

# VERIFICATION

Report No.: NEI-FCCE-1-1308012

Issued Date: Aug. 15, 2013



This is to certify that the product listed in follows was (were) tested in the Neutron EMC Laboratory to comply with the criteria limits Class A of conducted and radiated emissions of the Technical Standards FCC Part 15, Subpart B: 2012, established by the FCC, USA.

Equipment Storage Server

Model Name NH-4500-PRO; NH-4500-ENT; NH-4xy0-zzz (x=0~F, y=0~F, zzz=ENT or PRO)

Brand Name **NUUO** **NUUO**

Applicant NUUO Inc.

Address C Block, No. 18, Sihyuan St., Jhongjheng District, Taipei, Taiwan (R.O.C.)

Standard(s) ANSI C63.4: 2009

ICES-003 Issue 5: 2012

CISPR 22: 2008

CAN/CSA-CISPR 22-10

The test data, data evaluation, and equipment configuration contained in our test report (Report No. NEI-FCCE-1-1308012) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s). The test data contained in the referenced test report relate only to the EUT sample and item(s) tested.

  
Andy Chiu  
Authorized Signatory

## Neutron Engineering Inc.

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# FCC Test Report

**Issued Date** : Aug. 15, 2013  
**Project No.** : 1308012  
**Equipment** : Storage Server  
**Model Name** : NH-4500-PRO; NH-4500-ENT;  
NH-4xy0-zzz (x=0~F, y=0~F, zzz=ENT  
or PRO)

**Applicant** : NUUO Inc.  
**Address** : C Block, No. 18, Sihyuan St.,  
Jhongjheng District, Taipei, Taiwan  
(R.O.C.)

**Tested by:** Neutron Engineering Inc. EMC Laboratory  
**Date of Receipt:** Aug. 01, 2013  
**Date of Test:** Aug. 01, 2013 ~ Aug. 13, 2013

**Testing Engineer:** Kener Wu  
(Kener Wu)

**Technical Manager:** Jeff Yang  
(Jeff Yang)

**Authorized Signatory:** Andy Chiu  
(Andy Chiu)



C-2918 G-91 R-2669  
R-2829 T-1666 T-1667

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Testing Laboratory  
0659



**Declaration**

**Neutron** represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C.**, or National Institute of Standards and Technology (**NIST**) of **U.S.A.**

**Neutron's** reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **Neutron** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **Neutron** issued reports.

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**Neutron's** laboratory quality assurance procedures are in compliance with the **ISO Guide 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

**Limitation**

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.



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**REPORT ISSUED HISTORY**

Revised Version No.	Description	Issued Date
-	Initial Issue.	Aug. 15, 2013



## 1. CERTIFICATION

Equipment: Storage Server

Brand Name: **NUUO** NUUO®

Model Name: NH-4500-PRO; NH-4500-ENT; NH-4xy0-zzz (x=0~F, y=0~F, zzz=ENT or PRO)

Applicant: NUUO Inc.

Date of Test: Aug. 01, 2013 ~ Aug. 13, 2013

Standards: FCC Part 15, Subpart B: 2012 Class A

ICES-003 Issue 5: 2012 Class A

CAN/CSA CISPR 22-10 Class A

CISPR 22: 2008 Class A

ANSI C63.4-2009

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCE-1-1308012) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).



## 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

Emission				
Standard	Test Item	Limit	Judgment	Remark
FCC Part 15, Subpart B: 2012 ICES-003 Issue 5: 2012 CAN/CSA CISPR 22-10 CISPR 22: 2008	Conducted emission	Class A	PASS	
	Radiated emission Below 1 GHz	Class A	PASS	
	Radiated emission Above 1 GHz	Class A	PASS	NOTE (2)

**NOTE:**

- (1) "N/A" denotes test is not applicable in this Test Report.
- (2) If the EUT's max operating frequency does not exceed 108 MHz, the test will not be performed.



**2.1 TEST FACILITY**

The test facilities used to collect the test data in this report:

**Conducted emission Test:**

**C03:** (VCCI RN: C-4461)

B1, No. 37, Lane 365, YangGuang St., NeiHu District 114, Taipei, Taiwan.

**Radiated emission Test (Below 1 GHz):**

**OS01:** (VCCI RN: R-2829; FCC RN: 95335; FCC DN: TW1010)

No.132-1, Ln. 329, Sec. 2, Balian Rd., Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)

**Radiated emission Test (Above 1 GHz):**

**CB08:** (VCCI RN: G-91; FCC RN: 614388; FCC DN: TW1054; IC Assigned Code: 4428C-1)

1F., No. 61, Ln. 77, Sing-ai Rd., NeiHu Dist., Taipei City 114, Taiwan (R.O.C.)

**2.2 MEASUREMENT UNCERTAINTY**

**The measurement uncertainty is not specified by FCC/ Industry Canada rules and for reference only.**

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately **95%**.

The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2.

**A. Conducted emission test:**

Test Site	Measurement Frequency Range	U , (dB)	NOTE
C03	150 kHz ~ 30 MHz	1.94	

**C. Radiated emission test:**

Test Site	Measurement Frequency Range	Ant. H / V	U , (dB)	NOTE
OS01	30 MHz ~ 200 MHz	V	2.86	
	30 MHz ~ 200 MHz	H	2.56	
	200 MHz ~ 1, 000 MHz	V	2.88	
	200 MHz ~ 1, 000 MHz	H	2.98	

Test Site	Item	Measurement Frequency Range	Uncertainty	NOTE	
CB08	Radiated emission at 3m	Horizontal Polarization	30 - 200MHz	3.35 dB	
			200 - 1000MHz	3.11 dB	
			1 - 18GHz	3.97 dB	
			18 - 40GHz	4.01 dB	
		Vertical Polarization	30 - 200MHz	3.22 dB	
			200 - 1000MHz	3.24 dB	
			1 - 18GHz	4.05 dB	
			18 - 40GHz	4.04 dB	

Our calculated Measurement Instrumentation Uncertainty is shown in the tables above.

These are our  $U_{lab}$  values in CISPR 16-4-2 terminology.

Since Table 1 of CISPR 16-4-2 has values of measurement instrumentation uncertainty, called  $U_{CISPR}$ , as follows:

Conducted Disturbance (mains port) – 150 kHz – 30 MHz : 3.6 dB

Radiated Disturbance (electric field strength on an open area test site or alternative test site) – 30 MHz – 1000 MHz : 5.2 dB

It can be seen that our  $U_{lab}$  values are smaller than  $U_{CISPR}$ .





