



EMC COMPLIANCE TEST REPORT

REPORT NO.: 20110321-1
PRODUCT: Notebook computer
BRAND NAME: acer, eMachines
MODEL NO.: ZQH, ZQJ, Aspire4739Z, Aspire4739, eMD729Z, eMD729
ISSUED DATE: Mar. 21, 2011
ISSUED BY: QSMC Compliance Laboratory
LAB ADDRESS: No. 68, Sanzhuang Road, Songjiang Export Processing Zone, Shanghai, P. R. China

COMPLIANCE STANDARDS:

FCC 47CFR Part 15, Subpart B, Class B; ANSI C63.4:2003
ICES-003
CISPR 22: 2006
CISPR 24:1997+A1:2001+A2:2002
AS/NZS CISPR 22:2006, Class B
V-3/2009.04
V-4/2009.04
ETSI EN 301 489-1 v1.8.1: 2008
ETSI EN 301 489-17 v1.3.2:2008
EN 61000-3-2: 2006, Class D
EN 61000-3-3:1995+A1:2001+A2:2005
EN 55024:1998+A1:2001+A2:2003
EN 61000-4-2:2009
EN 61000-4-3:2006
EN 61000-4-4:2004
EN 61000-4-5:2006
EN 61000-4-6:2009
EN 61000-4-8:1993+A1:2001
EN 61000-4-11:2004
EN 55022:2006+A1:2007, Class B



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Appendix: EUT Assembly photos



Applicant: acer Incorporated
Manufacturer: acer Incorporated
Product: Notebook computer
Brand Name: ZQH, ZQJ, Aspire4739Z, Aspire4739, eMD729Z, eMD729
Model Number: acer, eMachines
Test Date: Mar. 12-Mar.18, 2011

COMPLIANCE STANDARDS:

- FCC 47CFR Part 15, Subpart B, Class B; ANSI C63.4:2003
- ICES-003
- CISPR 22: 2006
- CISPR 24:1997+A1:2001+A2:2002
- AS/NZS CISPR 22:2006, Class B
- V-3/2009.04
- V-4/2009.04
- ETSI EN 301 489-1 v1.8.1: 2008
- ETSI EN 301 489-17 v1.3.2:2008
- EN 61000-3-2: 2006, Class D
- EN 61000-3-3:1995+A1:2001+A2:2005
- EN 55024:1998+A1:2001+A2:2003
- EN 61000-4-2:2009
- EN 61000-4-3:2006
- EN 61000-4-4:2004
- EN 61000-4-5:2006
- EN 61000-4-6:2009
- EN 61000-4-8:1993+A1:2001
- EN 61000-4-11:2004
- EN 55022:2006+A1:2007, Class B

Approved By

Reviewed By

Herculius Hsu/ EMC manager:

Bill Bo/ Senior engineer



Section 1: General Information

1.1 Introduction

Product	Notebook Computer		
Trade Name	acer, eMachines		
Model Name	ZQH, ZQJ, Aspire4739Z, Aspire4739, eMD729Z, eMD729		
Housing Type	Plastic		
AC Power Adapter	DELTA	Model	ADP-65JH DB
	LITE-ON	Model	PA-1650-22AC
	HIPRO	Model	HP-A0652R3B
AC Power Adapter Rating	I/P: 100-240VAC O/P: 19VDC, 3.42A/2.15A		
AC Power Cord Type	Non-shielded AC 3-pin (1.8m)		
DC Power Cable Type	Non-shielded DC (1.8m) with one ferrite core		
CPU	Intel	Model	P6100 (2.00GHz)
			P6200 (2.13GHz)
			P6300 (2.26GHz)
			i3 380M (2.53GHz)
Memory Capacity	1GB/ 2GB/ 4GB		
14.0" LCD Panel	SAMSUNG	Model	LTN140AT01-G04
	LG	Model	LP140WH4-TLC1
	AUO	Model	B140XW01
	CMO	Model	BT140GW01
HDD	SEAGATE	Model	ST9250315AS (250GB)
			ST9320310AS (320GB)
			ST9500325AS (500GB)
			ST9640320AS (640GB)
			ST9750423AS (750GB)
	TOSHIBA	Model	MK2559GSXP (250GB)
			MK3259GSXP (320GB)
			MK5059GSXP (500GB)
			MK6459GSXP (640GB)
			MK7559GSX (750GB)



	HGST	Model	HTS545025B9A300 (250GB)
			HTS545032B9A300 (320GB)
			HTS545050B9A300 (500GB)
			HTS547564A9E384 (640GB)
			HTS547575A9E384 (750GB)
	WD	Model	WD2500BPVT-22ZEST0 (250GB)
			WD3200BPVT-22ZEST0 (320GB)
			WD5000BPVT-22HXZT1 (500GB)
			WD6400BPVT-22HXZT1 (640GB)
			WD7500BPVT-22HXZT1 (750GB)
ODD	TOSHIBA	Model	TS-L633F
	HLDS	Model	GT32N
			GT34N
	PLDS	Model	DS-8A5SH
	PANASONIC	Model	UJ8A0
PIONEER	Model	DVR-TD10RS	
Camera	Suyin	Model	HF0319-M08C-OV01
	LITE-ON	Model	10P2SF005
Wireless LAN	Atheros	Model	AR5B95
			HB125
	Broadcom	Model	BCM94313HMG2L
Battery	SANYO	Model	AS10D31
	SONY	Model	AS10D41
	PANASONIC	Model	AS10D51
	SAMSUNG	Model	AS10D61
	SIMPLO	Model	AS10D71
			AS10D73
			AS10D75



I/O Port:

I/O Port Types	Quantity
DC In port	1
MIC In port	1
Headphone port	1
LAN port	1
USB port	3
HDMI port	1
VGA port	1
Card reader	1



1.2 Test Procedure

The EUT was tested using special test software called BurnIn test V6.0, which exercises all external I/O ports as well as the internal storage media by writing and reading (if applicable) a continuous stream of “H” characters in font 9. A pattern of continuous stream-scrolling black “H” on a white background was written to display. To exercise the optical drive, a DVD disc was put into the optical drive and played through the internal audio while the EMC testing was being done. The measurements were made while the system was exercised in this manner.



Section 2: Test Facility and Procedure

2.1 Test Facility Used for Emission Testing

Conducted Emissions Facilities: Conducted Emissions were performed at QSMC Compliance Laboratory of No.68 Sanzhuang Road, Songjiang Export Processing Zone, Shanghai, P. R. China

FCC Registration No. 602285

VCCI Registration No. C-2529/ T-1836

Radiated Emissions Facilities: Radiated Emissions measurements were performed at QSMC Compliance Laboratory of No.68 Sanzhuang Road, Songjiang Export Processing Zone, Shanghai, P. R. China

FCC Registration No. 602285

VCCI Registration No R-2319/ G-191/ R-3341/ G-209/R-2320

2.1.1 Measurement Uncertainty

The measurement uncertainty has been determined to be the following:

AC Conducted Emissions = 2.4 dB

Telecom Conducted Emissions = 2.8 dB

Radiated Emissions (30MHz~1000MHz) = 3.9 dB





Radiated Emissions (1000MHz~18000MHz) =4.0 dB

The equipment conforms to the requirement of CISPR 16-1, CISPR 16-4-2, ANSI C63.2 and other required standards.

Calibration of all test and measurement, including any accessories that may effect such calibration, is checked frequently to ensure the accuracy. Adjustments are made and correction factors are applied in accordance with the instructions contained in the respective manual.



2.1.2 Lab Accreditations

Coverage	Agency	Scope of Accreditation	Logo
USA	FCC	3/10 meter chamber and conducted test chamber to perform FCC Part 15/18 measurements	 602285
Japan	VCCI	3/10 meter chamber and conducted test chamber to perform radiated / conducted measurements	 R-2320 / R-2319/ G-191/ R-3341/ G-209 C-2529/ T-1836
ISO/IEC 17025	CNAS	FCC 47CFR Part 15; CISPR22; AS/NZS CISPR 22; V-3/2008.04; V-4/2007.04; CNS13438; GB9254; GB17625.1; EN55022; EN61000-3-2; EN 61000-3-3; CISPR24; EN55024; EN61000-4-2; EN61000-4-3; EN61000-4-4; EN61000-4-5; EN61000-4-6; EN61000-4-8; EN61000-4-11	  TESTING CNAS L2894

2.1.3 Software to Exercise EUT

The EUT was tested using special test software called BurnIn test V6.0, which exercises all external I/O ports as well as the internal storage media by writing and reading (if applicable) a continuous stream of “H” characters in font 9. A pattern of continuous stream-scrolling black “H” on a white background was written to display. To exercise the optical drive, a DVD disc was put into the optical drive and played through the internal audio while the EMC testing was being done. The measurements were made while the system was exercised in this manner.

2.1.4 Special Accessories

There were no special accessories used during these tests.

