RFID READER

Model: ZXP Series 8

December 07th 2011 Report No.: SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0 (This report supersedes SL11092002-ZBR-059(15.225)_FCC,IC)



Modifications made to the product : None

This Test Report is Issued Under the Authority of:		
David Zhang	Bei	
David Zhang	Leslie Bai	
Test Engineer	Engineering Reviewer	

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RF Test Report	To: FCC Part 15.225 & IC RSS210
SIEMIC, INC. Accessing good marines	



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IC Number	: 3798B-MAICD01
Serial#	SL11092002-ZBR-059(15.225)_FCC,IC Rev1
Issue Date	December 07th 2011
Page	2 of 54

Laboratory Introduction

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Country/Region	Accreditation Body	Scope	
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 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 3 of 54

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 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 4 of 54

CONTENTS

1	EXECUTIVE SUMMARY & EUT INFORMATION	6
2	TECHNICAL DETAILS	7
3	MODIFICATION	8
4	TEST SUMMARY	9
5	MEASUREMENTS, EXAMINATION AND DERIVED RESULTS	.10
ANNE	EX A. TEST INSTRUMENT & METHOD	.18
ANNE	EX B EUT AND TEST SETUP PHOTOGRAPHS	.23
ANNE	EX C. TEST SETUP AND SUPPORTING EQUIPMENT	.23
ANNE	EX D USER MANUAL, BLOCK & CIRCUIT DIAGRAM	.27
ANNE	EX E SIEMIC ACCREDITATION	.28



 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 5 of 54

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Title

То

 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page_____6 of 54_____
 6

1 Executive Summary & EUT information

The purpose of this test programmed was to demonstrate compliance of the FCC/IC approved Radio module "I28RFID-MAICD-01" (FCC ID) / "0B-MAICD01" (IC ID) after the PCB modification being installed inside host printer ZXP Series 8 against the current Stipulated Standards. The modification on Radio module was to remove 3 connectors and also the coding/decoding of the chips. The complete system ZXP Series 8 with PCB modified radio module have demonstrated compliance with the FCC 15.225 2011 & IC RSS 210 Issue 8.0.

The equipment under test operating frequency is 13.56 MHz.

The test has demonstrated that this unit complies with stipulated standards.

EUT Information

EUT Description	:	13.56MHz RFID Reader
Model No	:	ZXP Series 8
Serial No	:	Z82-AM0C0000US00
Input Power	:	100~240 VAC, 4A
Classification Per Stipulated Test Standard	:	RFID Reader



Title: То



 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 7 of 54

2 TECHNICAL DETAILS

Purpose	Compliance testing of 13.56MHz radio module with host Zebra Card Printer ZXP Series 8 with stipulated standard
Applicant / Client	ZEBRA TECHNOLOGIES CORP.
Manufacturer	Zebra Technologies Corp. 333 Corporate Woods Parkway Vernon Hills, IL 60061 USA
Laboratory performing the tests	SIEMIC Laboratories
Test report reference number	SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0
Date EUT received	Nov 29 th 2011
Standard applied	47 CFR §15.225: 2011 & RSS 210 Issue 8: 2010
Dates of test (from – to)	Dec 5th 2011 - Dec 7th 2011
No of Units:	2
Equipment Category:	DXX
Trade Name:	Zebra Technologies Corp.
Model :	ZXP Series 8
RF Operating Frequency (ies)	13.56 MHz (RFID)
Number of Channels :	1
Modulation :	ASK
FCC ID :	I28RFID-MAICD-01
IC ID :	3798B-MAICD01



 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 8 of 54

3 MODIFICATION

NONE



 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 9 of 54

4 TEST SUMMARY

The product was tested in accordance with the following specifications. All testing has been performed according to below product classification:

RFID Reader

Test Results Summary

Test Sta	ndard	Description	Pass / Fail	
47 CFR Part 15.225: 2011	RSS 210 Issue 8: 2010	Description		
15.203		Antenna Requirement	Pass	
15.207(a)	RSS Gen(7.2.2)	Conducted Emissions Voltage	N/A	
15.225(a)	RSS210(A2.6)	Limit in the band of 13.553 – 13.567 MHz	Pass - Refer to test report SL09010703-ZBR- 001_ZXP(15.225)(Media Auth)	
15.225(b)	RSS210(A2.6)	Limit in the band of 13.410 – 13.553 MHz and 13.567 – 13.710 MHz	Pass	
15.225(c)	RSS210(A2.6)	Limit in the band of 13.110 – 13.410 MHz and 13.710 – 14.010 MHz	Pass	
15.225(d)	RSS210(A2.6)	Limit outside the band of 13.110 – 14.010 MHz	Pass	
15.225(e)	RSS210(A2.6)	Frequency Stability	Pass - Refer to test report SL09010703-ZBR- 001_ZXP(15.225)(Media Auth)	
ANSI C63.4: 2009/ RSS-Gen Issue 3: 2010				

PS: All measurement uncertainties are not taken into consideration for all presented test result.



 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 10 of 54

5 MEASUREMENTS, EXAMINATION AND DERIVED RESULTS

5.1 Antenna Requirement

Requirement(s): 47 CFR §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

Antenna requirement must meet at least one of the following:

- a) Antenna must be permanently attached to the device.
- b) Antenna must use a unique type of connector to attach to the device.
- c) Device must be professionally installed. Installer shall be responsible for ensuring that the correct antenna is employed with the device.
- 1) The RFID antenna is attached permanently to the device which meets the requirement.

Results: PASS

5.2 Conducted Emissions Voltage

Requirement:

	Conducted limit (dBµV)	
Frequency of emission (MHz)	Quasi-peak	Average
0.15–0.5	66 to 56*	56 to 46*
0.5–5	56	46
5–30	60	50

*Decreases with the logarithm of the frequency.

Procedures:

- 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. Conducted Emissions Measurement Uncertainty 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 ±3.86dB. NA

4. Environmental Conditions Temperature

	Relative Humidity	NΔ
	Relative Humaity	11/7
	Atmospheric Pressure	NA
Test Date : NA		

Tested By :N/A

 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 12 of 54

5.3 Radiated Emission < 30 MHz (outside 13.110 – 14.010 MHz)

1.	All possible modes of operation were	investigated. Only the 6 wo	orst case emissions measured, using the correct
	CISPR detectors, are reported. All ot	her emissions were relative	ly insignificant.
2.	A "-ve" margin indicates a PASS as it	refers to the margin preser	nt below the limit line at the particular frequency.
3.	Radiated Emissions Measurement Uncertainty		
	All test measurements carried out are	traceable to national stand	lards. The uncertainty of the measurement at a
	confidence level of approximately 959	<u>% (in the case where distrib</u>	utions are normal), with a coverage factor of 2, in the
	range 30MHz - 1GHz (QP only @ 3n	<u>n & 10m) is +5.6dB/-4.5dB (</u>	for EUTs < 0.5m X 0.5m X 0.5m).
4	Environmental Conditions	Temperature	23°C - 25°C
		Relative Humidity	50%
		Atmospheric Pressure	1019mbar
	Test Date : Dec 5 th – Dec 7 th 2011		
	Tested By :David Zhang		

Requirement(s): 47 CFR §15.209; 47 CFR §15.225(d) & RSS-210 (A2.6)

Procedures: Radiated emissions were measured according to ANSI C63.4. The EUT was set to transmit at the highest output power. The EUT was set 3 meter away from the measuring antenna. The loop antenna was positioned 1 meter above the ground from the center of the loop. The measuring bandwidth was set to 10 kHz.

