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Certificate No: T1131

Certificate of Accreditation to ISO/IEC 17025:2005

Sound Pressure Level Test Report

Report No. : PH1_08_0284

Date : 2008/12/11

Category: NAS
Model Name: N5200

Thecus Tech., Corp.

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Table of content

1. General Information	Page 2
2. Testing Configuration	Page 2
3. Test Equipment	Page 3
4. Reference	Page 3
5. Notification	Page 3
6. Test Setup	Page 4
7. Setup Photo	Page 5
8. Testing Result	Page 6
9. Spectrum	Page 7

1. General information

Applicant : Thecus Tech., Corp.
Manufacturer / OEM : Thecus Tech., Corp.
Product description : NAS
Project name : N5200
Quantity : 1 unit (s)
Test procedure : ISO 7779
Standard : ISO 7779, ISO 11201
Note: N5200 contains five Seagate Barracudea 7200.11 1500Gbytes hard disks.

2. Testing Configuration

Environment: Temperature: 21.2 °C
Relative Humidity: 53 %
Testing Chamber: Hemi-Anechoic Chamber #1,
PAL Acoustic Laboratory Ltd., Taipei

Testing Method: The sound pressure level is performed in accordance with the procedures specified in clause 8 of ISO 7779: "Acoustics - Measurement of airborne noise emitted by information technology and telecommunication equipment, 1999(E)." The sound pressure level is displayed in decibels (reference:20µPa)

Frequency Bandwidth: The testing frequency bandwidth is 100Hz~20KHz in 1/3 Octave bands

Frequency Weighting: The testing frequency weighting is A-Weighted

Measurement Duration: The measurement duration is 10 seconds

Sample Installation: The testing sample is installed on the standard testing table located in the geometric center of the hemi-anechoic chamber

3. Test equipment

Item	Equipment	Brand	Type	Serial Number	Last Calibrate date	Next Calibrate date
1	Microphone	G.R.A.S.	Type 40AE	34456	2008/11/13	2009/11/12
2	Microphone	G.R.A.S.	Type 40AE	34477	2008/11/11	2009/11/10
3	Microphone	G.R.A.S.	Type 40AE	34465	2008/11/11	2009/11/10
4	Microphone	G.R.A.S.	Type 40AE	34474	2008/11/11	2009/11/10
5	Preamplifier	G.R.A.S.	Type 26CA	33766	2008/11/13	2009/11/12
6	Preamplifier	G.R.A.S.	Type 26CA	33763	2008/11/11	2009/11/10
7	Preamplifier	G.R.A.S.	Type 26CA	33774	2008/11/11	2009/11/10
8	Preamplifier	G.R.A.S.	Type 26CA	33777	2008/11/11	2009/11/10
9	Microphone calibrator	B&K	4231	2326946	2008/11/11	2009/11/10
10	Analyzer	Head Acoustics	SQLabIII	037956-102007	2008/4/9	2009/4/8

4. Reference

1. ISO7779: 2003 - Acoustics - Measurement of airborne noise emitted by information technology and telecommunications equipment
2. ISO11201: 1995 - Acoustics - Noise emitted by machinery and equipment - Measurement of emission sound pressure levels at a work station and at other specified positions - Engineering method in an essentially free field over a reflecting plane

5. Notification

1. The test results are only valid for the specimen tested.
2. This test report should be used in complete form and any statement or result is partial extraction of this report is not valid.
3. The IECQ logo only assures the quality system of PAL Acoustic Laboratory Ltd. is accordance with the requirement of ISO/IEC 17025.
4. All testing data are not included in the accreditation scope of IECQ. IECQ does not assure whether the reporting data are correct or not. Clients shall not claim product certification, approval, or endorsement by IECQ or any agency.

6. Test setup

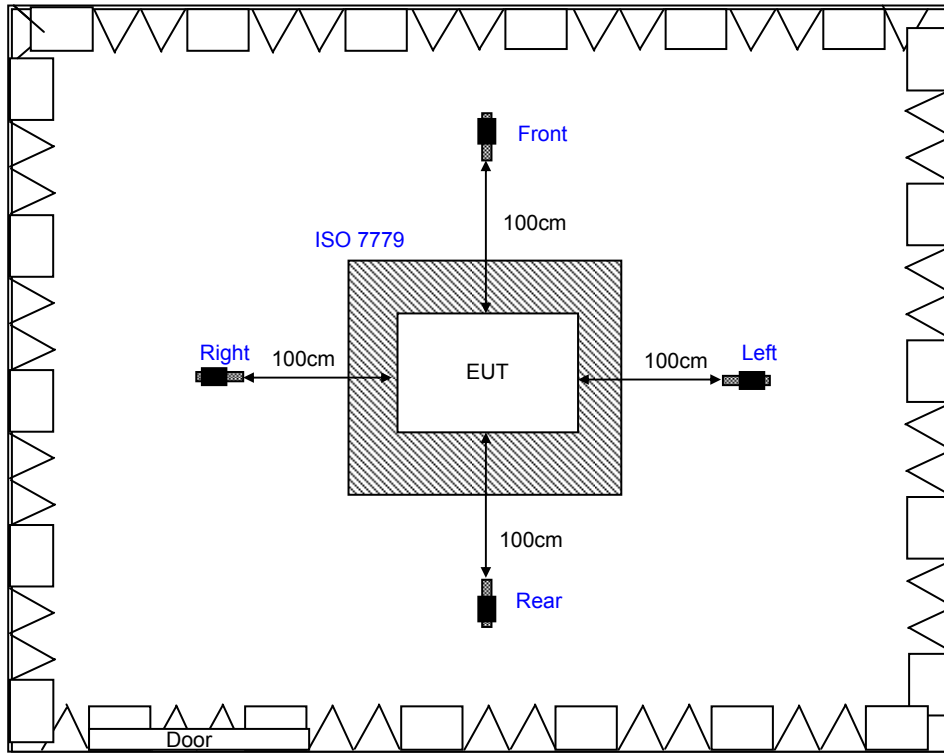


Fig. 1 Location of EUT and microphone position (Top view)

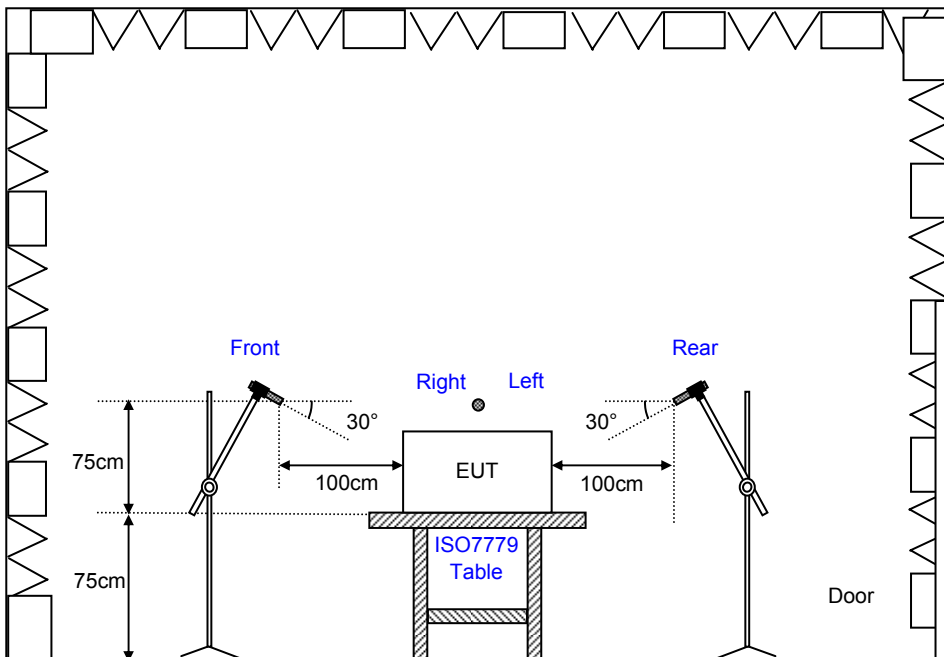


Fig. 2 Location of EUT and microphone position (Side view)

7. Setup photo



Fig. 3 Setup photo (overall view)



Fig. 4 Setup photo (close view)

8. Test Result

No.	Mode	Measured Sound Pressure Level dB(A)				Background Noise Correction dB(A)				Corrected Sound Pressure Level dB(A)				Corrected Sound Pressure Level dB(A)
		Front	Right	Rear	Left	K _{1A,Front}	K _{1A, Right}	K _{1A, Rear}	K _{1A, Left}	Front	Right	Rear	Left	Average
	BKG	16.3	16.6	15.5	16.4									
1	N5200pro_Without HDD	35.3	39.2	38.4	40.4	0.0	0.0	0.0	0.0	35.3	39.2	38.4	40.4	38.7
2	N5200pro_With HDD	33.9	38.1	37.2	39.9	0.0	0.0	0.0	0.0	33.9	38.1	37.2	39.9	37.8

9. Spectrum

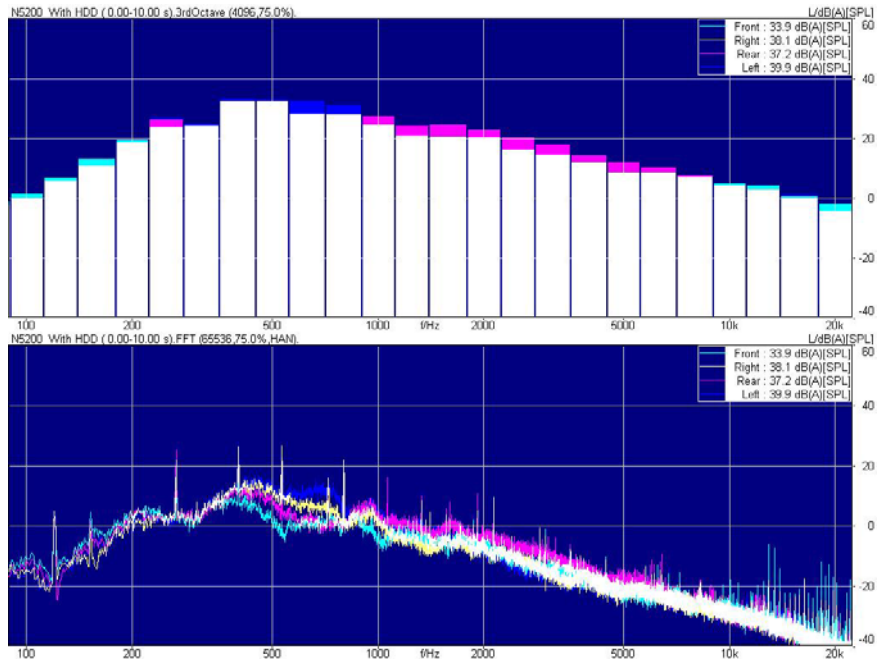


Fig. 5 N5200_With HDD

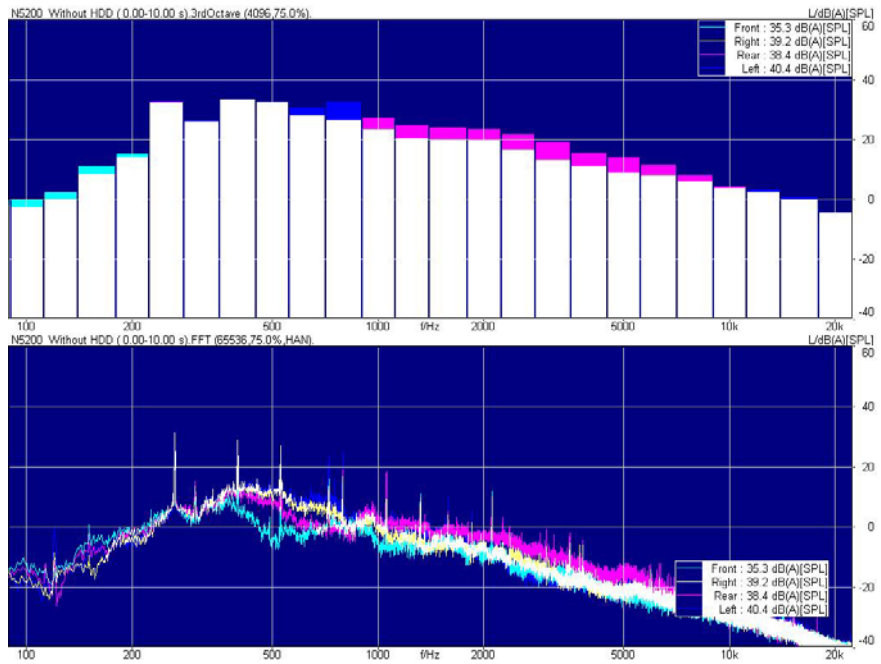


Fig. 6 N5200_Without HDD