



SPEC[®] CFP2006 Result

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Tyan

(Test Sponsor: Advanced Micro Devices)

SPECfp[®]_rate2006 = Not Run

Transport TX46, AMD Opteron 8356

SPECfp_rate_base2006 = 120

CPU2006 license: 49

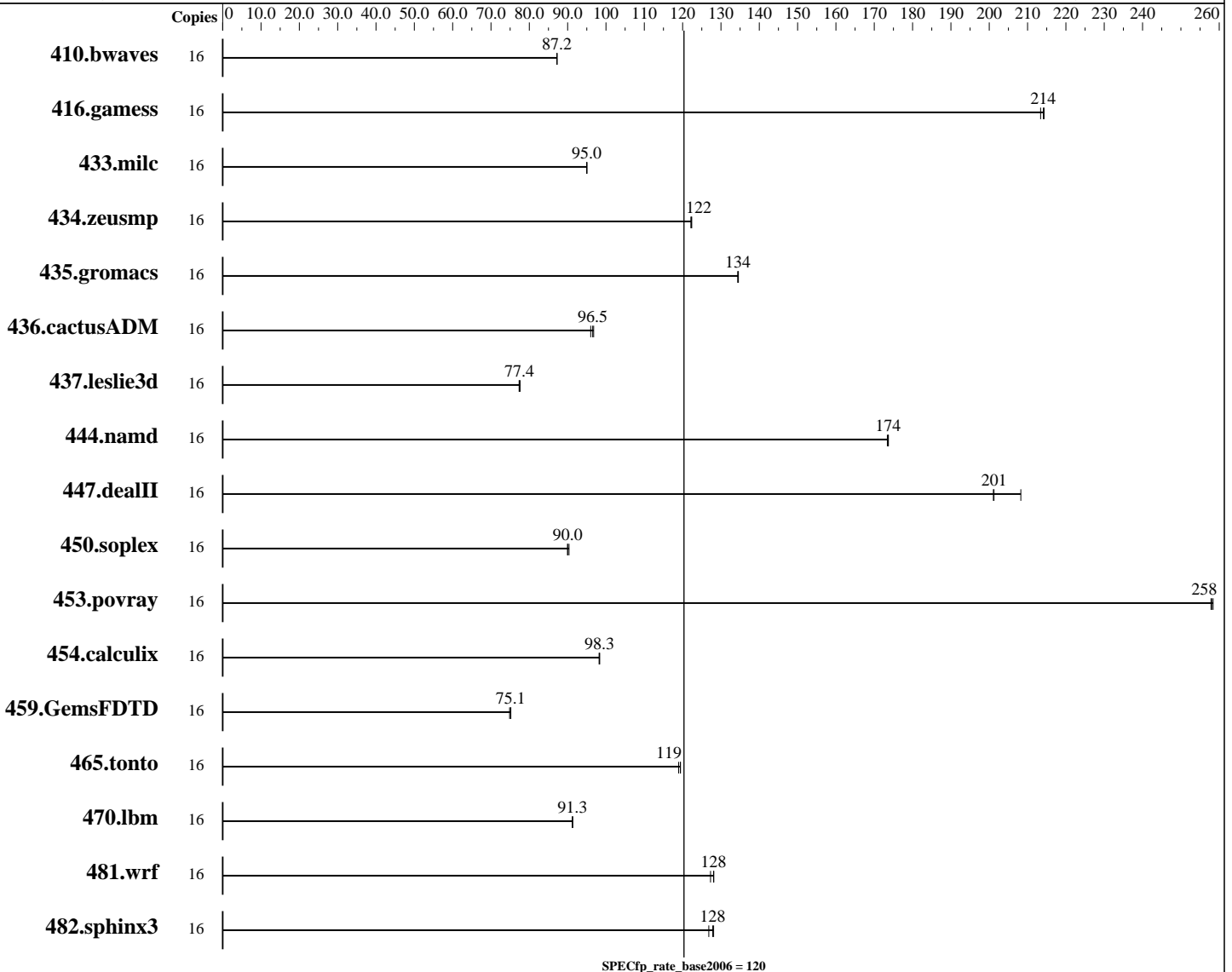
Test sponsor: Advanced Micro Devices

Tested by: Advanced Micro Devices

Test date: Apr-2008

Hardware Availability: Apr-2008

Software Availability: Mar-2008



Hardware

CPU Name: AMD Opteron 8356
 CPU Characteristics:
 CPU MHz: 2300
 FPU: Integrated
 CPU(s) enabled: 16 cores, 4 chips, 4 cores/chip
 CPU(s) orderable: 2,4 chips
 Primary Cache: 64 KB I + 64 KB D on chip per core
 Secondary Cache: 512 KB I+D on chip per core

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Software

Operating System: SuSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
 Compiler: gcc, g++, gfortran 4.3.0
 Auto Parallel: No
 File System: ext3
 System State: Runlevel 3 (Full multiuser with network)
 Base Pointers: 64-bit
 Peak Pointers: Not Applicable
 Other Software: None



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L3 Cache: 2 MB I+D on chip per chip
Other Cache: None
Memory: 32 GB (16 x 2GB, DDR2-667 CL5 ECC Reg Dual Rank)
Disk Subsystem: 1 x 250 GB SATA, 7200 RPM
Other Hardware: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	16	<u>2493</u>	<u>87.2</u>	2493	87.2	2494	87.2							
416.gamess	16	<u>1463</u>	<u>214</u>	1462	214	1468	213							
433.milc	16	<u>1547</u>	<u>95.0</u>	1545	95.1	1547	95.0							
434.zeusmp	16	1192	122	1190	122	<u>1190</u>	<u>122</u>							
435.gromacs	16	<u>850</u>	<u>134</u>	849	135	850	134							
436.cactusADM	16	1991	96.0	<u>1981</u>	<u>96.5</u>	1975	96.8							
437.leslie3d	16	1945	77.3	1938	77.6	<u>1942</u>	<u>77.4</u>							
444.namd	16	740	173	739	174	<u>739</u>	<u>174</u>							
