment



Annex B. i. EUT INTERNAL PHOTOGRAPHS

Please see attachment



Annex B. ii. EUT EXTERNAL PHOTOGRAPHS

Please see attach

 Serial#
 \$1.10050401-IDS-001_FCC(IBIS-LS) Rev1.0

 Issue Date
 June 13th 2010

 Page
 22 of 44

Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

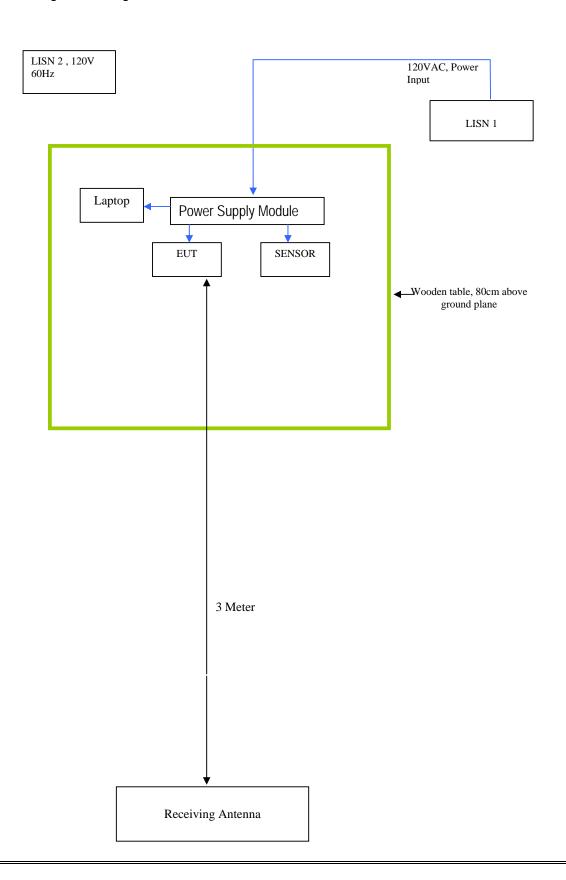
TEST CONDITIONS

Annex C. i. SUPPORTING EQUIPMENT DESCRIPTION

The following is a description of supporting equipment and details of cables used with the EUT.

Equipment Description (Including Brand Name)	Model & Serial Number	Cable Description (List Length, Type & Purpose)
Power Supply Module/IDS	IBIS-SU-M	DC Power Line
IBIS Sensor/IDS	IBIS-KU	DC Power Line, Signal Line
Laptop/Panasonic	CF-19	USB

Block Configuration Diagram for Radiated Emission





Block Configuration Diagram for Conducted Emission

<u>N/A</u>



| Serial# | St10050401-IDS-001_FCC(IBIS-LS) Rev1.0 | Issue Date | June 13th 2010 | 25 of 44 |

Annex C.ii. EUT OPERATING CONDITIONS

The following is the description of how the EUT is exercised during testing.

Test	Description Of Operation
Emissions Testing	The EUT was working normally.
Others Testing	N/A

 Serial#
 SL10050401-IDS-001_FCC(IBIS-LS) Rev1.0

 Issue Date
 June 13th 2010

 Page
 26 of 44

Annex C.iii. PASS / FAIL CRITERIA & MONITORING METHODS

For compliance to the immunity requirements of the Directive, the EUT must comply with the correct Performance Criteria (Continuous, Transient phenomena) stipulated in the relevant standard.

<u>Performance Criteria A (Continuous phenomena)</u> – the equipment should continue as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment id used as intended.

<u>Performance Criteria B (Transient phenomena)</u> – After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacturer, when the equipment is used as intended. The performance level mat be replaced by a permissible loss of performance.

During the test, degradation of performance is allowed. However, no change of operating state or store data is allowed to persist after the test

If the minimum performance level (or the permissible performance loss) is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment id used as intended.

Please refer to the standard for the full Performance Criteria description.