**3. GENERAL INFORMATION**

**3.1 GENERAL DESCRIPTION OF EUT**

Equipment	Storage Server						
Brand Name	<b>NUVO NUVO</b>						
Model Name	NH-4500-PRO; NH-4500-ENT; NH-4xy0-zzz (x=0~F, y=0~F, zzz=ENT or PRO)						
OEM Brand/Model Name	N/A						
Model Difference	<p>There are some models based on similar electrical circuit except the difference of list below:</p> <table border="1"> <thead> <tr> <th>Model No.:</th> <th>CPU</th> </tr> </thead> <tbody> <tr> <td>NH-4xy0-ENT</td> <td>i5-4570S</td> </tr> <tr> <td>NH-4x00-pro</td> <td>i7-4770S</td> </tr> </tbody> </table> <p>Model NH-4500-PRO was used for final testing and collecting test data included in this report.</p>	Model No.:	CPU	NH-4xy0-ENT	i5-4570S	NH-4x00-pro	i7-4770S
Model No.:	CPU						
NH-4xy0-ENT	i5-4570S						
NH-4x00-pro	i7-4770S						
Product Description	The EUT is a Storage Server. More details of EUT technical specification, please refer to the User's Manual.						
Power Source	AC Mains. (Power Build-in)						
Power Rating	I/P: AC 100-240V~6-3A 60/50Hz						
Connecting I/O Port(s)	Please refer to the User's Manual						
Products Covered	1 * CPU: Intel(R) / Core(TM) i7-4770 3.40GHz 1 * Memory: Apacer / 4G 1 * HDD: Seagate / 250GB 1 * Power Supply: FSP / FSP400-60PFG						
EUT Modification(s)	N/A						

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.



**3.2 DESCRIPTION OF TEST MODES**

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

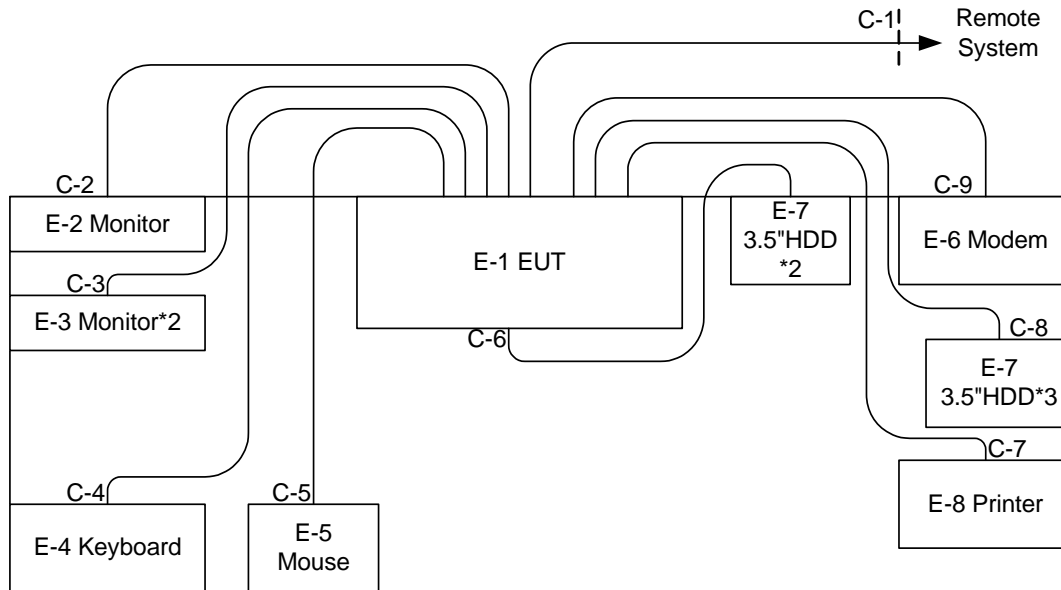
Pretest Test Mode	Description
Mode 1	FULL SYSTEM D-SUB+DVI*2 1920*1200/60Hz (NH-4500-PRO)
Mode 2	FULL SYSTEM D-SUB+DVI*2 1920*1200/60Hz (NH-4500-ent)

<b>Conducted emission test</b>	
Final Test Mode	Description
Mode 1	FULL SYSTEM D-SUB+DVI*2 1920*1200/60Hz (NH-4500-PRO)

<b>Radiated emission test</b>	
Final Test Mode	Description
Mode 1	FULL SYSTEM D-SUB+DVI*2 1920*1200/60Hz (NH-4500-PRO)



**3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED**



- C-1 RJ-45 Cable\*2
- C-2 D-Sub Cable
- C-3 DVI Cable\*2
- C-4 PS/2 Cable
- C-5 PS/2 Cable
- C-6 USB Cable\*2
- C-7 USB Cable
- C-8 USB Cable\*3
- C-9 RS232 Cable



**3.4 DESCRIPTION OF SUPPORT UNITS**

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
E-1	Storage Server	<b>NUUO</b> NUUO	NH-4500-PRO	N/A	N/A	EUT
E-2	24" LCD Monitor	DELL	2408WFPb	DOC	071863-11	
E-3	24" LCD Monitor	DELL	U2410f	DOC	CN-OJ257M-72872-09J-067L	
E-4	PS/2 K/B	Logitech	Y-SJ17(ACK260A)	DOC	SYU44664880	
E-5	PS/2 Mouse	Logitech	M-SBF69	DOC	HCA44601156	
E-6	Modem	ACEEX	DM-1414V	DOC	8041708	
E-7	External Hard Drive	WD	WDBACW0010HBK-SESN	DOC	WCAV5J749731	
E-8	Printer	HP	VCVRA-1004	DOC	CN17511HHK	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	10M	
C-2	YES	YES	1.8M	
C-3	YES	YES	1.8M	
C-4	YES	NO	1.5M	
C-5	YES	NO	1.8M	
C-6	YES	NO	1.2M	
C-7	YES	NO	1.7M	
C-8	YES	NO	1.2M	
C-9	YES	NO	1.7M	

Note:

- (1) The support equipment was authorized by Declaration of Conformity (DOC).



