

ANS-9010 performance test report

Test Configuration:

| | |
|----------------------|---|
| Platform | TYAN S2927 |
| Operating System | Windows XP SP2 |
| SATA Host Controller | nVIDIA NFP3600 |
| SATA Device | WD WD1500ADFD SATA HDD 150G x2 ACARD ANS-9010 RAM Disk 24G x2 |
| Software | IOMeter 2006/07/27 for Win32, i386 Hdtune v3.10 SiSoftware Sandra 2009 FDBench v1.02 PCMark05 v1.20 |

Test Result_IOMeter-Real Case Simulation:

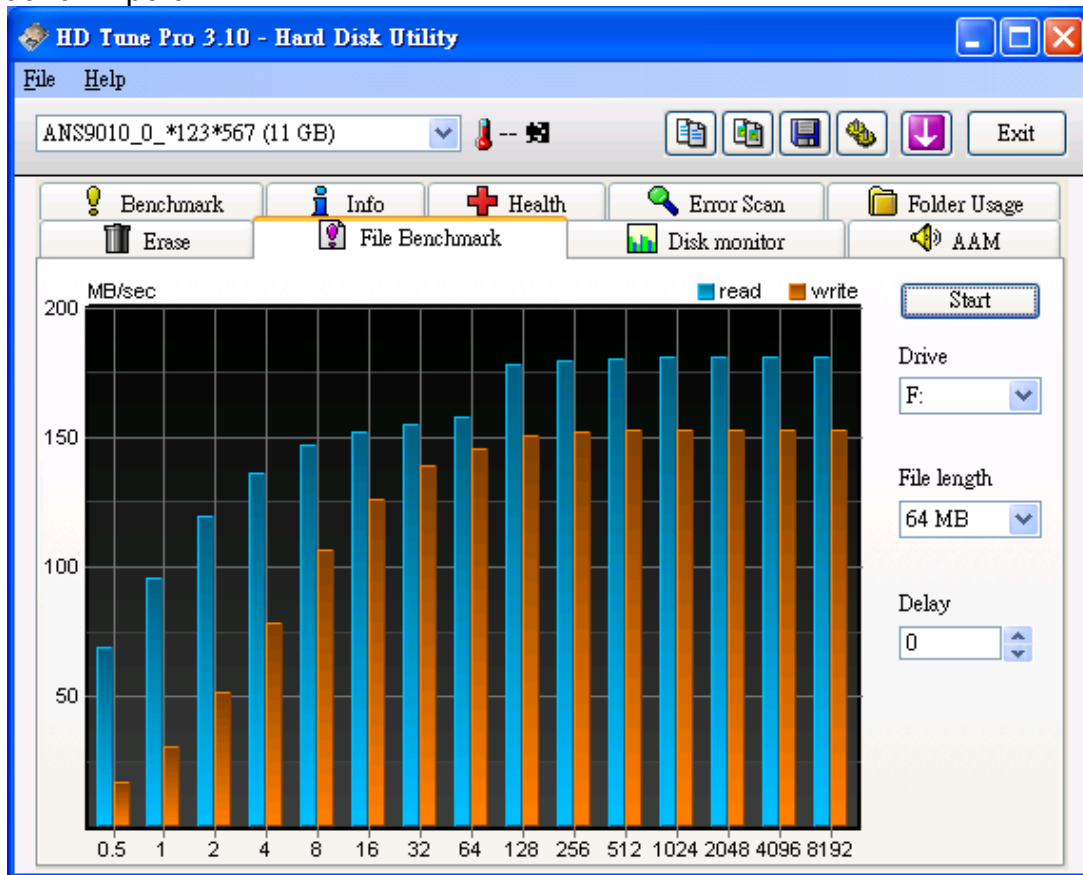
| Test Pattern | | 9010 x1 port | 9010 x2 port | 9010 x2 port RAID0 | 9010 x3 port RAID0 | 9010 x4 port RAID0 | HDD x1 | HDD x2 RAID0 |
|--------------|------|-----------------|-----------------|--------------------------|--------------------------|--------------------------|-----------|--------------------|
| File Server | MB/s | 145.5 | 288.47 | 254.44 | 339.1 | 394.14 | 1.6 | 2.52 |
| | IOPS | 13389.5 | 26651.82 | 23523.31 | 31372 | 36486.59 | 153.35 | 232.79 |
| Web Server | MB/s | 159.1 | 316.56 | 289.65 | 384.12 | 465.75 | 2.2 | 3.27 |
| | IOPS | 10319.94 | 20644.97 | 18985.11 | 25168.69 | 30538.05 | 151.6 | 225.8 |
| Workstation | MB/s | 167.5 | 332.26 | 333.16 | 489.33 | 225.63 | 44.13 | 67.55 |
| | IOPS | 174.8 | 342.65 | 330.1 | 481.32 | 238.78 | 42.35 | 76.49 |
| DataBase | MB/s | 136.1 | 269.7 | 244.54 | 330.71 | 408.14 | 1.19 | 1.94 |
| | IOPS | 17424.8 | 34522.02 | 31300.56 | 42331.26 | 52241.92 | 152.87 | 248.81 |
| Windows XP | MB/s | 177.2 | 354.01 | 350.02 | 505.35 | 643.26 | 20.23 | 29.99 |
| | IOPS | 932.4 | 1842.38 | 1808.52 | 2683.65 | 3296.13 | 98.45 | 154.63 |

Test Result_IOMeter-Various Block Size:

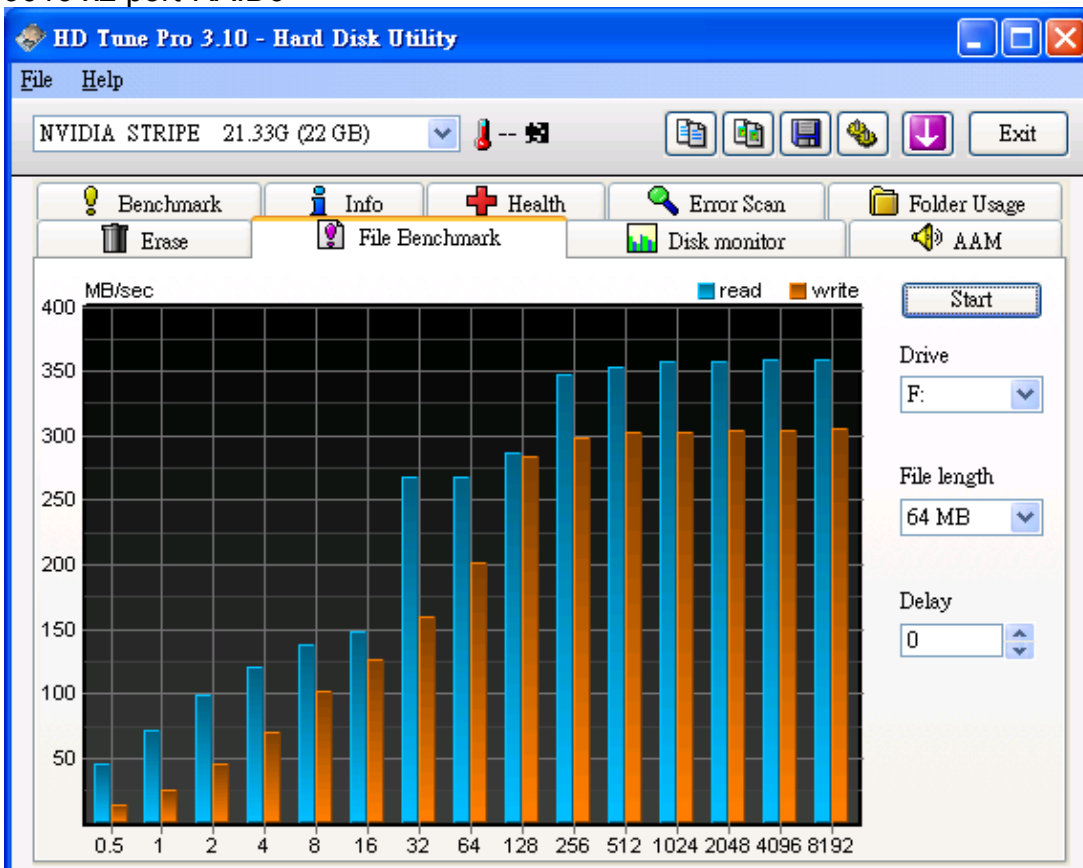
| Test Pattern | | 9010 x1 port | 9010 x2 port | 9010 x2 port RAID0 | 9010 x3 port RAID0 | 9010 x4 port RAID0 | HDD x1 | HDD x2 RAID0 |
|--------------------------|------|-----------------|-----------------|--------------------------|--------------------------|--------------------------|-----------|--------------------|
| 512B Read Sequential | MB/s | 67.4 | 103.09 | 49.6 | 49.37 | 47.56 | 16.47 | 18.98 |
| | IOPS | 138067.3 | 211133.05 | 101577.05 | 101109.86 | 97397.38 | 33724.92 | 38869.48 |
| 512B Read Random | MB/s | 29.2 | 50.58 | 36.9 | 35.87 | 34.51 | 0.08 | 0.13 |
| | IOPS | 59873.9 | 103588.14 | 75568.54 | 73465.52 | 70685.99 | 166.71 | 269.95 |
| 512B Write Sequential | MB/s | 26.5 | 51.52 | 27.12 | 27.98 | 27.28 | 12.05 | 12.65 |
| | IOPS | 54311.8 | 105511.53 | 55547.6 | 57299.65 | 55871.84 | 24688.38 | 25901.32 |
| 512B Write Random | MB/s | 27.1 | 50.69 | 36.97 | 35.88 | 34.2 | 0.07 | 0.19 |
| | IOPS | 55466.4 | 103810.36 | 75708.65 | 73479.05 | 70049.72 | 146.46 | 387.85 |
| 4K Read Sequential | MB/s | 91.4 | 188.34 | 216.11 | 210.67 | 221.93 | 29.92 | 59.79 |
| | IOPS | 23398.0 | 48214.6 | 55324.67 | 53931.45 | 56813.13 | 7660.69 | 15307.28 |
| 4K Read Random | MB/s | 112.7 | 222.75 | 202.44 | 257.99 | 271.26 | 0.64 | 0.99 |
| | IOPS | 28839.8 | 57023.45 | 51825.69 | 66044.49 | 69441.75 | 162.96 | 253.53 |
| 4K Write Sequential | MB/s | 100.0 | 199.55 | 167.84 | 169.87 | 167.97 | 56.25 | 94.04 |
| | IOPS | 25600.3 | 51085.26 | 42967.88 | 43485.59 | 43000.08 | 14399.7 | 24074.23 |
| 4K Write Random | MB/s | 101.4 | 201.84 | 182.18 | 238.68 | 268.8 | 0.66 | 1.42 |
| | IOPS | 25964.9 | 51670.87 | 46636.88 | 61101.56 | 68812.11 | 170.19 | 364.6 |
| 64K Read Sequential | MB/s | 176.1 | 351.41 | 346.52 | 503.31 | 663.84 | 83.19 | 166.03 |
| | IOPS | 2817.8 | 5622.49 | 5544.38 | 8053.02 | 10621.41 | 1331 | 2656.5 |
| 64K Read Random | MB/s | 178.9 | 357.53 | 332.31 | 465.62 | 588.03 | 8.81 | 8.66 |
| | IOPS | 2861.7 | 5720.52 | 5316.88 | 7449.93 | 9408.46 | 140.95 | 138.51 |
| 64K Write Sequential | MB/s | 151.1 | 302.03 | 302.32 | 307.51 | 218.67 | 78.59 | 161.51 |
| | IOPS | 2417.1 | 4832.41 | 4837.19 | 4920.17 | 3498.66 | 1257.48 | 2584.15 |
| 64K Write Random | MB/s | 151.3 | 302.33 | 282.61 | 395.92 | 502.11 | 7.62 | 11.09 |
| | IOPS | 2421.5 | 4837.32 | 4521.84 | 6334.79 | 8033.8 | 121.98 | 177.47 |
| 128K Read Sequential | MB/s | 181.9 | 363.62 | 350.69 | 518.3 | 686.28 | 83.24 | 166.34 |
| | IOPS | 1455.2 | 2909 | 2805.56 | 4146.42 | 5490.25 | 665.92 | 1330.75 |
| 128K Read Random | MB/s | 182.1 | 364.08 | 356.07 | 506.51 | 640.59 | 15.72 | 16.26 |
| | IOPS | 1456.8 | 2912.66 | 2848.57 | 4052.04 | 5124.72 | 125.74 | 130.06 |
| 128K Write Sequential | MB/s | 153.4 | 306.75 | 302.08 | 453.36 | 602.48 | 76.9 | 160.12 |
| | IOPS | 1227.0 | 2454.03 | 2416.6 | 3626.9 | 4819.87 | 615.23 | 1280.94 |
| 128K Write Random | MB/s | 153.5 | 307.34 | 302.42 | 430.49 | 188.05 | 13.78 | 20.14 |
| | IOPS | 1228.1 | 2458.72 | 2419.4 | 3443.91 | 1504.41 | 110.22 | 161.1 |

Test Result_HD Tune-File Benchmark:

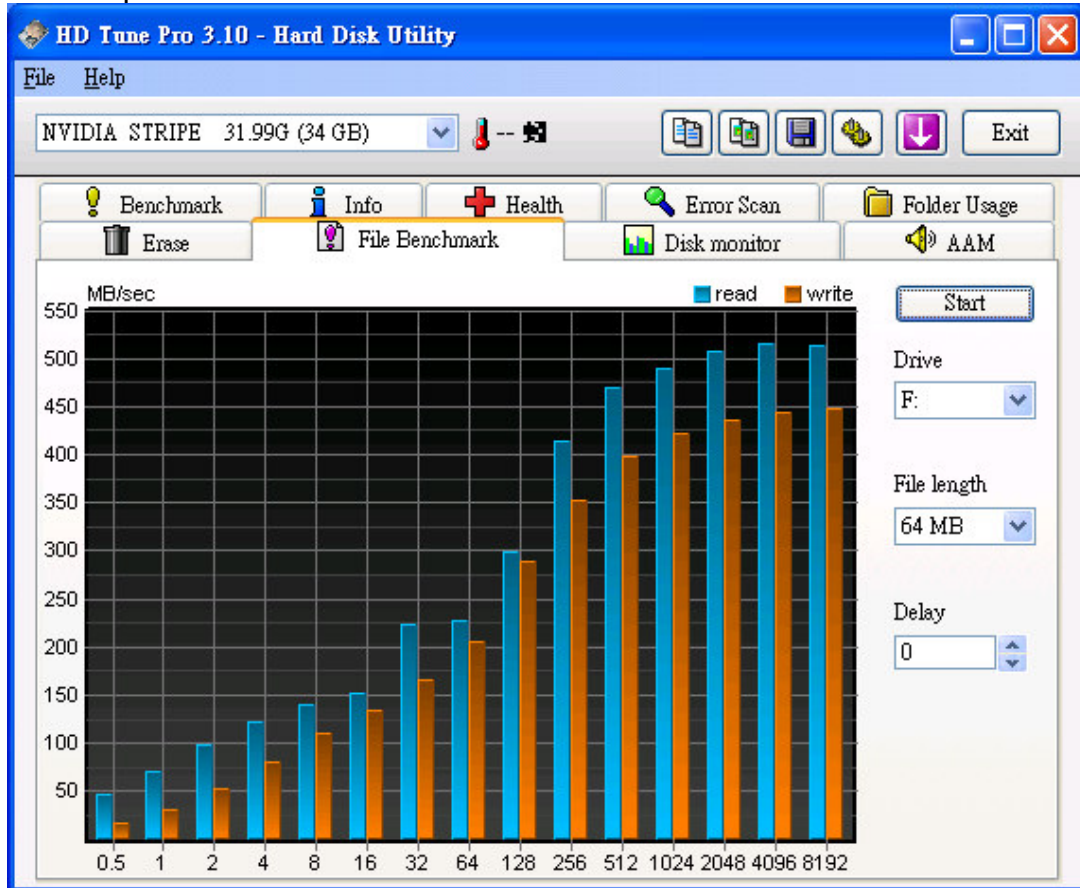
9010 x1 port



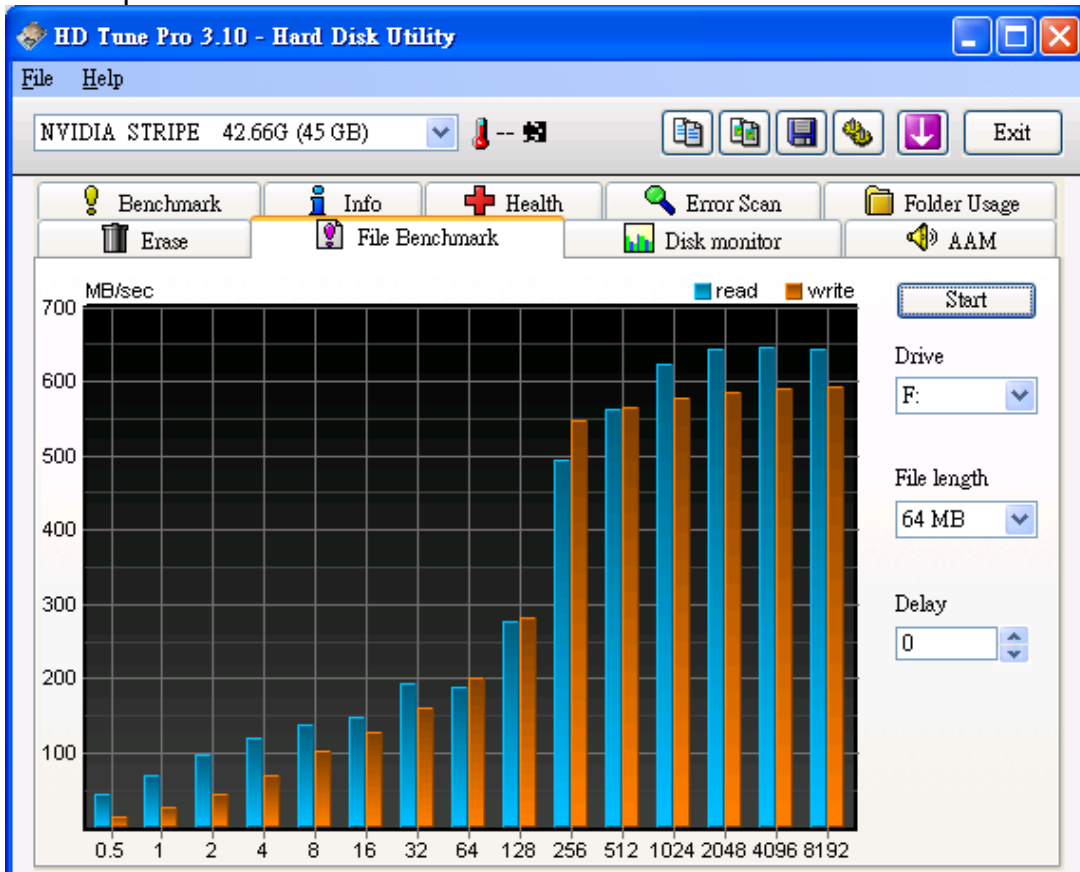
9010 x2 port-RAID0



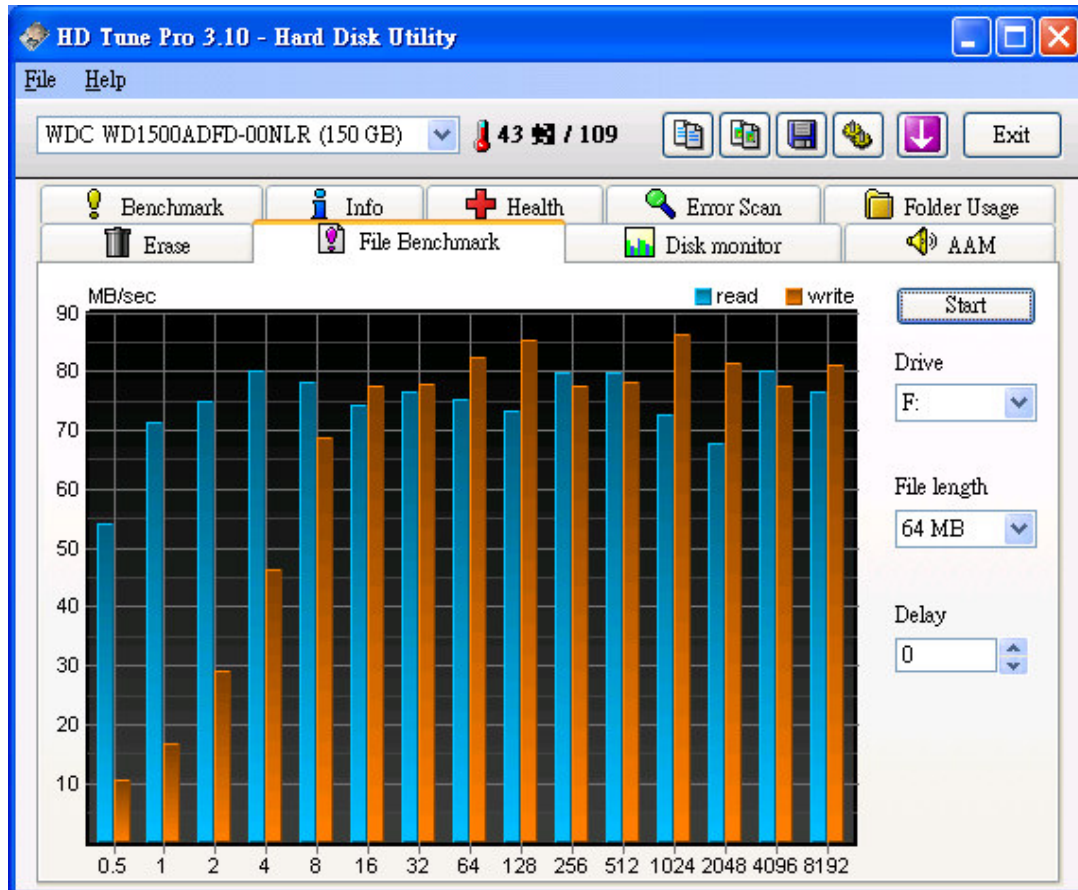
9010 x3 port-RAID0