447.dealII	16	<u>910</u>	<u>201</u>	879	208	910	201							
450.soplex	16	<u>1482</u>	<u>90.0</u>	1483	90.0	1477	90.4							
453.povray	16	<u>330</u>	<u>258</u>	329	258	330	258							
454.calculix	16	<u>1343</u>	<u>98.3</u>	1342	98.3	1344	98.2							
459.GemsFDTD	16	<u>2261</u>	<u>75.1</u>	2268	74.9	2258	75.2							
465.tonto	16	<u>1318</u>	<u>119</u>	1318	119	1323	119							
470.lbm	16	2408	91.3	2409	91.3	<u>2409</u>	<u>91.3</u>							
481.wrf	16	1395	128	1404	127	<u>1395</u>	<u>128</u>							
482.sphinx3	16	2459	127	2435	128	<u>2439</u>	<u>128</u>							

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Operating System Notes

'numactl' was used to bind copies to the cores.

Base Compiler Invocation

C benchmarks:

gcc

C++ benchmarks:

g++

Fortran benchmarks:

gfortran

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Base Compiler Invocation (Continued)

Benchmarks using both Fortran and C:
gcc gfortran

Base Portability Flags

```

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64
436.cactusADM: -DSPEC_CPU_LP64
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX -DSPEC_CPU_CASE_FLAG
482.sphinx3: -DSPEC_CPU_LP64

```

Base Optimization Flags

```

C benchmarks:
-O3 -funroll-loops -fno-strict-aliasing

C++ benchmarks:
-O3 -funroll-loops -fno-strict-aliasing

Fortran benchmarks:
-O3 -funroll-loops -fno-strict-aliasing

Benchmarks using both Fortran and C:
-O3 -funroll-loops -fno-strict-aliasing

```

The flags file that was used to format this result can be browsed at

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090713.05.html

You can also download the XML flags source by saving the following link:

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090713.05.xml



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