The limit is converted from microvolt/meter to decibel microvolt/meter.

Sample Calculation: Corrected Amplitude = Raw Amplitude (dBµV/m) + ACF(dB) + Cable Loss(dB) – Distance Correction Factor



Film RFID Test Plot- Loop Antenna at 90 degree





: I28RFID-MAICD-01
: 3798B-MAICD01
SL11092002-ZBR-059(15.225)_FCC,IC Re
December 07th 2011
14 of 54

1MHz ~ 30MHz

General Emission Limit @ 3 meter Ribbon RFID Test Plot- Loop Antenna at 0 degree \sim 130.0 120.0 110.0 100.0 90.0 Amplitude (dBuV/m) 80.0 70.0 60.0 50.0 40.0 30.0 JANG, ANA, 20.0 1.0 2.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 4.0 Frequency (MHz)

Ribbon RFID Test Plot - Loop Antenna at 90 degree





 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 15 of 54

5.4 Radiated Emissions > 30 MHz

All possible modes of operation v	vere investigated. Only the 6 worst o	ase emissions measured, using the correct
CISPR detectors, are reported.	All other emissions were relatively ins	significant.
A "-ve" margin indicates a PASS	as it refers to the margin present bel	ow the limit line at the particular frequency.
Radiated Emissions Measuremen	nt Uncertainty	
All test measurements carried ou	t are traceable to national standards	. The uncertainty of the measurement at a
confidence level of approximately	95% (in the case where distribution	s are normal), with a coverage factor of 2, in the
range 30MHz - 1GHz (QP only (0 3m & 10m) is +5.6dB/-4.5dB (for E	UTs < 0.5m X 0.5m X 0.5m).
Environmental Conditions	Temperature	23°C - 25°C
	Relative Humidity	50%
	Atmospheric Pressure	1019mbar
Test Date : Dec 5th - Dec 7th 20		
Tested By :David Zhang		
Test Date : Dec 5th – Dec 7th 20 Tested By :David Zhang	11	
	All possible modes of operation w CISPR detectors, are reported. A A "-ve" margin indicates a PASS Radiated Emissions Measurement All test measurements carried ou confidence level of approximately range 30MHz – 1GHz (QP only (Environmental Conditions Test Date : Dec 5th – Dec 7th 20 Tested By :David Zhang	All possible modes of operation were investigated. Only the 6 worst of CISPR detectors, are reported. All other emissions were relatively ins A "-ve" margin indicates a PASS as it refers to the margin present bell Radiated Emissions Measurement Uncertainty All test measurements carried out are traceable to national standards confidence level of approximately 95% (in the case where distribution range 30MHz – 1GHz (QP only @ 3m & 10m) is +5.6dB/-4.5dB (for E Environmental Conditions Temperature Relative Humidity Atmospheric Pressure Test Date : Dec 5th – Dec 7th 2011 Tested By :David Zhang

Requirement(s): 47 CFR §15.209; 47 CFR §15.225(d) & RSS-210 (A2.6)

Procedures: Radiated emissions were measured according to ANSI C63.4. The EUT was set to transmit at the highest output power.

The limit is converted from microvolt/meter to decibel microvolt/meter.

Sample Calculation: Corrected Amplitude = Raw Amplitude ($dB\mu V/m$) + ACF(dB) + Cable Loss(dB)



Results:





Test Data

Frequency (MHz)	Quasi-Peak (dBµV/m)	Antenna height (cm)	Polarity	Turntable position (deg)	Limit (dBµV/m)	Margin (dB)
244.98	42.41	279	Н	114	46	-3.59
240	43.13	285	V	134	46	-2.87
200.01	42.15	276	V	104	43.5	-1.35
625.01	44.25	116	Н	114	46	-1.75
756.01	43.35	106	Н	100	46	-2.65
232.99	40.09	271	V	129	46	-5.91



 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 17 of 54

Contactless RFID is in transmitting mode

Title: То

Frequency	Reading	Direction	Height	Polar	Antenna Loss	Cable loss	Amplifier	Corrected Reading	15.247/15.209	15.247/15.209	
GHz	(dBuV/m)	Degree	Meter	H/V	(dB)	(dB)	(dB)	(dBuV/m)	Limit (dBuV/m)	Margin	Comments
1.172	35.56	214	100	V	24.8	2.64	31.99	31.01	74	-42.99	Peak
1.172	21.09	214	100	V	24.8	2.64	31.99	16.54	54	-37.46	Ave
1.172	38.94	167	100	Н	24.8	2.64	31.99	34.39	74	-39.61	Peak
1.172	23.98	167	100	Н	24.8	2.64	31.99	19.43	54	-34.57	Ave



 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 18 of 54

Annex A. TEST INSTRUMENT & METHOD

Annex A.i. TEST INSTRUMENTATION & GENERAL PROCEDURES

Instrument	Manufacturer	Model	CAL Due Date
3m Semi-Anechoic	ETS-Lingren	3M	10/13/2012
Chamber			
Spectrum Analyzer	HP	8564E	05/19/2012
EMI Receiver	Rohde & Schwarz	ESIB 40	05/19/2012
R&S LISN	R&S	ESH2-Z5	05/18/2012
CHASE LISN	Chase	MN2050B	05/18/2012
Antenna(1 ~18GHz)	Emco	3115	06/04/2012
Antenna (30MHz~2GHz)	Sunol Sciences	JB1	06/04/2012
Chamber	Lingren	3m	10/13/2012
Pre-Amplifier(1 ~ 26GHz)	HP	8449	05/17/2012
Horn Antenna (18~40GHz)	Com Power	AH-840	06/04/2012
Microwave Pre-Amp (18~40GHz)	Com Power	PA-840	Every 2000 hours
Sekonic Hygro Hermograph	ST-50	HE01-000092	06/04/2012

Note: No calibration required.



 FCC IC
 : 128RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 19 of 54

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 Annex B.
- 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).

Description of Conducted Emission Program

This EMC Measurement software run LabView automation software and offers a common user interface for electromagnetic interference (EMI) measurements. This software is a modern and powerful tool for controlling and monitoring EMI test receivers and EMC test systems. It guarantees reliable collection, evaluation, and documentation of measurement results. Basically, this program will run a pre-scan measurement before it proceeds with the final measurement. The pre-scan routine will run the common scan range from 15 kHz to 30 MHz; the program will first start a peak and average scan on selectable measurement time and step size. After the program complete the pre-scan, this program will perform the Quasi Peak and Average measurement, based on the pre-scan peak data reduction result.

Sample Calculation Example

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 FCC IC
 : 128RFID-MAICD-01

 IC Number
 : 37988-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 20 of 54

Annex A. iii RADIATED EMISSIONS TEST DESCRIPTION

EUT Characterisation

EUT characterisation, over the frequency range from 30MHz to 10th Harmonic, 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.
- 2. The filtered power supply for the EUT and supporting equipment were tapped from the appropriate power sockets located on the turntable.
- 3. The relevant broadband antenna was set at the required test distance away from the EUT and supporting equipment boundary.





 FCC IC
 : 128RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 21 of 54

Test Method

The following procedure was performed to determine the maximum emission axis of EUT:

1. With the receiving antenna is H polarization, rotate the EUT in turns with three orthogonal axes to determine the axis of maximum emission.

2. With the receiving antenna is V polarization, rotate the EUT in turns with three orthogonal axes to determine the axis of maximum emission.

