FCC PART 15 SUBPART B CLASS B
DECLARATION OF CONFORMITY PROCEDURE
INDUSTRY CANADA
ICES-003 ISSUE 5 (NOV. 2014 UPDATE) CLASS B
TEST REPORT

For

Next Thing Company

1940 Union St #32,
Oakland, CA 94607, USA

Model: HELLA1337

Report Type: Original Report		**Product Type:** C.H.I.P. Computer
Prepared By	Jerry Wang Test Engineer	
Report Number	R15101413	
Report Date	2015-12-29	
Reviewed By	Elijah Garcia EMC supervisor	
	Bay Area Compliance Laboratories Corp. 1274 Anvilwood Avenue, Sunnyvale, CA 94089, USA Tel: (408) 732-9162 Fax: (408) 732 9164	

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	R1510143	Original Report	2015-12-29

1 General Information

1.1 General Statements

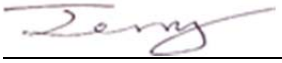
Bay area Compliance Laboratory Corp. [BACL] hereby makes the following Statements:

- The Unit(s) described in this Test Report were received at BACL's facilities on 16 October 2015. Testing was performed on the Unit(s) described in this Test Report during the period 31 October 2015 through 11 November 2015.
- The Test Results reported herein apply only to the Unit(s) actually tested, and to substantially identical Units.
- This Test Report must not be used to claim product endorsement by A2LA, or any agency of the U.S. Government, or by any other foreign government.
- This Test Report is the property of BACL, and shall not be reproduced, except in full, without prior written approval of BACL.

1.2 Purpose

The purpose of this Report is to document the compliance of the Linux Computer, model: C.H.I.P to the requirements of 47 CFR Part 15 Subpart B for Class B Devices and Industry Canada ICES-003 Issue 5 (Nov. 2014 Update) for Class B Devices. The objective of the testing performed was to determine the compliance of the EUT in accordance with the FCC Rules (i.e., 47 CFR Part 15 Subpart B Sections 15.107 and 15.109) using the CISPR 22 Edition 3 Class B limits for conducted and radiated emissions, ICES-003 Issue 5 (Nov. 2014 Update) per Section 6.1 Table 2 for powerline conducted emissions limits; per Section 6.2.1 Table 5 for Radiated Emissions at frequencies below 1 GHz; and, per Section 6.2.2 Table 7 for Radiated Emissions at frequencies above 1 GHz, subject to the upper frequency limitations stated in Section 6.2 Table 3, using the test methods in the latest version of ANSI C63.4 (i.e., ANSI BC63.4-2014). This Test Report references the applicable Electromagnetic Emissions requirements.

THE DATA CONTAINED IN THIS TEST REPORT WAS COLLECTED AND COMPILED BY:



Jerry Wang
[Test Engineer]

Jin Yang
[Test Engineer]

1.3 Agent for the Responsible Party

None

1.4 Responsible Party

Company Name:	Next thing Company
Contact:	Ben EL-Bza
Street Address:	1940 Union St #32,
City/State/Zip:	Oakland, CA 94607, USA
Country:	USA
Telephone:	+1 (206) 778-4314
E-mail:	ben@nextthing.com

1.5 Product Description of the Equipment under Test (EUT)

The "EUT" (Equipment under Test) was a computer, contains 2.4 GHz 802.11b/g/n and Bluetooth 4.0 dual modes.

1.6 Mechanical Description of the EUT

Dimensions: approximately 60 mm (L) x 41 mm (W) x 10 mm (H)
Weight: approximately 23.5 g.
Serial Number: None.
EUT Photos: See Exhibit C of this Test Report.

1.7 Related Submittal(s)/Grant(s)

FCC Part 15.247 DSS and DTS with FCC ID: 2AF9F-HELLA1337

1.8 Test Methodology

All of the measurements contained in this Test Report were made in accordance with ANSI C63.4-2014 "American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz". All tests were performed at the Bay Area Compliance Laboratories Corp. facilities in Sunnyvale California.

1.9 Test Facility Registrations

BACLs test facilities that are used to perform Radiated and Conducted Emissions tests are currently recognized by the Federal Communications Commission as Accredited with NIST Designation Number US1129.

BACL's test facilities that are used to perform Radiated and Conducted Emissions tests are currently registered with Industry Canada under Registration Numbers: 3062A-1, 3062A-2, and 3062A-3.

BACL is a Chinese Taipei Bureau of Standards Metrology and Inspection (BSMI) validated Conformity Assessment Body (CAB), under Appendix B, Phase I Procedures of the APEC Mutual Recognition Arrangement (MRA). BACL's BSMI Lab Code Number is: SL2-IN-E-1002R

BACL's test facilities that are used to perform AC Line Conducted Emissions, Telecommunications Line Conducted Emissions, Radiated Emissions from 30 MHz to 1 GHz, and Radiated Emissions from 1 GHz to 6 GHz are currently recognized as Accredited in accordance with the Voluntary Control Council for Interference [VCCI] Article 15 procedures under Registration Number A-0027.

1.10 Test Facility Accreditations

Bay Area Compliance Laboratories Corp. (BACL) is:

A- ***An independent, 3rd-Party, Commercial Test Laboratory accredited to ISO/IEC 17025:2005 by A2LA (Test Laboratory Accreditation Certificate Number 3279.02)*****,** in the fields of: Electromagnetic Compatibility and Telecommunications. Unless noted by an Asterisk (*) in the Compliance Matrix (See Section 3 of this Test Report), BACL's ISO/IEC 17025:2005 Scope of Accreditation includes all of the Test Method Standards and/or the Product Family Standards detailed in this Test Report..
BACL's ISO/IEC 17025:2005 Scope of Accreditation includes a comprehensive suite of EMC Emissions, EMC Immunity, Radio, RF Exposure, Safety and wireline Telecommunications test methods applicable to a wide range of product categories. These product categories include Central Office Telecommunications Equipment [including NEBS - Network Equipment Building Systems], Unlicensed and Licensed Wireless and RF devices, Information Technology Equipment (ITE); Telecommunications Terminal Equipment (TTE); Medical Electrical Equipment; Industrial, Scientific and Medical Test Equipment; Professional Audio and Video Equipment; Industrial and Scientific Instruments and Laboratory Apparatus; Cable Distribution Systems, and Energy Efficienct Lighting.

B- ***A Product Certification Body accredited to ISO/IEC 17065:2012 by A2LA (Product Certification Body Accreditation Certificate Number 3279.03)*** to certify
- For the USA (Federal Communications Commission):
    1- All Unlicensed radio frequency devices within FCC Scopes A1, A2, A3, and A4;
    2- All Licensed radio frequency devices within FCC Scopes B1, B2, B3, and B4;
    3- All Telephone Terminal Equipment within FCC Scope C.
- For the Canada (Industry Canada):
    1 All Scope 1-Licence-Exempt Radio Frequency Devices;
    2 All Scope 2-Licensed Personal Mobile Radio Services;
    3 All Scope 3-Licensed General Mobile & Fixed Radio Services;
    4 All Scope 4-Licensed Maritime & Aviation Radio Services;
    5 All Scope 5-Licensed Fixed Microwave Radio Services
    6 All Broadcasting Technical Standards (BETS) in the Category I Equipment Standards List.
- For Singapore (Info-Communications Development Authority (IDA)):
    1 All Line Terminal Equipment: All Technical Specifications for Line Terminal Equipment – Table 1 of IDA MRA Recognition Scheme: 2011, Annex 2
    2. All Radio-Communication Equipment: All Technical Specifications for Radio-Communication Equipment – Table 2 of IDA MRA Recognition Scheme: 2011, Annex 2
- For the Hong Kong Special Administrative Region:
    1 All Radio Equipment, per KHCA 10XX-series Specifications;
    2 All GMDSS Marine Radio Equipment, per HKCA 12XX-series Specifications;
    3 All Fixed Network Equipment, per HKCA 20XX-series Specifications.
- For Japan:
    1 MIC Telecommunication Business Law (Terminal Equipment):
    - All Scope A1 - Terminal Equipment for the Purpose of Calls;
    - All Scope A2 - Other Terminal Equipment
    2 Radio Law (Radio Equipment):
    - All Scope B1 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 1 of the Radio Law
    - All Scope B2 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 2 of the Radio Law
    - All Scope B3 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 3 of the Radio Law

