

Issue Date: April 2, 2014 Ref. Report No. ISL-14HE084FA

Product Name : POC-200 Series

Models : POC-200; POC-210; POC-212; POC-222

Brand : Neousys

Applicant : Neousys Technology Inc.

Address : 15F., No.868-3, Zhongzheng Rd., Zhonghe Dist., New Taipei City 23586,

Taiwan(R.O.C.)

### We, International Standards Laboratory, hereby certify that:

The device bearing the trade name and model specified above has been shown to comply with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified. (refer to Test Report if any modifications were made for compliance).

### **Standards:**



FCC CFR Title 47 Part 15 Subpart B: 2012- Section 15.107 and 15.109 ANSI C63.4-2009

#### Class A

I attest to the accuracy of data and all measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

#### **International Standards Laboratory**

Jim Chu / Director

**⊠** Hsi-Chih LAB:

No. 65, Gu Dai Keng Street, Hsi-Chih Dist., New Taipei City 221, Taiwan

Tel: 886-2-2646-2550; Fax: 886-2-2646-4641







# FCC TEST REPORT

CFR 47 Part 15 Subpart B Class A

Product: POC-200 Series

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Brand: Neousys

Applicant: Neousys Technology Inc.

Address: 15F., No.868-3, Zhongzheng Rd., Zhonghe

Dist., New Taipei City 23586, Taiwan(R.O.C.)

Test Performed by:

# **International Standards Laboratory**

<Hsi-Chih LAB>

\*Site Registration No.

BSMI:SL2-IN-E-0037; SL2-R1/R2-E-0037; TAF: 1178 FCC: TW1067; IC: IC4067A-1; NEMKO: ELA 113A VCCI: <Conduction01>C-354, T-1749, <OATS01>R-341,

<Chamber01>G-443

\*Address:

No. 65, Gu Dai Keng Street,

Hsi-Chih Dist., New Taipei City 221, Taiwan \*Tel: 886-2-2646-2550; Fax: 886-2-2646-4641

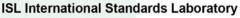
Report No.: **ISL-14HE084FA**Issue Date: **April 2, 2014** 

This report totally contains 26 pages including this cover page and contents page.

Test results given in this report apply only to the specific sample(s) tested and are traceable to national or international standard through calibration of the equipment and evaluating measurement uncertainty herein.

This report must not be used to claim product endorsement by NVLAP, NIST or any other Government agency.

This test report shall not be reproduced except in full, without the written approval of International Standards Laboratory.





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# 1. General

### 1.1 Certification of Accuracy of Test Data

**Standards:** FCC CFR Title 47 Part 15 Subpart B: 2012- Section

15.107 and 15.109 ANSI C63.4-2009

**Equipment Tested:** POC-200 Series

**Models:** POC-200; POC-210; POC-212; POC-222

**Brand:** Neousys

**Applicant:** Neousys Technology Inc.

**Sample received Date:** March 18, 2014

**Final test Date:** refer to the date of test data

**Test Site:** International Standards Laboratory

OATS 01; Chamber 01; Conduction 01

**Test Distance:** 10M; 3M (above1GHz)

**Temperature:** refer to each site test data

**Humidity:** refer to each site test data

**Input power:** Conduction input power: AC 120 V / 60 Hz

Radiation input power: AC 120 V / 60 Hz

**Report Number: ISL-14HE084FA** 

Test Result: PASS

**Report Engineer:** Winnie Huang

Test Engineer:

John Wu

John Wu

Approved By:

Eddy Hisung



# 1.2 Description of EUT

# **EUT**

Description	POC-200 Series
Condition	Pre-Production
Models	POC-200; POC-210; POC-212; POC-222
Serial Number	N/A
CPU	INTEL\Atom E3845\1.91GHz\FCBGA1170
Power supply	Mean Well (Model: GS90A12-P1M) INPUT:100-240V~ 2.0A 50-60Hz OUTPUT: 12V 6.67A 80W Max with CORE*1
Power Switch Button	One
Motherboard	Model:POC-200
2.5" SATA Solid State Disk	Phison (Model:SSB064GPTC0-S81) 64GB
DIMM Memory	DSL 8GB DDR3L-1333MHz
USB 2.0 Port	One 4-pins
USB 3.0 Port	Three 9-pins
RJ45 Port with POE Function	Two 8-pins (10/100bps)
DVI Connector	One 29-pins
COM Connector	Four 9-pins
Line-Out Port	One
DC power Port	One
Maximum Resolution	1920*1200
Maximum Operating Frequency	1.91GHz