3. Compare the results derived from above two steps. So, the axis of maximum emission from EUT was determined and the configuration was used to perform the final measurement.

Final Radiated Emission Measurement

1. Setup the configuration according to figure 1. Turn on EUT and make sure that it is in normal function.

2. For emission frequencies measured below 1 GHz, a pre-scan is performed in a shielded chamber to determine the accurate frequencies of higher emissions will be checked on a open test site. As the same purpose, for emission frequencies measured above 1 GHz, a pre-scan also be performed with a 1 meter measuring distance before final test.

3. For emission frequencies measured below and above 1 GHz, set the spectrum analyzer on a 100 kHz and 1 MHz resolution bandwidth respectively for each frequency measured in step 2.

4. The search antenna is to be raised and lowered over a range from 1 to 4 meters in horizontally polarized orientation. Position the highness when the highest value is indicated on spectrum analyzer, then change the orientation of EUT on test table over a range from $0 \circ to 360 \circ with a speed as slow as possible, and keep the azimuth that highest emission is indicated on the spectrum analyzer. Vary the antenna position again and record the highest value as a final reading.$

5. Repeat step 4 until all frequencies need to be measured were complete.

6. Repeat step 5 with search antenna in vertical polarized orientations.

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	Peak	100 kHz	100 kHz
Above 1000	Peak	1 MHz	1 MHz
ADOVE 1000	Average	1 MHz	10 Hz

Description of Radiated Emission Program

This EMC Measurement software run LabView automation software and offers a common user interface for electromagnetic interference (EMI) measurements. This software is a modern and powerful tool for controlling and monitoring EMI test receivers and EMC test systems. It guarantees reliable collection, evaluation, and documentation of measurement results. Basically, this program will run a pre-scan measurement before it proceeds with the final measurement. The pre-scan routine will run the scan on four different antenna heights, 2 antenna polarity, and 360 degrees table rotation. For example, the program was set to run 30 MHz to 1 GHz scan; the program will first start from a meter antenna height and divide the 30 MHz to 1 GHz into 10 separate parts of maximum hold sweeps. Each parts of maximum hold sweep, the program will collect the data from 0 degree to 360 degrees table rotation. After the program complete the 1m scan, the antenna continues to rise to 2m and continue the scan. The step will repeated for all specified antenna height and polarity. This program will perform the Quasi Peak measurement after the signal maximization process and pre-scan routine. The final measurement will be base on the pre-scan data reduction result.



 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 22 of 54

Sample Calculation Example

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. For the limit is employed average value, therefore the peak value can be transferred to average value by subtracting the duty factor. The basic equation with a sample calculation is as follows: Peak = Reading + Corrected Factor

where

Corr. Factor = Antenna Factor + Cable Factor - Amplifier Gain (if any) And the average value is Average = Peak Value + Duty Factor or

Average = Peak Value + Duty Factor of Set RBW = 1MHz, VBW = 10Hz.

Note :

If the measured frequencies are fall in the restricted frequency band, the limit employed must be quasi peak value when frequencies are below or equal to 1 GHz. And the measuring instrument is set to quasi peak detector function.



 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 23 of 54

Annex B EUT AND TEST SETUP PHOTOGRAPHS

Please see the attachment

Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

EUT 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)
Dell / Laptop	D600	USB Cable , 1meter;Ethernet cable, 3m; From PC Laptop to EUT



Block Configuration Diagram for Radiated Emission





FCC IC	: I28RFID-MAICD-01
IC Number	: 3798B-MAICD01
Serial#	SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0
Issue Date	December 07th 2011
Page	25 of 54

Block Configuration Diagram for Conducted Emission



 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 26 of 54

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	The EUT was working normally.



 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 27 of 54

Annex D USER MANUAL, BLOCK & CIRCUIT DIAGRAM

Please see attachment



 FCC IC
 : 128RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 28 of 54_____

Annex E SIEMIC ACCREDITATION

SIEMIC ACREDITATION DETAILS: A2LA 17025 & ISO Guide 65 : 2742.01 , 2742.2







Title

То

The American Association for Laboratory Accreditation

I28RFID-MAICD-01

Issue Date December 07th 2011

29 of 54

: 3798B-MAICD01 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

FCC IC

Serial#

Page

IC Number

"World Class Accreditation"

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

SIEMIC LABORATORIES ¹ 2206 Ringwood Ave, San Jose, CA 95131 Mr. Leslie Bai Phone: 408 526 1188 Email: leslie.bai@siemic.com Mr. Snell Leong Phone: 408 526 1188 Email: snell.leong@siemic.com www.siemic.com

ELECTRICAL

Valid to: September 30, 2012

Certificate Number: 2742.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following EMC, Product Safety, Radio and Telecommunication tests:

Test Description:	Test Method:	
EN & IEC – Emissions & Immunity	IEC/CISPR 11; IEC/CISPR 12; EN 55011; IEC/CISPR 22; EN 55022; IEC/CISPR 20; EN 55020; EN 61000-6-1; EN 61000-6-2; EN 61000-6-3; EN 61000-6-4; EN 61204-3; EN 61326, EN 61326-1; EN 61000-3-2; EN 61000-4-3; EN 50081-1, EN 50081-2; EN 50082-1; IEC 61000-4-2; EN 61000-4-2; IEC 61000-4-3 (limited up to 2.7 GHz and 3V/m); EN 61000-4-3; (limited up to 2.7 GHz and 3V/m); IEC 61000-4-4; EN 61000-4-3; (limited up to 2.7 GHz and 3V/m); IEC 61000-4-4; EN 61000-4-4; IEC 61000-4-5; EN 61000-4-5; IEC 61000-4-6; EN 61000-4-6; IEC 61000-4-8; EN 61000-4-8; IEC 61000-4-11; EN 61000-4-6; IEC 61000-4-8; EN 61000-4-8; IEC 61000-4-11; EN 61000-4-11; IEC/CISPR 24; EN 55024; EN 50412-2-1; EN 50083-2; EN 50090-2-2; EN 50091-2; EN 50130-4; EN 50130-4 +A12; IEC 60601-1-2; EN 12184; EN 55015; EN 61547; CISPR 16-1-4	
Korea – Emissions & Immunity	 IEC-CISPR 20; EN 53020; EN 61000-0-1; EN 61000-0-2; EN 61000-3-3; EN 61000-4-2; EN 61204-3; EN 61326, EN 61326-1; EN 61000-3-2; EN 61000-4-3; EN 50081-1, EN 50081-2; EN 50082-1; IEC 61000-4-3; (<i>limited up to 2.7 GHz and 3V/m</i>); EN 61000-4-3; (<i>limited up to 2.7 GHz and 3V/m</i>); IEC 61000-4-4; EN 61000-4-4; IEC 61000-4-5; EN 61000-4-5; IEC 61000-4-6; EN 61000-4-6; IEC 61000-4-5; EN 61000-4-5; IEC 61000-4-6; EN 61000-4-6; IEC 61000-4-8; EN 61000-4-8; IEC 61000-4-11; EN 61000-4-6; IEC 61000-4-8; EN 61000-4-8; IEC 61000-4-11; EN 61000-4-11; IEC/CISPR 24; EN 55024; EN 50412-2-1; EN 50083-2; EN 50090-2-2; EN 50091-2; EN 50130-4; EN 50130-4 +A12; IEC 60601-1-2; EN 12184; EN 55015; EN 61547; CISPR 16-1-4 KCC Notice 2009-27, Nov. 5, 2009; RRA Announce 2009-9, Dec. 21, 2009; KN 22:2007-12; KCC Notice 2009-27, Nov. 5, 2009; RRA Antoice 2009-27, Nov. 5, 2009; RRA Antoice 2009-10, Dec. 21, 2009; KN 24:2008-5; KN 61000-4-2:2008-5; KN 61000-4-3:2008-5; KN 61000-4-8:2008-5; KN 61000-4-5:2008-5; KN 61000-4-6:2008-5; KN 61000-4-8:2008-5; KN 61000-4-11:2008-5; RRL Notice 2008-3; RRL Notice 2007-101; RRL Notice 2005-131; RRL Notice 2008-3; RRL Notice 2007-101; RRL Notice 2008-4; RRA Notice No 2008-11(2008.12.16); RRA Notice No 2008-12(2008.12.16); KN 60601-1-2; KCC Notice 2009-27; KN 301 489-1(2008-05); KN 301 489-7(2008-05); KN 16-1-1(2008-05); KN 16-1-2(2008-05); KN 16-1-3(2008-05); KN 16-1-4(2008-05); KN 16-1-3(2008-05); KN 16-1-4(2008-05); KN 16-1-2(2008-05); KN 16-2-4(2008-05); KN 16-1-4(2008-05); KN 16-1-2(2008-05); KN 16-2-4(2008-05); 	