Annex D USER MANUAL, BLOCK & CIRCUIT DIAGRAM
Please see attachment

Serial#

SL10050401-IDS-001_FCC(IBIS-LS) Rev1.0 Issue Date June 13th 2010

Annex E. SIEMIC ACCREDITATION CERTIFICATES

SIEMIC ACCREDITATION DETAILS: A2LA Certificate Number: 2742.01





THE AMERICAN ASSOCIATION FOR LABORATORY ACCREDITATION

ACCREDITED LABORATORY

A2LA has accredited

SIEMIC LABORATORIES

San Jose, CA

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 18 June 2005).



Presented this 11th day of July 2008.

President For the Accreditation Council Certificate Number 2742.01 Valid to September 30, 2010

For the tests or types of tests to which this accreditation applies please refer to the laboratory's Electrical Scope of Accreditation.



THE AMERICAN ASSOCIATION FOR LABORATORY ACCREDITATION

ACCREDITED PRODUCT CERTIFICATION BODY

A2LA has accredited

SIEMIC INC.

San Jose, CA

for technical competence as a

Product Certification Body

This product certification body is accredited in accordance with the recognized International Standard ISO/IEC Guide 65:1996 General requirements for bodies operating product certification systems. This accreditation demonstrates technical competence for a defined scope and the operation of a quality management system for a Telecommunications Certification Body (TCB) meeting FCC (U.S.), IDA (Singapore) and IC (Canada) requirements.

Presented this 9th day of January 2009.

President

For the Accreditation Council Certificate Number: 2742.02 Valid to: September 30, 2010

For the product certification schemes to which this accreditation applies. please refer to the certification body's Scope of Accreditation.

Issue Date June 13th 2010

SL10050401-IDS-001_FCC(IBIS-LS) Rev1.0

SCOPE OF ACCREDITATION TO ISO/IEC GUIDE 65:1996

SIEMIC INC. 2206 Ringwood Ave. San Jose, CA 95131

Mr. Snell Leong (Authorized Representative) Phone: 408 526 1188

www.siemic.com

PRODUCT CERTIFICATION CONFORMITY ASSESSMENT BODY (CAB)

Valid to: September 30, 2010 Certificate Number: 2742.02

In recognition of the successful completion of the A2LA Certification Body Accreditation Program evaluation, including the US Federal Communications Commission (FCC), Industry Canada (IC) and Singapore (IDA) requirements for the indicated types of product certifications, accreditation is granted to this organization to perform the following product certification schemes:

Economy Scope

Federal Communication Commission - (FCC)

Unlicensed Radio Frequency Devices A1, A2, A3, A4 Licensed Radio Frequency Devices B1, B2, B3, B4 Telephone Terminal Equipment

*Please refer to FCC TCB Program Roles and Responsibilities, v04, released February 14, 2008 detailing scopes, roles and responsibilities. http://www.fcc.gov/oet/ea/FCC-Overview-TCB-Program.pdf

Industry Canada - (IC)

Radio All Radio Standards Specifications (RSS) in Category I

Equipment Standards List Radio

IDA – Singapore

Line Terminal Equipment All Technical Specifications for Line Terminal

Equipment - Table 1 of IDA MRA Recognition

Scheme: 2008, Annex 2

Radio-Communication Equipment All Technical Specifications for Radio-Communication

Equipment - Table 2 of IDA MRA Recognition

Scheme: 2008, Annex 2

*Please refer to Info-Communication Development Authority (iDA) Singapore website at: http://www.ida.gov.sg/doc/Policies%20and%20Regulation/Policies and Regulation Level2/20060609145118/MRA RecScheme.pdf

(A2LA Cert. No. 2742.02) 01/09/09

Page 1 of 1

^{*}Please refer to Industry Canada (IC) website at: http://www.ic.gc.ca/epic/site/smt-gst.nsf/en/h_sf01342e.html

SIEMIC ACCREDITATION DETAILS: FCC Test Site Registration No. 783147

FEDERAL COMMUNICATIONS COMMISSION

Laboratory Division 7435 Oakland Mills Road Columbia, MD 21046

December 20, 2007

Registration Number: 783147

SIEMIC Laboratories 2206 Ringwood Avenue, San Jose, CA 95131

Leslie Bai Attention:

Re: Measurement facility located at San Jose

3 & 10 meter site

Date of Renewal: December 20, 2007

Dear Sir or Madam:

Your request for renewal of the registration of the subject measurement facility has been received. The information submitted has been placed in your file and the registration has been renewed. The name of your organization will remain on the list of facilities whose measurement data will be accepted in conjunction with applications for Certification under Parts 15 or 18 of the Commission's Rules. Please note that the file must be updated for any changes made to the facility and the registration must be renewed at least every three years.