Test Configuration

Configuration	Test Mode
1	DVI 1920*1200

Model description of differences

Model descriptio	vioder description of differences					
Model	Model description of differences					
POC-200	Contains the maximal function set					
POC-210	With fewer functions or lower CPU frequency					
POC-212	With fewer functions or lower CPU frequency					
POC-222	With fewer functions or lower CPU frequency					



# **EMI Noise Source**:

Mother board	48MHz (SOSC1)	The same as Photo EUT-11
Crystal	25MHz (X2)	The same as Photo EUT-12
	24MHz (Y1)	The same as Photo EUT-13
	25MHz (X4)	The same as Photo EUT-14
	25MHz (X3)	The same as Photo EUT-15
	32.768MHz (X1)	The same as Photo EUT-16

### **EMI Solution:**

Solution	Quantity	SPEC	Location
Core	1	King Core 35*15cm	The same as Photo EUT-17



# 1.3 Description of Support Equipment

Unit	Model	Brand	Power Cord	FCC ID
	Serial No.			
Notebook	Latitude D400	DELL	Non-shielded, Detachable	FCC DOC
Personal	S/N: N/A			
Computer				
LCD	U2413f	DELL	Non-Shielded, Detachable	FCC DOC
Monitor	S/A:N/A			
Modem*4	DM1414	Aceex	Non-shielded, Without	IFAXDM1414
	S/N: 0301000557		Grounding Pin	
	0301000558			
USB	MO71KC	DELL	N/A	FCC DOC
Mouse	S/N: 511092011			
USB	SK-8115, S/N:			
Keyboard	MY-05N456-38843-2BK-331	DELL	N/A	FCC DOC
	5			
Headphone	ST-304	KOKA	Non-shielded, Detachable	FCC DOC
USB	LQ-300+II	EPSON	Non-shielded, Detachable	FCC DOC
Printer	S/N: G88Y109612			
Desktop	TL-SF1008P	TP-Link	LEADER ELECTRONICS	FCC DOC
Switch			(Model:NU60-F480125-I1	
with 4 PoE			)	
USB3.0	BUF-HD-HXU3(B)	BUFFALO	N/A	FCC DOC
External	S/N: 15564900300407			
HDD				
Enclosure				



#### 1.4 Software for Controlling Support Unit

Test programs exercising various part of EUT were used. The programs were executed as follows:

- A. Read and write to the disk drives.
- B. Read and write data in the USB3.0 Hard Disk through EUT USB3.0 port.
- C. Send audio signal to the HeadSet through Headphone port.
- D. Send H pattern to the video port device (Monitor).
- E. Send H pattern to the serial port device (Modem).
- F. Send H pattern to the parallel port device (Printer).
- G. Send\receive package from Notebook pc through Desktop Switch with 4 PoE to EUT's RJ-45 Port.
- H. Used Tfgen.exe or ping.exe to send signal to EUT RJ45 port through Desktop Switch with 4 PoE from Notebook RJ45 Port.

**Report Number: ISL-14HE084FA** 

I. Repeat the above steps.

	Filename	<b>Issued Date</b>
RJ45	ping.exe	05/05/1999
RJ45	Tfgen.exe	06/23/1999
USB3.0 External HDD Enclosure	InterEMC.exe	9/04/2000
Monitor	Intel EMCTEST.exe	09/04/2000
ATA Microphone and HeadSet	Windows Media player.exe	02/18/2006
EUT Hard Disk	Intel EMCTEST.exe	9/04/2000
Modem	Intel EMCTEST.exe	9/04/2000
Printer	Wordpad.exe	11/11/1999