C- ***A Product Certification Body accredited to ISO/IEC 17065:2012 by A2LA (Product Certification Body Accreditation Certificate Number 3279.01)*** to certify Products to USA's Environmental Protection Agency (EPA) ENERGY STAR Product Specifications for:

1 Electronics and Office Equipment:
- for Telephony (ver. 3.0)
- for Audio/Video (ver. 3.0)
- for Battery Charging Systems (ver. 1.1)
- for Set-top Boxes & Cable Boxes (ver. 4.1)
- for Televisions (ver. 6.1)
- for Computers (ver. 6.0)
- for Displays (ver. 6.0)
- for Imaging Equipment (ver. 2.0)
- for Computer Servers (ver. 2.0)

2 Commercial Food Service Equipment
- for Commercial Dishwashers (ver. 2.0)
- for Commercial Ice Machines (ver. 2.0)
- for Commercial Ovens (ver. 2.1)
- for Commercial Refrigerators and Freezers

3 Lighting Products
- For Decorative Light Strings (ver. 1.5)
- For Luminaires (including sub-components) and Lamps (ver. 1.2)
- For Compact Fluorescent Lamps (CFLs) (ver. 4.3)
- For Integral LED Lamps (ver. 1.4)

4 Heating, Ventilation, and AC Products
- for Residential Ceiling Fans (ver. 3.0)
- for Residential Ventilating Fans (ver. 3.2)

5 Other
- For Water Coolers (ver. 3.0)

D. A NIST Designated Phase-I and Phase-II Conformity Assessment Body (CAB) for the following economies and regulatory authorities under the terms of the stated MRAs/Treaties:

- Australia: ACMA (Australian Communication and Media Authority) – APEC Tel MRA -Phase I;
- Canada: (Industry Canada - IC) Foreign Certification Body – FCB – APEC Tel MRA -Phase I & Phase II;
- Chinese Taipei (Republic of China – Taiwan):
  - BSMI (Bureau of Standards, Metrology and Inspection) APEC Tel MRA -Phase I;
  - NCC (National Communications Commission) APEC Tel MRA -Phase I;
- European Union:
  - EMC Directive 2004/108/EC US-EU EMC & Telecom MRA CAB
  - Radio & Teleterminal Equipment (R&TTE) Directive 1995/5/EC US -EU EMC & Telecom MRA CAB
- Hong Kong Special Administrative Region: (Office of the Telecommunications Authority – OFTA) APEC Tel MRA -Phase I & Phase II
- Israel – US-Israel MRA Phase I
- Republic of Korea (Ministry of Communications - Radio Research Laboratory) APEC Tel MRA -Phase I
- Singapore: (Infocomm Development Authority - IDA) APEC Tel MRA -Phase I & Phase II;
- Japan: VCCI - Voluntary Control Council for Interference US-Japan Telecom Treaty VCCI Side Letter-
- USA:
  - ENERGY STAR Recognized Test Laboratory – US EPA
  - Telecommunications Certification Body (TCB) – US FCC;
- Vietnam: APEC Tel MRA -Phase I;

1.11 Measurement Uncertainties

All measurements involve uncertainties. In the case of EMC Emissions tests, the influence quantities (factors) that make a significant contribution to the measurement uncertainties are detailed in the latest version of CISPR 16-4-2 "Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-2: Uncertainties, statistics and limit modelling – Measurement instrumentation uncertainty" (i.e., CISPR 16-4-2:2011-06 + C1:2013-04 +A1:2014-02).

Based on the uncertainty models given in the latest version of CISPR 16-4-2, and, based on the calibration uncertainties of the specific instruments and facilities used at BACL to perform the measurements documented in this Test Report, the following estimates have been made of BACL's Measurement Uncertainties for the measurements documented in this Test Report.

Type of Measurement	**BACL Typical U_{LAB} Value** **(for a k=2 Coverage Factor, equivalent to ~ 95% level of confidence)**	**U_{CISPR} Value** **worst-allowable values, per Table 1 of the latest version of CISPR 16-4-2 (for a k=2 Coverage Factor, equivalent to ~ 95% level of confidence)**
Conducted Disturbance (Mains Port) 150 kHz to 30 MHz (i.e., AC/DC Line Conducted Emissions measurements made with an LISN)	3.3 dB	3.4 dB
Radiated Disturbance on an OATS 30 MHz – 1000 MHz (i.e., Radiated Emissions measured in a SAC at 10 metres distance)	5.8 dB	6.3 dB
Radiated Disturbance on an OATS 1 GHz – 6 GHz (i.e., Radiated Emissions measured in a FAR at 3 metres distance)	5.1 dB	5.2 dB
Radiated Disturbance on an OATS 6 GHz – 18 GHz (i.e., Radiated Emissions measured in a FAR at 3 metres distance)	5.4 dB	5.5 dB

2 System Test Configuration

2.1 Justification

The EUT and its Support Equipment were configured as a system and were arranged in accordance with the ANSI C63.4-2014 Standard.

2.2 EUT Exercise Software

The test utility used is *UART Terminal (RS-232)* provided by *Next Thing, Co.*

2.3 Equipment Modifications

A SMA port was attached to the output signal before the antenna of the EUT to perform conducted measurements.

2.4 Special Equipment

N/A

2.5 Local Support Equipment

Manufacturer	Description	Model No.
Acer	Laptop	ZHK

2.6 EUT Internal Configuration Details

Manufacturer	Description	Model
Realtek Semiconductor Corp.	WIFI/BT Module	RTL8723BS
Allwinner Technology	Soc	R8

2.7 Support Equipment

Manufacturer	Description	Model
Apple	USB Power Adapter	A1357
Asian Power Devices, Inc	AC Adapter	WB-10E05FU

2.8 Interface Ports and Cabling

Cable Description	Length (m)	To	From
USB Cable	<1M	Laptop	EUT
RF Cable	<1M	EUT	PSA

3 Summary of Test Results

FCC Rules (47 CFR Part 15 Subpart B) Industry Canada ICES-003 Issue 5 (Nov. 2014 Update)	Descriptions of Test	Result(s)
FCC §15.107 & ICES-003 Issue 5 (Nov. 2014 Update) Section 6.1 Table 2	Conducted Emissions	*N/A
FCC §15.109 & CAN/CSA-CISPR 22-10 Table 6 and ICES-003 Issue 5 (Nov. 2014 Update) Section 6.2.2 Table 7	Radiated Emissions	Compliant with the Class B Limits

Note: *N/A – The EUT is powered by DC, not applicable.

4 FCC §15.109 & Industry Canada ICES-0003 Issue 5 (Nov. 2014 Update) – Radiated Emissions

4.1 Applicable Standards

As per FCC §15.109: Radiated Emission Limits

a) Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of emission (MHz)	Field strength (microvolts/meter)
30-88	100
88-216	150
216-960	200
Above 960	500

(g) As an alternative to the radiated emission limits shown in paragraphs (a) and (b) of this section, digital devices may be shown to comply with the standards contained in Third Edition of the International Special Committee on Radio Interference (CISPR), Pub. 22, "Information Technology Equipment—Radio Disturbance Characteristics—Limits and Methods of Measurement" (incorporated by reference, *see* §15.38). In addition:

(1) The test procedure and other requirements specified in this part shall continue to apply to digital devices.