**4. EMC EMISSION TEST**

**4.1 CONDUCTED EMISSION TEST**

**4.1.1 LIMITS (FREQUENCY RANGE 150 KHZ-30MHZ)**

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 - 5.0	73.00	60.00	56.00	46.00
5.0 - 30.0	73.00	60.00	60.00	50.00

**NOTE:**

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
- (3) The test result calculated as following:  
 Measurement Value = Reading Level + Correct Factor  
 Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)  
 Margin Level = Measurement Value – Limit Value

**4.1.2 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	TWO-LINE V-NETWORK	R&S	ENV216	101051	Jun. 16, 2014
2	Test Cable	TIMES	CFD300-NL	C03	Jun. 16, 2014
3	EMI Test Receiver	R&S	ESCI	100080	Apr. 01, 2014
4	Measurement Software	EZ	EZ_EMCC (Version NB-03A)	N/A	N/A

Remark: "N/A" denotes No Model Name, No Serial No. or No Calibration specified.



**4.1.3 TEST PROCEDURE**

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

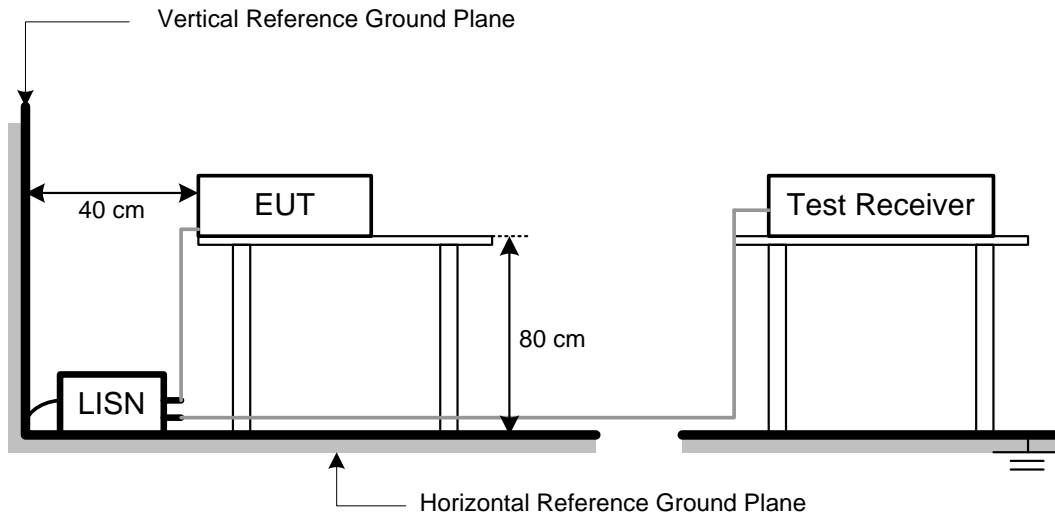
**NOTE:**

- a. Reading in which marked as Peak, QP or AVG means measurements by using are Quasi-Peak or Average Mode with Detector BW=9 kHz (6 dB Bandwidth).
- b. All readings are Peak Mode value unless otherwise stated QP or AVG in column of Note. If the Peak or QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only Peak or QP Mode was measured, but AVG Mode didn't perform.

**4.1.4 DEVIATION FROM TEST STANDARD**

No deviation

**4.1.5 TEST SETUP**





#### **4.1.6 EUT OPERATING CONDITIONS**

The EUT exercise program (EMC.exe) used during radiated and/or conducted emission measurement was designed to exercise the various system components in a manner similar to a typical use. The program contained on a PC hard disk and is auto-starting on power-up. Once loaded, the program sequentially exercises each system component in turn. The sequence used is:

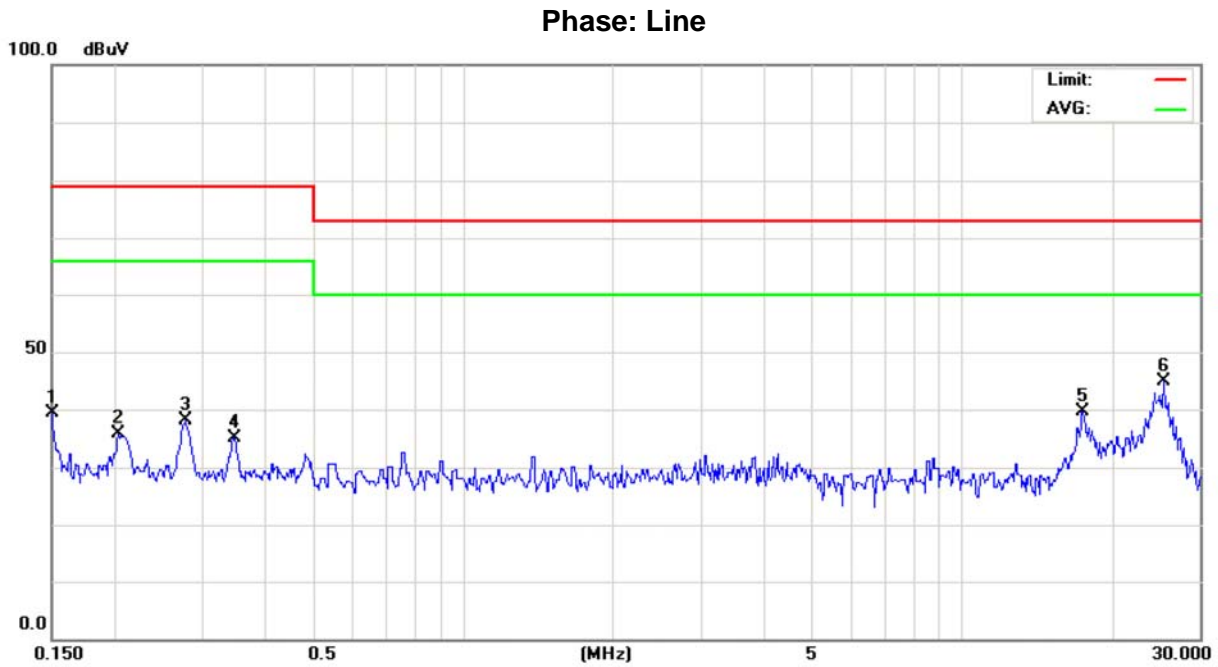
1. Read (write) from (to) mass storage device (External HDD).
2. Send "H" pattern to video port device (Monitor).
3. Send "H" pattern to USB port device (Printer).
4. Send "H" pattern to serial port device (Modem).
5. Send/Receive data to/from remote system.
6. Repeated from 2 to 5 continuously.

As the keyboard and mouse are strictly input devices, no data is transmitted to (from) them during test. They are, however, continuously scanned for data input activity.