# 1.5 I/O Cable Condition of EUT and Support Units

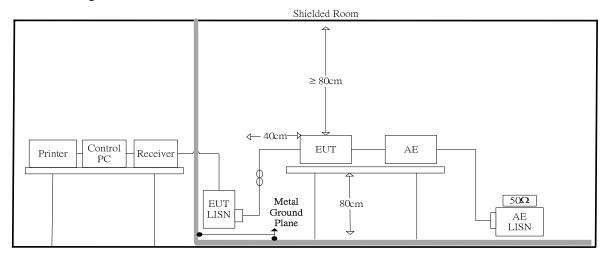
Description	Path	Cable Length	Cable Type	Connector Type
AC Power Cord	110V (~240V) to EUT SPS	1.8M	Non-shielded, Detachable	Plastic Head
DC Power In cable	Power Adapter DC Out to EUT DC In Connector	1M	Non-shielded, Un-detachable	Metal Head
RJ45 Data Cable*2	EUT's RJ-45 Port To Desktop Switch with 4 PoE's RJ-45 Port	10M	Non-shielded, Detachable	RJ-45, with Plastic Head
RJ45 Data Cable	Desktop Switch with 4 PoE's RJ-45 Port To Notebook PC's RJ-45 Port	2M	Non-shielded, Detachable	RJ-45, with Plastic Head
LCD Monitor Data Cable(DVI)	LCD Monitor DVI Port to EUT DVI Port	1.8M	Shielded, Detachable	Metal Head
USB Mouse Data Cable	Mouse to EUT USB2.0 port	2M	Non-Shielded, Un-detachable	Metal Head
USB Keyboard Data Cable	Keyboard to EUT USB3.0 Port	2M	Non-Shielded, Un-detachable	Metal Head
Headphone Data Cable	Headphone to EUT line Out port	2M	Non-shielded, Un-detachable	Plastic Head
USB Printer Data Cable	USB Printer to PC USB3.0 Port	2M	Shielded, Detachable	Metal Head
USB3.0 Data Cable	USB3.0 External HDD Enclosure USB 3.0Port to EUT USB 3.0Port	1.5M	Non-shielded, Detachable	Plastic Head
Modem Data Cable*4	Modem to EUT COM Port	2M	Shielded, Detachable	Metal Head



# 2. Powerline Conducted Emissions

### 2.1 Test Setup and Procedure

#### 2.1.1 Test Setup



### 2.1.2 Test Procedure

The measurements are performed in a  $3.5 \text{m} \times 3.4 \text{m} \times 2.5 \text{m}$  shielded room, which referred as Conduction 01 test site, or a  $3 \text{m} \times 3 \text{m} \times 2.3 \text{m}$  test site, which referred as Conduction 02 test site. The EUT was placed on non-conduction  $1.0 \text{m} \times 1.5 \text{m}$  table, which is 0.8 meters above an earth-grounded.

Power to the EUT was provided through the LISN which has the Impedance (500hm/50uH) vs. Frequency Characteristic in accordance with the standard. Power to the LISNs were filtered to eliminate ambient signal interference and these filters were bonded to the ground plane. Peripheral equipment required to provide a functional system (support equipment) for EUT testing was powered from the second LISN through a ganged, metal power outlet box which is bonded to the ground plane at the LISN.

The interconnecting cables were arranged and moved to get the maximum measurement. Both the line of power cord, hot and neutral, were measured. All of the interface cables were manipulated according to ANSI C63.4 requirements.

The highest emissions were analyzed in details by operating the spectrum analyzer in fixed tuned mode to determine the nature of the emissions and to provide information which could be useful in reducing their amplitude.

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#### 2.1.3 EMI Receiver/Spectrum Analyzer Configuration (for the frequencies tested)

Frequency Range: 150KHz~30MHz

Detector Function: Quasi-Peak / Average Mode

Resolution Bandwidth: 9KHz

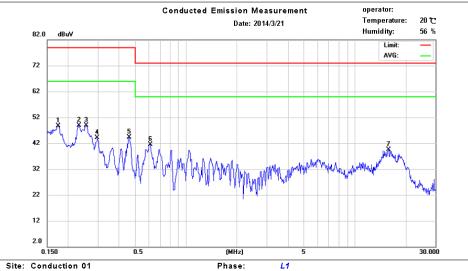


### 2.2 Conduction Test Data: Configuration 1

### **Table 2.2.1 Power Line Conducted Emissions (Line)**



Test LAB:International Standards Laboratory (Hsichih Site) Tel:886-2-26462550 Fax:886-2-26464641