(2) If, in accordance with §15.33 of this part, measurements must be performed above 1000 MHz, compliance above 1000 MHz shall be demonstrated with the emission limit in paragraph (a) or (b) of this section, as appropriate. Measurements above 1000 MHz may be performed at the distance specified in the CISPR 22 publications for measurements below 1000 MHz provided the limits in paragraphs (a) and (b) of this section are extrapolated to the new measurement distance using an inverse linear distance extrapolation factor (20 dB/decade), e.g., the radiated limit above 1000 MHz for a Class B digital device is 150 μV/m, as measured at a distance of 10 meters.

(3) The measurement distances shown in CISPR Pub. 22, including measurements made in accordance with this paragraph above 1000 MHz, are considered, for the purpose of §15.31(f)(4) of this part, to be the measurement distances specified in this part.

Note: The CISPR 22 Third Edition Class B Radiated Emissions Limits were applied from 30 MHz to 1 GHz (i.e., from 30 MHz to 230 MHz, a Limit of 30 dBμV/m was applied at a 10 m measurement distance; from 230 MHz to 1000 MHz, a 37 dBμV/m limit was applied at a 10 m measurement distance). Above 1000 MHz, the FCC limit of 500 μV/m (54 dBμV/m) was applied at a 3 m measurement distance.

As per the Industry Canada ICES-003 Issue 5 (Nov. 2014 Update) Section 6.2 Table 3 Frequency Limits for Radiated Emissions:

Radiated emissions from an ITE shall be measured from the lowest frequency generated, or used, in the device or 30 MHz, whichever is higher, up to the frequency determined in accordance with Table 3.

Table 3 – Frequency Range of Measurement Highest Frequency Generated or Used in Device	Upper Frequency of Radiated Measurement
Below 1.705 MHz	No radiated testing required
1.705 MHz – 108 MHz	1 GHz
108 MHz – 500 MHz	2 GHz
500 MHz – 1 GHz	5 GHz
Above 1 GHz	5th harmonic of the highest frequency or 40 GHz, whichever is lower.

At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified in this Section. Measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be demonstrated that measurements at a distance of 30 meters or less are not practical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB per decade (inverse linear-distance for field strength measurements).

As per the Industry Canada ICES-003 Issue 5 (Nov. 2014 Update) Section 5(a) (ii) (i.e., CAN/CSA-CISPR 22-10 Class B Radiated Emissions Limits:

CAN/CSA-CISPR 22-10 Class B Radiated Emissions Limits as stated in Table 6 – Limits for radiated disturbance of class B ITE at a measuring distance of 10 m

Frequency (MHz)	Class B Radiated Limit (dBµV/m) Quasi-Peak Detector
30 to 230	30
230 to 1000	37
NOTE 1 The lower limit shall apply at the transition frequency. NOTE 2 Additional provisions may be required for cases where interference occur	

As per the Industry Canada ICES-003 Issue 5 (Nov. 2014 Update) Section 6.2.2 Table 7 Class B Radiated Emissions Limits above 1 GHz:

Class B: An ITE that does not meet the conditions for Class A equipment shall comply with the Class B radiated limits set out in Table 7 determined at a distance of 3 meters.

Table 7 – Class B Radiated Limits above 1 GHz Frequency (MHz)

Frequency (MHz)	Class B Radiated Limit (dBµV/m)	
	Linear Average Detector	Peak Detector
> 1000	54	74

The radiated emissions tests were performed in the BACL 10-meter Anechoic Chamber, using a test setup in accordance with ANSI C63.4-2014 measurement procedures.

SPECIAL NOTE: A "Boresight Mast" was used to ensure that the emissions from the EUT remained within the 3 dB Beamwidth of the Double-Ridge Guide Horn Antenna used to make measurements above 1 GHz. Additionally, at frequencies above 1 GHz, loose-laid RF Absorber was placed on the Chamber Ground Plane to ensure that those measurements were made under conditions that approximated free-space.

The spacing between the peripherals (if any) was 10 cm.
The external I/O cables (if any) were draped along the test table and bundled as required.

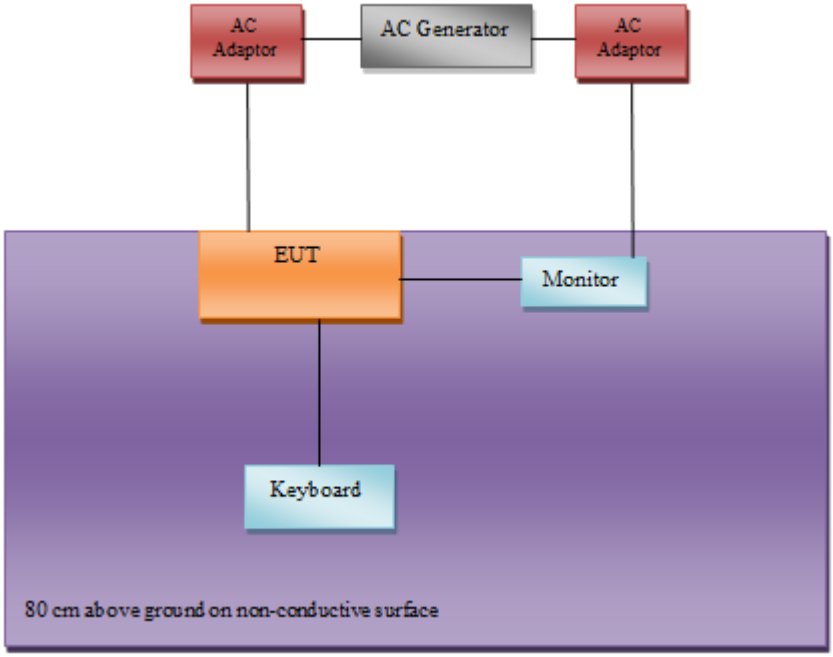
The procedures detailed in ANSI C63.4-2014 Clauses 8.3.1 and 11.9.2, were used to determine the mode of operation and cable positions of the EUT system that produce the emissions with the highest amplitudes relative to the limit. This arrangement was used when the final ac radiated emissions measurements were made on the EUT.

Using the mode of operation and cable position arrangement of the EUT system determined in ANSI C63.4-2014 Clause 8.3.1, the procedure detailed in ANSI C63.4-2014 Clause 11.9.3 was used to perform the final radiated emission measurements. In particular, the six highest emissions relative to the limit in the frequency range were recorded.

It should be noted that, in addition to cable manipulations, a maximizing procedure that included varying the receive antenna height and the turntable azimuth was employed while making all final compliance measurements on the EUT.

All measurement data was initially collected and recorded under computer control using the VASONA® EMI Software package, with the EMI Receiver/Spectrum Analyzer in Peak Detection mode. From 30 MHz to 1 GHz, Quasi-peak measurements were made only when a Peak emission was found to be - 6 dB or higher with respect to the applicable specification limits. Above 1 GHz, both Peak and CISPR (Linear) Average measurement were collected and recorded under computer control using the VASONA® EMI Software package.

4.2 Test Setup Block Diagram



4.3 Corrected Amplitude and Margin Calculations

The Corrected Amplitude (CA) was calculated by adding the Antenna Factor (AF), the Cable Loss (CL), the Attenuator and RF Limiter Loss Factor (AL) to the "raw" Amplitude (Am) reading, and then subtracting the Preamplifier Gain (Gp). The basic equation is as follows:

CA = Am + AF + CL + AL – Gp

For example, if (at some frequency and measurement distance) we had a measured Amplitude reading (Am) of 50.0 dBµV/m, an Antenna Factor of 17.0 dB/m, a Cable Loss (CL) of 5.8 dB, an Attenuator and RF Limiter Loss (AL) of 0.4 dB, and a Preamplifier Gain of 32.5 dB, the corrected amplitude (CA) would be 40.7 dBµV/m (i.e., 50.0 + 17.0 + 5.8 + 0.4 – 32.5 = 40.7 dBµV/m).