(A2LA Certificate No. 2742.01) Revised 01/12/2011

Page 1 of 8

Peter Alage

5301 Buckeystown Pike, Suite 350 | Frederick, Maryland 21704-8373 | Phone: 301 644 3248 Fax: 301 662 2974 | www.A2LA.org

 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 30 of 54

UE / ECC Emilia	CAT 1112 11 CAT 1112 12 CAT 1112 11 CAT 1112 4
US (PCC - Emissions	SAE J1113-11, SAE J1113-12; SAE J1113-41; SAE J1113-4; SAE J1113-13; FCC Method 47 CFR Part 18, FCC Report and Order ET Docket 98-153 (FCC 02-48); FCC Method 47 CFR Parts15, including
	Suppart G, using FCC Order 04-425 ANSI C62 4/2000/ ANSI C62 10/2000/ ANSI C62 1/2002
	ANSI C03.4(2009); ANSI C03.10(2009); ANSI C03.4:2003 ANSI C63.4(2003) with ECC Mathed 47 CEB Part 11-
	ANSI C03.4(2003) with FCC Method 47 CFR Part 15, Subpart E:
	ANSI C63 4(2003) with FCC Method 47 CFR Part 15, Subpart C;
	ANSI C63.4(2003) and DA 02-2138:
	ANSI C63.4(2003) with FCC Method 47 CFR Part 15, Subpart B
Canada – Emissions	ICES-001; ICES-002; ICES-003 Issue 4; ICES-003 Issue 4 (2004); ICES-006 Issue 1
Vietnam – Emission & Immunity	TCN 68-193:2003; TCN 68-196:2001; TCVN 7189:2002
Australia / New Zealand – Emissions and Immunity	AS/NZS 1044; AS/NZS 4251.1; AS/NZS 4251.2; AS/NZS CISPR 22; AS/NZS 3548; AS/NZS 2279.3; AS/NZS 61000-3-3; AS/NZS CISPR 11; AS/NZS CISPR 24; AS/NZS 61000.6.3; AS/NZS 61000.6.4; AS/NZS CISPR 14.1; AS/NZS 61000.3.2
Japan – Emissions	JEITA IT-3001; VCCI-V-3:2010.4 (up to 6 GHz)
China – Emissions	GB9254; GB17625.1
Taiwan – Emissions	CNS 13438 (up to 6 GHz); CNS 13783-1; CNS 13803; CNS 13439
Singapore – Emissions & Immunity	IDA TS EMC; CISPR 22; IEC 61000-4-2; IEC 61000-4-3; IEC 61000-4-4; IEC 61000-4-5; IEC 61000-4-6
FCC – Unlicensed Radio A1 to A4	A1: 47 CFR Parts 11 (Emergency Alert System (EAS)), 15 (Radio Frequency Devices) and 18 (Industrial, Scientific, and Medical Equipment) FCC OST/MP-5(1986); ANSI C63.4(2003); ANSI C63.4(2009); ANSI C63.10(2009)
	A2: 47 CFR Part 15 (Radio Frequency Devices); ANSI C63.4(2003); ANSI C63.4(2009); ANSI C63.10(2009)
	A3: 47 CFR Part 15 (Radio Frequency Devices); ANSI C63.17:2006; ANSI C63.10(2009); IEEE Std 1528:2003 + Ad1; Std IEEE 1528A:2005
	A4: 47 CFR Part 15 (Radio Frequency Devices); ANSI C63.10(2009); IEEE Std 1528:2003 + Ad1; Std IEEE 1528A:2005
FCC – Licensed Radio B1 to B4	B1: 47 CFR Parts 2 (Frequency Allocations and Radio Treaty Matters; General Rules and Regulations), 22 (Public Mobile Services), 24 (Personal Communications Services), 25 (Satellite Communications), and 27 (Miscellaneous Wireless Communications Services):
	ANSI/TIA-603-C (2004), Land Mobile FM or PM Communications Equipment Measurement and Performance Standard; IEEE Std 1528:2003 + Ad1; Std IEEE 1528A:2005
	Dr. D.