Limit: CISPR22 ClassA Conduction

No.	Frequency (MHz)	Correct Factor (dB)	QP Emission (dBuV)	QP Limit (dBuV)	QP Margin (dB)	AVG Emission (dBuV)	AVG Limit (dBuV)	AVG Margin (dB)	Note
1	0.17	9.66	43.19	79.00	-35.81	29.68	66.00	-36.32	
2	0.23	9.67	41.63	79.00	-37.37	37.07	66.00	-28.93	
3	0.26	9.67	46.89	79.00	-32.11	38.51	66.00	-27.49	
4	0.30	9.67	34.30	79.00	-44.70	29.67	66.00	-36.33	
5	0.46	9.67	41.71	79.00	-37.29	36.32	66.00	-29.68	
6	0.61	9.67	39.48	73.00	-33.52	32.50	60.00	-27.50	
7	15.82	9.83	32.13	73.00	-40.87	24.47	60.00	-35.53	

Note:

Margin = QP/AVG Emission - Limit

QP/AVG Emission = Receiver Reading + Correct Factor

Correct Factor = LISN Loss + Cable Loss

A margin of -8dB means that the emission is 8dB below the limit

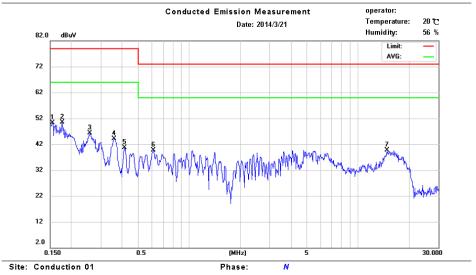
The frequency spectrum graph is for final peak graph, and the attached table is for QP/AVG test result. If peak data can pass, it will be shown in "QP/AVG Correct" column, if not, QP/AVG data will instead. The CISPR 22 limits would be applied to all FCC Part 15 devices.



**Table 2.2.2 Power Line Conducted Emissions (Neutral)** 



Test LAB:International Standards Laboratory (Hsichih Site) Tel:886-2-26462550 Fax:886-2-26464641



Limit: CISPR22 ClassA Conduction

No.	Frequency (MHz)	Correct Factor (dB)	QP Emission (dBuV)	QP Limit (dBuV)	QP Margin (dB)	AVG Emission (dBuV)	AVG Limit (dBuV)	AVG Margin (dB)	Note
1	0.15	9.74	42.09	79.00	-36.91	33.72	66.00	-32.28	
2	0.18	9.74	39.66	79.00	-39.34	37.17	66.00	-28.83	
3	0.26	9.75	37.95	79.00	-41.05	32.37	66.00	-33.63	
4	0.36	9.75	40.18	79.00	-38.82	36.56	66.00	-29.44	
5	0.41	9.75	35.08	79.00	-43.92	29.79	66.00	-36.21	
6	0.62	9.75	35.11	73.00	-37.89	30.11	60.00	-29.89	
7	14.82	9.92	33.67	73.00	-39.33	26.24	60.00	-33.76	

Note:

 $Margin = QP/AVG\ Emission\ \hbox{-}\ Limit$ 

 $QP/AVG\ Emission = Receiver\ Reading + Correct\ Factor$ 

Correct Factor = LISN Loss + Cable Loss

A margin of -8dB means that the emission is 8dB below the limit

The frequency spectrum graph is for final peak graph, and the attached table is for QP/AVG test result. If peak data can pass, it will be shown in "QP/AVG Correct" column, if not, QP/AVG data will instead. The CISPR 22 limits would be applied to all FCC Part 15 devices.