The "**Margin**" values in the following data tables indicate the degree of compliance within the applicable limit. For example, a margin of -7 dB means the emission is 7 dB below the applicable Limit. The equation for the margin calculation is as follows:

Margin (dB) = Corrected Amplitude (dBµV/m) - Applicable Limit (dBµV/m)

4.4 Test Equipment List and Details @ 5M chamber

BACL Asset Number:	Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
124	Rohde & Schwarz	Receiver, EMI Test	ESCI 1166.5950K 03	100044	2015-07-23	1 year
125	Agilent	Amplifier, Pre	8447D	2944A101 87	2015-03-20	1 year
327	Sunol Sciences	Controller, System	SC104V	122303-1	Cal. Not required	N/A
331	Sunol Sciences	Antenna, Biconi-Log	JB1	A020106-1	2015-07-11	2 year
691	Wireless Solutions	N-type coax	LMR 400	691	2015-07-02	1 year

***Statement of Traceability*:** BACL Corp. attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with A2LA Policy P102 (dated 14 May 2015) "A2LA Policy on Metrological Traceability".

4.5 Test Equipment List and Details @ 10M chamber

BACL Asset Number:	Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
603	UTiFLEX	High Frequency Cable	223458-002	223458-004	2015-05-29	1 year
606	UTiFLEX	SMA Cable	64638	218625007	2015-06-05	1 year
784	ETS LINGEREN	Horn Antenna built in Pre Amp	3117-PA	203557	2015-10-05	2 year
450	Agilent	Analyser Spectrom	E4440A	US 42221851	2015-06-23	1 year
311	Sunol Sciences	Controller, System	SC104V	113005-1	Cal. Not required	N/A

***Statement of Traceability*:** BACL Corp. attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with A2LA Policy P102 (dated 14 May 2015) "A2LA Policy on Metrological Traceability".

4.6 EMI Measurement Software

The EMI Measurement software package used to perform this test was the EMIsoft® VASONA® Version 6.00.

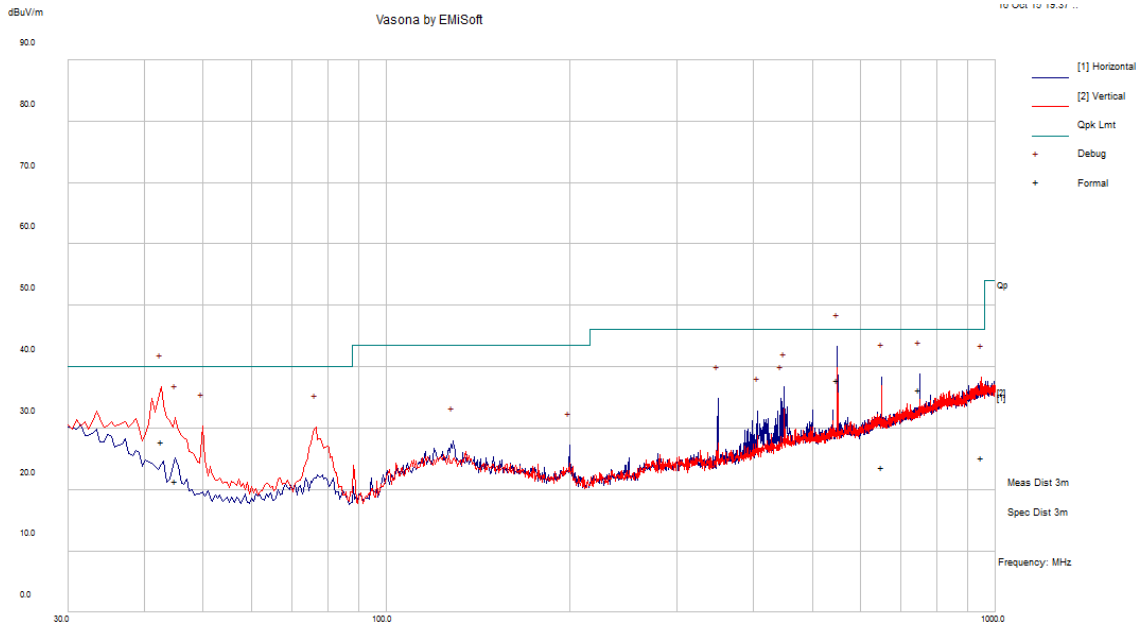
4.7 Test Environmental Conditions & Test Personnel

Test Date(s)	2015-10-31
Test Site	5M Chamber2
Temperature:	23º C
Relative Humidity:	40 %
Barometric Pressure:	102.1kPa
Test Personnel:	Jin Yang

Test Date(s)	2015-11-11
Test Site	10M Chamber1
Temperature:	22 º C
Relative Humidity:	39 %
Barometric Pressure:	102.1kPa
Test Personnel:	Jerry Wang

4.8 Radiated Emissions Test Plots and Data

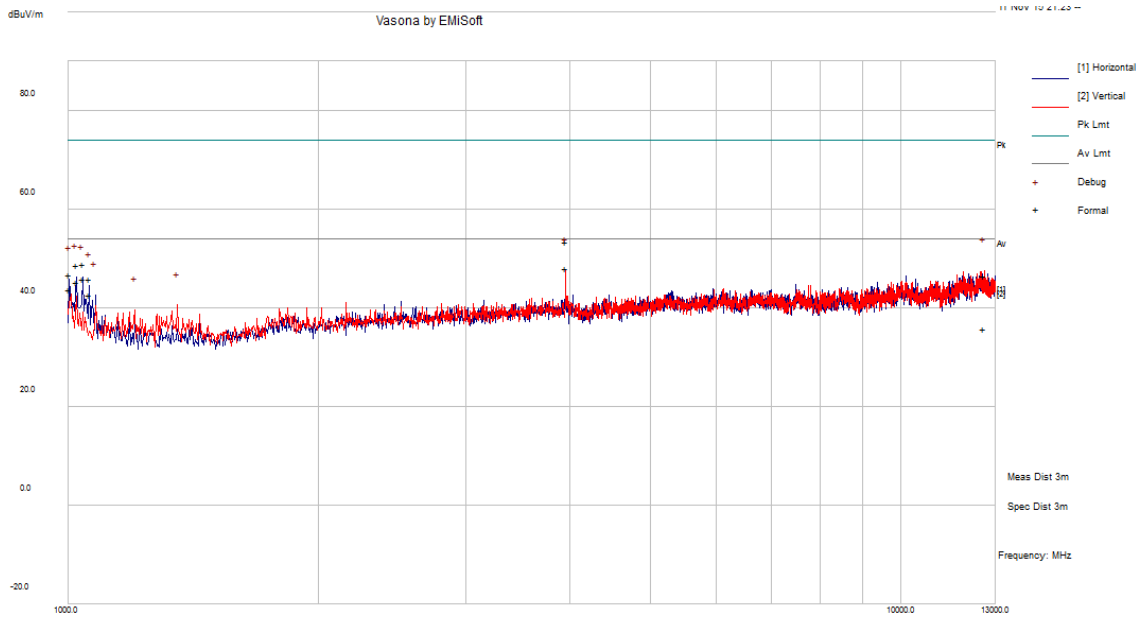
30-1000 MHz Peak Pre-Scan (measured at a 3 meter distance) Plot



Six Highest Quasi-Peak Final Measurements:

Frequency (MHz)	Corrected Amplitude (dBµV/m)	Test Antenna		Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)
		Height (cm)	Polarity (H/V)			
549.92	37.81	143	H	279	46	-8.19
749.97	36.29	100	H	107	46	-9.71
42.70	27.83	111	V	302	40	-12.17
44.98	21.43	189	V	180	40	-18.57
948.02	25.14	235	V	291	46	-20.86
650.10	23.64	112	H	112	46	-22.36

Above 1 GHz Peak Pre-scan (measured at a 3 meter distance) Plot



Six Highest Peak Measurements:

Frequency (MHz)	Corrected Amplitude (dBµV/m)	Test Antenna		Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)
		Height (cm)	Polarity (H/V)			
3960	53.45	113	V	328	74	-20.55
1041	48.84	110	H	37	74	-25.16
1023	48.62	103	H	41	74	-25.38
1004	46.64	110	H	7	74	-27.36
12594	46.42	133	V	14	74	-27.58
1060	45.88	101	H	9	74	-28.12

Six Highest CISPR Average Measurements:

Frequency (MHz)	Corrected Amplitude (dBµV/m)	Test Antenna		Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)
		Height (cm)	Polarity (H/V)			
3960	48.06	113	V	328	54	-5.94
1041	45.84	110	H	37	54	-8.16
1023	45.28	103	H	41	54	-8.72
1004	43.75	110	H	7	54	-10.25
1060	42.58	101	H	9	54	-11.42
12594	35.68	133	V	14	54	-18.32

4.9 Summary of Test Results

Based upon the measurements made, it was determined that the EUT complied with the applicable FCC Part 15 Subpart B Class B and Industry Canada ICES-003 Issue 5 (Nov. 2014 Update) Class B Radiated Emissions Limits. The EUT's worst margin reading of:

FCC & IC ICES-003 Issue 5 (Nov. 2014 Update) Radiated Emissions - Worst Case (30 MHz – 1 GHz):			
Frequency (MHz)	**Polarization (H / V)**	**Highest Amplitude Quasi-Peak Corrected Amplitude (dBµV/m)**	**Worst-Case Quasi-Peak Margin (dB)**
549.92	Horizotal	37.81	-8.19

FCC & IC ICES-003 Issue 5 (Nov. 2014 Update) Radiated Emissions – Peak Worst Case (Above 1 GHz):			
Frequency (MHz)	**Polarization (H / V)**	**Highest Peak Corrected Amplitude (dBµV/m)**	**Worst-Case Peak Margin (dB)**
3960	Vertical	53.45	-20.55

FCC& IC ICES-003 Issue 5 (Nov. 2014 Update) Radiated Emissions – CISPR Average Worst Case (Above 1 GHz):			
Frequency (MHz)	**Polarization (H / V)**	**Highest CISPR Average Corrected Amplitude (dBµV/m)**	**Worst-Case CISPR Average Margin (dB)**
3960	Vertical	48.06	-5.94

5 Exhibit A – FCC and Industry Canada Product Labeling Requirements

5.1 As per FCC §15.19: Labelling Requirements Paragraph 3

(3) All other devices shall bear the following statement in a conspicuous location on the device:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Specifications: Text is white in color and is left justified. Labels are printed in indelible ink on permanent adhesive backing or silk-screened and shall be affixed at a conspicuous location on the EUT.

As per FCC §15.105: Information to the User

(b) For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help.

5.2 As per ICES-003 §8 Labeling Requirements

The manufacturer, importer or supplier shall meet the labeling requirements set out in this section for every ITE unit

- (i) Prior to marketing in Canada, for ITE manufactured in Canada, and;
- (ii) Prior to importation into Canada, for imported ITE.

The presence of the label on the ITE represents the manufacturer's or importer's Self-Declaration of Compliance (SDoC) to Industry Canada ICES-003. Each unit of an ITE model shall bear a label indicating the model's compliance with ICES-003.

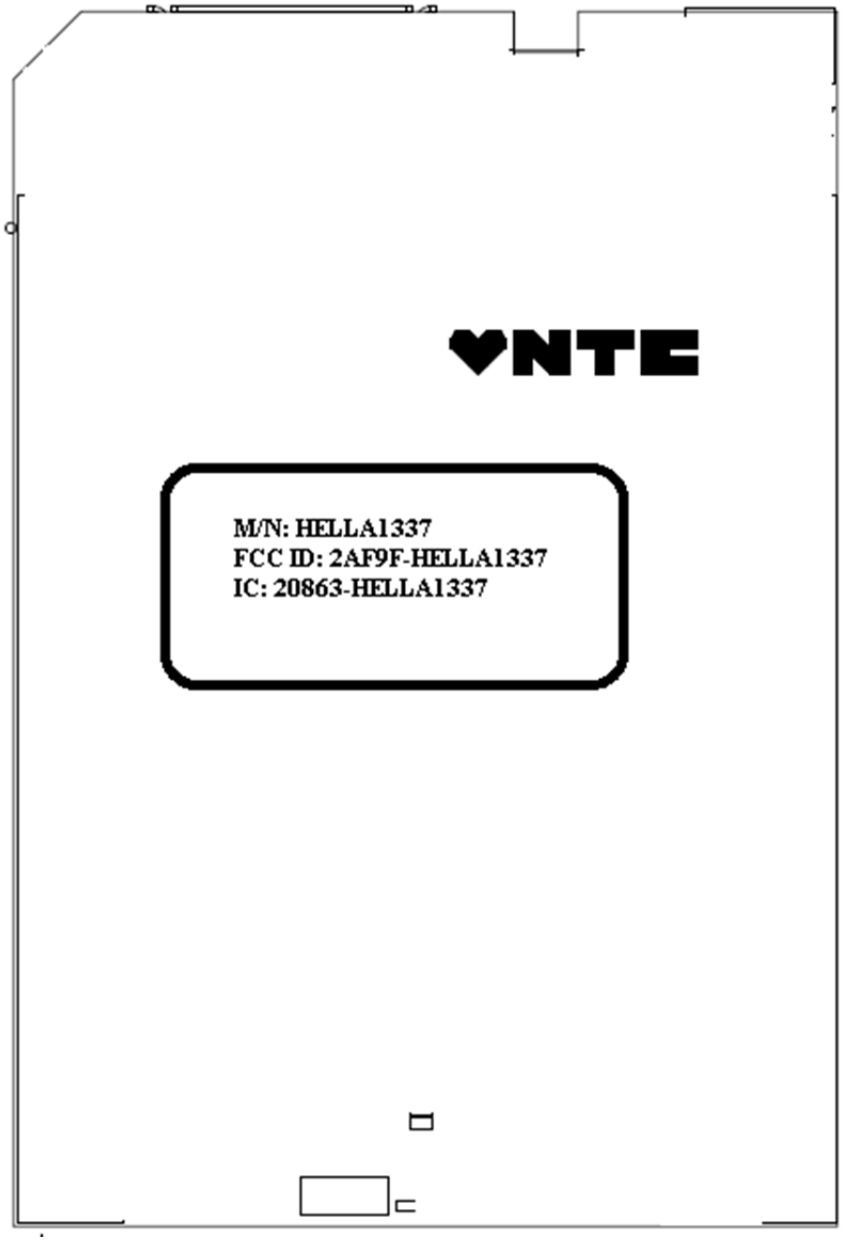
The label shall be permanently affixed to the ITE or displayed electronically and its text must be clearly legible. When the dimension of the device is too small or it is otherwise not practical to place the label on the ITE, the label shall be placed in a prominent location in the user manual supplied with the ITE. The user manual may be in an electronic format and must be readily available.