Measurement facilities that have indicated that they are available to the public to perform measurement services on a fee basis may be found on the FCC website www.fcc.gov under E-Filing, OET Equipment Authorization Electronic Filing, Test Firms.

Sincerely,

Phyllis Parrish Industry Analyst

SIEMIC ACCREDITATION DETAILS: Industry of Canada CAB ID: US0160



UNITED STATES DEPARTMENT OF COMMERCE National Institute of Standards and Technology Gaithersburg, Maryland 20899-

March 4, 2009

Mr. Leslie Bai SIEMIC, Inc. 2206 Ringwood Avenue San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by Industry Canada (IC), under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, Phase I Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name: SIEMIC, Inc.

Physical Location: 2206 Ringwood Avenue, San Jose, CA 95131 USA

Identification No.: US0160

Recognized Scope: CS-03 Part I, II, V, VI, VII and VIII

You may submit test data to IC to verify that the equipment to be imported into Canada satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements.

Recognized CABs are listed on the NIST website at http://ts.nist.gov/mra. Please contact Ms. Ramona Saar at (301) 975-5521 or ramona.saar@nist.gov if you have any questions.

Sincerely,

David F. Alderman

Group Leader, Standards Coordination and Conformity Group

Standards Services Division

David In Alda

Enclosure

cc: CAB Program Manager



SIEMIC ACCREDITATION DETAILS: Industry of Canada Test Site Registration No. 4842-1

Industry Industrie

Ganada Canada

May 27, 2010

OUR FILE: 46405-4842 Submission No: 140856

Siemic Inc.

2206 Ringwood Ave San Jose, CA, 95131 USA

Attention: Snell Leong

Dear Sir/Madame:

The Bureau has received your application for the renewal of a 3m alternative test site. Be advised that the information received was satisfactory to Industry Canada. The following number(s) is now associated to the site(s) for which registration / renewal was sought (4842A-1). Please reference the appropriate site number in the body of test reports containing measurements performed on the site. In addition, please keep for your records the following information;

- Your primary code is: 4842
- The company number associated to the site(s) located at the above address is: 4842A

Furthermore, to obtain or renew a unique site number, the applicant shall demonstrate that the site has been accredited to ANSI C63.4-2003 or later. A scope of accreditation indicating the accreditation by a recognized accreditation body to ANSI C63.4-2003 or later shall be accepted. Please indicate in a letter the previous assigned site number if applicable and the type of site (example: 3 metre OATS or 3 metre chamber). If the test facility is not accredited to ANSI C63.4-2003 or later, the test facility shall submit test data demonstrating full compliance with the ANSI standard. The Bureau will evaluate the filing to determine if recognition shall be granted.

The frequency for re-validation of the test site and the information that is required to be filed or retained by the testing party shall comply with the requirements established by the accrediting organization. However, in all cases, test site re-validation shall occur on an interval not to exceed two years. There is no fee or form associated with an OATS filing. OATS submissions are encouraged to be submitted electronically to the Bureau using the following URL;

http://strategis.ic.gc.ca/epic/internet/inceb-bhst.nsf/en/h_tt00052e.html.

If you have any questions, you may contact the Bureau by e-mail at certification.bureau@ic.gc.ca Please reference our file and submission number above for all correspondence.

Yours sincerely.