# 2.3 Test Setup Photo

Front View





Back View



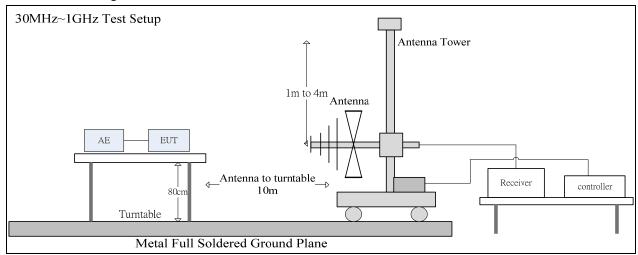


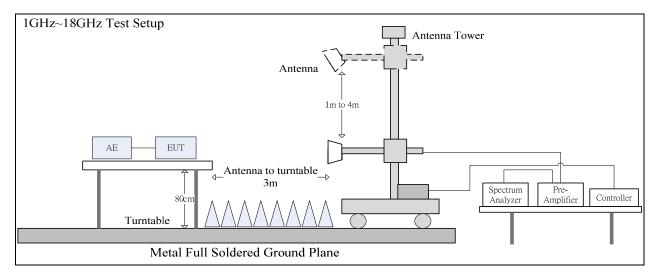


# 3. Radiated Emissions

#### 3.1 Test Setup and Procedure

#### 3.1.1 Test Setup





#### 3.1.2 Test Procedure

The radiated emissions test will then be repeated on the open site or chamber to measure the amplitudes accurately and without the multiple reflections existing in the shielded room. The EUT and support equipment are set up on the turntable of one of 10 meter open field sites or 10 meter chamber. Desktop EUT are set up on a wooden stand 0.8 meter above the ground or floor-standing arrangement shall be placed on the horizontal ground reference plane. The test volume for a height of up to 30 cm may be obstructed by absorber placed on the ground plane.

For the initial measurements, the receiving antenna is varied from 1-4 meter height and is changed in the vertical plane from vertical to horizontal polarization at each frequency. The highest emissions between 30 MHz to 1000 MHz were analyzed in details by operating the spectrum analyzer and/or EMI receiver in quasi-peak mode to determine the precise amplitude of the emissions. The highest emissions between 1 GHz to 40 GHz were analyzed in details by



operating the spectrum analyzer in peak and average mode to determine the precise amplitude of the emissions.

Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the antenna in the cone of radiation from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response. At the highest amplitudes observed, the EUT is rotated in the horizontal plane while changing the antenna polarization in the vertical plane to maximize the reading. The interconnecting cables were arranged and moved to get the maximum measurement. Once the maximum reading is obtained, the antenna elevation and polarization will be varied between specified limits to maximize the readings. All of the interface cables were manipulated according to ANSI C63.4 requirements.

The highest internal source of the EUT is defined as the highest frequency generated or used within the EUT or on which the EUT operates or tunes. If the highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz. If the highest frequency of the internal sources of the EUT is between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz. If the highest frequency of the internal sources of the EUT is between 500 MHz and 1 GHz, the measurement shall only be made up to 5 GHz. If the highest frequency of the internal sources of the EUT is above 1 GHz, the measurement shall be made up to 5 times the highest frequency or 40 GHz, whichever is less. Spectrum Analyzer Configuration (for the frequencies tested).

**Report Number: ISL-14HE084FA** 

### **3.1.3** Spectrum Analyzer Configuration (for the frequencies tested)

Frequency Range: 30MHz--1000MHz Detector Function: Quasi-Peak Mode

Resolution Bandwidth: 120KHz

Frequency Range: Above 1000MHz
Detector Function: Peak/Average Mode

Resolution Bandwidth: 1MHz



# 3.2 Radiation Test Data: Configuration 1 Table 3.2.1 Radiated Emissions (Horizontal)

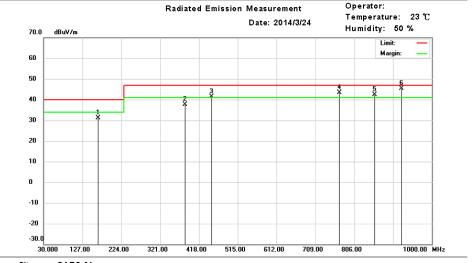


Test LAB:International Standards Laboratory (Hsichih Site)
Tel:886-2-26462550
Fax:886-2-26464641

Horizontal

**Report Number: ISL-14HE084FA** 

Polarization:



Site: OATS 01

Condition : CISPR22 ClassA 10M Radiation

Mk.	Frequency (MHz)	RX_R (dBuV)	Correct Factor(dB/m)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.Pos (cm)	Tab.Pos (deg.)	Detector
1	165.8000	17.58	13.44	31.02	40.00	-8.98	250	355	QP
2	383.0800	20.36	17.24	37.60	47.00	-9.40	254	114	QP
3	449.0400	22.07	19.32	41.39	47.00	-5.61	163	255	QP
4	769.1400	19.28	24.02	43.30	47.00	-3.70	317	40	QP
5	855.7400	16.96	25.31	42.27	47.00	-4.73	276	16	QP
6	923.9900	19.28	26.13	45.41	47.00	-1.59	312	185	QP

\* Note:

Margin = Emission - Limit

Emission = Radiated Amplitude + Correct Factor

Correct Factor = Antenna Correction Factor + Cable Loss

A margin of -8dB means that the emission is 8dB below the limit

BILOG Antenna Distance: 10 meters

The CISPR 22 limits would be applied to all FCC Part 15 devices.

Below 1GHz test, if the peak measured value meets the QP limit, it is unnecessary to perform the QP measurement. measurement.





Test LAB:International Standards Laboratory (Hsichih Site) Tel:886-2-26462550 Fax:886-2-26464641

Horizontal

**Report Number: ISL-14HE084FA** 



Site: Chamber 01

Condition: FCC ClassA 3M above1GHz Radiation Polarization:

Mk.	Frequency (MHz)	RX_R (dBuV)	Correct Factor(dB/m)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.Pos (cm)	Tab.Pos (deg.)	Detector
1	1077.900	84.93	-20.85	64.08	80.00	-15.92	139	179	peak
2	1077.900	72.66	-20.85	51.81	60.00	-8.19	139	179	AVG
3	1221.000	74.89	-20.75	54.14	80.00	-25.86	113	327	peak
4	2003.000	72.82	-16.24	56.58	80.00	-23.42	179	120	peak
5	2309.000	74.94	-15.68	59.26	80.00	-20.74	182	52	peak
6	2462.000	67.69	-15.41	52.28	80.00	-27.72	108	354	peak
7	2989.000	70.17	-14.26	55.91	80.00	-24.09	100	284	peak

#### \* Note:

Margin = Emission - Limit

Emission = Radiated Amplitude + Correct Factor

 $Correct\ Factor = Antenna\ Correction\ Factor + Cable\ Loss - Pre-Amplifier\ Gain$ 

A margin of -8dB means that the emission is 8dB below the limit

Horn Antenna Distance: 3 meters

The CISPR 22 limits would be applied to all FCC Part 15 devices.

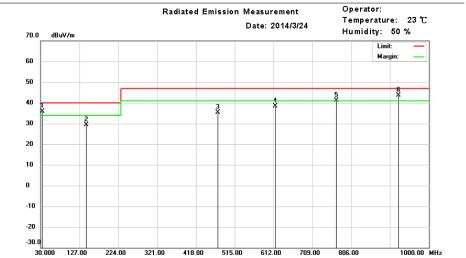
Above 1GHz test, if the peak measured value meets the average limit, it is unnecessary to perform the average measurement.



## **Table 3.2.2 Radiated Emissions (Vertical)**



Test LAB:International Standards Laboratory (Hsichih Site)
Tel:886-2-26462550
Fax:886-2-26464641



Site : OATS 01

Condition : CISPR22 ClassA 10M Radiation

Polarization:

Vertical

**Report Number: ISL-14HE084FA** 

Mk.	Frequency (MHz)	RX_R (dBuV)	Correct Factor(dB/m)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.Pos (cm)	Tab.Pos (deg.)	Detector
1	33.8800	16.58	19.27	35.85	40.00	-4.15	100	326	QP
2	144.4600	15.10	14.27	29.37	40.00	-10.63	229	315	QP
3	472.3200	15.47	19.85	35.32	47.00	-11.68	218	131	QP
4	615.8800	16.58	21.76	38.34	47.00	-8.66	100	200	QP
5	769.1400	17.06	24.02	41.08	47.00	-5.92	237	157	QP
6	924.0100	17.38	26.13	43.51	47.00	-3.49	270	53	QP

\* Note:

Margin = Emission - Limit

Emission = Radiated Amplitude + Correct Factor

Correct Factor = Antenna Correction Factor + Cable Loss

A margin of -8dB means that the emission is 8dB below the limit

BILOG Antenna Distance: 10 meters

The CISPR 22 limits would be applied to all FCC Part 15 devices.