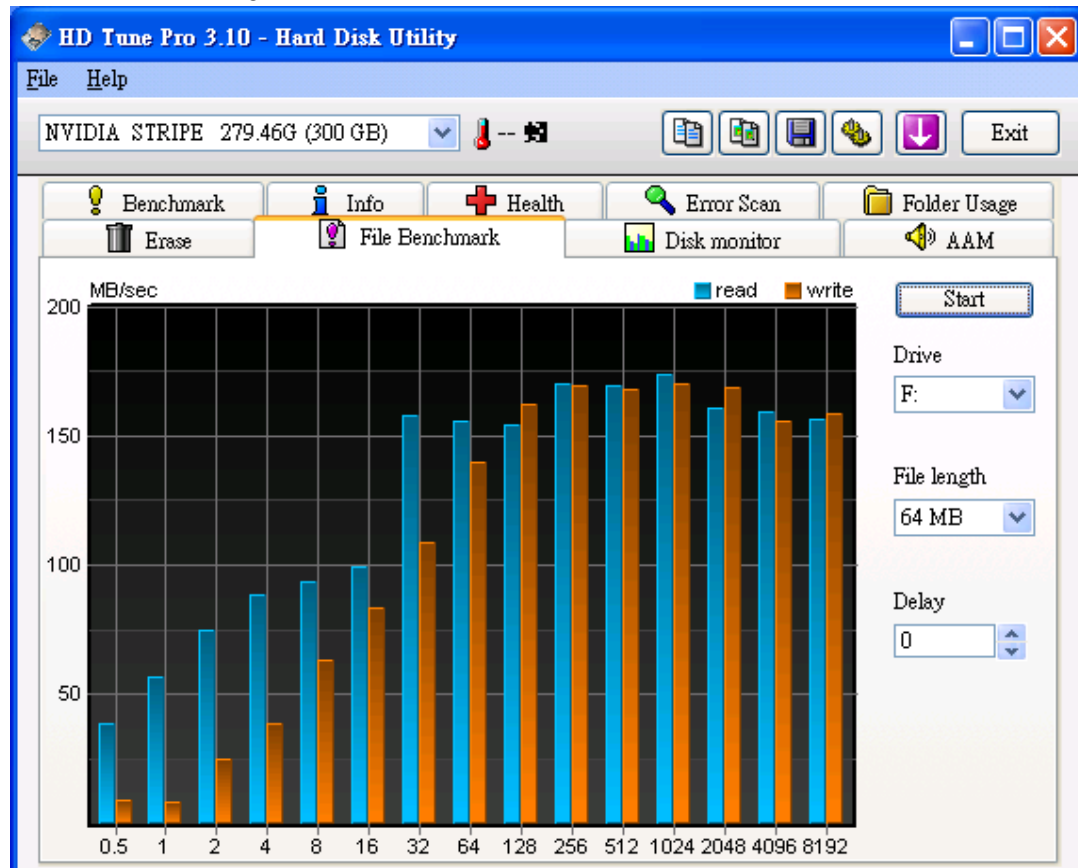
9010 x4 port-RAID0



WDHDDx1

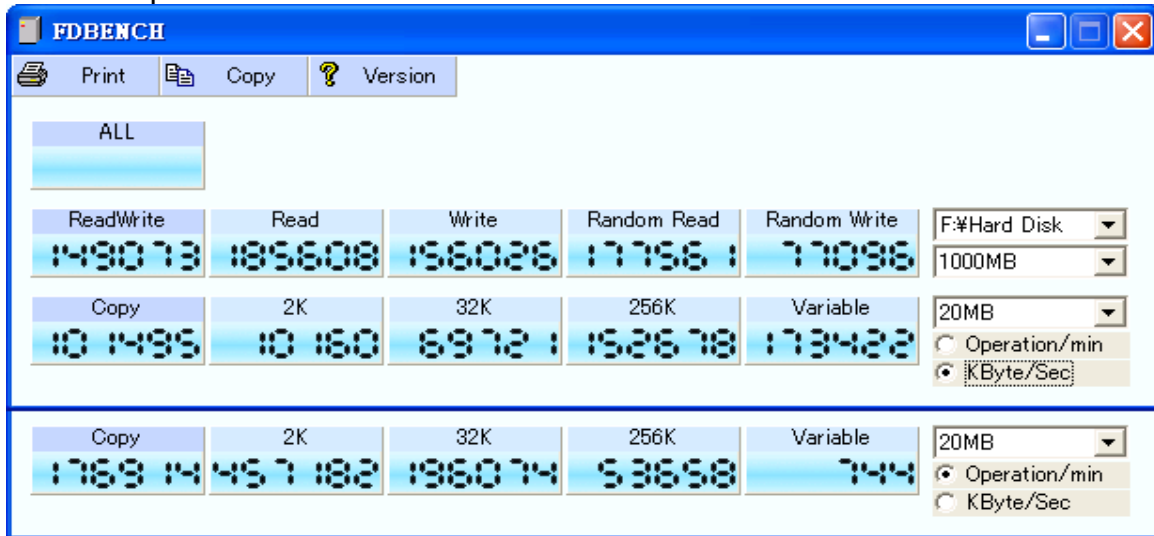


WDHDDx2-RAID0

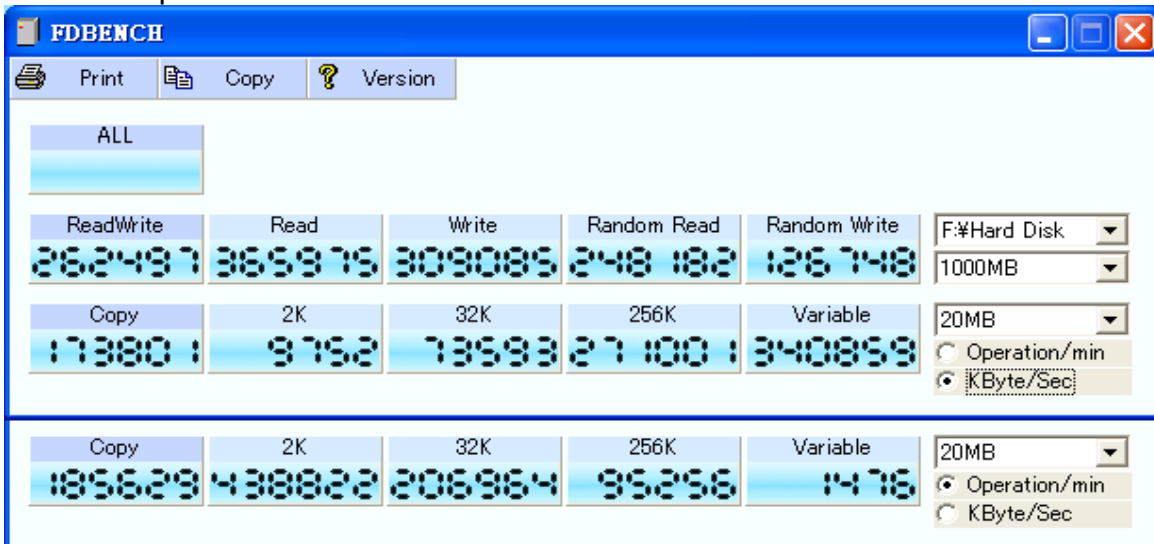


Test Result_FDBench:

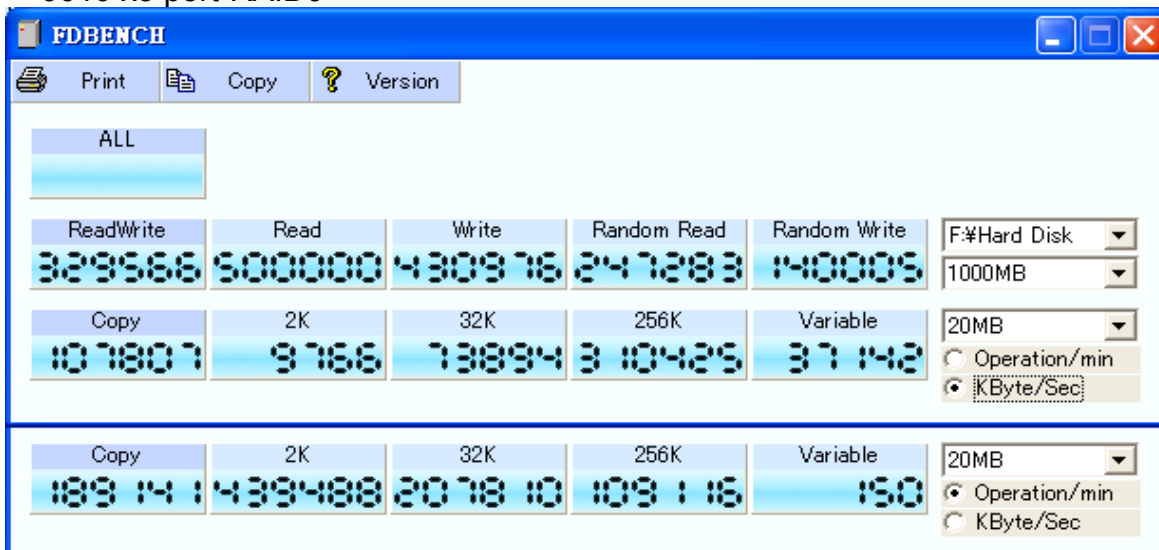
9010x1 port



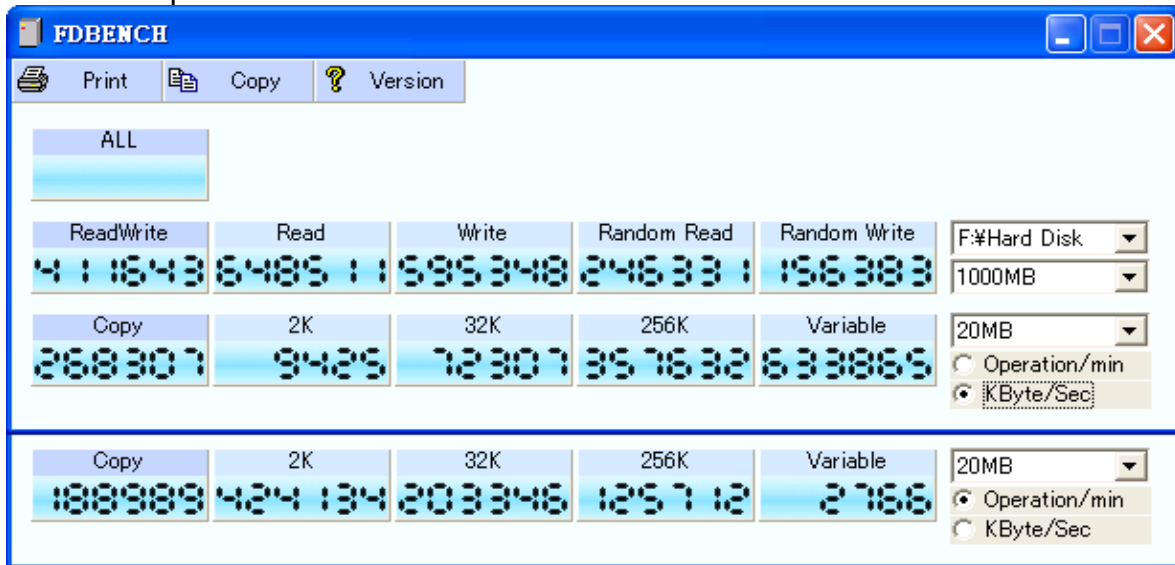
9010 x2 port-RAID0



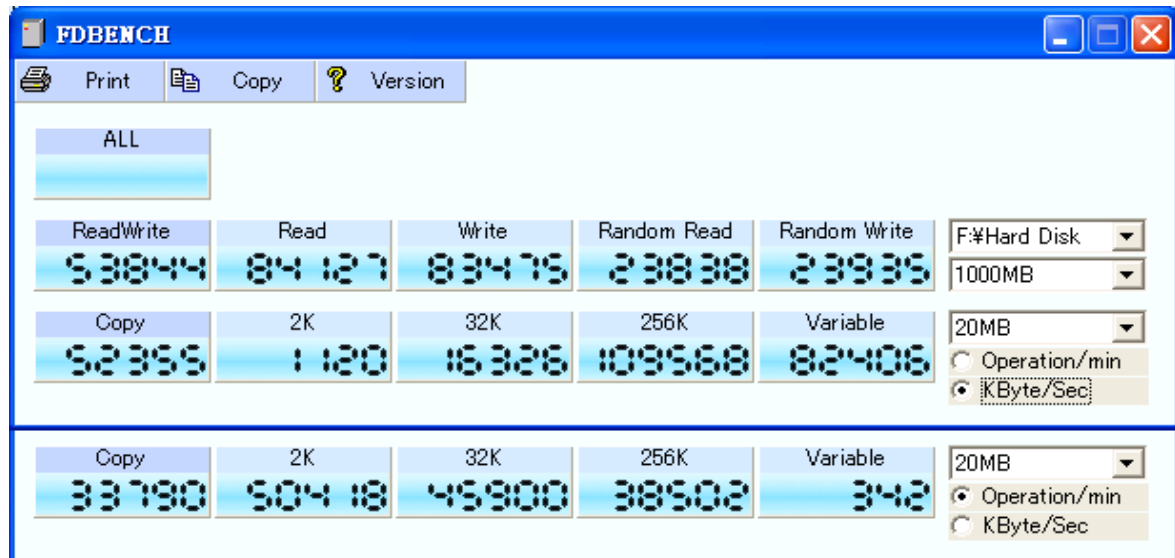
9010 x3 port-RAID0



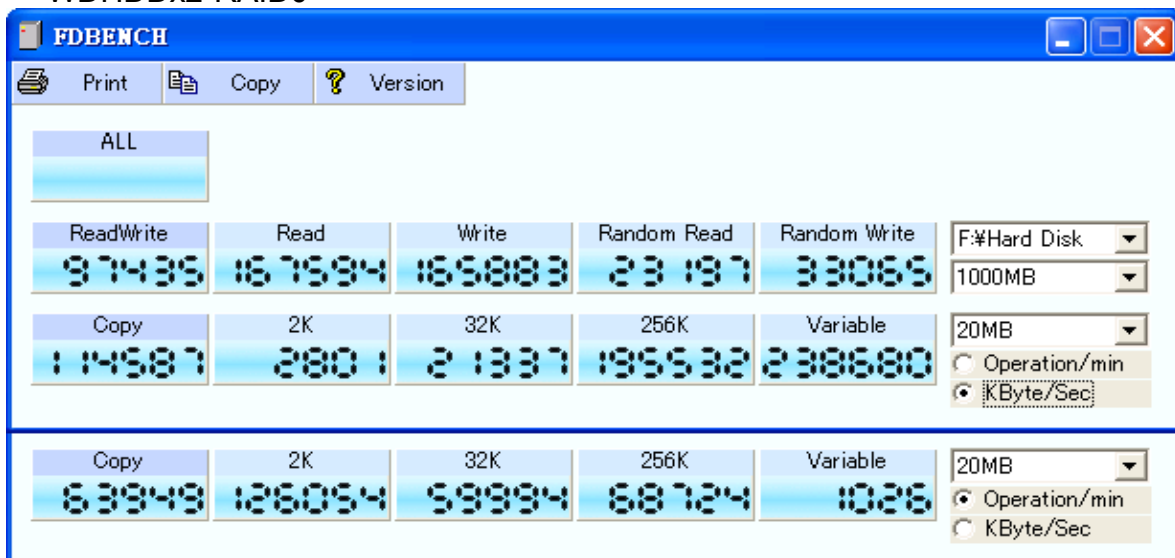
9010 x4 port-RAID0



WDHDDx1



WDHDDx2-RAID0



Test Result_PCMARK05:

9010 x1 port

The image displays two side-by-side PCMark05 Result windows for a 9010 x1 port configuration. The left window shows the overall PCMark Score and system details, while the right window provides a detailed breakdown of the HDD Test Suite.

Overall Scores:

- PCMark Score: 44996
- PCMark: N/A
- CPU: N/A
- Memory: N/A
- Graphics: N/A
- HDD: 44996

System Details:

- OS: Microsoft Windows XP
- CPU: Dual-Core AMD Opteron(tm) Processor 8220 @ 2800 MHz
- Memory: 1024 MB
- Graphics: XGI Volari Z7

HDD Test Suite Breakdown:

- HDD - XP Startup: 160.107 MB/s
- HDD - Application Loading: 145.013 MB/s
- HDD - General Usage: 137.482 MB/s
- HDD - Virus Scan: 160.585 MB/s
- HDD - File Write: 148.074 MB/s

9010 x2 port-RAID0

The image displays two side-by-side PCMark05 Result windows for a 9010 x2 port-RAID0 configuration. The left window shows the overall PCMark Score and system details, while the right window provides a detailed breakdown of the HDD Test Suite.