For: Wireless Lab

ratory Manager Certification and Engineering Bureau 3701 Carling Ave., Building 94 P.O. Box 11490, Station "H Ottawa, Ontario K2H 8S2 Email: dalwinder.gill@ic.gc.ca Tel. No. (613) 998-8363 Fax. No. (613) 990-4752

SIEMIC ACCREDITATION DETAILS: FCC DOC CAB Recognition: US1109

FEDERAL COMMUNICATIONS COMMISSION

Laboratory Division 7435 Oakland Mills Road Columbia, MD 21046

August 28, 2008

Siemic Laboratories 2206 Ringwood Ave., San Jose, CA 95131

Attention:

Leslie Bai

Re:

Accreditation of Siemic Laboratories

Designation Number: US1109 Test Firm Registration #: 540430

Dear Sir or Madam:

We have been notified by American Association for Laboratory Accreditation that Siemic Laboratories has been accredited as a Conformity Assessment Body (CAB).

At this time Siemic Laboratories is hereby designated to perform compliance testing on equipment subject to Declaration Of Conformity (DOC) and Certification under Parts 15 and 18 of the Commission's Rules.

This designation will expire upon expiration of the accreditation or notification of withdrawal of designation.

Sincerely,

GRETER CERNALIE George Tannahill **Electronics Engineer**

SIEMIC ACCREDITATION DETAILS: Australia CAB ID: US0160



UNITED STATES DEPARTMENT OF COMMERCE National Institute of Standards and Technology Gaithersburg, Maryland 20899-

November 20, 2008

Mr. Leslie Bai SIEMIC, Inc. 2206 Ringwood Avenue San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by the Australian Communications and Media Authority (ACMA) under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, Phase I Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name: Siemic, Inc.

Physical Location: 2206 Ringwood Avenue, San Jose, CA 95131

Identification No.: US0160

EMC: AS/NZS 4251.1 (until 5/31/2009), AS/NZS 4251.2 (until 5/31/2009), Recognized Scope:

AS/NZS CISPR 11, AS/NZS CISPR 14.1, AS/NZS CISPR 22, AS/NZS

61000.6.3, AS/NZS 61000.6.4

Radiocommunications: AS/NZS 4281, AS/NZS 4268, AS/NZS 4280.1, AS/NZS 4280.2, AS/NZS 4295, AS/NZS 4582, AS/NZS 4583, AS/NZS 4769.1, AS/NZS

4769.2, AS/NZS 4770, AS/NZS 4771

Telecommunications: AS/ACIF S002:05, AS/ACIF S003:06, AS/ACIF S004:06, AS/ACIF S006:01, AS/ACIF S016:01, AS/ACIF S031:01, AS/ACIF S038:01, AS/ACIF S040:01, AS/ACIF S041:05, AS/ACIF S043.2:06, AS/NZS 60950.1

You may submit test data to ACMA to verify that the equipment to be imported into Australia satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements. Recognized CABs are listed on the NIST website at http://ts.nist.gov/mra. Please contact Ms. Ramona Saar, at (301) 975-5521 or ramona.saar@nist.gov if you have questions.

Sincerely,

David F. Alderman

David T. alder

Group Leader, Standards Coordination and Conformity Group Standards Services Division

Enclosure

Snell Leong, Siemic, Inc.; Ramona Saar, NIST cc:



Issue Date

SL10050401-IDS-001_FCC(IBIS-LS) Rev1.0 June 13th 2010 35 of 44

SIEMIC ACCREDITATION DETAILS: Korea CAB ID: US0160



UNITED STATES DEPARTMENT OF COMMERCE National Institute of Standards and Technology Gaithersburg, Maryland 20899

October 1, 2008

Mr. Leslie Bai SIEMIC, Inc. 2206 Ringwood Avenue San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by the Radio Research Agency (RRA) Korea Communications Commission (KCC) under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, Phase I Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name: SIEMIC, Inc.

Physical Location: 2206 Ringwood Avenue, San Jose, CA 95131

Identification No.: US0160

Recognized Scope: EMI: KCC Notice 2008-39, RRL Notice 2008-3: CA Procedures for EMI

KN22: Test Method for EMI

EMS: KCC Notice 2008-38, RRL Notice 2008-4: CA Procedures for EMS KN24, KN-61000-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11: Test Method for EMS Wireless: RRL Notice 2008-26, RRL Notice 2008-2, RRL Notice 2008-10,

RRL Notice 2007-49, RRL Notice 2007-20, RRL Notice 2007-21,

RRL Notice 2007-80, RRL Notice 2004-68

Wired: President Notice 20664, RRL Notice 2007-30,

RRL Notice 2008-7 with attachments 1, 3, 5, 6

President Notice 20664, RRL Notice 2008-7 with attachment 4

You may submit test data to RRA/KCC to verify that the equipment to be imported into Korea satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements.