2.1.5 Equipment Modifications and Deviations

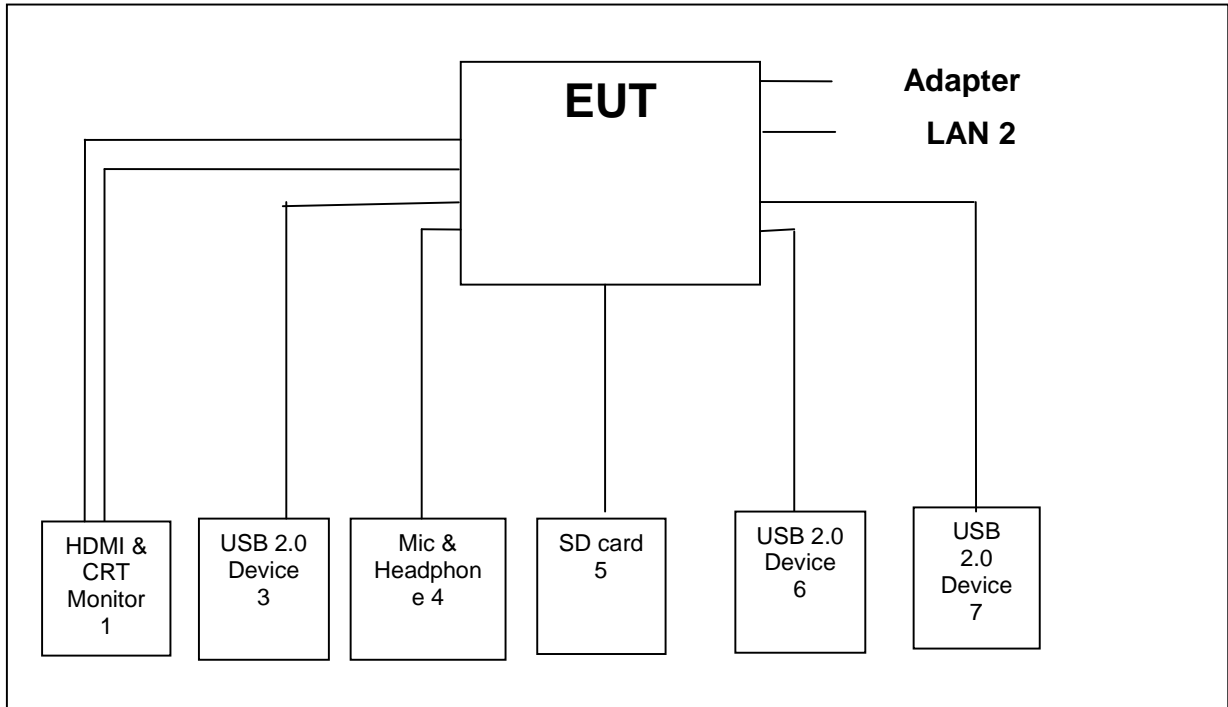
There is no EUT modification or test standard deviation.



2.1.6 Test Configuration

The EUT was configured as a worst case system configuration as a result from pre-testing as described below:

Arrangement Block Diagram



Associated Equipments

No.	Interference	Equipment	Brand	Model
1	HDMI & VGA port	Monitor	DELL	U2709Wb
2	LAN port	supporting PC	Gateway	E-475
3	USB port	USB HDD	TeraSys	F12-UF
4	Audio in & out port	Headphone / mic	HYUNDAI	HY-500MV
5	4 IN 1 card reader	SD card	Transcend	2GB
6	USB port	USB iPod	Apple	A1285
7	USB port	USB iPod	Apple	A1285



Pre-test configuration

Prior to taking the formal emissions data collected in this report many hours of pre-testing have been performed. The selection of the worst case system documented in this report was based upon this pre-testing.

Mode	CPU	LCD Panel	Memory	HDD	ODD	Wireless LAN	Camera	Battery	Adapter
1	Intel P6200 (2.13GHz)	CMO BT140GW01	1GB*2	HGST HTS545050B9A300 (500GB)	HLDS GT34N	Atheros AR5B95	LITE-ON 10P2SF005	SIMPLO AS10D71	HIPRO HP-A0652R3B
2	Intel P6300 (2.26GHz)	SAMSUNG LTN140AT01-G04	2GB*2	WD WD6400BPVT-22HXZT1 (640GB)	PIONEER DVR-TD10RS	Atheros AR5B95	Suyin HF0319-M08C-OV01	SAMSUNG AS10D61	LITE-ON PA-1650-22AC
3	Intel i3 380M (2.53GHz)	LG LP140WH4-TLC1	2GB*2	HGST HTS545032B9A300 (320GB)	PLDS DS-8A5SH	Broadcom BCM94313 HMG2L	LITE-ON 10P2SF005	SANYO AS10D31	HIPRO HP-A0652R3B
4	Intel P6300 (2.26GHz)	SAMSUNG LTN140AT01-G04	2GB*2	WD WD5000BPVT-22HXZT1 (500GB)	PIONEER DVR-TD10RS	Atheros AR5B95	Suyin HF0319-M08C-OV01	SAMSUNG AS10D61	LITE-ON PA-1650-22AC
5	Intel P6100 (2.00GHz)	LG LP140WH4-TLC1	2GB*2	SEAGATE ST9500325AS (500GB)	PANASONIC UJ8A0	Broadcom BCM94313 HMG2L	LITE-ON 10P2SF005	SONY AS10D41	HIPRO HP-A0652R3B
6	Intel i3 380M (2.53GHz)	LG LP140WH4-TLC1	2GB*2	SEAGATE ST9640320AS (640GB)	TOSHIBA TS-L633F	Broadcom BCM94313 HMG2L	LITE-ON 10P2SF005	SANYO AS10D31	DELTA ADP-65JHDB
7	Intel i3 380M (2.53GHz)	LG LP140WH4-TLC1	2GB*2	SEAGATE ST9750423AS (750GB)	PLDS DS-8A5SH	Broadcom BCM94313 HMG2L	LITE-ON 10P2SF005	SIMPLO AS10D73	DELTA ADP-65JHDB
8	Intel i3 380M (2.53GHz)	LG LP140WH4-TLC1	2GB*2	TOSHIBA MK2559GSXP (250GB)	PLDS DS-8A5SH	Broadcom BCM94313 HMG2L	LITE-ON 10P2SF005	SIMPLO AS10D75	DELTA ADP-65JHDB
9	Intel i3 380M (2.53GHz)	LG LP140WH4-TLC1	2GB*2	TOSHIBA MK5059GSXP (500GB)	PLDS DS-8A5SH	Broadcom BCM94313 HMG2L	LITE-ON 10P2SF005	PANASONIC AS10D51	DELTA ADP-65JHDB
10	Intel i3 380M (2.53GHz)	LG LP140WH4-TLC1	2GB*2	TOSHIBA MK6459GSXP (640GB)	PLDS DS-8A5SH	Broadcom BCM94313 HMG2L	LITE-ON 10P2SF005	PANASONIC AS10D51	DELTA ADP-65JHDB
11	Intel i3 380M (2.53GHz)	LG LP140WH4-TLC1	2GB*2	TOSHIBA MK7559GSX (750GB)	PLDS DS-8A5SH	Broadcom BCM94313 HMG2L	LITE-ON 10P2SF005	SANYO AS10D31	DELTA ADP-65JHDB
12	Intel i3 380M (2.53GHz)	LG LP140WH4-TLC1	2GB*2	HGST HTS545025B9A300 (250GB)	PLDS DS-8A5SH	Broadcom BCM94313 HMG2L	LITE-ON 10P2SF005	SANYO AS10D31	DELTA ADP-65JHDB
13	Intel i3 380M (2.53GHz)	LG LP140WH4-TLC1	2GB*2	SEAGATE ST9250315AS (250GB)	PLDS DS-8A5SH	Broadcom BCM94313 HMG2L	LITE-ON 10P2SF005	SANYO AS10D31	DELTA ADP-65JHDB
14	Intel i3 380M (2.53GHz)	LG LP140WH4-TLC1	2GB*2	HGST HTS547564A9E384 (640GB)	PLDS DS-8A5SH	Broadcom BCM94313 HMG2L	LITE-ON 10P2SF005	SANYO AS10D31	DELTA ADP-65JHDB
15	Intel i3 380M (2.53GHz)	LG LP140WH4-TLC1	1GB*2	HGST HTS547575A9E384 (750GB)	PLDS DS-8A5SH	Broadcom BCM94313 HMG2L	LITE-ON 10P2SF005	SANYO AS10D31	DELTA ADP-65JHDB
16	Intel i3 380M (2.53GHz)	LG LP140WH4-TLC1	1GB*2	WD WD2500BPVT-22ZEST0 (250GB)	PLDS DS-8A5SH	Broadcom BCM94313 HMG2L	LITE-ON 10P2SF005	SANYO AS10D31	DELTA ADP-65JHDB
17	Intel i3 380M (2.53GHz)	LG LP140WH4-TLC1	1GB*2	WD WD3200BPVT-22ZEST0 (320GB)	PLDS DS-8A5SH	Broadcom BCM94313 HMG2L	LITE-ON 10P2SF005	SANYO AS10D31	DELTA ADP-65JHDB
18	Intel i3 380M (2.53GHz)	LG LP140WH4-TLC1	4GB*2	SEAGATE ST9320310AS (320GB)	PLDS DS-8A5SH	Broadcom BCM94313 HMG2L	LITE-ON 10P2SF005	SANYO AS10D31	DELTA ADP-65JHDB
19	Intel i3 380M (2.53GHz)	LG LP140WH4-TLC1	4GB*2	TOSHIBA MK3259GSXP (320GB)	PLDS DS-8A5SH	Intel 100BNHMW	LITE-ON 10P2SF005	SANYO AS10D31	DELTA ADP-65JHDB



20	Intel i3 380M (2.53GHz)	AUO B140XW01	4GB*2	WD WD7500BPVT-2 2HXZT1 (750GB)	HLDS GT32N	Atheros HB125	LITE-ON 10P2SF005	SANYO AS10D31	DELTA ADP-65JH DB
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Worst Case for Final Testing (Mode 3 chosen)

Component	Vendor	Part Number
CPU	Intel	i3 380M (2.53GHz)
LCD Panel	LG	LG LP140WH4-TLC1
Memory	ELPIDA	EBJ20UF8BCS0-DJ-F (2GB)+ EBJ20UF8BCS0-DJ-F (2GB)
Hard Disk Drive	HGST	HTS545032B9A300 (320GB)
Optical Driver	PLDS	DS-8A5SH
Wireless LAN	Broadcom	BCM94313HMG2L
Camera	LITE-ON	10P2SF005
Battery	SANYO	AS10D31
Adapter	HIPRO	HP-A0652R3B

2.1.7 Cable Description and Information

Cable Type	Shielded	Ferrite
LAN cable (Remote)	No	No
headphone/MIC cable	No	No
USB 2.0 Device cable	Yes	No
HDMI cable	Yes	No
VGA cable	Yes	Yes

2.2 Measurement Equipment

N/A is an abbreviation for Not Applicable. All equipments are traceable to CNAS calibration standards.