FCC – Licensed Radio (continued) B1 to B4	 B2: 47 CFR Parts 2 (Frequency Allocations and Radio Treaty Matters; General Rules and Regulations), 22 (Public Mobile Services), 74 (Experimental Radio Auxiliary, Special Broadcast and Other Program Distributional Services), 90 (Private Land Mobile Radio Services), 95 (Personal Radio Services), and 97 (Amateur Radio Services); ANSI/TIA- 603-C (2004), Land Mobile FM or PM Communications Equipment Measurement and Performance Standard
	 B3: 47 CFR Parts 2 (Frequency Allocations and Radio Treaty Matters; General Rules and Regulations); 80 (Stations in the Maritime Services), 87 (Aviation Services); ANSI/TIA-603-C (2004), Land Mobile FM or PM Communications Equipment Measurement and Performance Standard
	B4: 47 CFR Parts 2 (Frequency Allocations and Radio Treaty Matters; General Rules and Regulations); 27 (Broadband Radio Services (BRS) and Educational Broadband Services (EBS)), 74 (Experimental Radio Auxiliary, Special Broadcast and Other Program Distributional Services), and 101 (Fixed Microwave Services); ANSI/TIA-603-C (2004), Land Mobile FM or PM Communications Equipment Measurement and Performance Standard
Canada – Radio	RSS 102; RSS 111; RSS 112; RSS 117; RSS 118; RSS 119; RSS 123; RSS 125; RSS 127; RSS 128; RSS 129; RSS 131; RSS 132; RSS 133; RSS 134; RSS 135; RSS 136; RSS 137; RSS 138; RSS 139; RSS 141; RSS 142; RSS 170; RSS 181; RSS 182; RSS 188; RSS 191; RSS 192; RSS 193; RSS 194; RSS 195; RSS 196; RSS 197; RSS 198; RSS 199; RSS 210; RSS 220; RSS 213; RSS 215; RSS 243; RSS 287; RSS 310; RSS Gen
CE – Radio	EN 301 502; EN 301 511; EN 301 526; EN 301 681; EN 301 721; EN 301 751; EN 301 753; EN 301 783-2; EN 301 796; EN 301 797; EN 301 840-2; EN 301 843-1; EN 301 843-4; EN 301 843-5; EN 301 893; EN 301 908-01; EN 301 908-02; EN 301 908-03; EN 301 908-04; EN 301 908-05; EN 301 908-06; EN 301 908-07; EN 301 908-08; EN 301 908-09; EN 301 908-10; EN 301 908-11; EN 301 908-08; EN 301 908-09; EN 301 908-10; EN 301 908-11; EN 301 929-2; EN 301 997-2; EN 302 018-2; EN 302 054-2; EN 302 064-2; EN 302 066-2; EN 302 077-2; EN 302 186; EN 302 195-2; EN 302 217-3; EN 302 245-2; EN 302 288-2; EN 302 291-2; EN 302 296; EN 302 297; EN 302 326-2; EN 302 326-3; EN 302 340; EN 302 372-2; EN 302 426; EN 302 454-2; EN 302 502; EN 302 510-2;
	EN 302 420; EN 302 4342; EN 302 302; EN 302 310-2; EN 302 217-4-2; EN 300 224-1; EN 300 279; EN 300 339; EN 300 385; EN 301 839-2; EN 301 843-6; EN 302 017-2; EN 302 208-2; EN 302 217-2-2; ETS 300 329; ETS 300 445; ETS 300 446; ETS 300 683; ETS 300 826; ETS EN 300 328; ETSI EN 300 086-2; EN 302217-1; EN 302217-2-1; EN 302217-4-1; EN 30228-1; EN 302908-12; EN 302326-1; EN 301929-1; EN 301997-1; EN 300224-2; EN 301839-1; EN 301843-1; EN 301843-2; EN 301843-3; EN 301843-4; EN 301843-5; EN 302017-1; EN 302208-1; EN 30086-1; EN 300113-1; EN 300224-1; EN 300341-1; EN 302291-1; EN 300200-1; EN 302500-2; ETSI EN 300 113-2; ETSI EN 300 197; ETSI EN 300 198; ETSI EN 300 219-1; ETSI EN 300 219-2; ETSI EN 300 220-1; ETSI EN 300 220-2; ETSI EN 300 220-3; ETSI EN 300 220-1; ETSI EN 300 296-1; ETSI EN 300 296-2; ETSI EN 300 328-1; ETSI EN 300 328-2; ETSI EN 300 328-1; ETSI EN 300 328-2; ETSI EN 300 330; ETSI EN 300 330-1; ETSI EN 300 330-2;



 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 32 of 54

CE Badia (applituned)	ETELEN 200 241 2, ETELEN 200 272 1, ETELEN 200 272 2,
CE – Radio (continued)	ETSI EN 300 371-2; ETSI EN 300 375-1; ETSI EN 300 375-2; ETSI EN 300 373-3; ETSI EN 300 300, I: ETSI EN 300 300, 3;
	ETSI EN 200 422.1: ETSI EN 200 422.2: ETSI EN 200 421.
	ETSI EN 200 440 1- ETSI EN 200 440 2- ETSI EN 200 454 1-
	ETSI EN 200 454 2, ETSI EN 200 718 2, ETSI EN 200 434-1,
	ETGLEN 300 434-2, ETGLEN 300 710-2, ETGLEN 301 021,
	ETSI EN 201 212 1, ETSI EN 201 212 2, ETSI EN 201 212 2,
	E151 EN 301 213-1; E151 EN 301 213-2; E151 EN 301 213-3;
	ETSLEN 301 213-4; ETSLEN 301 213-5; ETSLEN 301 357-1;
	ETSI EN 301 357-2; ETSI EN 301 390; ETSI EN 301 459;
	ETSI EN 301 489-01(excluding section 9.6); ETSI EN 301 489-02;
	ETSI EN 301 489-03; ETSI EN 301 489-04; ETSI EN 301 489-05;
	ETSI EN 301 489-06; ETSI EN 301 489-07; ETSI EN 301 489-08;
	ETSI EN 301 489-09; ETSI EN 301 489-10; ETSI EN 301 489-11;
	ETSI EN 301 489-12; ETSI EN 301 489-13; ETSI EN 301 489-14;
	ETSI EN 301 489-15; ETSI EN 301 489-16; ETSI EN 301 489-17;
	ETSI EN 301 489-18; ETSI EN 301 489-19; ETSI EN 301 489-20;
	ETSI EN 301 489-22; ETSI EN 301 489-23; ETSI EN 301 489-24;
	ETSI EN 301 489-25; ETSI EN 301 489-26; ETSI EN 301 489-27;
	ETSI EN 301 489-28; ETSI EN 301 489-31; ETSI EN 301 489-32;
	IEC 60945
IDA – Radio	IDA TS 3G-BS; IDA TS 3G-MT; IDA TS AR; IDA TS CT-CTS;
0-04-02-01-01-00-00-00-00-00-00-00-00-00-00-00-	IDA TS GMPCS; IDA TS GSM-BS; IDA TS GSM-MT; IDA TS LMR;
	IDA TS RPG; IDA TS SRD; IDA TS UWB; IDA TS WBA
Vietnam – Radio	TCN 68-242:2006; TCN 68-243:2006; TCN 68-246:2006
Korea – Radio	KCC Notice 2009-13; KCC Notice 2008-26; RRL Notice 2008-2;
	RRL Notice 2005-105; RRL Notice 2008-17;
	RRL Notice 2005-127; RRL Notice 2005-24; RRL Notice 2005-25;
	RRL Notice 2005-179; RRL Notice 2008-10; RRL Notice 2007-49;
	RRL Notice 2007-20; RRL Notice 2007-11; RRL Notice 2007-80;
	RRL Notice 2004-68; KCC Notice 2009-36, Dec. 8, 2009;
	RRL Notice 2009-6. October 15, 2009: KCC Notice 2010-1:
	KCC Notice 2010-12; KCC Notice 2010-13
Taiwan – Radio	LP0002; PLMN07; PLMN01; PLMN08
Australia - New Zealand -	AS 2772.2; AS/NZS 4281; AS/NZS 4268; AS/NZS 4280.1; AS/NZS 4583;
Radio	AS/NZS 4280.2; AS/NZS 4281; AS/NZS 4295; AS/NZS 4582;
	AS/NZS 4769.1; AS/NZS 4769.2; AS/NZS 4770; AS/NZS 4771
Hong Kong – Radio	HKTA 1002; HKTA 1007; HKTA 1008; HKTA 1010; HKTA 1015;
	HKTA 1016; HKTA 1020; HKTA 1022; HKTA 1026; HKTA 1027;
	HKTA 1029; HKTA 1030; HKTA 1031; HKTA 1032; HKTA 1033;
	HKTA 1034; HKTA 1035; HKTA 1036; HKTA 1037; HKTA 1039;
	HKTA 1041; HKTA 1042; HKTA 1043; HKTA 1044; HKTA 1046;
	HKTA 1047; HKTA 1048; HKTA 1049; HKTA 1051; HKTA1052;
	HKTA1053; HKTA 1054; HKTA 1055
	0.0