Recognized CABs are listed on the NIST website at http://ts.nist.gov/mra. If you have any questions please contact Ramona Saar at (301) 975-5521 or ramona.saar@nist.gov.

Sincerely,

David F. Alderman

Group Leader, Standards Coordination and Conformity Group

Standards Services Division

Paris To alde

Enclosure

cc: Ramona Saar

NIST

Serial#

SL10050401-IDS-001_FCC(IBIS-LS) Rev1.0 Issue Date June 13th 2010

SIEMIC ACCREDITATION DETAILS: Taiwan BSMI Accreditation No. SL2-IN-E-1130R



UNITED STATES DEPARTMENT OF COMMERCE National Institute of Standards and Technology Geithersburg, Maryland 20888-

May 3, 2006

Mr. Leslie Bai SIEMIC Laboratories 2206 Ringwood Avenue San Jose, CA 95131

Dear Mr. Buil:

I am pleased to inform you that your laboratory has been recognized by the Chinese Taipei's Bureau of Standards, Metrology, and Inspection (BSMI) under the Asia Pacific Economic Cooperation (APEC) Mutual Recognition Arrangement (MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, Phase I Procedures, of the APEC Tel MRA. You may submit test data to BSMI to verify that the equipment to be imported into Chinese Taipei satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements. The pertinent designation information is as follows:

SL2-IN-E-1130R (Must be applied to the test reports) BSMI number:

US0160 U.S Identification No: Scope of Designation: CNS 13438 Mr. Leslie Bai Authorized signatory:

The names of all recognized CABs will be posted on the NIST website at http://ts.nist.gov/mra. If you have any questions, please contact Mr. Dhillon at 301-975-5521. We appreciate your continued interest in our international conformity assessment activities.

Sincerely, and I acolo

David F. Alderman

Group Leader, Standards Coordination and Conformity Group

Jogindar Dhillon 001



SIEMIC ACCREDITATION DETAILS: Taiwan NCC CAB ID: US0160



UNITED STATES DEPARTMENT OF COMMERCE National Institute of Standards and Technology Gaithersburg, Maryland 20899-

November 25, 2008

Mr. LeslieBai SIEMIC, Inc. 2206 Ringwood Avenue San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by the National Communications Commission (NCC) for the requested scope expansion under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is designated to act as a Conformity Assessment Body (CAB) under Appendix B, Phase I Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name:

SIEMIC, Inc.

Physical Location:

2206 Ringwood Avenue, San Jose, CA 95131

Identification No.:

LP0002

Current Scope: Additional Scope:

PSTN01, ADSL01, ID0002, IS6100 and CNS 14336

You may submit test data to NCC to verify that the equipment to be imported into China satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements.

Recognized CABs are listed on the NIST website at http://ts.nist.gov/mra. If you have any questions please contact Ramona Saar at (301) 975-5521 or ramona.saar@nist.gov.

Paris Z. alden David F. Alderman

Group Leader, Standards Coordination and Conformity Group Standards Services Division

Enclosure

cc: Ramona Saar



Serial#

SL10050401-IDS-001_FCC(IBIS-LS) Rev1.0 Issue Date June 13th 2010

SIEMIC ACCREDITATION DETAILS: Mexico NOM Recognition



Laboratorio Valentín V. Rivero

México D.F. a 16 de octubre de 2006.

LESLIE BAI DIRECTOR OF CERTIFICATION SIEMIC LABORATORIES, INC. ACCESSING GLOBAL MARKETS PRESENTE

En contestación a su escrito de fecha 5 de septiembre del año en curso, le comento que estamos muy interesados en su intención de firmar un Acuerdo de Reconocimiento Mutuo, para lo cual adjunto a este escrito encontrara el Acuerdo en idioma ingles y espeñol prefenado de los cuales le pido sea revisado y en su caso corregido, para que si esta de acuerdo poder firmado para mandado con las autoridades Mexicanas para su visto bueno y así poder ejercer dicho acuerdo.