**2.2.1 Conducted Emissions**

Description	Manufacturer	Model No.	Serial No.	Calibrated Until
Test Receiver	Rohde & Schwarz	ESCI	100167	5/24/2011
LISN	Schwarz beck	NSLK8127	8127433	5/24/2011
LISN	Schwarz beck	NSLK8128	8128229	5/24/2011
TLISN	FCC	F-071115	092062	1/21/2012
TLISN	FCC	FCC-TLISN-T4-02	20581	5/24/2011
TLISN	FCC	FCC-TLISN-T8-02	20445	5/24/2011
Probe	FCC	F-33-4	57	5/30/2011
Probe	FCC	F35	507	5/30/2011
Software	ADT	ADT_Cond_V7.3.4	N/A	N/A

2.2.2 Radiated Emissions

Description	Manufacturer	Model No.	Serial No.	Calibrated Until
Test Receiver	Rohde & Schwarz	ESCI	100166	5/24/2011
Test Receiver	Rohde & Schwarz	ESIB26	100307	5/24/2011
Bilog Antenna	Schwarz beck	VULB9168	9168-198	5/30/2011
Bilog Antenna	Schwarz beck	VULB9168	9168-195	5/30/2011
Horn Antenna	Schwarz beck	BBHA 9120D	409	5/30/2011
Spectrum Analyzers	Agilent	E7405A	MY45104985	5/24/2011
Preamplifier	Agilent	8447D	2944A10848	5/24/2011
Preamplifier	Agilent	8447D	2944A10847	5/24/2011
Preamplifier	Agilent	8449B	3008A02145	5/24/2011
Preamplifier	Agilent	8449B	3008A02146	5/24/2011
Software	ADT	ADT_Radiated_V7	N/A	N/A
Antenna Mast	Inn-co	MA4000	MA4000/101/9770 405/L	N/A
Antenna Mast	Inn-co	MA4000	MA4000/104/9770 405/L	N/A
Turn Table	Inn-co	DT3000-1T-C	DT3000-1T-C/22	N/A
Controller	Inn-co	CO2000	CO2000/218/9770 405/L	N/A

**2.2.3 Power Harmonics and Voltage Fluctuation/Flicker**

Description	Manufacturer	Model No.	Serial No.	Calibrated Until
AC Power Source	EMTest	ACS 500	V0523100459	5/24/2011
Harmonics & Flicker Analyzer	EMTest	DPA 500	V0523100458	5/24/2011
Software	EMTest	EMTest software	N/A	N/A

2.2.4 Electrostatic Discharge (ESD) Immunity

Description	Manufacturer	Model No.	Serial No.	Calibrated Until
ESD Simulator	EMTest	ESD 30C	V0523100460	5/30/2011
ESD Simulator	Noiseken	ESS-2002	ESS0423758	5/30/2011
ESD Simulator	TESEQ	NSG435	6251	5/30/2011
ESD Simulator	TESEQ	NSG435	6253	5/30/2011

2.2.5 Radiated Electromagnetic Field Immunity

Description	Manufacturer	Model No.	Serial No.	Calibrated Until
Amplifier	Amplifier Research	150W1000	312368	N/A
Amplifier	Amplifier Research	60S1G3 (M1)	312416	N/A
Antenna	Amplifier Research	AT5080	312113	N/A
Antenna Tripod	Evergo	TP1000A	N/A	N/A
Field Monitoring	Amplifier Research	IF4000A	310906	N/A
Probe	Amplifier Research	FP6001	307201	5/24/2011
Power Meter	Boonton	4232A	142402	5/24/2011
Power Sensor	Boonton	51011EMC	33838	5/24/2011
Power Sensor	Boonton	51011EMC	33839	5/24/2011
Double-coupling	Amplifier Research	DC6180A	312192	N/A
Double-coupling	Amplifier Research	DC7144A	311989	N/A
Controller	Amplifier Research	SC1000M1	312477	N/A
Signal Generator	Rohde& Schwarz	SML03	102270	5/24/2011
Software	ADT	ADT_RS_V7	N/A	N/A

**2.2.6 Fast Transient/Burst Immunity**

Description	Manufacturer	Model No.	Serial No.	Calibrated Until
EFT Generator	EMTest	EFT500	V0523100450	5/24/2011
Clamp	EMTest	HFK	0605-08	N/A
Software	EMTest	EMTest Software	N/A	N/A

2.2.7 Surge Immunity

Description	Manufacturer	Model No.	Serial No.	Calibrated Until
Telecom surge generator	EMTest	TSS 500 M10	0523100456	5/24/2011
Impulse Generator	EMTest	VCS 500 M10	V0523100451	5/24/2011
CDN	EMTest	CNV504 S4	V054221000813	N/A
CDN	EMTest	CNV504 S1	V0523100455	N/A
Software	EMTest	EMTest Software	N/A	N/A

2.2.8 Conducted Disturbance/Induced Radio-Frequency Field Immunity

Description	Manufacturer	Model No.	Serial No.	Calibrated Until
Continuous Wave Simulator	EMTest	CWS 500C	V053100457	5/24/2011
Attenuator	EMTest	ATT 6/75	1104-13	5/24/2011
CDN	EMTest	CDN-M2/M3	0705-02	5/24/2011
CDN	EMTest	CDN-T2	0705-01	5/24/2011
CDN	EMTest	CDN-T4	0705-01	5/24/2011
EM Clamp	EMTest	EM Clamp	35737	5/24/2011
CA M2/M3/AF3	EMTest	CA M2/M3/AF3	N/A	N/A
Coupling clamp	EMTest	HFK (-4)	0605-08	N/A
CDN	EMTest	CDN-M1	0705-01	N/A
CDN	EMTest	CDN-AF4	0705-01	N/A
Software	EMTest	EMTest Software	N/A	N/A



2.2.9 Power Frequency Magnetic Field Immunity

Description	Manufacturer	Model No.	Serial No.	Calibrated Until
Current transformer	EMTest	MC 2630 (-8)	0705-04	N/A
Motorized Variation	EMTest	MV 2616 (-8)	V0523100453	N/A
Power Fail Simulator	EMTest	UCS500M4-PFS	V0523100452	5/24/2011
Coil	EMTest	MS100	0605-1	5/24/2011
Software	EMTest	EMTest Software	N/A	N/A

2.2.10 Voltage Dips and Short Interruptions

Description	Manufacturer	Model No.	Serial No.	Calibrated Until
Power Fail Simulator	EMTest	UCS500M4-PFS	V0523100452	5/24/2011
Software	EMTest	EMTest Software	N/A	N/A



Section: 3 Electromagnetic Emissions Test

3.1 Emission

3.1.1 Line Conducted Emissions Test

- Measurement Procedures Utilized for Conducted Emissions

The EUT was set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per EN 55022.

Associated equipment, if needed, was placed as per EN 55022.

All I/O cables were positioned to simulate typical actual usage as per EN 55022.

The test equipment EUT installed received AC power through a Line Impedance Stabilization Network (LISN), which supplied power source and was grounded to the ground plane.

All associated equipment received power from a second LISN.

For conducted emission test on telecommunication ports, a telecommunication port is connected by its signal cable to an impedance stabilization network (ISN).

During the testing, the LAN utilization is in excess of 10 % and sustains that level for a minimum of 250 ms. the traffic rate is monitored by the program of NetSpeed.

The EUT test program was started. Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150K Hz to 30MHz for emissions in each of the test modes.

During the above scans under battery charging mode, the emissions were maximized by cable manipulation.

The EUT configuration and cable configuration of the above highest emission level were recorded for reference of the final test.

- Conducted Emissions Test Data

The following data was collected with an EMC receiver in Quasi-peak and Average detection mode.

Test date: 03/17/2011

Temperature: 21°C

Rel. Humidity: 54%



120 Vac 60 Hz Mains

Live Line

Frequency	Correction factor	Reading dB(μV)		Emission dB(μV)		Limit dB(μV)		Margins Db	
		QP	AV	QP	AV	QP	AV	QP	AV
0.15400	12.13	30.03	8.43	42.16	20.56	65.78	55.78	-23.62	-35.22
0.17000	11.86	27.69	7.40	39.55	19.26	64.96	54.96	-25.41	-35.70
0.19000	11.52	31.35	20.92	42.87	32.44	64.04	54.04	-21.17	-21.60
0.21000	11.32	22.64	8.88	33.96	20.20	63.21	53.21	-29.25	-33.01
0.48198	10.48	21.01	9.58	31.49	20.06	56.30	46.30	-24.81	-26.24
19.40871	11.59	30.60	22.38	42.19	33.97	60.00	50.00	-17.81	-16.03

Neutral Line

Frequency	Correction factor	Reading dB(μV)		Emission dB(μV)		Limit dB(μV)		Margins dB	
		QP	AV	QP	AV	QP	AV	QP	AV
0.15400	12.13	29.69	8.58	41.82	20.71	65.78	55.78	-23.96	-35.07
0.17000	11.86	27.44	7.57	39.30	19.43	64.96	54.96	-25.66	-35.53
0.19000	11.52	31.07	20.90	42.59	32.42	64.04	54.04	-21.45	-21.62
0.20200	11.34	23.42	10.03	34.76	21.37	63.53	53.53	-28.77	-32.16
0.24599	11.22	27.81	19.25	39.03	30.47	61.89	51.89	-22.86	-21.42
18.98074	11.55	29.18	21.25	40.73	32.80	60.00	50.00	-19.27	-17.20

Note: Conducted Emissions data was also taken at 100Vac, 60Hz / 50Hz, 110Vac, 60Hz. This data was found to be equivalent or lower than the data listed above.