Below 1GHz test, if the peak measured value meets the QP limit, it is unnecessary to perform the QP measurement. measurement.





Test LAB:International Standards Laboratory (Hsichih Site) Tel:886-2-26462550 Fax:886-2-26464641



Site: Chamber 01

Condition: FCC ClassA 3M above1GHz Radiation Polarization:

**Report Number: ISL-14HE084FA** 

Vertical

Mk.	Frequency (MHz)	RX_R (dBuV)	Correct Factor(dB/m)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.Pos (cm)	Tab.Pos (deg.)	Detector
1	1068.000	80.11	-20.85	59.26	80.00	-20.74	100	51	peak
2	2003.000	73.14	-16.24	56.90	80.00	-23.10	124	197	peak
3	2309.000	75.27	-15.68	59.59	80.00	-20.41	153	196	peak
4	2462.000	67.77	-15.41	52.36	80.00	-27.64	100	20	peak
5	2768.000	65.49	-14.75	50.74	80.00	-29.26	106	227	peak
6	2972.000	67.88	-14.29	53.59	80.00	-26.41	100	60	peak

\* Note:

Margin = Emission - Limit

Emission = Radiated Amplitude + Correct Factor

Correct Factor = Antenna Correction Factor + Cable Loss - Pre-Amplifier Gain

A margin of -8dB means that the emission is 8dB below the limit

Horn Antenna Distance: 3 meters

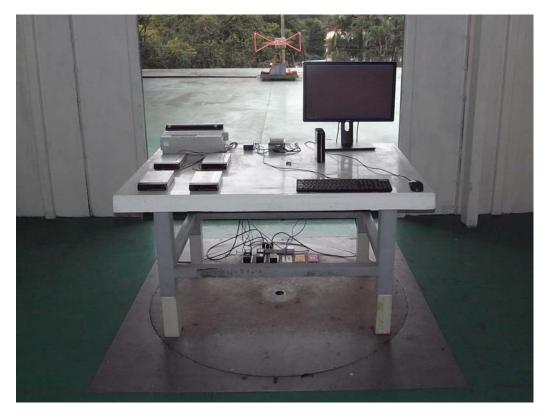
The CISPR 22 limits would be applied to all FCC Part 15 devices.

Above 1GHz test, if the peak measured value meets the average limit, it is unnecessary to perform the average measurement.



# 3.3 Test Setup Photo

Front View

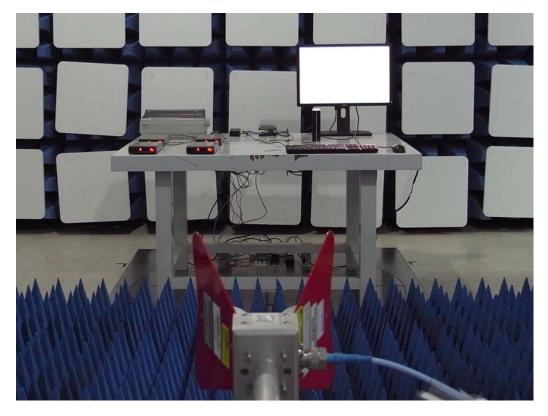


Back View





Front View (above 1GHz)



Back View (above 1GHz)





# 4. Appendix

#### 4.1 Appendix A: Warning Labels

### **Label Requirements**

A Class A digital device subject to Verification of FCC shall carry a warning label which includes the following statement:

\* \* \* W A R N I N G \* \* \*

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.



# **4.2** Appendix B: Warning Statement

#### **Statement Requirements**

The operators' manual for a Class A digital device shall contain the following statements or their equivalent:

#### \* \* \* \* W A R N I N G \* \* \*

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and uses in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Notice: The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equivalent.

\* \* \* \* \* \* \* \*

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If the EUT was tested with special shielded cables the operators manual for such product shall also contain the following statements or their equivalent:

Shielded interface cables and/or AC power cord, if any, must be used in order to comply with the emission limits.



# **4.3** Appendix C: Test Equipment

# 4.3.1 Test Equipment List

Location	<b>Equipment Name</b>	Brand	Model	S/N	Last Cal.	Next Cal.
CON01					Date	Date
Conduction	Coaxial Cable 1F-C1	HUBER SUHNER	RG214U	389942	10/25/2013	10/25/2014
Conduction	LISN 21	ROHDE & SCHWARZ	ENV216	101476	05/14/2013	05/14/2014
Conduction	LISN 22	ROHDE & SCHWARZ	ENV216	101478	05/14/2013	05/14/2014
Conduction	ISN T2 03	FCC	FCC-TLISN-T 2-02	20618	08/13/2013	08/13/2014
Conduction	ISN T4 05	FCC	FCC-TLISN-T 4-02	20619	08/13/2013	08/13/2014
Conduction	INS T8 07	Teseq GmbH	ISN T800	30834	06/01/2013	06/01/2014
Conduction	ISN T8 06 (Shielding)	Teseq GmbH	ISN ST08	33999	08/10/2013	08/10/2014
Conduction	EMI Receiver 15	ROHDE & SCHWARZ	ESCI	101166	04/30/2013	04/30/2014

Location	<b>Equipment Name</b>	Brand	Model	S/N	Last Cal.	Next Cal.
OATS01					Date	Date
Radiation	BILOG Antenna 10	Sumol	ЈВ1	A013004-1	07/10/2013	07/10/2014
		Sciences				
Radiation	Coaxial Cable 3F-10M	EMCI	CFD400-NL	ISL-R001	03/14/2014	03/14/2015
Radiation	EMI Receiver 13	ROHDE &	ESCI	101015	02/26/2014	02/26/2015
		SCHWARZ				

Location	<b>Equipment Name</b>	Brand	Model	S/N	Last Cal.	Next Cal.
Chamber 01					Date	Date
Rad. above 1Ghz	Horn Antenna 11	ETS-LINDGR EN	3117	00114397	03/21/2014	03/21/2015
Rad. above 1Ghz	Horn Antenna 03	COM-Power	AH-826	08010	04/01/2013	04/01/2015
Rad. above 1Ghz	Horn Antenna 05	Com-Power	AH-640	100A	01/09/2013	01/09/2015
Rad. above 1Ghz	Microwave Cable-16	HUBER SUHNER	SUCFLEX 104	345761/4	01/06/2014	01/06/2015
Rad. above 1Ghz	Preamplifier 20	EMCI	EMC051845	980084	11/06/2013	11/06/2014
Rad. above 1Ghz	Microwave Cable-19	HUBER SUHNER	SUCFLEX 102	MY 2151/2	05/09/2013	05/09/2014
Rad. above 1Ghz	Preamplifier 22	EMCI	EMC184045	980124	04/02/2013	04/02/2014
Rad. above 1Ghz	Spectrum Analyzer 23	ROHDE & SCHWARZ	FSU43	101255	11/07/2013	11/07/2014



# 4.3.2 Software for Controlling Spectrum/Receiver and Calculating Test Data

Site	Filename	Version	Issue Date	
Conduction/Radiation	EZ EMC	ISL-03A2	3/6/2013	



## 4.4 Appendix D: Uncertainty of Measurement

The measurement uncertainty refers to CISPR 16-4-2:2011. The coverage factor k=2 yields approximately a 95 % level of confidence.

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<Conduction 01> AMN: ±3.28dB ISN T2: ±3.86dB ISN T4: ±4.27dB ISN T8: ±3.86dB

<OATS 01 (10M)> Horizontal

30MHz~200MHz: ±3.36dB 200MHz~1000MHz: ±4.08dB

Vertical

30MHz~200MHz: ±3.99dB 200MHz~1000MHz: ±4.16dB

<Chamber 01 (3M)>

1GHz~6GHz: ±4.70dB 6GHz~18GHz: ±4.91dB 18GHz~26.5GHz: ±4.34dB 18GHz~26.5GHz: ±4.38dB