As per IC ICES-003 Annex

Industry Canada ICES-003 Compliance Label:

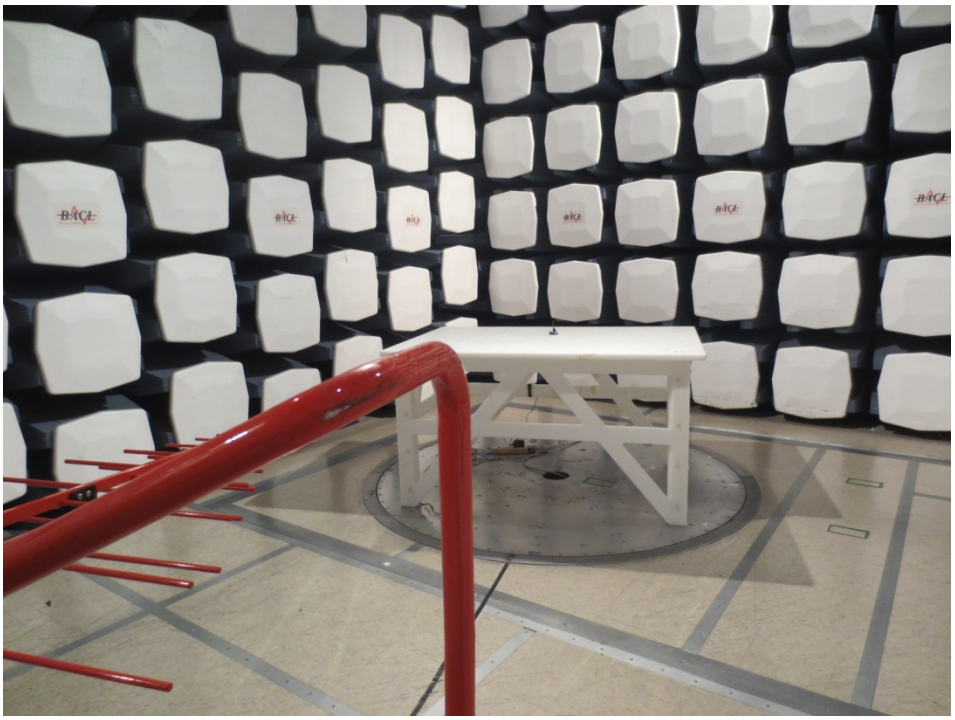
CAN ICES-3 (B)/NMB-3(B)

5.3 Label Location on EUT

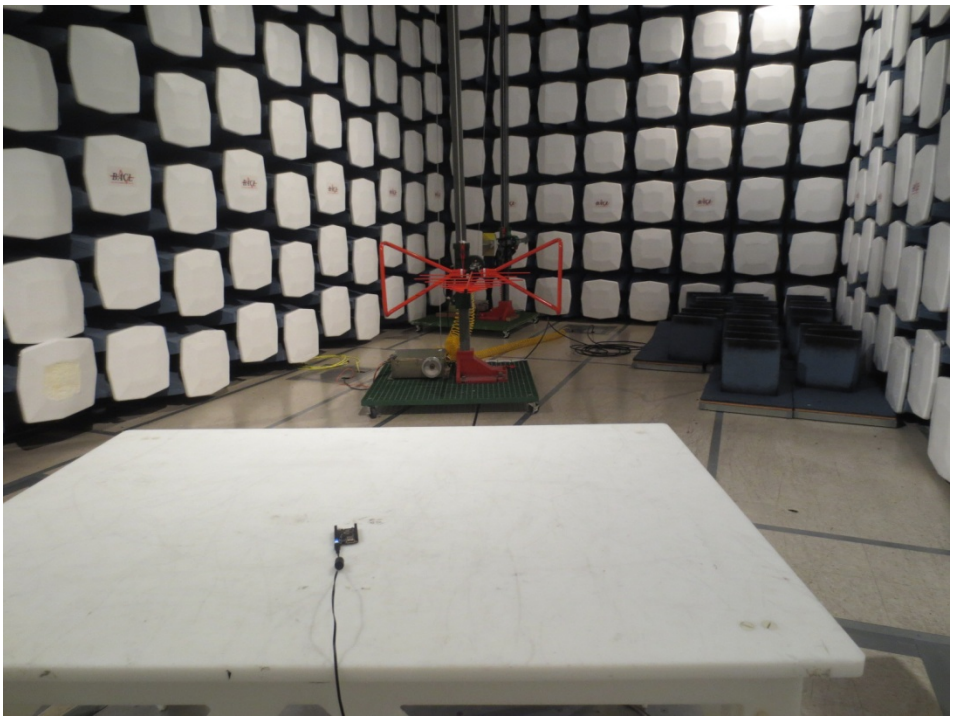


6 Exhibit B- Test Setup Photos

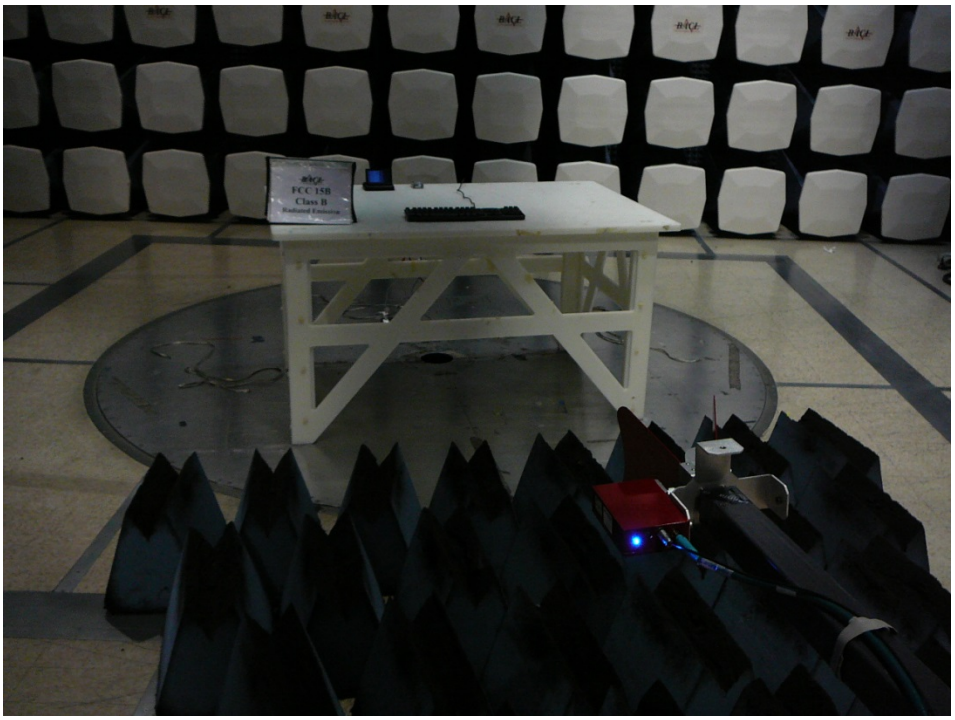
6.1 Radiated Emission below 1 GHz Front View