Aprovecho este escrito para mencionarle que nuestro intermediario gestor será la empresa Isatel de México. S. A. de C. V., empresa que ha colaborado durante mucho tiempo con nosotros en lo relacionado a la evaluación de la conformidad y que cuenta con amplia experiencia en la gestoria de la certificación de cumplimiento con Normas Oficiales Mexicanas de producto en México.

Me despido de ustad enviêndole un cordial saludo y esperando sus comentarios al Acuerdo que nos poupa.

Atentamente:

Ing. Fausting Conez González Gerente-Terrico del Laboratorio de CANIEN.

Haderens Condesa ce 100 Makos, D.F. 5264-0908 con 12 lineas Fax 5264-0466

SIEMIC ACCREDITATION DETAILS: Hong Kong OFTA CAB ID: US0160



UNITED STATES DEPARTMENT OF COMMERCE National Institute of Standards and Technology Gaithersburg, Maryland 20899-

December 8, 2008

Mr. Leslie Bai SIEMIC, Inc. 2206 Ringwood Avenue San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by the Office of the Telecommunications Authority (OFTA) under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, Phase I Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name: SIEMIC, Inc.

Physical Location: 2206 Ringwood Avenue, San Jose, California 95131 USA

Identification No.: US0160

Recognized Scope: Radio: HKTA 1002, 1007, 1008, 1010, 1015, 1016, 1020, 1022, 1026,

1027, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1039, 1041,

1042, 1043, 1044, 1046, 1047, 1048, 1049, 1051

Telecom: HKTA 2011, 2012, 2013, 2014, 2017, 2018, 2022, 2024, 2026,

2027, 2028, 2029, 2030, 2031, 2032, 2033

You may submit test data to OFTA to verify that the equipment to be imported into Hong Kong satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements.

Recognized CABs are listed on the NIST website at http://ts.nist.gov/mra. If you have any questions please contact Ramona Saar at (301) 975-5521 or ramona.saar@nist.gov.

Sincerely,

David F. Alderman

Group Leader, Standards Coordination and Conformity Group

Standards Services Division

David I. alden

Enclosure

cc: Ramona Saar



SIEMIC ACCREDITATION DETAILS: Australia ACMA CAB ID: US0160



UNITED STATES DEPARTMENT OF COMMERCE National Institute of Standards and Technology Gaithersburg, Maryland 20899-

November 20, 2008

Mr. Leslie Bai SIEMIC, Inc. 2206 Ringwood Avenue San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by the Australian Communications and Media Authority (ACMA) under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, Phase I Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name: Siemic, Inc.

Physical Location: 2206 Ringwood Avenue, San Jose, CA 95131

Identification No.: US0160

Recognized Scope: EMC: AS/NZS 4251.1 (until 5/31/2009), AS/NZS 4251.2 (until 5/31/2009),

AS/NZS CISPR 11, AS/NZS CISPR 14.1, AS/NZS CISPR 22, AS/NZS

61000.6.3, AS/NZS 61000.6.4

Radiocommunications: AS/NZS 4281, AS/NZS 4268, AS/NZS 4280.1, AS/NZS 4280.2, AS/NZS 4295, AS/NZS 4582, AS/NZS 4583, AS/NZS 4769.1, AS/NZS

4769.2, AS/NZS 4770, AS/NZS 4771

Telecommunications: AS/ACIF S002:05, AS/ACIF S003:06, AS/ACIF S004:06, AS/ACIF S006:01, AS/ACIF S016:01, AS/ACIF S031:01, AS/ACIF S038:01, AS/ACIF S040:01, AS/ACIF S041:05, AS/ACIF S043.2:06, AS/NZS 60950.1

You may submit test data to ACMA to verify that the equipment to be imported into Australia satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements. Recognized CABs are listed on the NIST website at http://ts.nist.gov/mra. Please contact Ms. Ramona Saar, at (301) 975-5521 or ramona.saar@nist.gov if you have questions.