230 Vac 50 Hz Mains

Live Line

Frequency MHz	Correction factor dB	Reading dB(μV)		Emission dB(μV)		Limit dB(μV)		Margins dB	
		QP	AV	QP	AV	QP	AV	QP	AV
0.18210	11.65	35.75	26.81	47.40	38.46	64.39	54.39	-16.99	-15.93
0.19010	11.52	34.68	24.42	46.20	35.94	64.04	54.04	-17.84	-18.10
0.24609	11.21	27.05	20.41	38.26	31.62	61.89	51.89	-23.63	-20.27
0.49808	10.43	29.97	21.50	40.40	31.93	56.03	46.03	-15.63	-14.10
0.57007	10.46	28.08	14.96	38.54	25.42	56.00	46.00	-17.46	-20.58
19.09277	11.56	29.32	20.08	40.88	31.64	60.00	50.00	-19.12	-18.36

Neutral Line

Frequency MHz	Correction factor dB	Reading dB(μV)		Emission dB(μV)		Limit dB(μV)		Margins dB	
		QP	AV	QP	AV	QP	AV	QP	AV
0.18610	11.58	36.20	28.67	47.78	40.25	64.21	54.21	-16.43	-13.96
0.24609	11.21	28.03	20.90	39.24	32.11	61.89	51.89	-22.65	-19.78
0.49808	10.43	29.93	21.57	40.36	32.00	56.03	46.03	-15.67	-14.03
0.57007	10.46	27.80	14.68	38.26	25.14	56.00	46.00	-17.74	-20.86
0.69406	10.57	26.68	15.15	37.25	25.72	56.00	46.00	-18.75	-20.28
19.46074	11.60	29.36	20.48	40.96	32.08	60.00	50.00	-19.04	-17.92

Note: Conducted Emissions data was also taken at 220Vac/240Vac, 50Hz. This data was found to be equivalent or lower than the data listed above.



230 VAC 50 Hz Telecommunication

RJ45 Line (10 Mbps)

Frequency	Correction factor	Reading dB(μ V)		Emission dB(μ V)		Limit dB(μ V)		Margins dB	
		QP	AV	QP	AV	QP	AV	QP	AV
3.49386	19.48	30.29	20.09	49.77	39.57	74.00	64.00	-24.23	-24.43
7.08561	19.57	24.69	13.70	44.26	33.27	74.00	64.00	-29.74	-30.73
8.91348	19.61	28.88	22.05	48.49	41.66	74.00	64.00	-25.51	-22.34
10.16140	19.63	27.81	21.08	47.44	40.71	74.00	64.00	-26.56	-23.29
11.24932	19.62	33.60	27.08	53.22	46.70	74.00	64.00	-20.78	-17.30
13.74914	19.64	29.08	23.06	48.72	42.70	74.00	64.00	-25.28	-21.30

RJ45 Line (100 Mbps)

Frequency	Correction factor	Reading dB(μ V)		Emission dB(μ V)		Limit dB(μ V)		Margins dB	
		QP	AV	QP	AV	QP	AV	QP	AV
3.39787	19.47	30.60	19.79	50.07	39.26	74.00	64.00	-23.93	-24.74
6.25367	19.56	24.42	14.02	43.98	33.58	74.00	64.00	-30.02	-30.42
7.92155	19.59	33.61	30.98	53.20	50.57	74.00	64.00	-20.80	-13.43
13.41717	19.64	34.70	32.00	54.34	51.64	74.00	64.00	-19.66	-12.36
18.24083	19.77	35.57	32.51	55.34	52.28	74.00	64.00	-18.66	-11.72
23.12448	19.94	32.67	29.54	52.61	49.48	74.00	64.00	-21.39	-14.52

Note: Conducted Emissions data was also taken at 220Vac/240Vac, 50Hz. This data was found to be equivalent or lower than the data listed above.



100 VAC 50 Hz Telecommunication

RJ45 Line (10 Mbps)

Frequency	Correction factor	Reading dB(μV)		Emission dB(μV)		Limit dB(μV)		Margins dB	
		QP	AV	QP	AV	QP	AV	QP	AV
2.61793	19.45	29.39	17.32	48.84	36.77	74.00	64.00	-25.16	-27.23
3.19389	19.46	31.38	20.80	50.84	40.26	74.00	64.00	-23.16	-23.74
4.81777	19.53	20.64	10.24	40.17	29.77	74.00	64.00	-33.83	-34.23
5.42573	19.55	22.40	11.39	41.95	30.94	74.00	64.00	-32.05	-33.06
6.56565	19.56	28.10	17.13	47.66	36.69	74.00	64.00	-26.34	-27.31
25.51632	20.05	16.47	8.20	36.52	28.25	74.00	64.00	-37.48	-35.75

RJ45 Line (100 Mbps)

Frequency	Correction factor	Reading dB(μV)		Emission dB(μV)		Limit dB(μV)		Margins dB	
		QP	AV	QP	AV	QP	AV	QP	AV
2.72992	19.45	30.31	19.45	49.76	38.90	74.00	64.00	-24.24	-25.10
3.21388	19.46	31.43	20.44	50.89	39.90	74.00	64.00	-23.11	-24.10
4.44580	19.52	23.83	14.24	43.35	33.76	74.00	64.00	-30.65	-30.24
5.08575	19.54	20.55	10.08	40.09	29.62	74.00	64.00	-33.91	-34.38
6.41766	19.56	27.46	15.57	47.02	35.13	74.00	64.00	-26.98	-28.87
6.89363	19.57	26.63	15.67	46.20	35.24	74.00	64.00	-27.80	-28.76

Note: Conducted Emissions data was also taken at 110Vac, 50Hz. This data was found to be equivalent or lower than the data listed above.



3.1.2 Radiated Emissions Test

- Measurement Procedures Utilized for Radiated Emissions

The equipment was set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane.

Associated equipment, if needed, was placed as per EN 55022.

All I/O cables were positioned to simulate typical usage as per EN 55022.

The EUT received AC power source, from the outlet socket under the turntable. All associated equipment received power from another socket under the turntable.

Mains cables, telephone lines or other connections to auxiliary equipment located outside the test are shall drape to the floor. No extension cords shall be used to mains receptacle.

The antenna was placed at 10 meter away from the EUT as stated in EN 55022. The antenna connected to the Spectrum Analyzer via a cable and at times a pre-amplifier would be used.

The analyzer/receiver scanned from 30MHz to 1000MHz. The EUT test program was started. Emissions were scanned under battery charging mode and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both vertical and horizontal polarization, to maximize the emission reading level.

The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. The height of antenna can be varied from one meter to four meters; the height of adjustment depends on the EUT height and the antenna 3dB beam width both, to detect the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz

The test mode(s) described in Item 2.1.6 were scanned during the preliminary test:

After the preliminary scan, we found the test mode described in Item 2.1.6 producing the highest emission level.

The EUT and cable configuration, antenna position, polarization and turntable position of the above highest emission level were recorded for the final test.

FCC Part 15 measurements below 1 GHz were performed at an EUT to antenna distance of 10 meters. Measurements taken above 1GHz were taken at an EUT to antenna distance of 3 meters. CISPR 22 measurements were performed at an EUT to antenna distance of 10 meters.



- Radiated Emissions Test Data

Radiated Emissions measurements were performed at QSMC Compliance Laboratory. The data lists the worst case emission frequencies, measured levels, antenna, cable and amplifier corrections, the corrected field strength, and the limit. The data was collected at 10 meters from 30MHz to 1000MHz and at 3 meters from 1000MHz to 6000MHz and compared to the CISPR 22 Class B limits.

Test date: 03/18/2011
 Temperature: 22°C
 Rel. Humidity: 62 %

120 Vac 60 Hz Mains

Vertical Polarization

Frequency	Factor	Reading	Emission	Limit	Margin	Mast Height	Turn Table
MHz	dB/m	dB(V)	dB(V/m)	dB(V/m)	dB	cm	Deg
98.00 (QP)	11.58	10.98	22.56	30.00	-7.44	100.00	304.00
105.77 (QP)	12.31	10.06	22.37	30.00	-7.63	112.00	79.00
199.00 (QP)	11.95	11.17	23.12	30.00	-6.88	100.00	108.00
500.42 (QP)	19.77	9.52	29.29	37.00	-7.71	238.00	321.00
755.00 (QP)	24.69	0.84	25.53	37.00	-11.47	342.00	254.00
996.16 (QP)	27.12	5.76	32.88	37.00	-4.12	300.00	138.00

Horizontal Polarization

Frequency	Factor	Reading	Emission	Limit	Margin	Mast Height	Turn Table
MHz	dB/m	dB(V)	dB(V/m)	dB(V/m)	dB	cm	Deg
199.18 (QP)	11.78	14.12	25.90	30.00	-4.10	400.00	119.00
499.63 (QP)	19.75	11.93	31.68	37.00	-5.32	152.00	26.00
546.04 (QP)	20.75	7.67	28.42	37.00	-8.58	382.00	251.00
697.32 (QP)	23.83	1.03	24.86	37.00	-12.14	392.00	329.00
833.19 (QP)	25.37	0.95	26.32	37.00	-10.68	400.00	260.00
999.06 (QP)	26.64	6.20	32.84	37.00	-4.16	100.00	111.00

Note: Radiated Emissions data was also taken at 100Vac, 50Hz. This data was found to be equivalent or lower than the data listed above.



230 Vac 50 Hz Mains

Vertical Polarization

Frequency	Factor	Reading	Emission	Limit	Margin	Mast Height	Turn Table
MHz	dB/m	dB(μV)	dB(μV/m)	dB(μV/m)	dB	cm	Deg
97.99 (QP)	11.58	11.60	23.18	30.00	-6.82	100.00	282.00
140.76 (QP)	15.20	6.82	22.02	30.00	-7.98	128.00	278.00
199.00 (QP)	11.95	12.11	24.06	30.00	-5.94	100.00	36.00
499.76 (QP)	19.76	12.06	31.82	37.00	-5.18	317.00	17.00
834.80 (QP)	25.26	2.00	27.26	37.00	-9.74	212.00	74.00
995.76 (QP)	27.12	5.64	32.76	37.00	-4.24	305.00	61.00

Horizontal Polarization

Frequency	Factor	Reading	Emission	Limit	Margin	Mast Height	Turn Table
MHz	dB/m	dB(μV)	dB(μV/m)	dB(μV/m)	dB	cm	Deg
240.00 (QP)	13.51	17.95	31.46	37.00	-5.54	400.00	65.00
266.65 (QP)	14.10	10.05	24.15	37.00	-12.85	328.00	11.00
499.62 (QP)	19.75	13.01	32.76	37.00	-4.24	173.00	17.00
833.19 (QP)	25.37	0.98	26.35	37.00	-10.65	348.00	41.00
967.28 (QP)	26.71	-1.03	25.68	37.00	-11.32	400.00	315.00
999.38 (QP)	26.64	6.31	32.95	37.00	-4.05	100.00	78.00

Note: Radiated Emissions data was also taken at 240Vac, 50Hz. This data was found to be equivalent or lower than the data listed above.