(A2LA Certificate No. 2742.01) Revised 01/12/2011

Peter Allage Page 4 of 8

 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 33 of 54

CS-03 Part V Issue 9:2009 Amendment 1; CS-03 Part VIII Issue 9:2009 Amendment 4; CS-03 Part I Issue 9:2006 Amendment 3; CS-03 Part II Issue 9:2004; CS-03 Part III Issue 9:2004; CS-03 Part V Issue 9:2004 ; CS-03 Part VI Issue 9:2004; CS-03 Part VII Issue 9:2006 Amendment 3; CS-03 Part VIII Issue 9:2007 Amendment 3; CS-03 Issue 9:04 + A2(06) + A3(06)	
TBR 2: 01-1997: TBR 004 Ed.1.95 + A1 (97): TBR 1: TBR 3:TBR 12: A1 01-1996: TBR 013 ed.1; TBR 024 ed.1; TBR 25; TBR 38 ed.1;ETSI ES 203 021-05 ; ETSI ES 203 021-2 ; ETSI ES 021-3;TBR 021; ETSI EG 201 121; ETSI EN 301 437; ETSI TS 101 270-1;ITU-T Recommendation Q.920;ITU-T Recommendation Q.920 – Amendment 1;ITU-T Recommendation Q.921 – Amendment 1;ITU-T Recommendation Q.931;ITU-T Recommendation Q.931;ISDN User Network Interface Layer 3 Specification for Basic Call Control;ITU-T Recommendation P.300	
AS/CA S003.1:2010; AS/CA S003.2:2010; AS/CA S003.3:2010; AS/CA S004:2010; AS/ACIF S006:2008; AS/ACIF S041.1:2009 AS/ACIF S041.2:2009; AS/ACIF S041.3:2009; AS/ACIF S042.1:2008; AS/ACIF S043.2:2008; AS/ACIF S043.3:2008; 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 ACIF S042.1	
PTC200:2006; PTC200 Issue No.2:97 + A1(980); PTC220; PTC273:2007; TNA 115; TNA 117	
IDA TS ADSL, Issue 1, Rev. 1 (April 2006); IDA TS DLCN, Issue 1 (July 2005); IDA TS ISDN BA, Issue 1 (July 2005); IDA TS ISDN PRA, Issue 1 (July 2005); IDA TS ISDN 3 (Oct. 2000); IDA TS-PSTN, Issue 1 (March 2007); IDA TS ACLIP 07	
HKTA 2011; HKTA 2012; HKTA 2013; HKTA 2014; HKTA 2015; HKTA 2017; HKTA 2018; HKTA 2019; HKTA 2022; HKTA 2023; HKTA 2024; HKTA 2026; HKTA 2027; HKTA 2028; HKTA 2029; HKTA 2030; HKTA 2031; HKTA 2032; HKTA 2033	



 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 34 of 54

Vietnam – Telecom	TCN 68-188:2000; TCN 68-193:2003; TCN 68-196:2001; TCN 68-143:2003; TCN 68-192:2003; TCN 68-189:2000; TCN 68-221:2004; TCN 68-222:2004; TCN 68-245:2004; TCN 68-223:2004	
Korea – Telecom	RRA Notice 2009-38, Sep. 11, 2009; RRA Notice 2009-7 (including attachments 1, 3, 5, 6); Presidential Decree 21098, RRL Notice 2007-30; RRL Notice 2008-10 (attachments 1, 3, 5, 6); RRL Notice 2009-25; RRL Notice 2008-59	
China – Telecom	YD/T 514-1:98; YD/T 1277.1-2003; GB/T 17904.1-1999; GB/T 17904.2-1999; GB/T 17154.1-1997; GB/T 17154.2-1997; YD/T1091-2000; YD/T1006-1999; GB/T 17789-1999	
Taiwan – Telecom	PSTN01:03; ADSL01:08; ID0002; IS6100: 93	
Japan — Telecom	JATE Blue Book, Green Book; Ministerial Ordinance of the Ministry of Posts and Telecommunications No 31 of April 1, 1985 (last amended on March 22 2004); Ordinance Concerning Technical Conditions Compliance Approval etc. of Terminal Equipment	
South Africa – Telecom	DPT-TE-001; TE-002; TE-003; TE-004; TE-005; TE-006; TE-007; TE-008; TE-009; TE-010; TE-012 (telephone interface); TE-013 (telephone interface); TE-014; TE-015; TE-018; SWS-001; SWS-002; SWS-003; SWS-004; SWS-005; SWS-006; SWS-007; SWS-008; SWS-009; SWS-010	
Israel – Telecom	Israel MoC Spe. 23/96	
Mexico – Telecom	NOM-151-SCT1-1999; NOM-152-SCT1-1999	
Argentina – Telecom	CNC-ST2-44-01	
Brazil – Telecom	Resolution 392-2005	
International Telecom Union	ITU-T-G.703:01; ITU-T-G.823:93; ITU-T G.824; ITU-T G.825; ITU-T-G.991.2; ITU-T-G.992.1; ITU-T-G.992.3; ITU-T-G.992.5; ITU-T-G.993.1	
Product Safety	IEC 60950-1; EN 60950-1; UL 60950-1; IEC 60601-1-1; CAN/CSA 22.2 NO. 60950-1-03; SS-EN 60950-1; AS/NZ 60950-1, (voltage surge testing up to 6kV, excluding Annex A and H); CNS 14336, CNS 14408; GB4943; President Notice 20664; RRL Notice 2008-10 (attachment 4); RRA Notice 2009-7 (attachment 4); TCN 68-190:2003; SABS IEC 60950; IEC/EN 61558; IEC/EN 61558-2-7; EN 62115; IEC 60215; EN 60958; EN 60598; IEC 215 (1987) + A1 (1992) + A2 (1994)	
Japan - Radio	ARIB STD-T81; ARIB STD-T66; RCR STD-1; RCR STD-29; ARIB STD-T94 Fascicle 1; ARIB STD-T90; ARIB STD-T89; RCR STD-33	

Title: То

SIEMIC, INC. Accessing global markets RF Test Report of Zebra Technologies Corp. Model : ZXP Series 8 FCC 15.225 2011, RSS210 Issue 7: 2007 www.siemic.com

 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 35 of 54

SAR & HAC	IEEE P1528:2003 + Ad1; IEEE 1528A:2005; FCC OET Bulletin 65 Supplement C; FCC OET Bulletin 65; ANSI C95; ANSI C63.19; FCC 47 CFR 20.19; H46-2/99-273E; EN 50360; EN 50361; IEC62209-1; IEC 62209-2; EN 50371; EN 50383; EN 50357; EN 50364; RRL 2008-18; RRL 2008-16; KCC 2009-27; RRL 2004-67; CNS 14958-1; CNS 14959; NZS 2772.1; NZS 6609.2; Resolution N 533	
Japan – Notification No. 88 of MIC 2004		
Table No 13	CB Radio	
Table No 21	Cordless Telephone	
Table Nos 22-1 thru 22-17	Low Power Radio Equipment	
Table No 36	Low Power Security System	
Table No 43	Low Power Data Communication in the 2.4 GHz Band	
Table No 44	Low Power Data Communication in the 2.4 GHz Band	
Table No 45	Low Power Data Communication in the 5.2, 5.3, 5.6 GHz Bands	
Table No 46	Low Power Data Communication in the 25 and 27 GHz Bands	
Table No 47	Base Station for 5 GHz Band Wireless Access System	
Table No 47	Base Station for 5 GHz Band Wireless Access System (low spurious type)	
Table No 47	Land Mobile Relay for 5 GHz Band Wireless Access System (limited for use in special zones)	
Table No 47	Land Mobile Relay for 5 GHz Band Wireless Access System (limited for in special zones, low spurious type)	
Table No 47	Land Mobile Relay for 5 GHz Band Wireless Access System	
Table No 47	Land Mobile Relay for 5 GHz Band Wireless Access System (low spurious type)	
Table No 47	Land Mobile Relay for 5 GHz Band Wireless Access System (low power type)	
Table No 50	Digital Cordless Telephone	
Table No 50	PHS Base Station	
Table No 50	PHS Land Mobile Station	
Table No 50	PHS Relay Station	
Table No 50	PHS Test Station	
Table No 64	Mobile Station for Dedicated Short Range Communication Systems	
Table No 64	Base Station for Dedicated Short Range Communication Systems	
Table No 64	Test Station for Dedicated Short Range Communication Systems	
Table No 70	UWB (Ultra Wide Band) Radio System	

(A2LA Certificate No. 2742.01) Revised 01/12/2011

Peter Alaze

Page 7 of 8



 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0
 Issue Date December 07th 2011 Page 36 of 54

¹Note: This accreditation covers testing performed at the laboratory listed above and the OATS located at 44366 South Grimmer Blvd., Fremont CA 94538. At this site "Radiated Emissions" are tested at a measurement distance of 10m.

