



# SPEC<sup>®</sup> CFP2006 Result

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## Supermicro

## SPECfp<sup>®</sup>\_rate2006 = Not Run

### A+ Server 2021M-UR+B, AMD Opteron 2356

## SPECfp\_rate\_base2006 = 64.4

CPU2006 license: 49

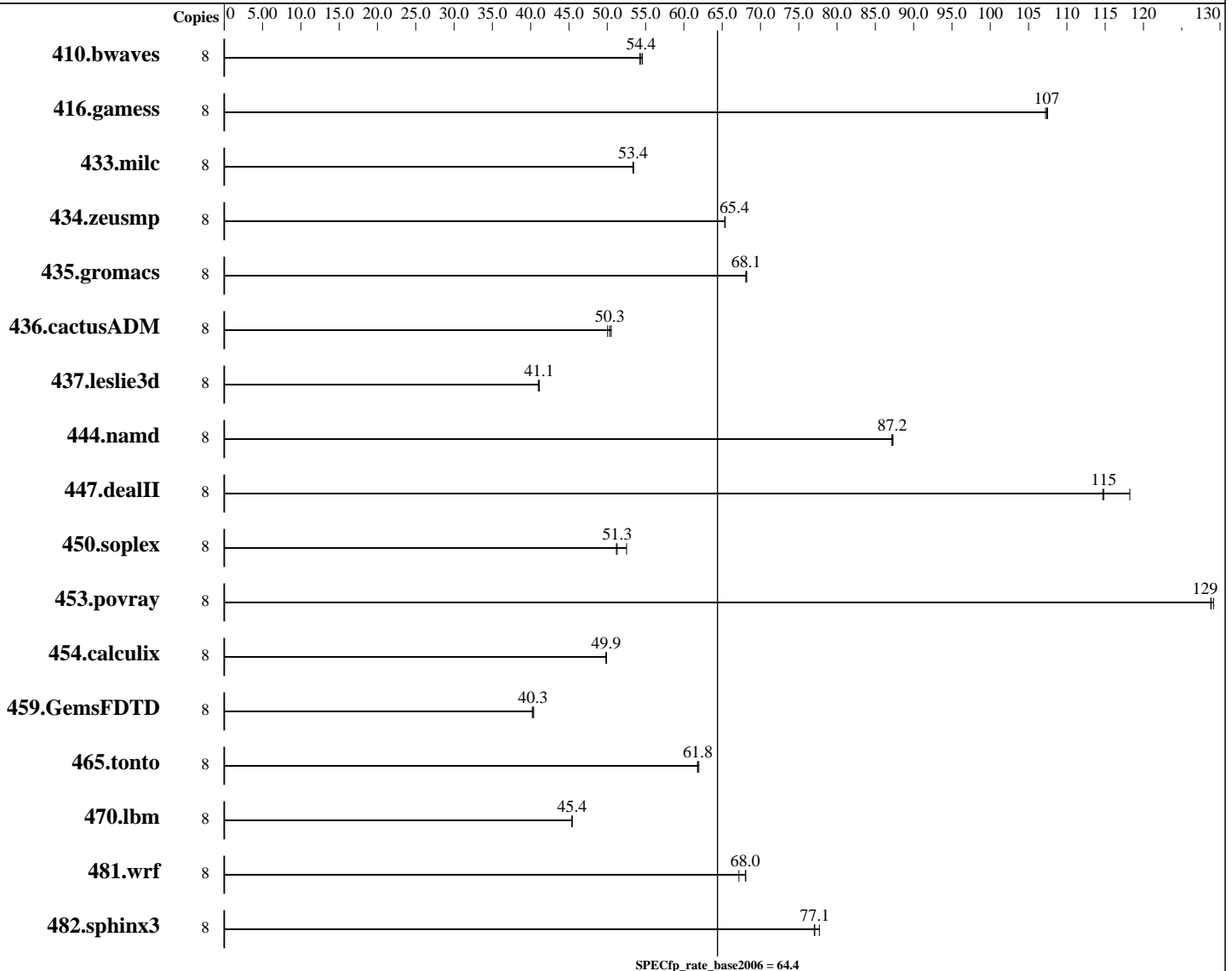
Test sponsor: Advanced Micro Devices

Tested by: Advanced Micro Devices

Test date: Apr-2008

Hardware Availability: Apr-2008

Software Availability: Mar-2008



### Hardware

CPU Name: AMD Opteron 2356  
 CPU Characteristics:  
 CPU MHz: 2300  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip  
 CPU(s) orderable: 1,2 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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### Hardware (Continued)

L3 Cache: 2 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 16 GB (8 x 2GB, DDR2-667 CL5 ECC Reg Dual Rank)  
 Disk Subsystem: 1 x 120 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	8	1991	54.6	<u>1998</u>	<u>54.4</u>	2004	54.3									
416.gamess	8	<u>1459</u>	<u>107</u>	1461	107	1457	107									
433.milc	8	1374	53.4	<u>1376</u>	<u>53.4</u>	1377	53.3									
434.zeusmp	8	<u>1114</u>	<u>65.4</u>	1114	65.3	1113	65.4									
435.gromacs	8	837	68.2	<u>838</u>	<u>68.1</u>	839	68.1									
436.cactusADM	8	<u>1899</u>	<u>50.3</u>	1910	50.1	1892	50.5									
437.leslie3d	8	1829	41.1	<u>1830</u>	<u>41.1</u>	1834	41.0									
444.namd	8	735	87.3	<u>736</u>	<u>87.2</u>	736	87.2									
447.dealII	8	774	118	<u>797</u>	<u>115</u>	798	115									
450.soplex	8	1270	52.5	<u>1301</u>	<u>51.3</u>	1303	51.2									
453.povray	8	<u>330</u>	<u>129</u>	330	129	330	129									
454.calculix	8	1323	49.9	<u>1323</u>	<u>49.9</u>	1324	49.8									
459.GemsFDTD	8	2101	40.4	<u>2107</u>	<u>40.3</u>	2111	40.2									
465.tonto	8	1270	62.0	1274	61.8	<u>1274</u>	<u>61.8</u>									
470.lbm	8	2420	45.4	<u>2421</u>	<u>45.4</u>	2422	45.4									
481.wrf	8	<u>1314</u>	<u>68.0</u>	1313	68.1	1330	67.2									
482.sphinx3	8	2007	77.7	<u>2023</u>	<u>77.1</u>	2024	77.0									

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++

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## Base Compiler Invocation (Continued)

Fortran benchmarks:  
gfortran

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.20090713.04.html](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090713.04.html)

You can also download the XML flags source by saving the following link:  
[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090713.04.xml](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090713.04.xml)



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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.0.  
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