**120 Vac 60 Hz Mains****Vertical Polarization (above 1GHz to 5th harmonics)**

Frequency	Factor	Reading	Emission	Limit	Margin	Mast Height	Turn Table
MHz	dB/m	dB(μ V)	dB(μ V/m)	dB(μ V/m)	dB	cm	Deg
1385.00(AV)	28.11	8.36	36.47	54.00	-17.53	100.00	211.00
1522.50(AV)	27.89	7.79	35.68	54.00	-18.32	103.00	215.00
1605.00(AV)	27.79	8.46	36.25	54.00	-17.75	110.00	205.00
2595.00(AV)	31.39	3.11	34.50	54.00	-19.50	164.00	155.00
6362.50(AV)	40.36	-6.80	33.56	54.00	-20.44	400.00	360.00
11670.00(AV)	46.40	-12.75	33.65	54.00	-20.35	351.00	26.00

Horizontal Polarization (above 1GHz to 5th harmonics)

Frequency	Factor	Reading	Emission	Limit	Margin	Mast Height	Turn Table
MHz	dB/m	dB(μ V)	dB(μ V/m)	dB(μ V/m)	dB	cm	Deg
1385.00(AV)	28.11	5.46	33.57	54.00	-20.43	101.00	269.00
1605.00(AV)	27.79	6.42	34.21	54.00	-19.79	100.00	198.00
1715.00(AV)	28.02	9.96	37.98	54.00	-16.02	100.00	201.00
2457.50(AV)	31.13	4.83	35.96	54.00	-18.04	150.00	245.00
6417.50(AV)	40.61	-6.03	34.58	54.00	-19.42	300.00	254.00
8205.00(AV)	43.34	-9.69	33.65	54.00	-20.35	400.00	325.00



230 Vac 50 Hz Mains

Vertical Polarization (1GHz to 6GHz)

Frequency	Factor	Reading	Emission	Limit	Margin	Mast Height	Turn Table
MHz	dB/m	dB(μV)	dB(μV/m)	dB(μV/m)	dB	cm	Deg
1375.00(AV)	28.11	9.38	37.49	50.00	-12.51	100.00	203.00
1512.50(AV)	27.90	8.08	35.98	50.00	-14.02	100.00	213.00
1587.50(AV)	27.80	7.15	34.95	50.00	-15.05	114.00	193.00
2437.50(AV)	31.08	1.50	32.58	50.00	-17.42	112.00	137.00
2787.50(AV)	32.08	3.18	35.26	50.00	-14.74	124.00	142.00
4562.50(AV)	35.91	-1.65	34.26	54.00	-19.74	150.00	326.00

Horizontal Polarization (1GHz to 6GHz)

Frequency	Factor	Reading	Emission	Limit	Margin	Mast Height	Turn Table
MHz	dB/m	dB(μV)	dB(μV/m)	dB(μV/m)	dB	cm	Deg
1375.00(AV)	28.11	6.48	34.59	50.00	-15.41	100.00	213.00
1587.50(AV)	27.80	6.14	33.94	50.00	-16.06	107.00	233.00
1712.50(AV)	28.02	9.57	37.59	50.00	-12.41	100.00	205.00
1925.00(AV)	28.92	6.24	35.16	50.00	-14.84	100.00	254.00
2675.00(AV)	31.67	1.59	33.26	50.00	-16.74	110.00	188.00
3937.50(AV)	34.59	-1.00	33.59	54.00	-20.41	150.00	165.00

Note: Radiated Emissions data was also taken at 240Vac, 50Hz. This data was found to be equivalent or lower than the data listed above.



100 Vac 50 Hz Mains

Vertical Polarization (1GHz to 6GHz)

Frequency	Factor	Reading	Emission	Limit	Margin	Mast Height	Turn Table
MHz	dB/m	dB(μ V)	dB(μ V/m)	dB(μ V/m)	dB	cm	Deg
1000.00(AV)	26.72	8.54	35.26	50.00	-14.74	100.00	131.00
1375.00(AV)	28.11	7.25	35.36	50.00	-14.64	100.00	169.00
1587.50(AV)	27.80	6.91	34.71	50.00	-15.29	126.00	217.00
1925.00(AV)	28.92	4.76	33.68	50.00	-16.32	150.00	186.00
2437.50(AV)	31.08	4.88	35.96	50.00	-14.04	305.00	156.00
5012.50(AV)	37.60	-1.28	36.32	54.00	-17.68	210.00	326.00

Horizontal Polarization (1GHz to 6GHz)

Frequency	Factor	Reading	Emission	Limit	Margin	Mast Height	Turn Table
MHz	dB/m	dB(μ V)	dB(μ V/m)	dB(μ V/m)	dB	cm	Deg
1000.00(AV)	26.72	8.49	35.21	50.00	-14.79	100.00	0.00
1375.00(AV)	28.11	4.91	33.02	50.00	-16.98	140.00	254.00
1512.50(AV)	27.90	5.34	33.24	50.00	-16.76	125.00	325.00
1587.50(AV)	27.80	6.04	33.84	50.00	-16.16	200.00	314.00
1712.50(AV)	28.02	4.54	32.56	50.00	-17.44	151.00	219.00
2450.00(AV)	31.11	0.47	31.58	50.00	-18.42	105.00	289.00



3.1.3 Power Harmonics Measurement

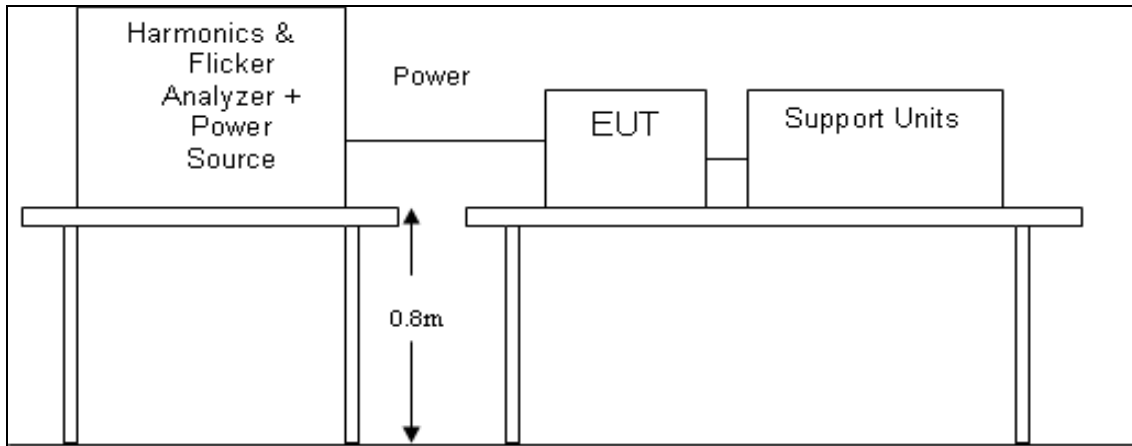
The product was tested and met the requirements specified in EN61000-3-2

- Measurement Procedures Utilized for Harmonics

- 1) The EUT was placed on the top of a wooden table 0.8 meters above the ground and operated to produce the maximum harmonic components under normal operating conditions for each successive harmonic component in turn.
- 2) The classification of EUT is according to section 5 of EN 61000-3-2.
- 3) The EUT is classified as follows:
 - Class A: Balanced three-phase equipment, Household appliances excluding equipment as Class D, Tools excluding portable tools, Dimmers for incandescent lamps, audio equipment, equipment not specified in one of the three other classes.
 - Class B: Portable tools; Arc welding equipment which is not professional equipment.
 - Class C: Lighting equipment.
 - Class D: Equipment having a specified power less than or equal to 600 W of the following types: Personal computers and personal computer monitors and television receivers.
- 4) The correspondent test program of test instrument to measure the current harmonics emanated from EUT is chosen. The measure time shall be not less than the time necessary for the EUT to be exercised.



- Test Setup



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

-Test Condition

Equipment Tested	Notebook Computer
Test Software	BurnIn test V6.0
Test Standard	EN 61000-3-2
Test Operator	Tom Ding
Date of Test	03/12/2011
Relative Humidity	50%
Temperature	21°C
Atmospheric Pressure	101.1KPa

-Test Results

Fundamental voltage	230V
Power Frequency	50Hz
Observation Time	150sec
Power Consumption	66.75W
Power factor	41.4%
Fundamental voltage	230V

Note: According to EN61000-3-2 paragraph 7 the note1 and 2 are valid for all applications having an active input >75W, others the result should be pass.