Overall Scores:

- PCMark Score: 59424
- PCMark: N/A
- CPU: N/A
- Memory: N/A
- Graphics: N/A
- HDD: 59424

System Details:

- OS: Microsoft Windows XP
- CPU: Dual-Core AMD Opteron(tm) Processor 8220 @ 2800 MHz
- Memory: 1024 MB
- Graphics: XGI Volari Z7

HDD Test Suite Breakdown:

- HDD - XP Startup: 253.948 MB/s
- HDD - Application Loading: 158.932 MB/s
- HDD - General Usage: 188.903 MB/s
- HDD - Virus Scan: 167.254 MB/s
- HDD - File Write: 239.126 MB/s

9010 x3 port-RAID0

Result PCMARK^{OS}

Result Details

Scores | Results | Log

- PCMark Score
 - PCMark: N/A
 - CPU: N/A
 - Memory: N/A
 - Graphics: N/A
 - HDD: 63829

System

OS: Microsoft Windows XP
CPU: Dual-Core AMD Opteron(tm) Processor 8220 @ 2800 MHz
Memory: 1024 MB
Graphics: XGI Volari Z7

Close

Result PCMARK^{OS}

Result Details

Scores | Results | Log

- System Test Suite
- CPU Test Suite
- Memory Test Suite
- Graphics Test Suite
- HDD Test Suite
 - HDD - XP Startup
 - HDD - XP Startup: 313.542 MB/s
 - HDD - Application Loading
 - HDD - Application Loading: 160.870 MB/s
 - HDD - General Usage
 - HDD - General Usage: 202.576 MB/s
 - HDD - Virus Scan
 - HDD - Virus Scan: 176.417 MB/s
 - HDD - File Write
 - HDD - File Write: 241.871 MB/s
- Custom Test Suite

Close

9010 x4 port-RAID0

Result PCMARK^{OS}

Result Details

Scores | Results | Log

- PCMark Score
 - PCMark: N/A
 - CPU: N/A
 - Memory: N/A
 - Graphics: N/A
 - HDD: 65696

System

OS: Microsoft Windows XP
CPU: Dual-Core AMD Opteron(tm) Processor 8220 @ 2800 MHz
Memory: 1024 MB
Graphics: XGI Volari Z7

Close

Result PCMARK^{OS}

Result Details

Scores | Results | Log

- System Test Suite
- CPU Test Suite
- Memory Test Suite
- Graphics Test Suite
- HDD Test Suite
 - HDD - XP Startup
 - HDD - XP Startup: 353.921 MB/s
 - HDD - Application Loading
 - HDD - Application Loading: 162.504 MB/s
 - HDD - General Usage
 - HDD - General Usage: 206.876 MB/s
 - HDD - Virus Scan
 - HDD - Virus Scan: 172.428 MB/s
 - HDD - File Write
 - HDD - File Write: 245.473 MB/s
- Custom Test Suite

Close

WDHDDx1

The image shows two side-by-side PCMark OS Result windows for the WDHDDx1 configuration. The left window displays the overall PCMark Score and system information, while the right window shows a detailed breakdown of the HDD Test Suite results.

Left Window: Result Details

- PCMark Score
 - PCMark: N/A
 - CPU: N/A
 - Memory: N/A
 - Graphics: N/A
 - HDD: 7017
- System**
 - OS: Microsoft Windows XP
 - CPU: Dual-Core AMD Opteron(tm) Processor 8220 @ 2800 MHz
 - Memory: 1024 MB
 - Graphics: XGI Volari Z7

Right Window: Result Details

- System Test Suite
 - CPU Test Suite
 - Memory Test Suite
 - Graphics Test Suite
 - HDD Test Suite
 - HDD - XP Startup
 - HDD - XP Startup: 11.672 MB/s
 - HDD - Application Loading
 - HDD - Application Loading: 10.026 MB/s
 - HDD - General Usage
 - HDD - General Usage: 8.413 MB/s
 - HDD - Virus Scan
 - HDD - Virus Scan: 82.719 MB/s
 - HDD - File Write
 - HDD - File Write: 85.960 MB/s
 - Custom Test Suite

WDHDDx2-RAID0

The image shows two side-by-side PCMark OS Result windows for the WDHDDx2-RAID0 configuration. The left window displays the overall PCMark Score and system information, while the right window shows a detailed breakdown of the HDD Test Suite results.

Left Window: Result Details

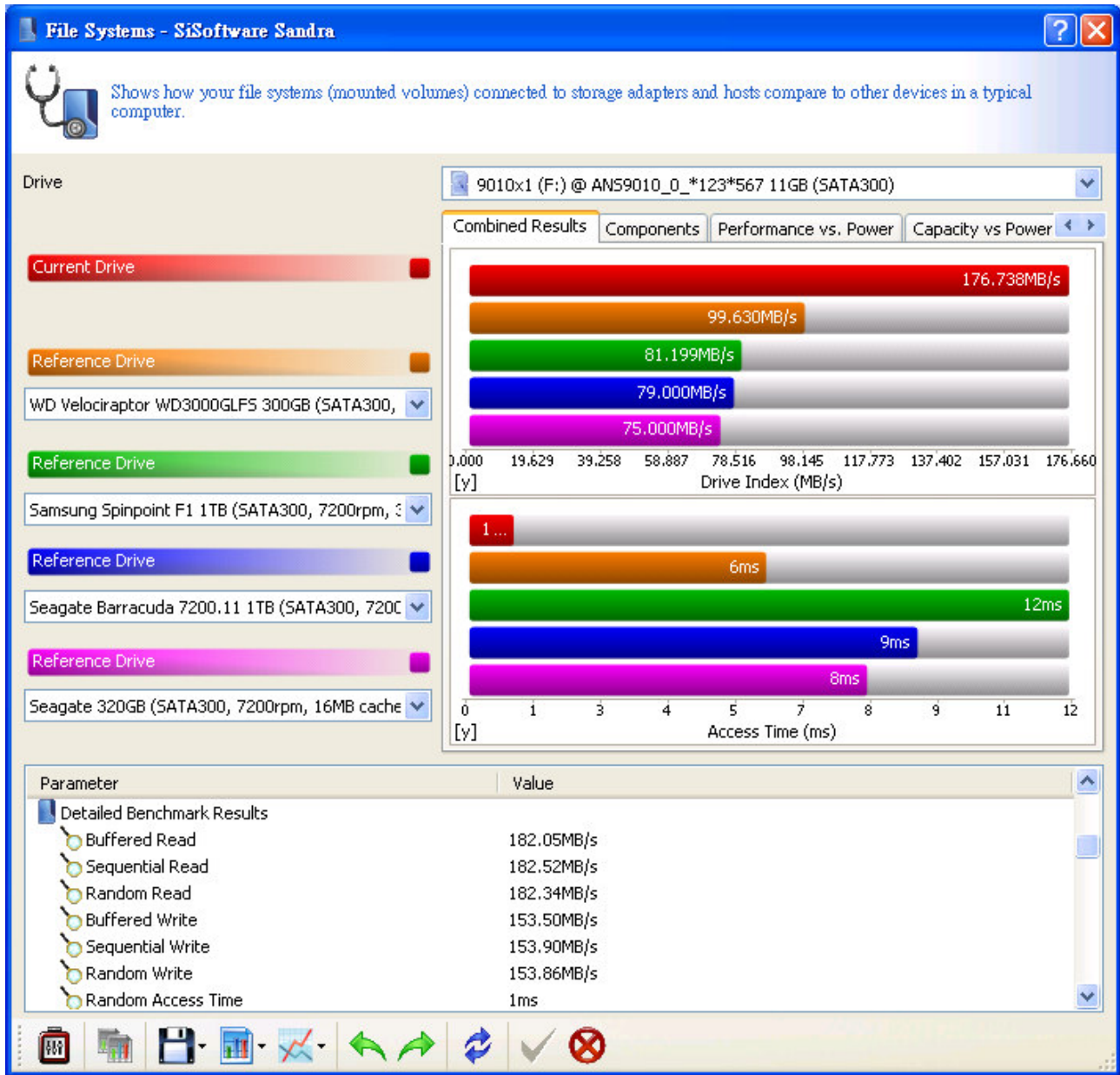
- PCMark Score
 - PCMark: N/A
 - CPU: N/A
 - Memory: N/A
 - Graphics: N/A
 - HDD: 9334
- System**
 - OS: Microsoft Windows XP
 - CPU: Dual-Core AMD Opteron(tm) Processor 8220 @ 2800 MHz
 - Memory: 1024 MB
 - Graphics: XGI Volari Z7