**4.1.7 TEST RESULTS**

E.U.T	Storage Server	Model Name	NH-4500-PRO
Temperature	24 °C	Relative Humidity	48%
Test Voltage	AC 120V/60Hz		
Test Mode	FULL SYSTEM D-SUB+DVI*2 1920*1200/60Hz (NH-4500-PRO)		

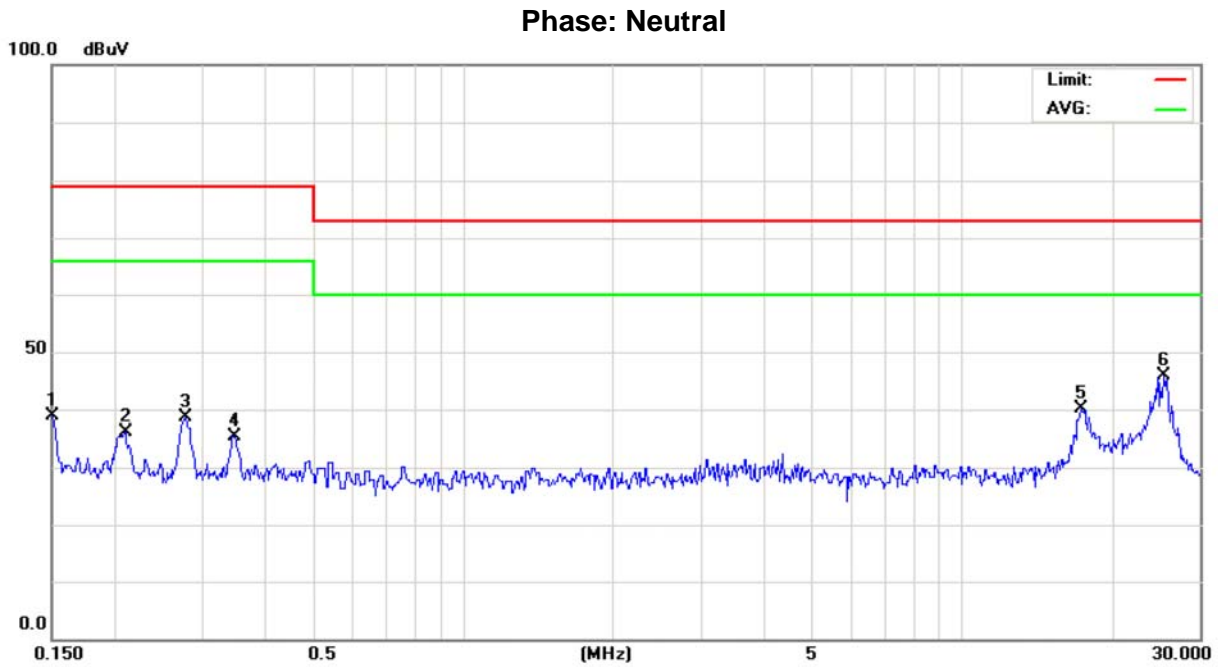


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1500	29.75	9.63	39.38	79.00	-39.62	peak	
2		0.2039	25.88	10.09	35.97	79.00	-43.03	peak	
3		0.2781	28.54	9.68	38.22	79.00	-40.78	peak	
4		0.3467	25.58	9.61	35.19	79.00	-43.81	peak	
5		17.4000	29.79	9.76	39.55	73.00	-33.45	peak	
6	*	25.3500	34.98	9.82	44.80	73.00	-28.20	peak	





E.U.T	Storage Server	Model Name	NH-4500-PRO
Temperature	24 °C	Relative Humidity	48%
Test Voltage	AC 120V/60Hz		
Test Mode	FULL SYSTEM D-SUB+DVI*2 1920*1200/60Hz (NH-4500-PRO)		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1500	29.25	9.70	38.95	79.00	-40.05	peak	
2		0.2095	26.10	10.12	36.22	79.00	-42.78	peak	
3		0.2781	28.78	9.74	38.52	79.00	-40.48	peak	
4		0.3474	25.63	9.67	35.30	79.00	-43.70	peak	
5		17.2500	30.32	9.82	40.14	73.00	-32.86	peak	
6	*	25.3500	36.02	9.92	45.94	73.00	-27.06	peak	



**4.2 RADIATED EMISSION TEST**

**4.2.1 LIMITS**

**Below 1 GHz**

FREQUENCY (MHz)	Class A (at 10m)	Class B (at 10m)
	dBuV/m	dBuV/m
30 - 230	40	30
230 - 1000	47	37

**NOTE:**

- (1) The limit for radiated test was performed according to as following:  
FCC Part 15, Subpart B: 2012; ICES-003 Issue 5: 2012; CAN/CSA-CISPR 22-10; CISPR 22: 2008.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m) = 20log Emission level (uV/m).
- (4) The test result calculated as following:  
Measurement Value = Reading Level + Correct Factor  
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)  
Margin Level = Measurement Value - Limit Value

**Above 1 GHz**

FREQUENCY (MHz)	Class A (dBuV/m) (at 3m)		Class A (dBuV/m) (at 10m)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80	60	69.5	49.5
FREQUENCY (MHz)	Class B (dBuV/m) (at 3m)			
	PEAK	AVERAGE		
Above 1000	74	54		

**NOTE:**

- (1) The limit for radiated test was performed according to as following:  
FCC Part 15, Subpart B: 2012; ICES-003 Issue 5: 2012.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m) = 20log Emission level (uV/m).  
3m Emission level = 10m Emission level + 20log(10m/3m).
- (4) The test result calculated as following:  
Measurement Value = Reading Level + Correct Factor  
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)  
Margin Level = Measurement Value - Limit Value

**FREQUENCY RANGE OF RADIATED MEASUREMENT (FOR UNINTENTIONAL RADIATORS)**

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 - 108	1000
108 - 500	2000
500 - 1000	5000
Above 1000	5 <sup>th</sup> harmonic of the highest frequency or 40 GHz, whichever is lower



**4.2.2 MEASUREMENT INSTRUMENTS LIST**

**Below 1 GHz:**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Log-Bicon Antenna	Schwarzbeck	VULB 9160	3176	Jun. 13, 2014
2	Pre-Amplifier	Anritsu	MH648A	M09961	Jun. 02, 2014
3	Test Cable	TIMES	LMR-400	30M	Jun. 02, 2014
4	Test Cable	TIMES	LMR-400	OS01-1	Jun. 02, 2014
5	EMI Measuring Receiver	SHCAFFNER	SCR 3501	408	Jan. 8, 2014
6	Spectrum Analyzer	ADVANTEST	R3162	140100131	Sep. 7, 2013
7	Positioning Controller (OS01)	CT	SC100	N/A	N/A
8	Turn Table	Chance Most	CMTB-1.5	N/A	N/A
9	Measurement Software	EZ	EZ EMC (Version NB-02A)	N/A	N/A

**Above 1 GHz:**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Horn Antenna (1G)	Schwarzbeck	BBHA 9120 D	9120D-325	Jun. 15, 2014
2	Pre_Amplifier	Agilent	8449B	3008A01714	Apr. 16, 2014
3	Microflex Cable	HARBOUR INDUSTRIES	27478 LL142	1M	May. 13, 2014
4	Microflex Cable	AISI	S104-SMAP-1	10M	May. 15, 2014
5	Microflex Cable	HARBOUR INDUSTRIES	27478 LL142	3M	May. 13, 2014
6	Spectrum Analyzer	R&S	FSP-40	100129	Oct. 01, 2013
7	Measurement Software	EZ	EZ EMC (Version NB-03A)	N/A	N/A

Remark: "N/A" denotes No Model Name, No Serial No. or No Calibration specified.