3.1.4 Power Voltage Fluctuation/ Flicker Measurement

The product was tested and met the requirements specified in EN 61000-3-3

Test Condition

Equipment Tested	Notebook computer
Test Software	BurnIn test V6.0
Test Standard	EN 61000-3-3
Test Operator	Tom Ding
Date of Test	03/12/2011
Relative Humidity	50%
Temperature	21°C
Atmospheric Pressure	101.2KPa

Test Results

	EUT Values	Limit	Result	Remark
Pst	0.028	1.00	Pass	Pst means short-term flicker indicator
Plt	0.028	0.65	Pass	Plt means long-term flicker indicator
dc [%]	0.011	3.30	Pass	dc means relative steady-state voltage change
dmax [%]	0.139	4.00	Pass	dmax means maximum relative voltage change
dt [s]	0.000	0.50	Pass	Tdt means maximum time that dt exceeds 3.3%

3.2 Electromagnetic Immunity Report

EN55024:1998+A1:2001+A2:2003



3.2.1 Electrostatic Discharge (ESD) Immunity Measurement

The product was tested and met the requirements specified in EN 61000-4-2

Test Condition

Equipment Tested	Notebook computer
Test Software	BurnIn Test V6.0
Test Standard	EN 61000-4-2
Test Operator	Tom Ding
Date of Test	03/14/2011
Relative Humidity	55%
Temperature	21°C
Atmospheric Pressure	101.2KPa

Test Results

Amount of Discharge	Voltage	Coupling	Performance Criteria	Result (Pass/Fail)
10 /Point	± 2 kV	Air Discharge	A	Pass
10 /Point	± 4 kV	Air Discharge	A	Pass
10 /Point	± 8 kV	Air Discharge	B	Pass
25 /Point	± 2 kV	Contact Discharge	A	Pass
25 /Point	± 4 kV	Contact Discharge	A	Pass
25 /Point	± 2 kV	Indirect Discharge HCP	B	Pass
25 /Point	± 4 kV	Indirect Discharge HCP	B	Pass
25 /Point	± 2kV	Indirect Discharge VCP (Right)	B	Pass
25 /Point	± 4 kV	Indirect Discharge VCP (Right)	B	Pass
25 /Point	± 2 kV	Indirect Discharge VCP (Left)	B	Pass
25 /Point	± 4 kV	Indirect Discharge VCP (Left)	B	Pass



3.2.2 Radiated Electromagnetic Field Immunity Test

The product was tested and met the requirements specified in EN 61000-4-3

Test Condition

Equipment Tested	Notebook computer
Test Software	BurnIn test V6.0
Test Standard	EN 61000-4-3
Test Operator	Tom Ding
Date of Test	03/13/2011
Relative Humidity	50%
Temperature	21°C
Atmospheric Pressure	101.0KPa

Test Results

Test level: 3V/m

Steps: 1 % of fundamental

Dwell Time: 3 sec

Range (MHz)	Field	Modulation	Polarity	Position	Performance Criteria	Result (Pass/Fail)
80-1000	3V/m	Yes	H	B/F/L/R	A	Pass
80-1000	3V/m	Yes	V	B/F/L/R	A	Pass
1400-2700	3V/m	Yes	H	B/F/L/R	A	Pass
1400-2700	3V/m	Yes	V	B/F/L/R	A	Pass



3.2.3 Fast Transient/Burst Immunity Test

The product was tested and met the requirements specified in EN 61000-4-4

Test Condition

Equipment Tested	Notebook computer
Test Software	BurnIn test V6.0
Test Standard	EN 61000-4-4
Test Operator	Tom Ding
Date of Test	03/14/2011
Relative Humidity	50%
Temperature	21°C
Atmospheric Pressure	101.2KPa

Test Results

Inject Line	Voltage	Inject Method	Performance Criteria	Result (Pass/Fail)
L	± 1 KV	Direct	A	Pass
N	± 1 KV	Direct	A	Pass
PE	± 1 KV	Direct	A	Pass
L + N	± 1 KV	Direct	A	Pass
L + PE	± 1 KV	Direct	A	Pass
N + PE	± 1 KV	Direct	A	Pass
L + N + PE	± 1 KV	Direct	A	Pass
RJ 45 Port (LAN Cable)	± 0.5 KV	Clamp	A	Pass



3.2.4 Surge Immunity Test

The product was tested and met the requirements specified in EN 61000-4-5

Test Condition

Equipment Tested	Notebook computer
Test Software	BurnIn test V6.0
Test Standard	EN 61000-4-5
Test Operator	Tom Ding
Date of Test	3/15/2011
Relative Humidity	51%
Temperature	22°C
Atmospheric Pressure	101.0KPa

Test Results

Coupling Line	Voltage	Polarity	Coupling Method	Performance Criteria	Result (Pass/Fail)
L1-L2	1 KV	Positive	Capacitive	A	Pass
L1-PE	2 KV	Positive	Capacitive	A	Pass
L2-PE	2 KV	Positive	Capacitive	A	Pass
L1-L2	1 KV	Negative	Capacitive	A	Pass
L1-PE	2 KV	Negative	Capacitive	A	Pass
L2-PE	2 KV	Negative	Capacitive	A	Pass
T, R to Ground	1 KV	Positive	Capacitive	A	Pass
T, R to Ground	1 KV	Negative	Capacitive	A	Pass



3.2.5 Conducted Disturbance, Induced Radio-Frequency Field

The product was tested and met the requirements specified in EN 61000-4-6

Test Condition

Equipment Tested	Notebook computer
Test Software	BurnIn test V6.0
Test Standard	EN 61000-4-6
Test Operator	Tom Ding
Date of Test	03/14/2011
Relative Humidity	50%
Temperature	21°C
Atmospheric Pressure	101.0KPa

Test Results

Frequency Step: 1% of fundamental

Dwell Time: 3 sec

Test Ports: mains, RJ-45

Range (MHz)	Field	Modulation	Performance Criteria	Result (Pass/Fail)
0.15-80	3V	Yes	A	Pass



3.2.6 Power Frequency Magnetic Field Immunity Test

The product was tested and met the requirements specified in EN 61000-4-8

Test Condition

Equipment Tested	Notebook computer
Test Software	BurnIn test V6.0
Test Standard	EN 61000-4-8
Test Operator	Tom Ding
Date of Test	03/17/2011
Relative Humidity	55%
Temperature	22°C
Atmospheric Pressure	101.5KPa

Test Results

Power Freq.: 50Hz

Orientation	Field	Performance Criteria	Result (Pass/Fail)
X	1A/m	A	Pass
Y	1A/m	A	Pass
Z	1A/m	A	Pass



3.2.7 Voltage Dips / Short Interruptions and Interruptions Test

The product was tested and met the requirements specified in EN 61000-4-11

Test Condition

Equipment Tested	Notebook computer
Test Software	BurnIn test V6.0
Test Standard	EN 61000-4-11
Test Operator	Tom Ding
Date of Test	03/17/2011
Relative Humidity	55%
Temperature	22°C
Atmospheric Pressure	101.1KPa

Test Results

The duration with a sequence of three dips/interruptions with interval of 10s minimum (Between each test event)

Power Freq.: 50Hz

Voltage Dips:

Test Level % U _T	Reduction	Duration (periods)	Performance Criteria	Result (Pass/Fail)
0	> 95%	0.5	B	Pass
0	> 95%	1	B	Pass
40	60%	5	C	Pass
70	30%	0.5	B	Pass
70	30%	25	C	Pass

Voltage Interruptions:

Test Level % U _T	Reduction	Duration (periods)	Performance Criteria	Result (Pass/Fail)
0	> 95%	250	C	Pass



SECTION 4: Test Arrangement Photos

4.1 Conducted Emissions





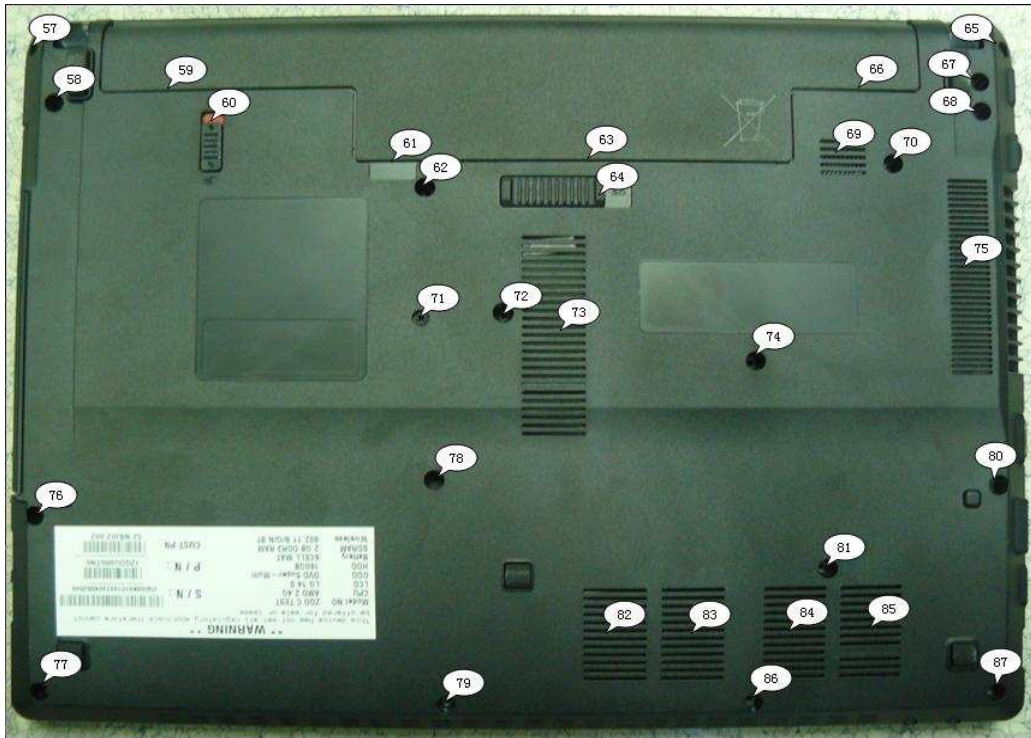
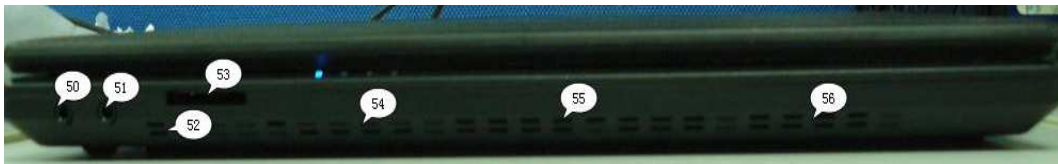
4.2 Radiated Emissions