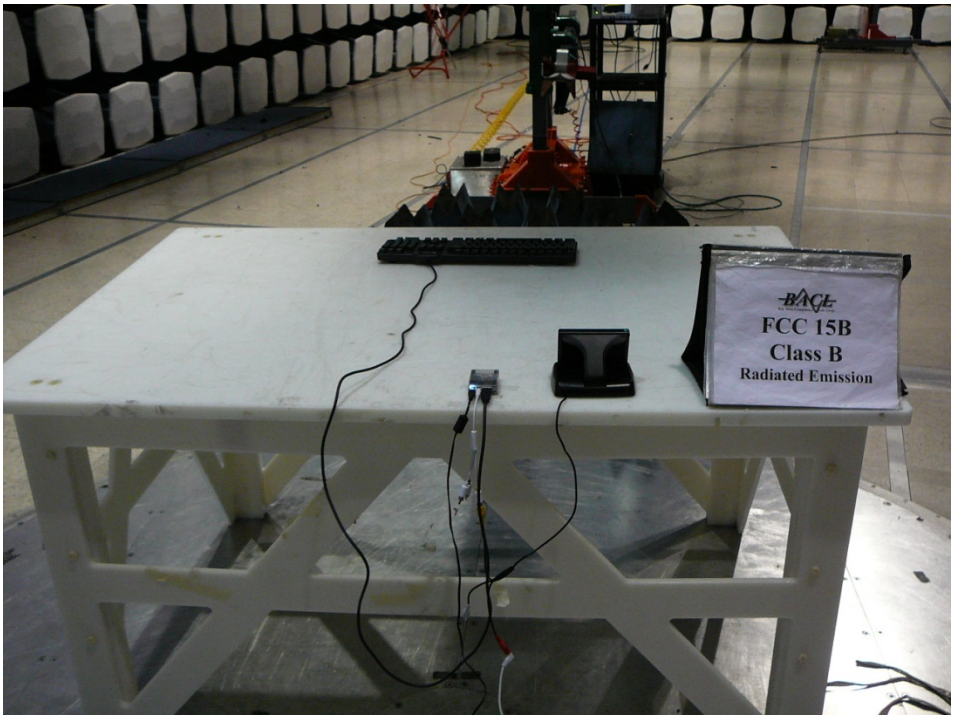
6.2 Radiated Emission below 1 GHz Rear View