**4.2.3 TEST PROCEDURE**

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m or 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- c. The initial step in collecting radiated emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- d. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

**NOTE: (Below 1 GHz)**

- a. Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode with Detector BW=120 kHz.
- b. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.

**NOTE: (Above 1 GHz)**

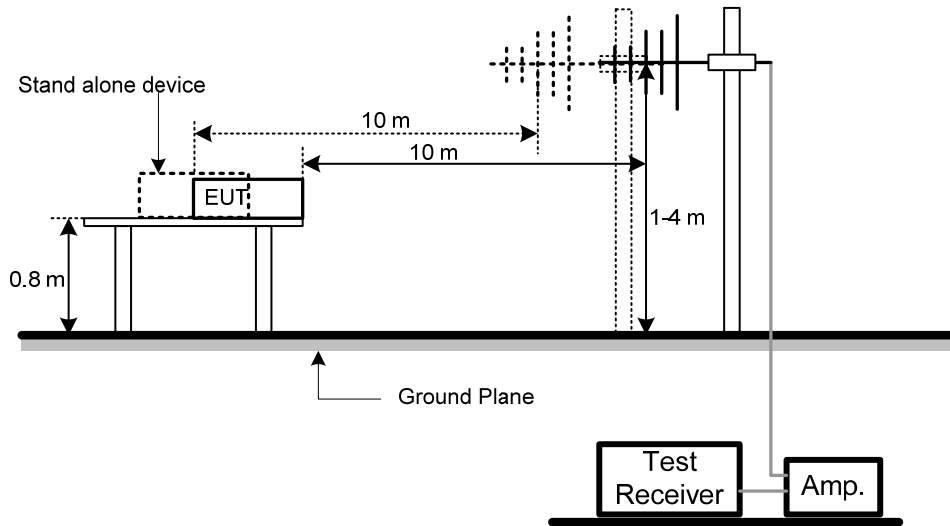
- a. Reading in which marked as Peak means measurements by using are Peak Mode with instrument setting in RBW= 1 MHz, VBW= 1 MHz.  
Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW= 1 MHz, VBW= 10 Hz.
- b. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform.

**4.2.4 DEVIATION FROM TEST STANDARD**

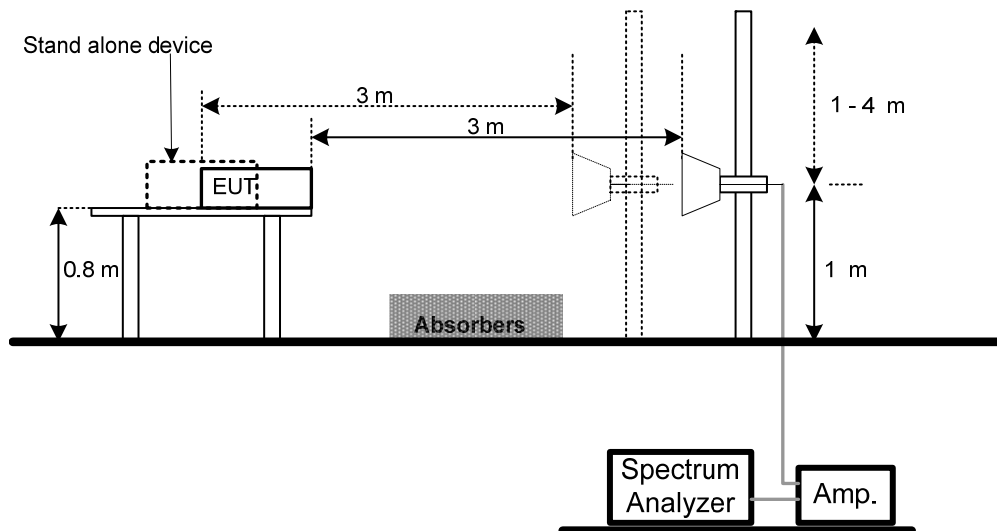
No deviation

**4.2.5 TEST SETUP**

**Below 1 GHz**



**Above 1 GHz**



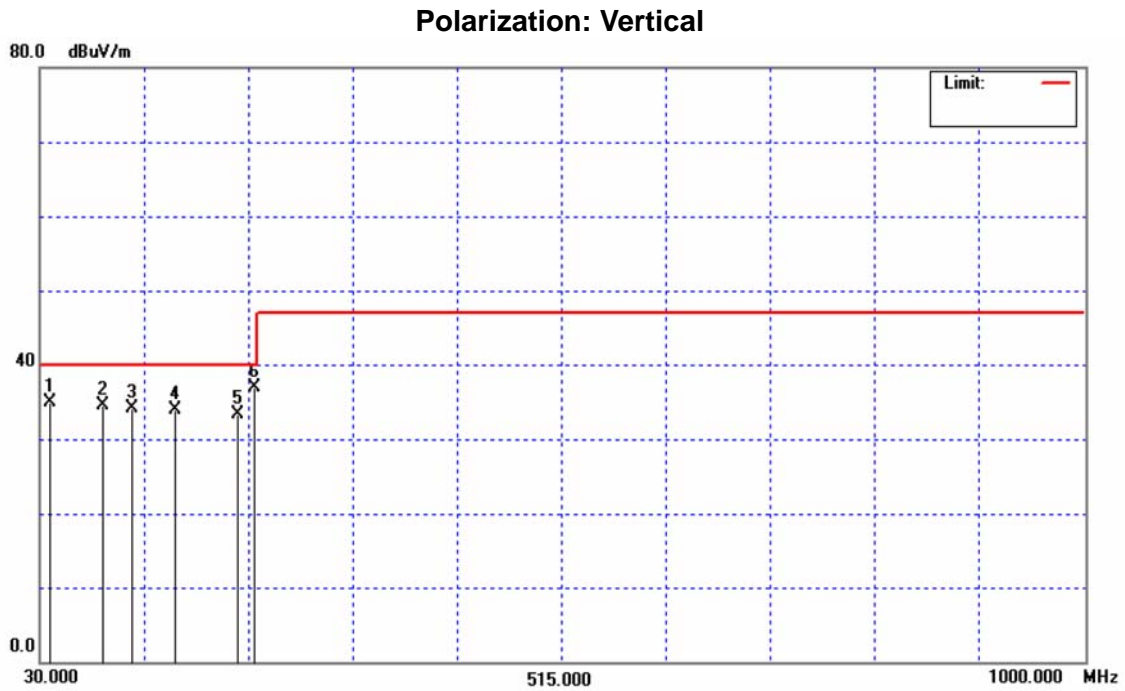
**4.2.6 EUT OPERATING CONDITIONS**

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.



**4.2.7 TEST RESULTS-BELOW 1 GHZ**

E.U.T	Storage Server	Model Name	NH-4500-PRO
Temperature	24 °C	Relative Humidity	67%
Test Voltage	AC 120V/60Hz		
Test Mode	FULL SYSTEM D-SUB+DVI*2 1920*1200/60Hz (NH-4500-PRO)		

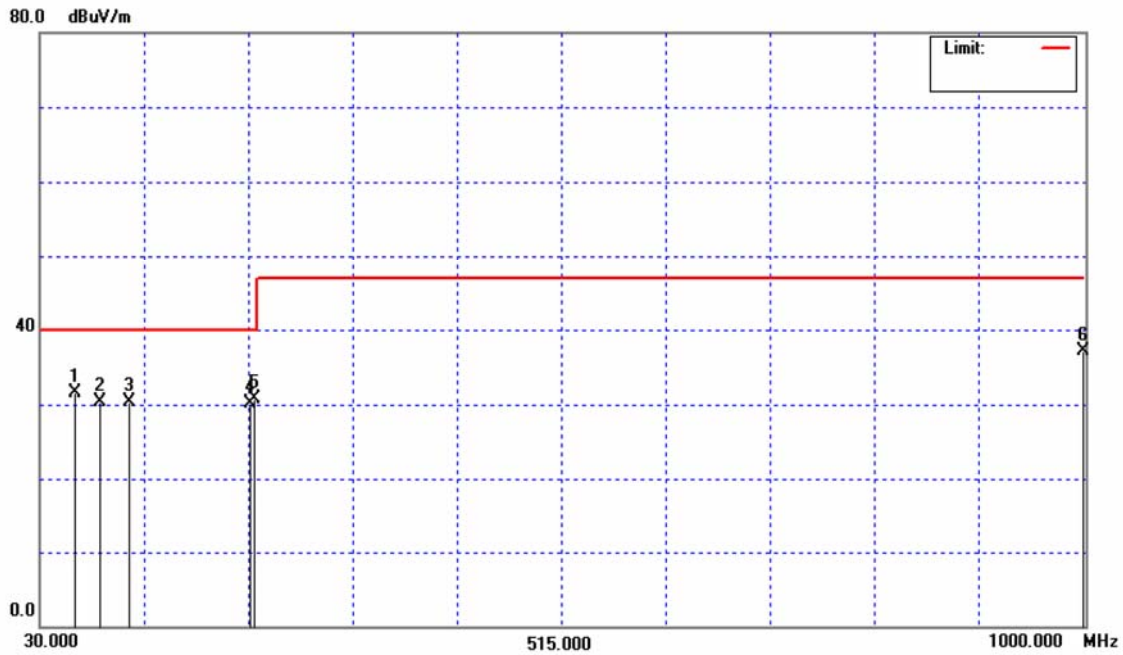


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		39.6800	41.22	-6.34	34.88	40.00	-5.12	peak	
2		87.7000	45.00	-10.45	34.55	40.00	-5.45	peak	
3		114.9200	40.67	-6.50	34.17	40.00	-5.83	peak	
4		156.0100	38.73	-4.81	33.92	40.00	-6.08	peak	
5		213.3400	41.27	-8.02	33.25	40.00	-6.75	peak	
6	*	229.0900	43.15	-6.31	36.84	40.00	-3.16	QP	



E.U.T	Storage Server	Model Name	NH-4500-PRO
Temperature	24 °C	Relative Humidity	67%
Test Voltage	AC 120V/60Hz		
Test Mode	FULL SYSTEM D-SUB+DVI*2 1920*1200/60Hz (NH-4500-PRO)		

**Polarization: Horizontal**



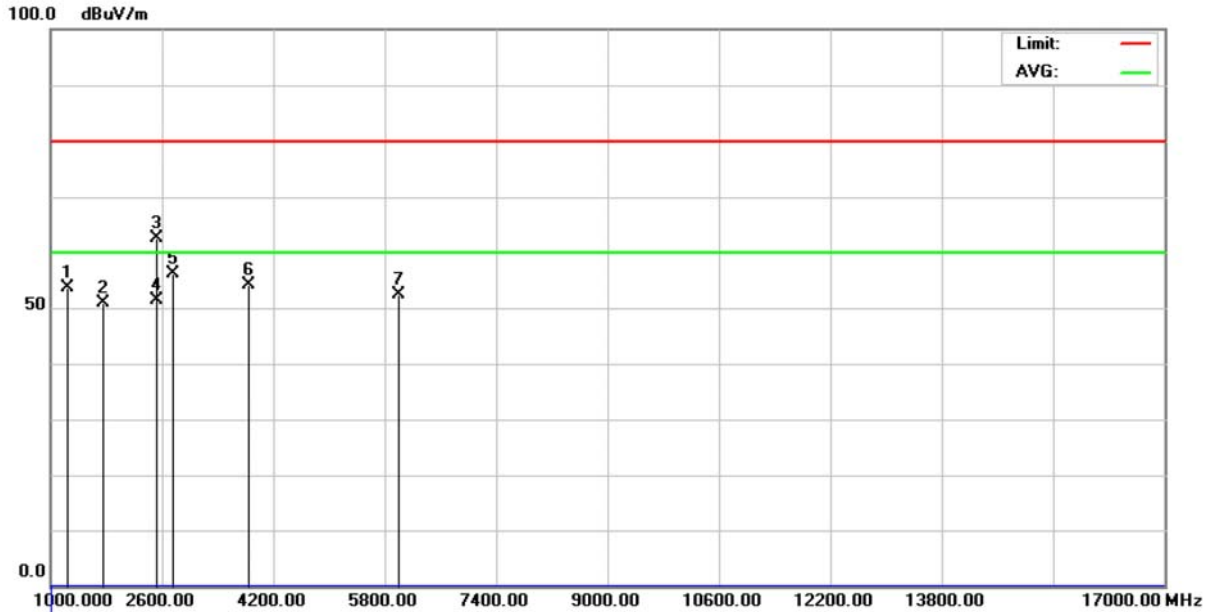
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	61.0880	38.26	-6.76	31.50	40.00	-8.50	peak	
2		85.5640	40.73	-10.47	30.26	40.00	-9.74	peak	
3		112.8800	36.97	-6.67	30.30	40.00	-9.70	peak	
4		224.8000	36.94	-6.84	30.10	40.00	-9.90	peak	
5		229.0885	37.00	-6.31	30.69	40.00	-9.31	peak	
6		1000.000	26.45	10.56	37.01	47.00	-9.99	peak	



**4.2.8 TEST RESULTS-ABOVE 1 GHZ**

E.U.T	Storage Server	Model Name	NH-4500-PRO
Temperature	26 °C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	FULL SYSTEM D-SUB+DVI*2 1920*1200/60Hz (NH-4500-PRO)		

**Polarization: Vertical**



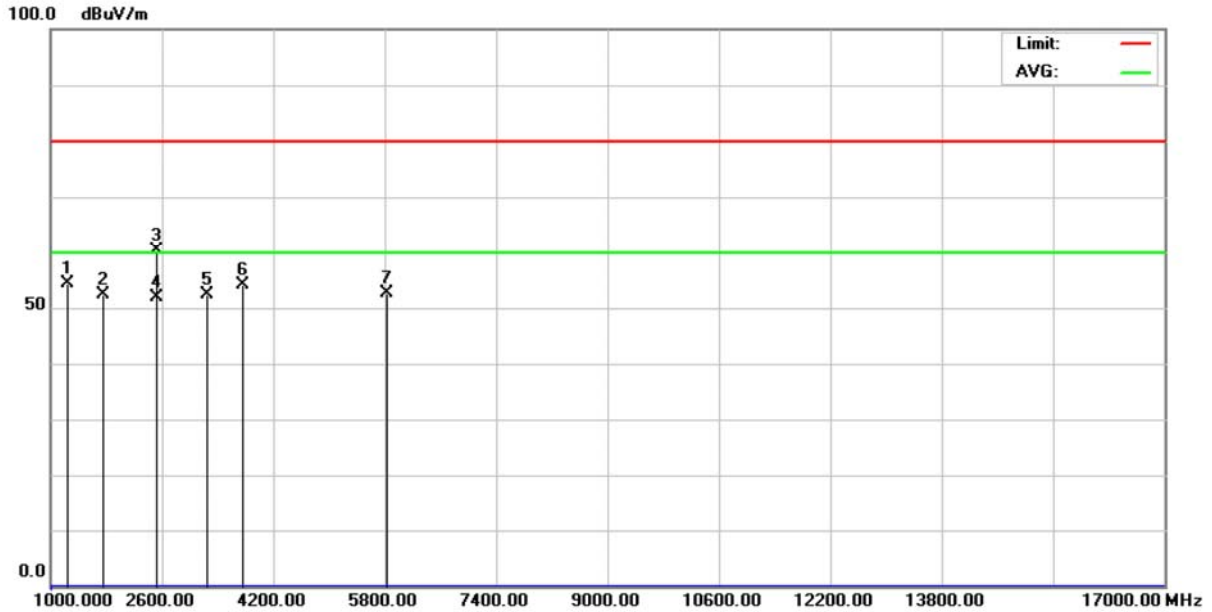
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	1240.000	58.17	-4.66	53.51	80.00	-26.49	peak	
2	1760.000	53.45	-2.55	50.90	80.00	-29.10	peak	
3	2520.000	62.39	0.26	62.65	80.00	-17.35	peak	
4 *	2520.000	51.14	0.26	51.40	60.00	-8.60	AVG	
5	2760.000	55.61	0.44	56.05	80.00	-23.95	peak	
6	3840.000	50.02	4.07	54.09	80.00	-25.91	peak	
7	6000.000	44.21	8.05	52.26	80.00	-27.74	peak	





E.U.T	Storage Server	Model Name	NH-4500-PRO
Temperature	26 °C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	FULL SYSTEM D-SUB+DVI*2 1920*1200/60Hz (NH-4500-PRO)		

**Polarization: Horizontal**



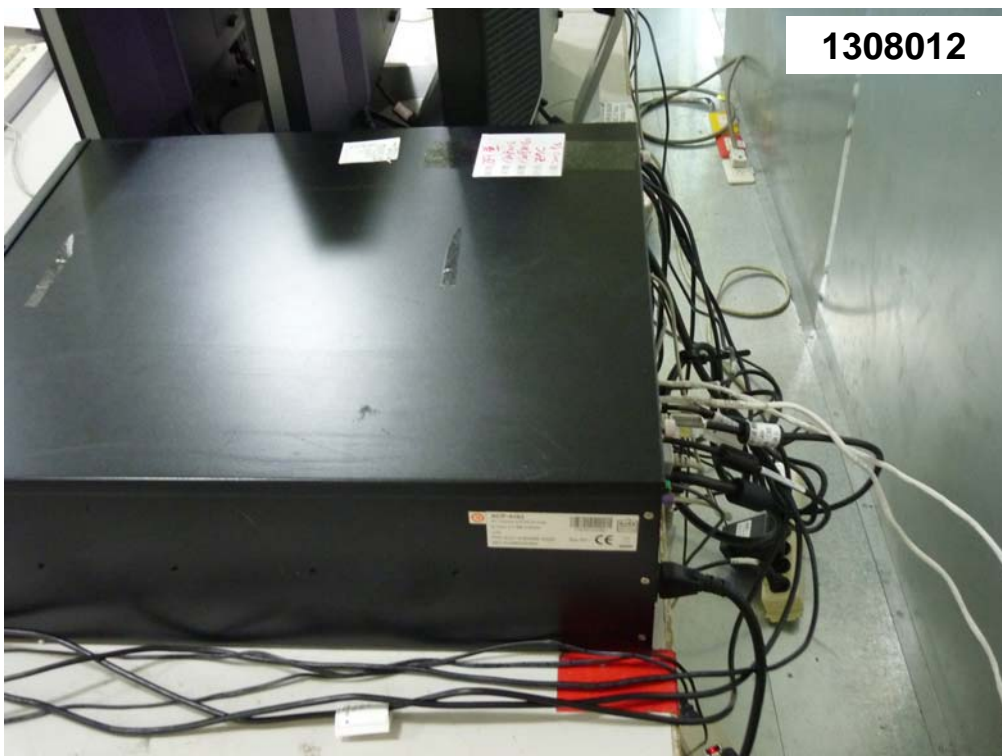
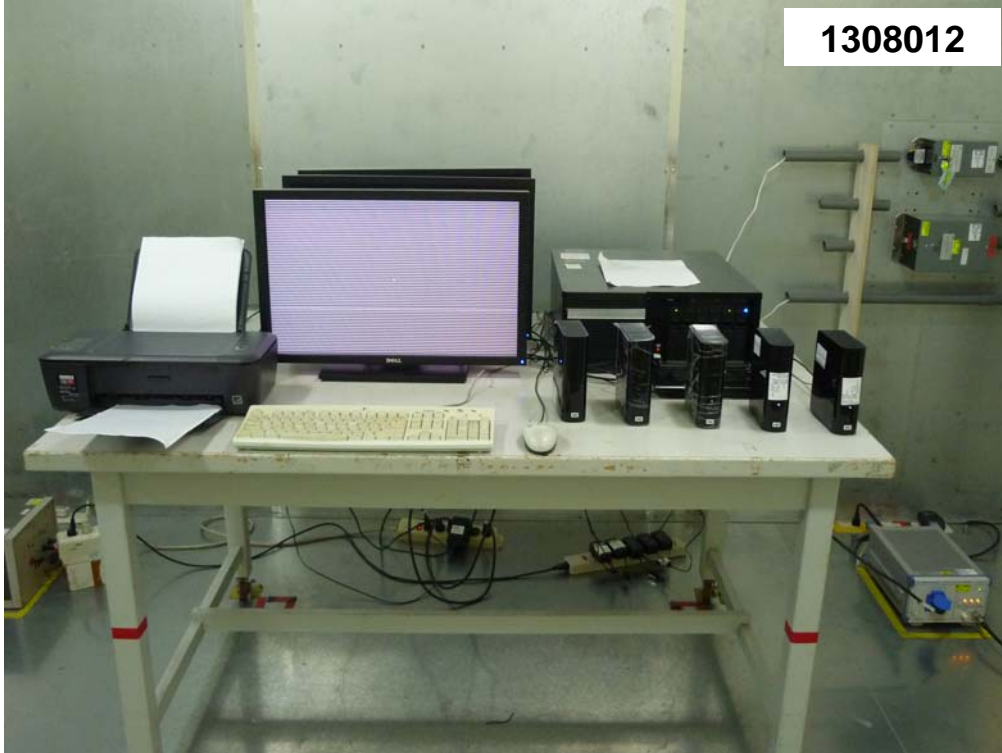
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	1240.000	59.04	-4.66	54.38	80.00	-25.62	peak	
2	1760.000	54.86	-2.55	52.31	80.00	-27.69	peak	
3	2520.000	60.20	0.26	60.46	80.00	-19.54	peak	
4 *	2520.000	51.50	0.26	51.76	60.00	-8.24	AVG	
5	3240.000	50.90	1.39	52.29	80.00	-27.71	peak	
6	3760.000	50.38	3.63	54.01	80.00	-25.99	peak	
7	5840.000	44.86	7.77	52.63	80.00	-27.37	peak	



**5. EUT TEST PHOTO**

**Conducted emission test photos**

**FULL SYSTEM D-SUB+DVI\*2 1920\*1200/60Hz (NH-4500-PRO)**





**Radiated emission test photos**

**Below 1 GHz**

**FULL SYSTEM D-SUB+DVI\*2 1920\*1200/60Hz (NH-4500-PRO)**

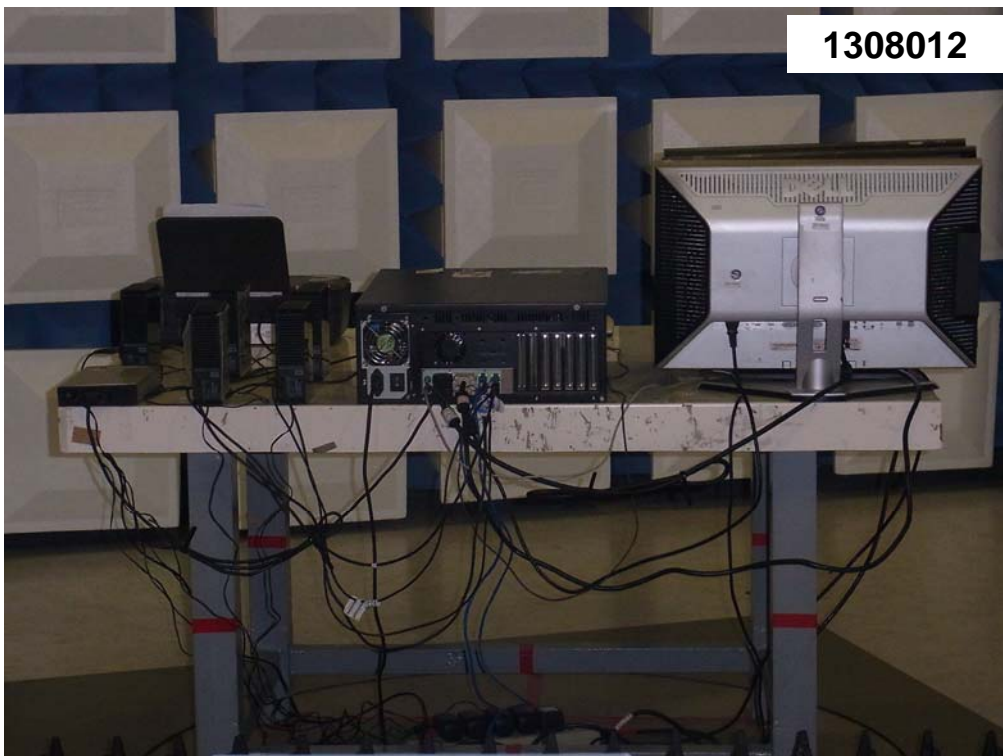




**Radiated emission test photos**

**Above 1 GHz**

**FULL SYSTEM D-SUB+DVI\*2 1920\*1200/60Hz (NH-4500-PRO)**





**Neutron Engineering Inc.**

## **ATTACHMENT**

## **PHOTOGRAPHS OF EUT**



**1308012**



**1308012**