4.3 Electrostatic Discharge (ESD)



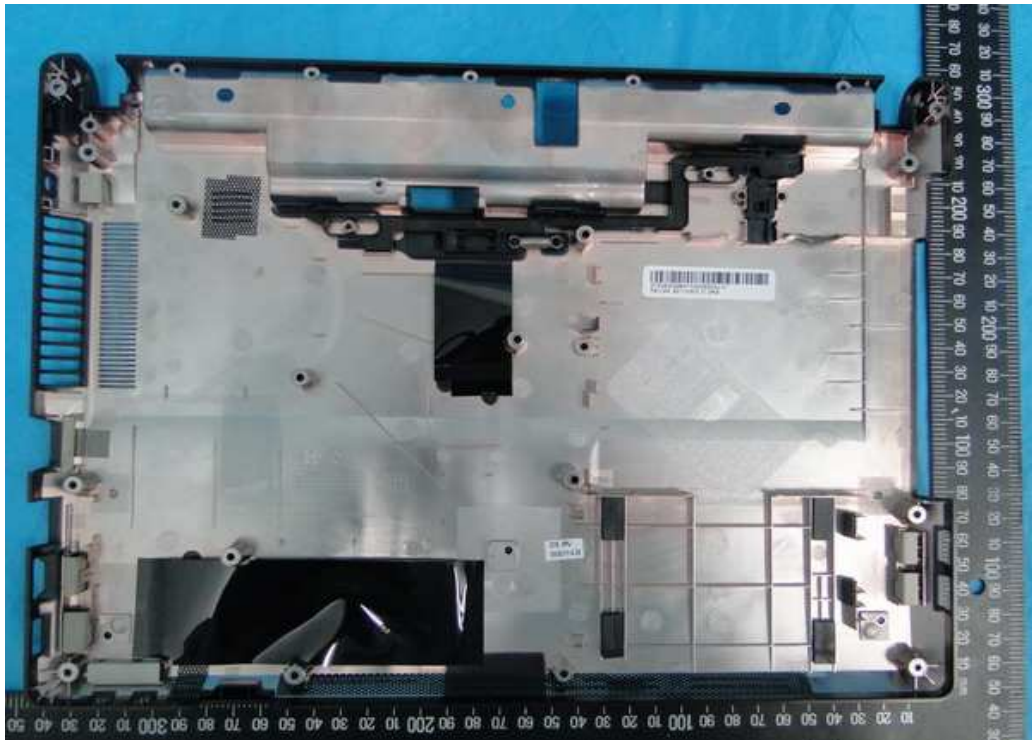


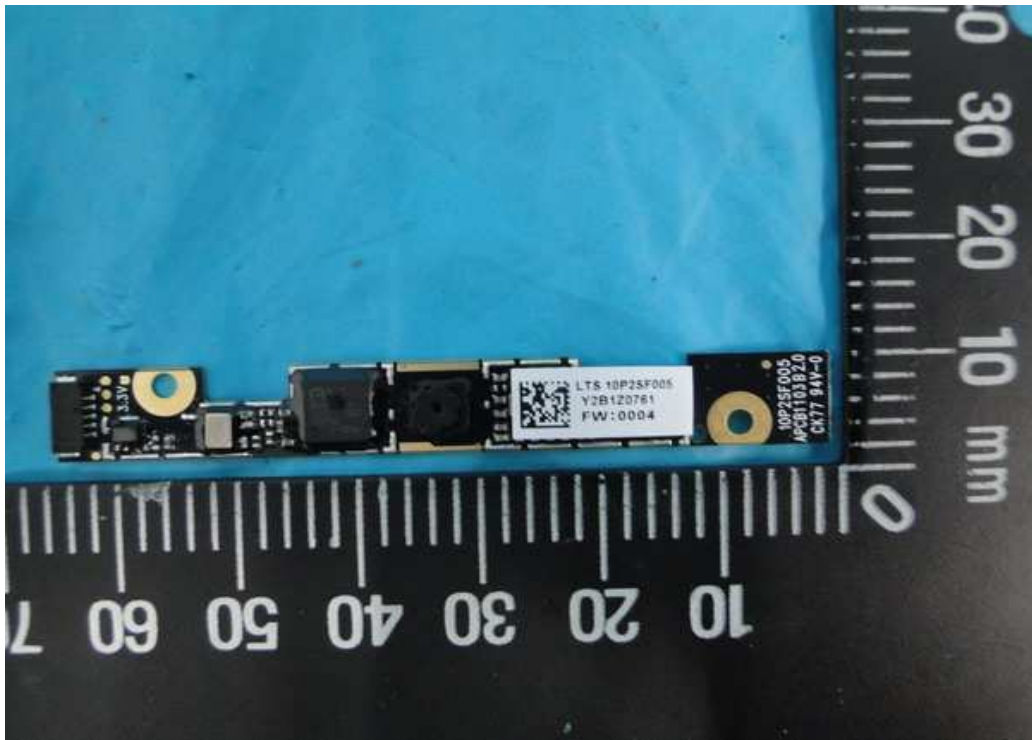


Appendix: EUT Internal Photos

EUT

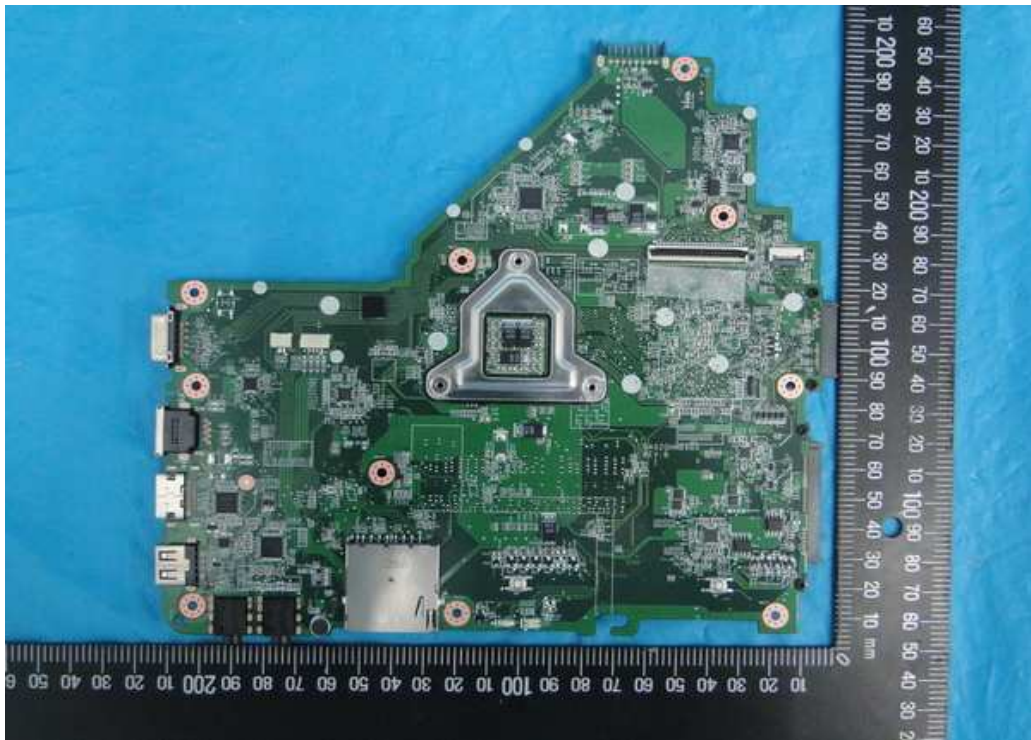


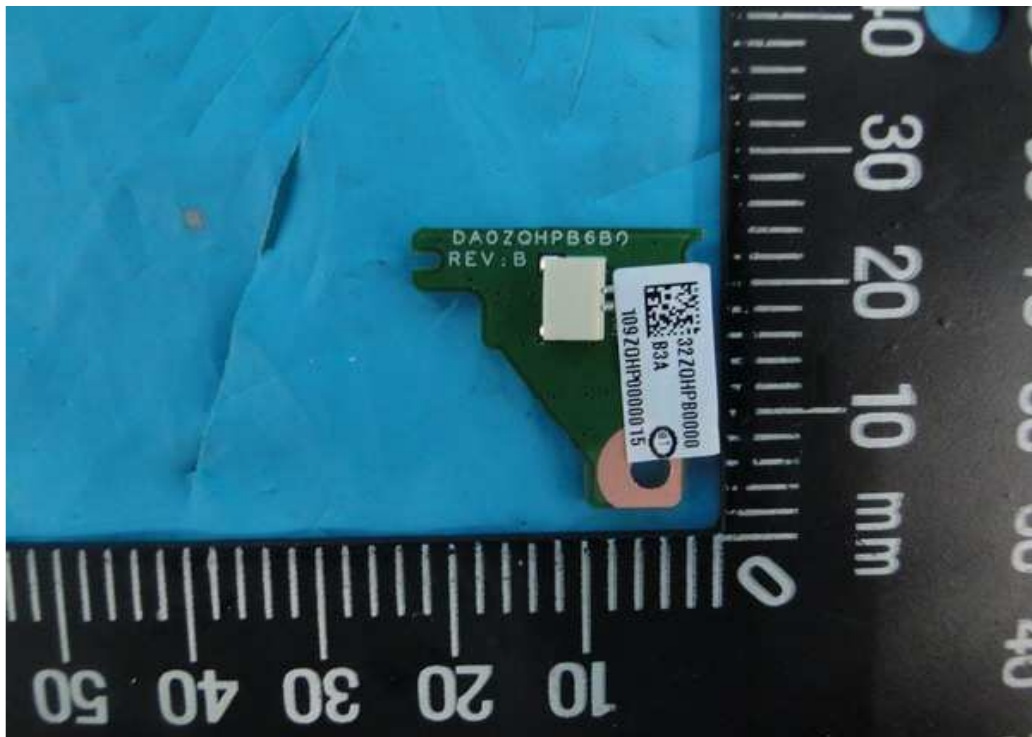