*Limitations for listed standards are indicated by italics and Scope excludes protocol sections of applicable standards.

(A2LA Certificate No. 2742.01) Revised 01/12/2011

Peter Maye

Page 8 of 8

Title

То

Accessing global markets RF Test Report of Zebra Technologies Corp. Model : ZXP Series 8 FCC 15.225 2011, RSS210 Issue 7: 2007 www.siemic.com
 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 37 of 54



Accessing global markets RF Test Report of Zebra Technologies Corp. Model : ZXP Series 8 FCC 15.225 2011, RSS210 Issue 7: 2007 www.siemic.com



Title

То

The American Association for Laboratory Accreditation

Phone: 408 526 1188

128RFID-MAICD-01

SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

: 3798B-MAICD01

Issue Date December 07th 2011

38 of 54

FCC IC

Serial#

Page

IC Number

World Class Accreditation"

SCOPE OF ACCREDITATION TO ISO/IEC GUIDE 65:1996

SIEMIC INC. 2206 Ringwood Ave. San Jose, CA 95131 Mr. Snell Leong (Authorized Representative) www.siemic.com

PRODUCT CERTIFICATION CONFORMITY ASSESSMENT BODY (CAB)

Valid to: September 30, 2012

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), Singapore (IDA) and Hong Kong (OFTA) 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	C

*Please refer to FCC TCB Program Roles and Responsibilities, released July 22, 2010 detailing scopes, roles and responsibilities. <u>http://fjallfoss.fcc.gov/oetcf/kdb/forms/FTSSearchResultPage.cfm?id=44683&switch=P</u>

Industry Canada - (IC)

Radio

Scope 1-Licence-Exempt Radio Frequency Devices; Scope 2-Licensed Personal Mobile Radio Services; Scope 3-Licensed General Mobile & Fixed Radio Services; Scope 4-Licensed Maritime & Aviation Radio Services; Scope 5-Licensed Fixed Microwave Radio Services;

*Please refer to Industry Canada (IC) website at: http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf09888.html

IDA - Singapore

Line Terminal Equipment

All Technical Specifications for Line Terminal Equipment – Table 1 of IDA MRA Recognition Scheme; 2009, Annex 2

Radio-Communication Equipment

All Technical Specifications for Radio-Communication Equipment – Table 2 of IDA MRA Recognition Scheme: 2009, 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/MRARecSc heme.pdf (A2LA Cert. No, 2742.02) Revised 12/16/2010 Leter Maye Page 1 of 2

5301 Buckeystown Pike, Suite 350 | Frederick, Maryland 21704-8373 | Phone: 301 644 3248 | Fax: 301 662 2974 | www.A2LA.org



 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 39 of 54

OFTA - Hong Kong

Radio Equipment

HKTA 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1010, 1015, 1016, 1019, 1020, 1022, 1026, 1027, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1038, 1039, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050, 1051, 1052, 1053, 1054, 1055

*Please refer to the Office of the Telecommunications Authority's website at. http://www.ofta.gov.hk/en/standards/HKTASpec/hkta-10xx.html

Fixed Network Equipment

HKTA 2001, 2005, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2040, 2041, 2102, 2103, 2104, 2108, 2201, 2202, 2203, 2204

"Please refer to the Office of the Telecommunications Authority's website at: http://www.ofta.gov.hk/en/standards/HKTASpec.hkta-2xxx.html

MIC-Japan

Terminal Equipment

Scope A1 - Terminal Equipment for the Purpose of Calls

Radio Equipment

Scope B1 - Unlicensed Station (all classes of equipment)

(A2LA Cert. No. 2742.02) Revised 12/16/2010

Peter Alaye Page 2 of 2

Title

То

Accessing global markets RF Test Report of Zebra Technologies Corp. Model : ZXP Series 8 FCC 15.225 2011, RSS210 Issue 7: 2007 www.siemic.com
 FCC IC
 : 128RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 40 of 54_____

SIEMIC ACREDITATION DETAILS: FCC Test Site Registration No. 783147

FEDERAL COMMUNICATIONS COMMISSION

Laboratory Division 7435 Oakland Mills Road Columbia, MD 21046

September 12, 2008

Registration Number: 783147

SIEMIC Laboratories 2206 Ringwood Avenue, San Jose, CA 95131

Attention: Leslie Bai

Measurement facility located at San Jose Anechoic chamber (3 meters) Date of Listing: February 10, 2004

Dear Sir or Madam:

Re:

Your request for registration of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.948 of the FCC rules. The information has, therefore, been placed on file and the name of your organization added to 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. Please also note that this registration does not recognize the measurement facility to perform testing for products authorized under the Declaration of Conformity (DoC) process. In order to test products subject to DoC authorization process, a measurement facility must be accredited and recognized by the FCC.

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 <u>www.fcc.gov</u> under E-Filing, OET Equipment Authorization Electronic Filing, Test Firms.

Sincerely, tota

Katie Hawkins Electronics Engineer

Accessing global markets RF Test Report of Zebra Technologies Corp. Model : ZXP Series 8 FCC 15.225 2011, RSS210 Issue 7: 2007 www.siemic.com
 FCC IC
 : 128RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 41 of 54_____

SIEMIC ACREDITATION DETAILS: Industry of Canada CAB ID : US0160



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

March 4, 2009

Title

То

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,

Panil I alda

David F. Alderman Group Leader, Standards Coordination and Conformity Group Standards Services Division

Enclosure

cc: CAB Program Manager



 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 42 of 54

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

Canada Canada

May 27, 2010

Title

То

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 <u>certification.bureau@ic.gc.ca</u> Please reference our file and submission number above for all correspondence.