6.3 Radiated Emission above 1 GHz Front View

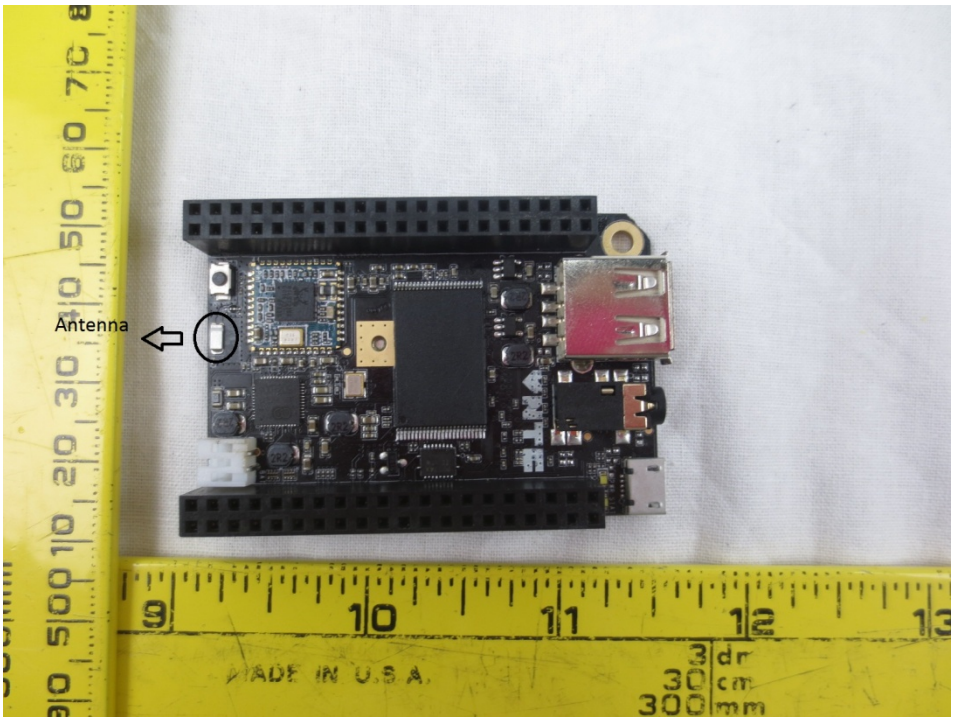


6.4 Radiated Emission above 1 GHz Rear View

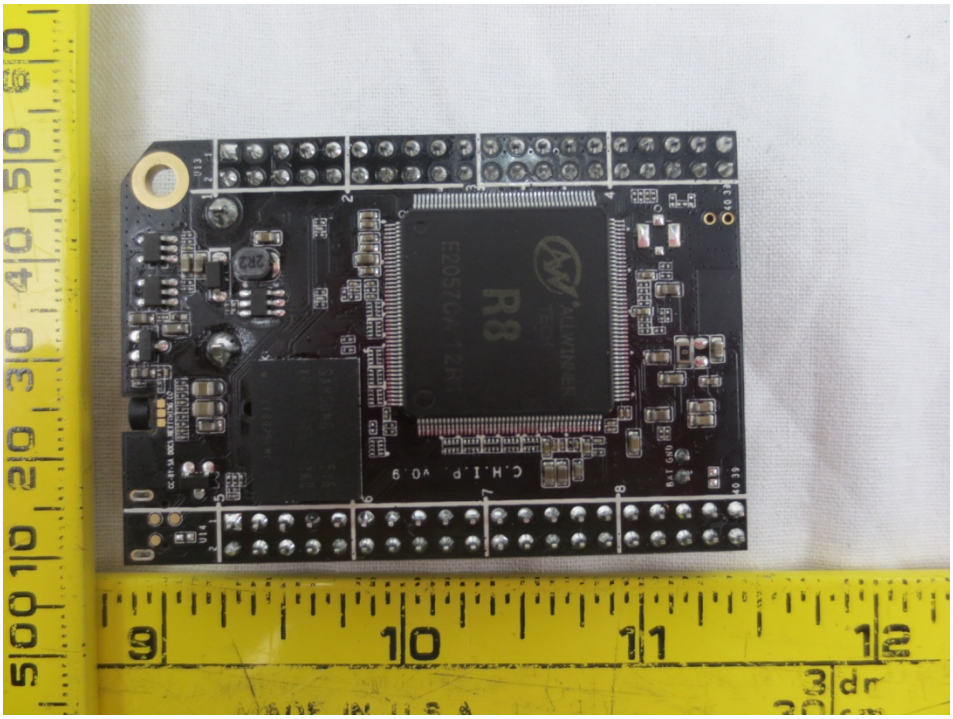


7 Exhibit C – EUT Photographs

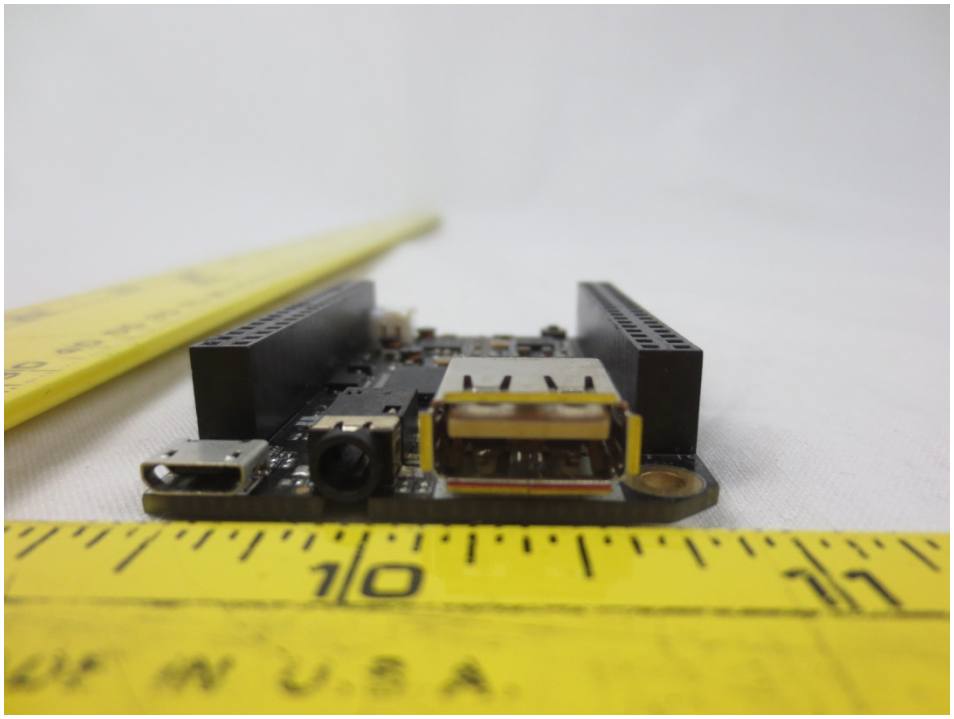
7.1 EUT Photo – Top View



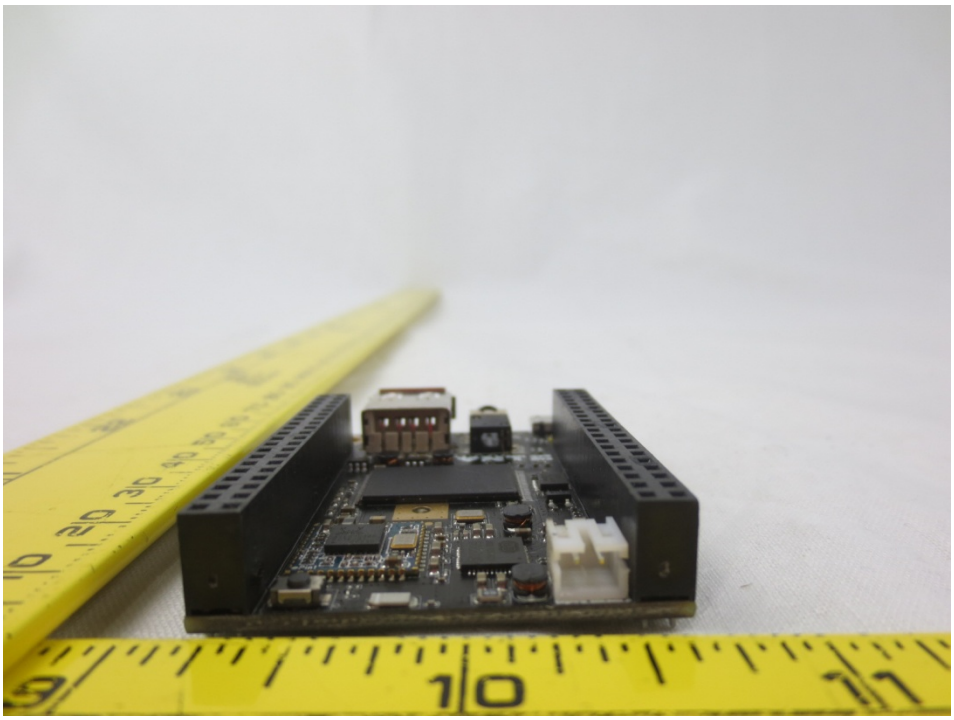
7.2 EUT Photo – Bottom View



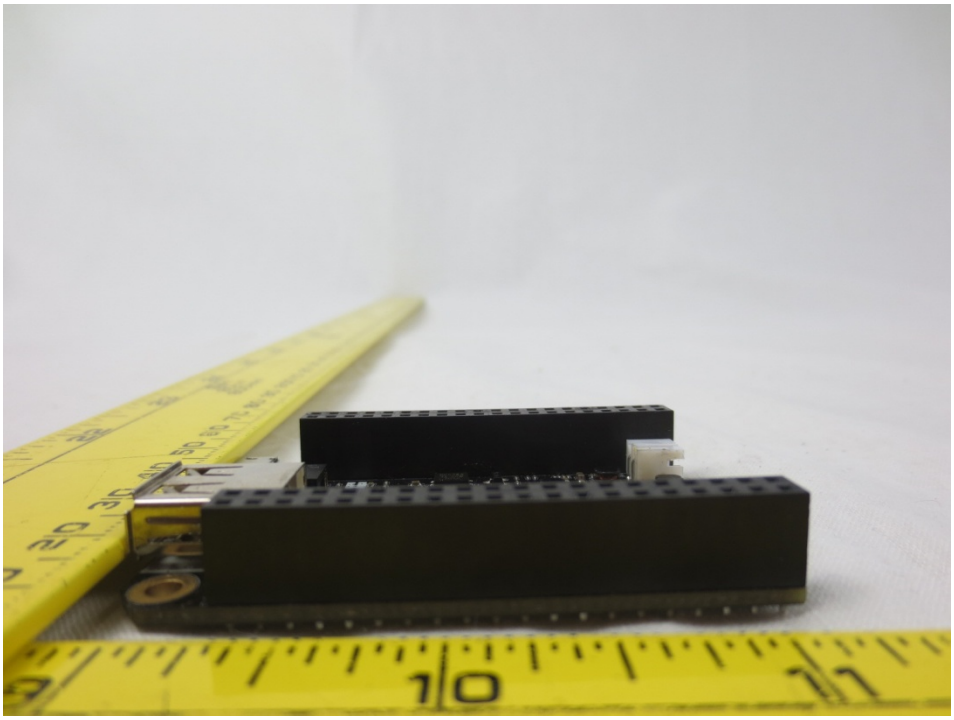
7.3 EUT Photo – Front View



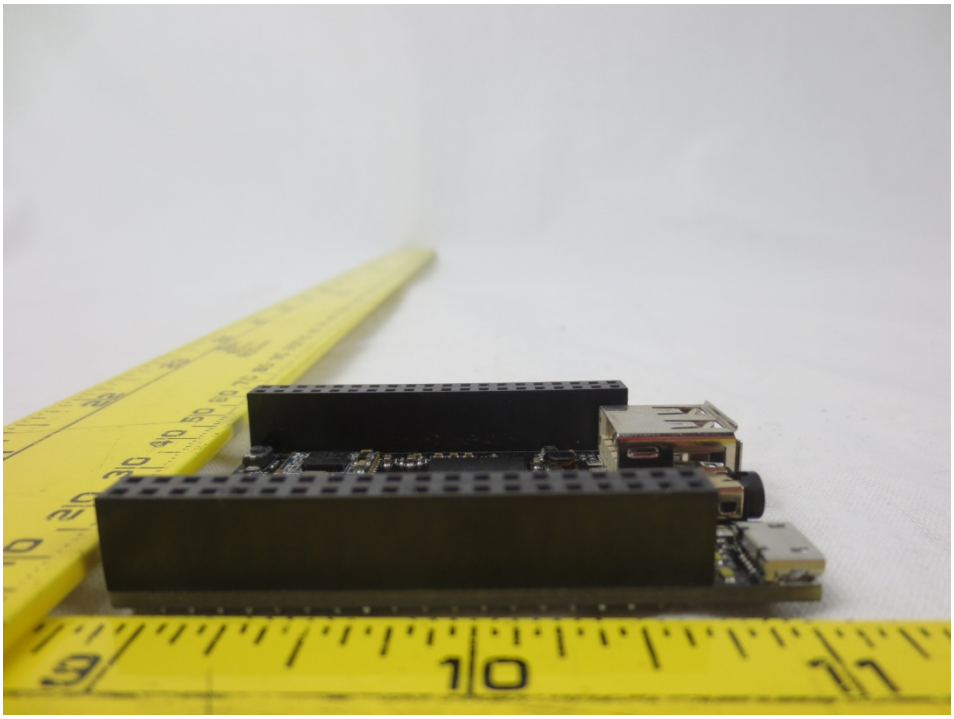
7.4 EUT Photo – Back View



7.5 EUT Photo – Right Side View



7.6 EUT Photo – Left Side View



7.7 AC/DC Power Adapter

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