Right Window: Result Details

- System Test Suite
 - CPU Test Suite
 - Memory Test Suite
 - Graphics Test Suite
 - HDD Test Suite
 - HDD - XP Startup
 - HDD - XP Startup: 16.867 MB/s
 - HDD - Application Loading
 - HDD - Application Loading: 11.346 MB/s
 - HDD - General Usage
 - HDD - General Usage: 11.730 MB/s
 - HDD - Virus Scan
 - HDD - Virus Scan: 80.321 MB/s
 - HDD - File Write
 - HDD - File Write: 161.722 MB/s
 - Custom Test Suite

Test Result_SiSoftware Sandra File Systems Bench :

9010 x1 port



9010 x2 port-RAID0

The screenshot shows the SiSoftware Sandra File Systems benchmark results for a RAID0 configuration. The main window displays the drive configuration and two bar charts comparing the current drive to reference drives. The 'Current Drive' is a RAID0 setup with two Seagate 320GB drives, achieving a Drive Index of 353.937 MB/s. The reference drives include a RAID0 setup with four WD Raptor 36GB drives (144.000 MB/s), a RAID0 setup with two Maxtor Atlas IV 73GB drives (114.948 MB/s), and a RAID0 setup with two Seagate 320GB drives (143.805 MB/s). The access time chart shows the current drive has an access time of 1ms, while the reference drives have access times of 8ms, 10ms, and 12ms.

Drive Configuration: 9010x2-R0 (F:) @ NVIDIA STRIPE 21.33G 23GB (SCSI, SCSI-2, NCQ)

Current Drive: 2x Seagate 320GB (RAID0, SATA300, 7200rpm, ...)

Reference Drives:

- 4x WD Raptor 36GB (RAID0, SATA150, 10krpm, ...)
- Gigabyte iRAM 4GB (SATA150) (x86)
- 2x Maxtor Atlas IV 73GB (RAID0, SCSI-4, 15000r ...)

Performance Comparison (Drive Index in MB/s):

| Configuration | Drive Index (MB/s) |
|----------------------------------|--------------------|
| Current Drive | 353.937 |
| Reference Drive 1 (4x WD Raptor) | 144.000 |
| Reference Drive 2 (2x Seagate) | 143.805 |
| Reference Drive 3 (2x Maxtor) | 114.948 |

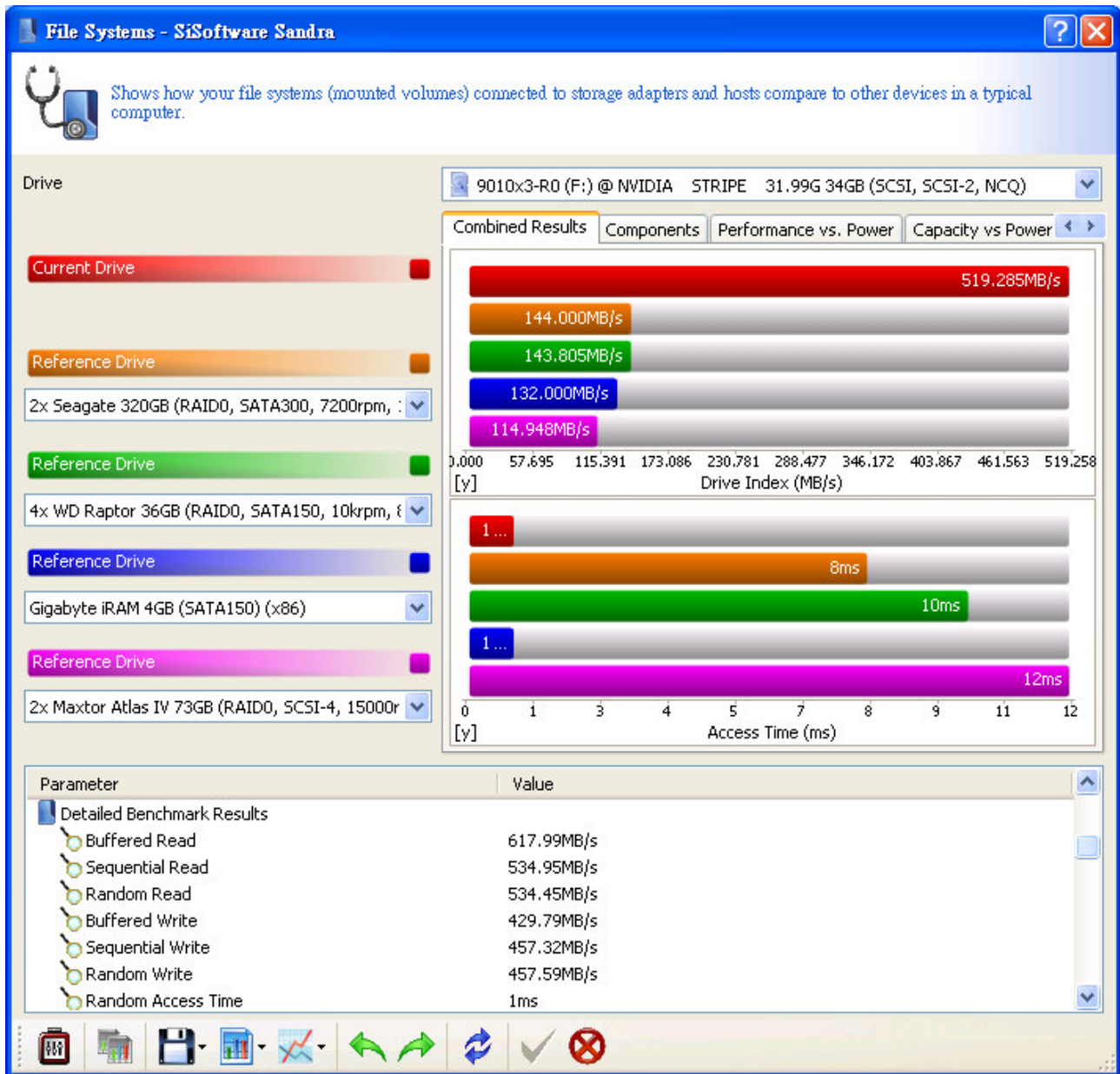
Performance Comparison (Access Time in ms):

| Configuration | Access Time (ms) |
|----------------------------------|------------------|
| Current Drive | 1 |
| Reference Drive 1 (4x WD Raptor) | 8 |
| Reference Drive 2 (2x Seagate) | 10 |
| Reference Drive 3 (2x Maxtor) | 12 |