Yours sincerely,

Dolunderfull

Dalwindar Gill For: Wireless Laboratory Manager Certification and Engineering Bureau 3701 Carling Ava., Building 94 P.O. Box 11490, Station "H" Ottawa, Outario K2H 882 Email: dalwindser gill@ic.gc.ca Tel. No. (613) 998-8363 Fax. No. (613) 990-4752



128RFID-MAICD-01 FCC IC IC Number : 3798B-MAICD01 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0 Serial# Issue Date December 07th 2011 Page 43 of 54

SIEMIC ACREDITATION 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,

Grenze Tanahill

Electronics Engineer

Title

То

Accessing global markets RF Test Report of Zebra Technologies Corp. Model : ZXP Series 8 FCC 15.225 2011, RSS210 Issue 7: 2007 www.siemic.com FCC IC : I28RFID-MAICD-01 IC Number : 3798B-MAICD01 Serial# SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0 Issue Date December 07th 2011 Page_ 44 of 54_____

SIEMIC ACREDITATION 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
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,

Daniel I. aldum

David F. Alderman Group Leader, Standards Coordination and Conformity Group Standards Services Division

Enclosure

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



Title

То

Accessing global markets RF Test Report of Zebra Technologies Corp. Model : ZXP Series 8 FCC 15.225 2011, RSS210 Issue 7: 2007 www.siemic.com FCC IC : I28RFID-MAICD-01 IC Number : 3798B-MAICD01 Serial# SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0 Issue Date December 07th 2011 Page_ 45 of 54_____

SIEMIC ACREDITATION DETAILS: Korea CAB ID: US0160

Red Rodo Research Agency

KOREA COMMUNICATIONS COMMISSION REPUBLIC OF KOREA 1, Wonhyoro-3ga, Yongsan-gu, Seoul, 140-848, Korea

KCC/RRA

Radio Research Agency

Tel: +82 2 710 6610 Fax: +82 2 710 6619 Homepage : www.rra.go.kr

14th Jan, 2011

Radio Research Agency Korea Communications Commission #1, Wonhypero-Iga, Yongsan-gu Seoul Korea 140-848 (Tel) 82-2710-6610, (Fax) 82-2-710-6619 Jan 14*, 2011

Mr. David F. Alderman Group Leader, Standards Coordination and Conformity Group National Institute of Standards and Technology 100 Bureau Drive, Stop 2100 Gaithersburg, Maryland 20899-2100, USA

Dear Mr. David F. Alderman:

This is to confirm the recognition by Radio Research Agency of

SIEMIC, Inc. (US0160)

as an accredited Conformity Assessment Body (CAB) under the terms of Phase I of the APEC TEL MRA. The scope for which this laboratory has been recognized is given below.

Coverage	Standards	Date of Recognition
Current Scope	EMI : KCC Notice 2008-39, RRL Notice 2008-3 and KN22 EM5 : KCC Notice 2008-38, RRL Notice 2008-4, KN24, KN 61000 -4-2, -4-3, -4-4, - 4-5, -4-6, -4-8, -4-11 Radio : RRL Notice 2008-26, RRL Notice 2008-2, RRL Notice 2008-10, RRL Notice 2007-49, RRL Notice 2007-20, RRL Notice 2007-11, RRL Notice 2007-80, RRL Notice 2004-68 Telecom : President Notice 20664, RRL Notice 2007-30, 2008-7(1,3,4,5,6)	Jan 14 ¹⁰ , 2011
Updated Scope	SAR : RRA Notice 2008-16, RRA Notice 2008-18, KCC Notice 2009-27	

This recognition is contingent upon the maintenance of this CAB's accreditation status and is limited to the standards listed above.

If you have any inquiries about this recognition, please contact to Certification Division of Radio Research Agency with above address and telephone numbers.

Best Regards,

K.-Y.M

Ahn, Kun-Young Director Certification Division

Enclosure

cc: Ramona Saar – NIST, JungMin Park - RRA

Title

То

Accessing global markets RF Test Report of Zebra Technologies Corp. Model : ZXP Series 8 FCC 15.225 2011, RSS210 Issue 7: 2007 www.siemic.com
 FCC IC
 : 128RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 46 of 54

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



UNITED STATES DEPARTMENT OF COMMERCE National Institute of Standards and Technology Gethersburg, Maryland 20995

NIS

May 3, 2006

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

Dear Mr. Bait

I am pleased to inform you that your laboratory has been recognized by the Chinese Taipei's Bareau 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 designated scope remains valid and comply with the designation requirements. The pertinent designated not information is as follows:

- BSMI number:
- U.S Identification No:

Scope of Designation: CNS 13438

Authorized signatory: Mr. Leslie Bai

ES0160

The names of all recognized CABs will be posted on the NIST website at http://ts.nisi.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.

SL2-IN-E-1130R (Must be applied to the test reports).

Sincerely,

2 acres

David F. Alderman Group Leader, Standards Coordination and Conformity Group

ce: Jogindar Dhillon

Title

То

Accessing global markets RF Test Report of Zebra Technologies Corp. Model : ZXP Series 8 FCC 15.225 2011, RSS210 Issue 7: 2007 www.siemic.com FCC IC : I28RFID-MAICD-01 IC Number : 3798B-MAICD01 Serial# SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0 Issue Date December 07th 2011 Page 47 of 54_____

SIEMIC ACREDITATION DETAILS: Taiwan NCC CAB ID: US0160



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

March 16, 2009

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.:
 US0160

 Current Scope:
 LP0002, PSTN01, ADSL01, ID0002, IS6100 and CNS 14336

 Additional Scope:
 PLMN07

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.

Sincerely,

2 alla Na

David F. Alderman Group Leader, Standards Coordination and Conformity Group Standards Services Division

Enclosure

cc: Ramona Saar



Title

То

Accessing global markets RF Test Report of Zebra Technologies Corp. Model : ZXP Series 8 FCC 15.225 2011, RSS210 Issue 7: 2007 www.siemic.com
 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 48 of 54



Accessing global markets RF Test Report of Zebra Technologies Corp. Model : ZXP Series 8 FCC 15.225 2011, RSS210 Issue 7: 2007 www.siemic.com
 FCC IC
 : 128RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 49 of 54

SIEMIC ACREDITATION DETAILS: Hong Kong OFTA CAB ID : US0160



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

December 8, 2008

Title

То

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,

Parid I. alden

David F. Alderman Group Leader, Standards Coordination and Conformity Group Standards Services Division

Enclosure

cc: Ramona Saar





Title

То

Accessing global markets RF Test Report of Zebra Technologies Corp. Model: ZXP Series 8 FCC 15.225 2011, RSS210 Issue 7: 2007 www.siemic.com FCC IC : I28RFID-MAICD-01 IC Number : 3798B-MAICD01 Serial# SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0 Issue Date December 07th 2011 Page_ 50 of 54_____

SIEMIC ACREDITATION 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 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 Z. alder

David F. Alderman Group Leader, Standards Coordination and Conformity Group Standards Services Division

Enclosure

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



Title

То

Accessing global markets RF Test Report of Zebra Technologies Corp. Model : ZXP Series 8 FCC 15.225 2011, RSS210 Issue 7: 2007 www.siemic.com
 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page_____51 of 54_____
 51

SIEMIC ACREDITATION DETAILS: Australia NATA Recognition





Title

То

Accessing global martets RF Test Report of Zebra Technologies Corp. Model : ZXP Series 8 FCC 15.225 2011, RSS210 Issue 7: 2007 www.siemic.com FCC IC : I28RFID-MAICD-01 IC Number : 3798B-MAICD01 Serial# SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0 Issue Date December 07th 2011 Page 52 of 54

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



Title

То

Accessing global markets RF Test Report of Zebra Technologies Corp. Model : ZXP Series 8 FCC 15.225 2011, RSS210 Issue 7: 2007 www.siemic.com
 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 53 of 54

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



Title

То

Accessing global markets RF Test Report of Zebra Technologies Corp. Model : ZXP Series 8 FCC 15.225 2011, RSS210 Issue 7: 2007 www.siemic.com
 FCC IC
 : I28RFID-MAICD-01

 IC Number
 : 3798B-MAICD01

 Serial#
 SL11092002-ZBR-059(15.225)_FCC,IC Rev1.0

 Issue Date
 December 07th 2011

 Page
 54 of 54

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