Sincerely,

David F. Alderman

Group Leader, Standards Coordination and Conformity Group

Standards Services Division

David T. alder

Enclosure

Snell Leong, Siemic, Inc.; Ramona Saar, NIST cc:

Serial#

SL10050401-IDS-001_FCC(IBIS-LS) Rev1.0 Issue Date June 13th 2010

SIEMIC ACCREDITATION DETAILS: Australia NATA Recognition



Leslie Bai SIEMIC, Inc. 2206 Ringwood Avenue San Jose, CA 95131

November 4 2008

Under Australian government legislation, the Australian Communications and Media Authority (ACMA) has determined the National Association of Testing Authorities, Australia (NATA) as an accreditation body as per Section 409(1) of the Telecommunications Act 1997 (Cth). Pursuant to Section 409(2) of the Telecommunications Act 1997 (Cth), I am pleased to advise that your laboratory has been determined as a Recognised Testing Authority (RTA).

This determination has been made on the basis of your accreditation by A2LA accreditation no. 2742.01 and the Mutual Recognition Agreement between NATA and A2LA. It is effective from 11 July 2008. RTA status applies only to the following standards and is contingent upon their continued inclusion in your laboratory's scope of accreditation.

AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S006, AS/ACIF S016, AS/ACIF S031, AS/ACIF S038, AS/ACIF S041 and AS/ACIF S043.2

As an RTA, your laboratory has the following obligations:

- 1. the laboratory shall continue to meet all of the accreditation criteria of A2LA;
- 2. the authorised representative of the laboratory shall notify NATA of changes to the staff or operations of the laboratory which would affect the performance of the tests for which the laboratory has been determined;
- 3. compliance of equipment shall be reported on test reports bearing the A2LA logo/endorsement.

Current information on the Australian Communications and Media Authority and regulatory requirements for telecommunications products within Australia can be obtained from the ACMA's web-site at "http://www.acma.gov.au". Further information about NATA may be gained by visiting "http://www.nata.asn.au".

Please note that AS/ACIF S040 and New Zealand standards do not form part of the RTA scheme.

Your RTA listing will appear on the NATA website shortly.

Kind Regards

Chris Norton, Senior Scientific Officer Measurement Science and Technology National Association of Testing Authorities (NATA) 71-73 Flemington Road North Melbourne Vic 3051 Australia

Ph: +61 3 9329 1633 Fx: +61 3 9326 5148 E-Mail: Christopher.Norton@nata.asn.au

Internet: www.nata.asn.au

SIEMIC ACCREDITATION DETAILS: VCCI Radiated Test Site Registration No. R-3083





CERTIFICATE

Company: SIEMIC Inc.

<Member No. 3081

Facility: SIEMIC Inc.

(Radiation

3

meter site)

Location of Facility:

2206 Ringwood Avenue, San Jose, CA 95131 USA

This is to certify that the following measuring facility has been registered in accordance with the Rules for Voluntary Control Measures

Registration No.: R-3083

Date of Registration: June 12, 2009

This Certificate is valid until September 30, 2010



SIEMIC ACCREDITATION DETAILS: VCCI Conducted (Main Port) Test Site Registration No. C-3421





CERTIFICATE

Company: SIEMIC Inc.

<Member No. 3081

Facility: SIEMIC Inc.

(Main Ports Conducted Interference Measurement)

Location of Facility:

2206 Ringwood Avenue, San Jose, CA 95131 USA

This is to certify that the following measuring facility has been registered in accordance with the Rules for Voluntary Control Measures

Registration No.: C-3421

Date of Registration: June 12, 2009

This Certificate is valid until September 30, 2010



SIEMIC ACCREDITATION DETAILS: VCCI Conducted (Telecom Port) Test Site Registration No. T-1597



CERTIFICATE

Company: SIEMIC Inc.

<Member No. 3081

Facility: SIEMIC Inc.

(Telecominication Ports Conducted Interference Measurement)

Location of Facility:

2206 Ringwood Avenue, San Jose, CA 95131 USA

This is to certify that the following measuring facility has been registered in accordance with the Rules for Voluntary Control Measures

Registration No.: T-1597

Date of Registration: June 12, 2009

This Certificate is valid until September 30, 2010