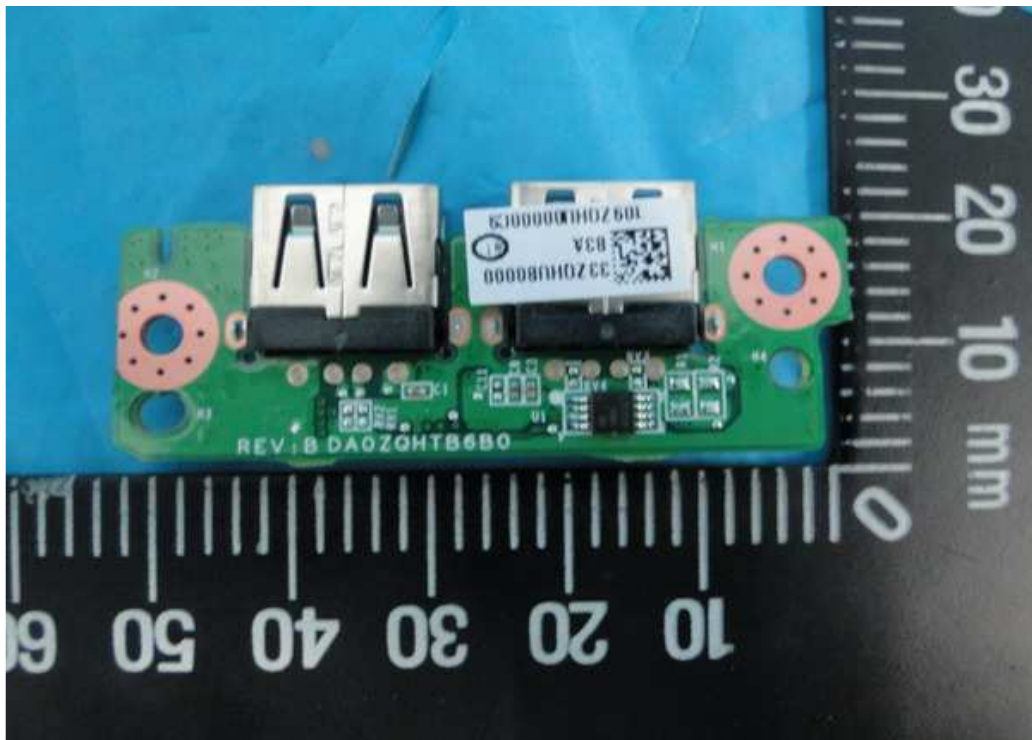
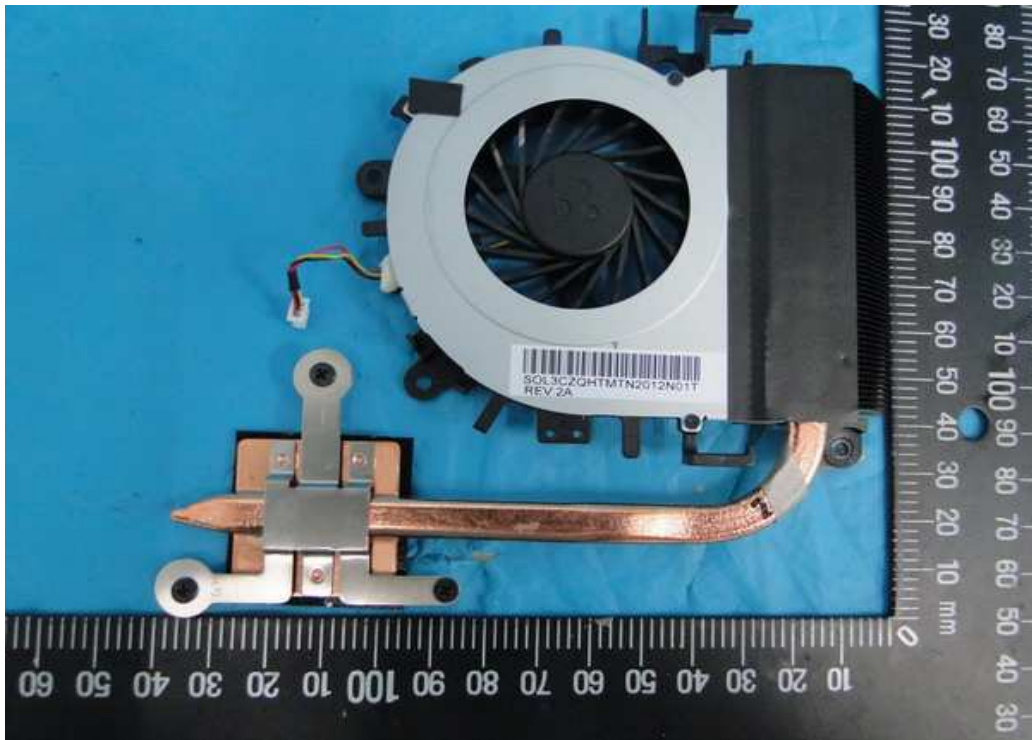












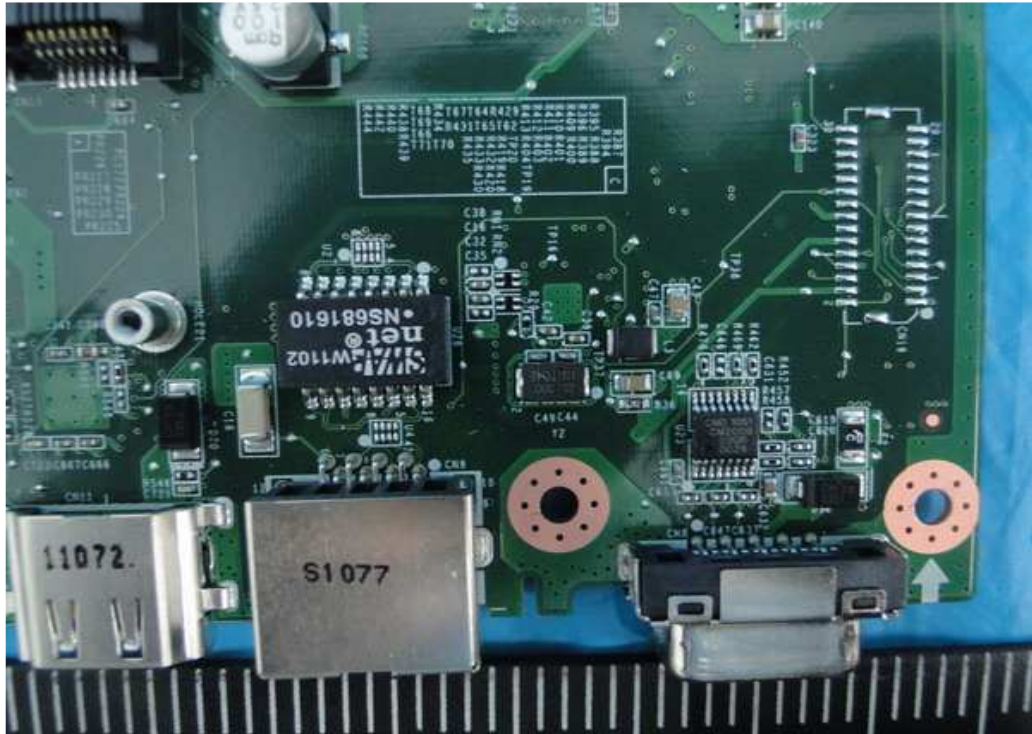




Y1:



Y2:





Y4:

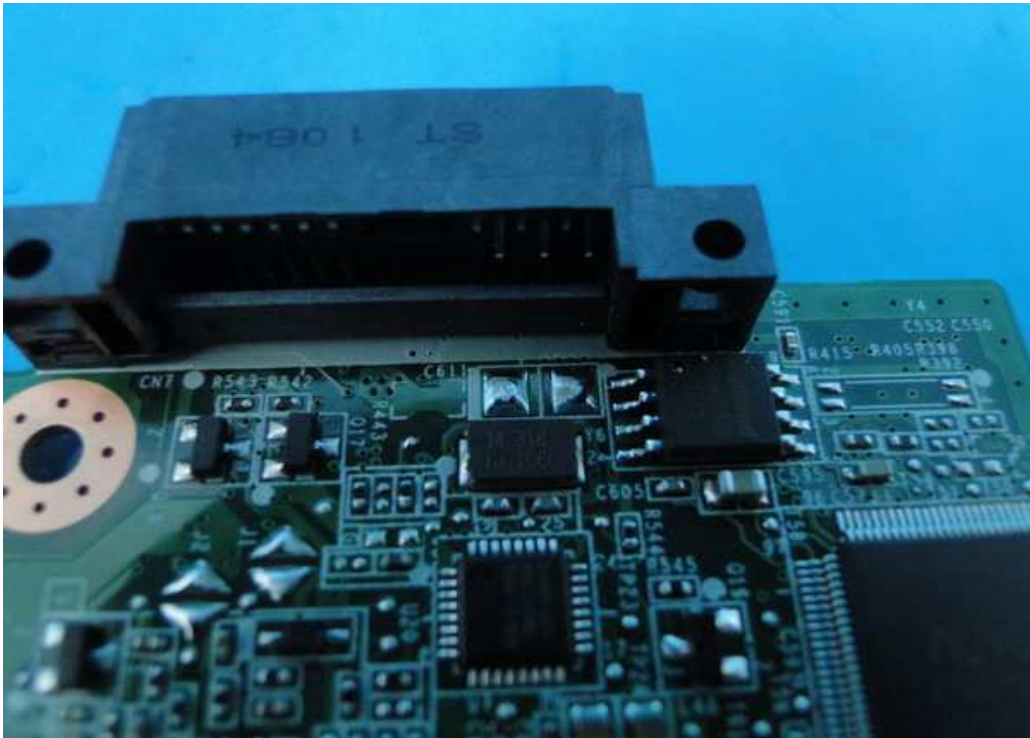


Y5:





Y6:



Y7:

