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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: M3800**

### Thecus Tech., Corp.

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Taipei County, Taiwan R.O.C.

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## 1. General information

**Applicant :** Thecus Tech., Corp.  
**Manufacturer / OEM :** Thecus Tech., Corp.  
**Product description :** NAS  
**Project name :** M3800  
**Quantity :** 1 unit (s)  
**Test procedure :** ISO 7779  
**Standard :** ISO 7779, ISO 11201  
**Note:** N3800 contains three 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**

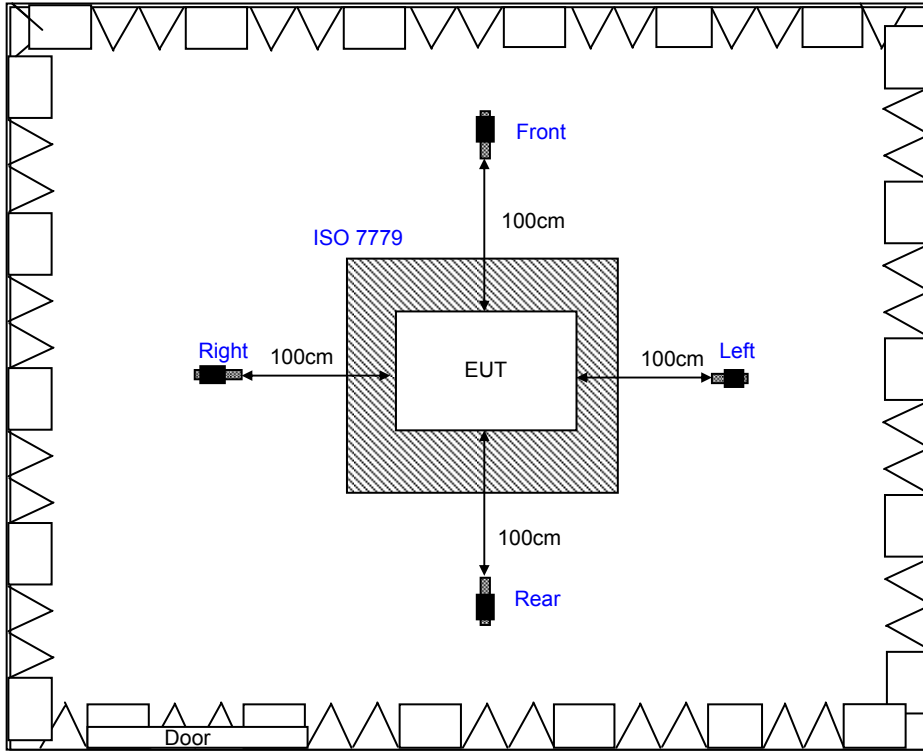


Fig. 1 Location of EUT and microphone position (Top view)

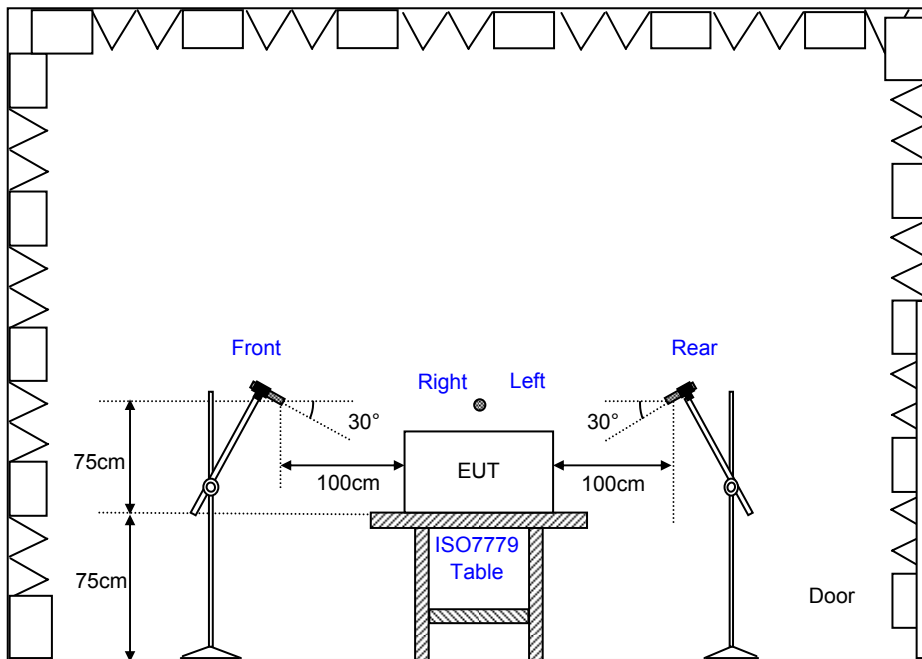


Fig. 2 Location of EUT and microphone position (Side view)

