

■ Testing Target

X-Wall DX-192, real-time SATA to SATA cryptographic bridge chip with TDES 192-bit strength

■ Testing Environment

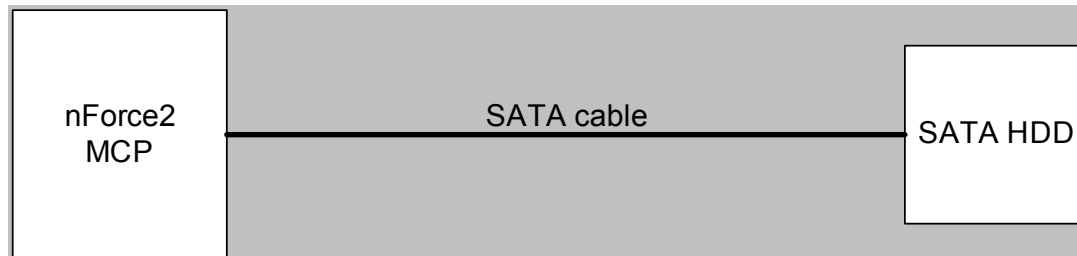
Mother Board	MSI K7N2 Delta 2
SATA Host	nVidia nForce2-MCP, SATA1.0, 1.5Gbit/sec
CPU	AMD Sempron
Memory	256MB(DDR)
SATA Device	Maxtor 6Y160M0, 160GB, SATA-I 1.5G
Operating System	Windows XP Professional with SP1

■ Benchmarking Programs (under Windows XP Pro)

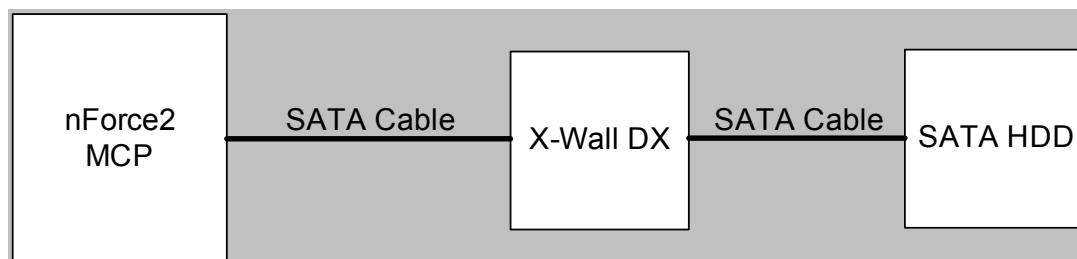
- PCMark 2002
- SiSoftware Sandra 2004
- ATTO Disk Benchmark

■ Testing Configurations

Configuration 1: SATA disk performance without X-Wall DX engaged



Configuration 2: SATA disk performance with X-Wall DX engaged



■ **Functional Test Results**

BIOS hard drive detection	Pass
Windows XP Pro installation & booting	Pass
Windows 2000 installation & booting	Pass
Linux Enterprise AS 4 installation & booting	Pass
Linux Fedora (Free edition) installation & booting	Pass

■ **Performance Test Result (under Windows XP Pro)**

➤ **PCMark 2002**

		Without X-Wall DX	With X-Wall DX
Score		1493	1453
Cache Write	MB/s	40.6	40.4
Uncache Write	MB/s	54.4	51.5
Cache Read	MB/s	44.2	43.0
Un Cache Read	MB/s	53.2	51.9
File Copy	MB/s	24.0	23.3

➤ **SiSoftware Sandra 2004**

		Without X-Wall DX	With X-Wall DX
Drive Index	KB/s	27228	27235
Buffer Read	MB/s	83	90
Sequential Read	MB/s	37	37
Random Read	MB/s	7	7
Buffer Write	MB/s	109	98
Sequential Write	MB/s	43	43
Random Write	MB/s	17	15
Average Access Time	ms	7	7

➤ ATTO Disk Benchmark