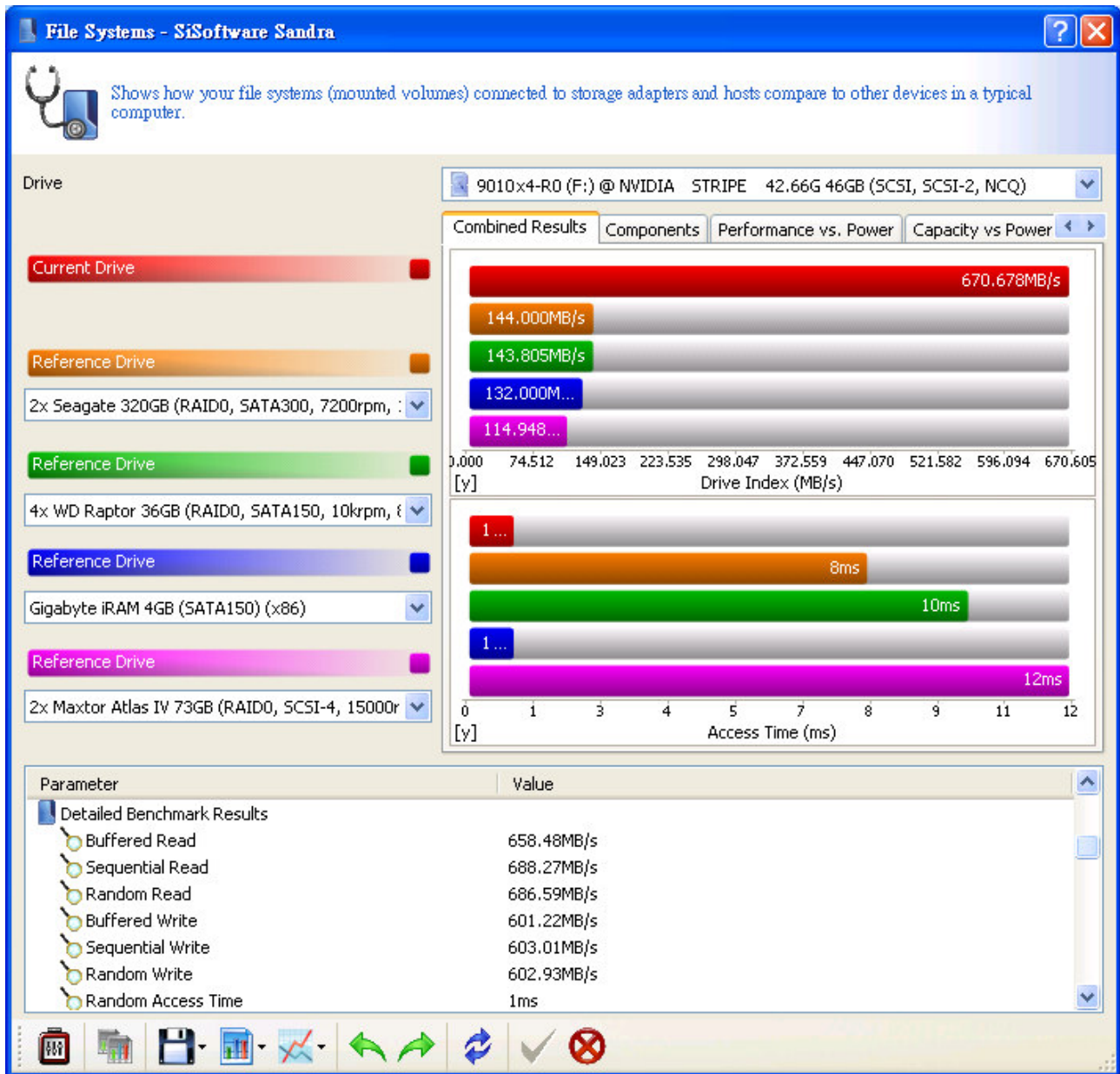
Detailed Benchmark Results:

| Parameter | Value |
|--------------------|------------|
| Buffered Read | 364.40MB/s |
| Sequential Read | 365.35MB/s |
| Random Read | 365.30MB/s |
| Buffered Write | 307.60MB/s |
| Sequential Write | 308.37MB/s |
| Random Write | 308.37MB/s |
| Random Access Time | 1ms |

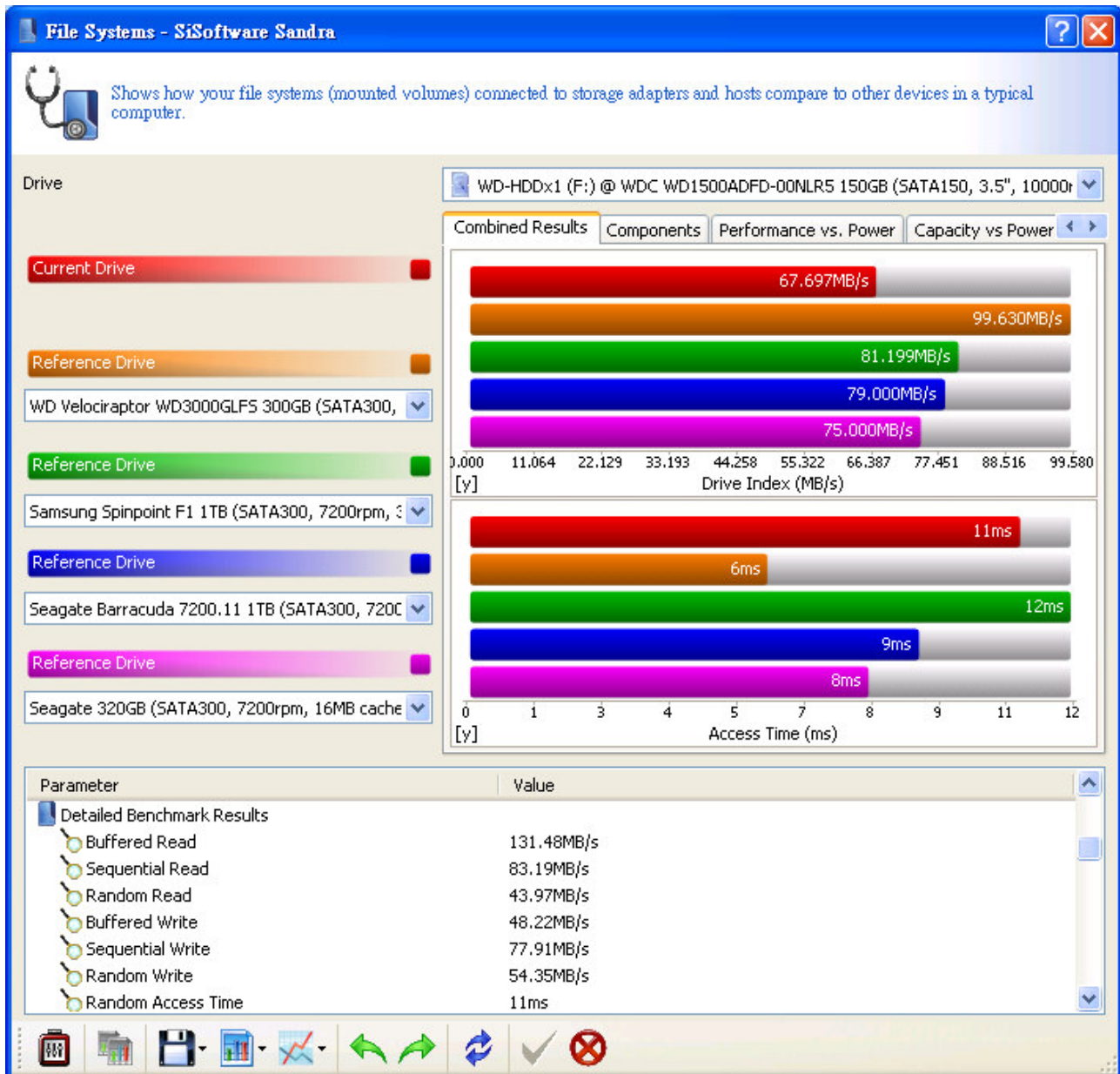
9010 x3 port-RAID0



9010 x4 port-RAID0



WDHDDx1



WDHDDx2-RAID0