**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 <sub>1A</sub> ,Front	K <sub>1A</sub> , Right	K <sub>1A</sub> , Rear	K <sub>1A</sub> , Left	Front	Right	Rear	Left	Average
	BKG	16.3	16.6	15.5	16.4									
1	M3800_With HDD	25.1	24.3	24.6	24.5	0.6	0.8	0.6	0.7	24.5	23.5	24.0	23.8	24.0
2	M3800_Without HDD	17.8	19.5	18.2	19.3	Invalid	Invalid	Invalid	Invalid	17.8	19.5	18.2	19.3	18.8

**9. Spectrum**

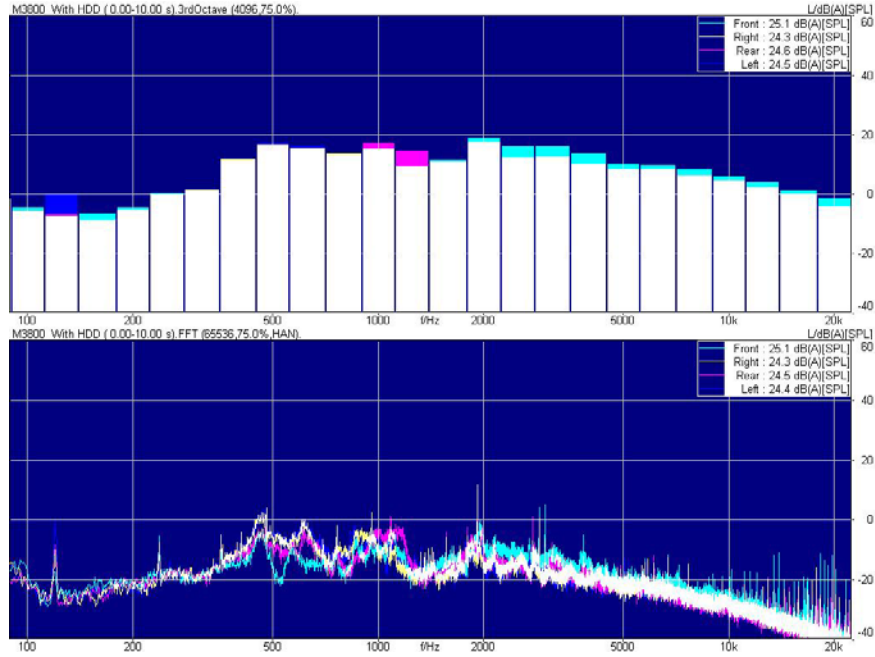


Fig. 5 M3800\_With HDD

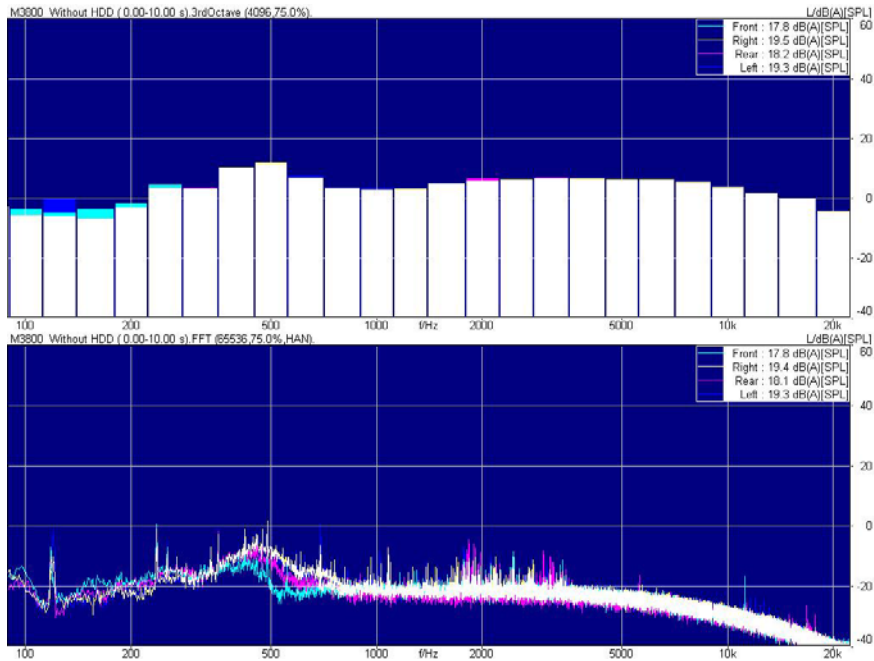


Fig. 6 M3800\_Without HDD