



# SPEC® CFP2006 Result

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**Supermicro  
Motherboard H8DM8-2**

**SPECfp®\_rate2006 = 42.3  
SPECfp\_rate\_base2006 = 42.3**

CPU2006 license: 001176

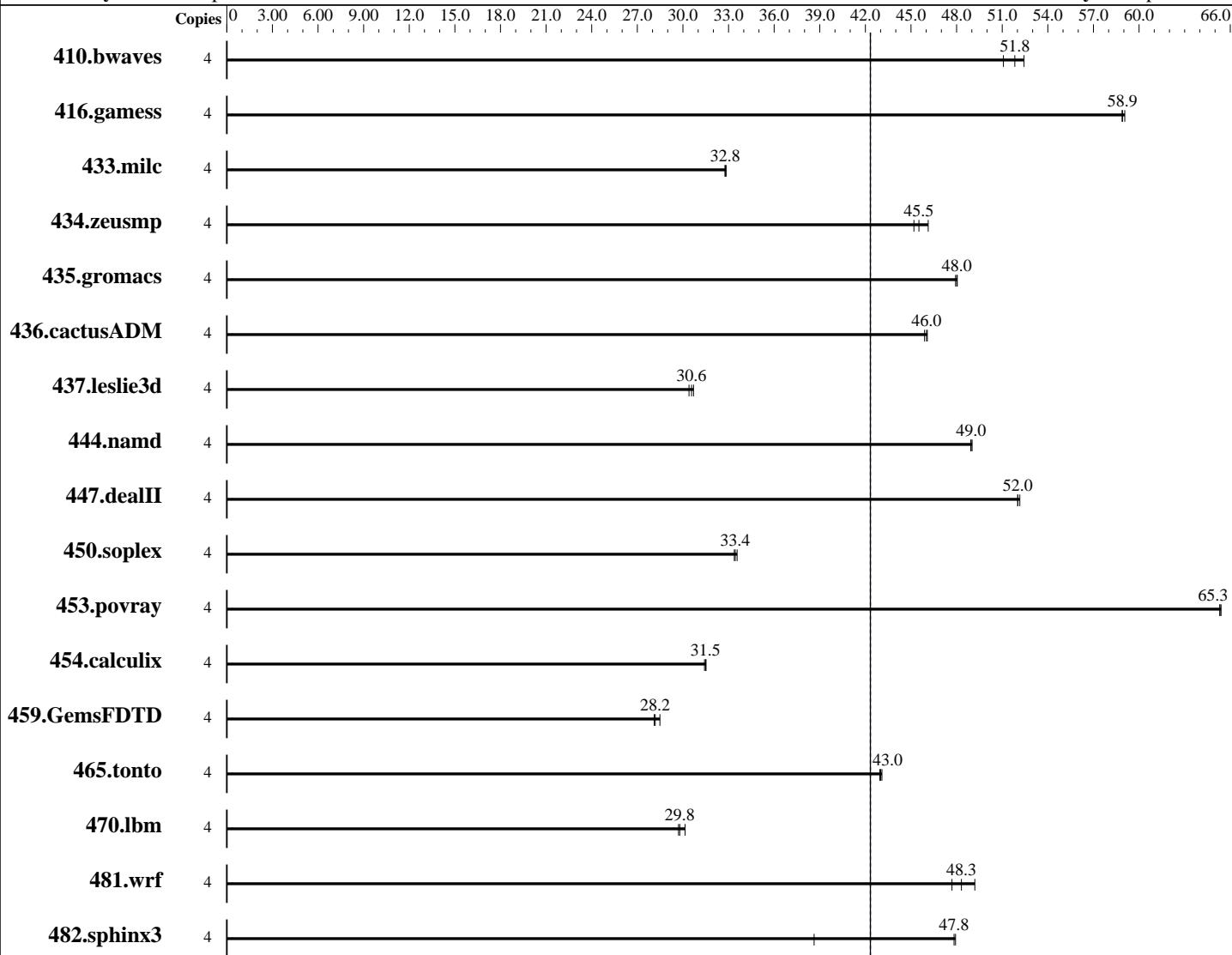
Test sponsor: Supermicro

Tested by: Supermicro

Test date: Mar-2007

Hardware Availability: Jan-2007

Software Availability: Sep-2006



**SPECfp\_rate\_base2006 = 42.3**

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## Hardware

CPU Name: AMD Opteron 2220 SE  
CPU Characteristics: 2.8GHz  
CPU MHz: 2800  
FPU: Integrated  
CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
CPU(s) orderable: 1,2 chips  
Primary Cache: 64 KB I + 64 KB D on chip per core  
Secondary Cache: 1 MB I+D on chip per core

## Software

Operating System: SuSE 10.0 (Kernel 2.6.16.21-0.8-smp x86\_64)  
Compiler: The Portland Group (PGI)  
PGI pgcc 6.2-4 C Compiler  
PGI pgCC 6.2-4 C++ Compiler  
PGI pgf90 6.2-4 Fortran Compiler  
Auto Parallel: No  
File System: ext3  
System State: Multi-user

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L3 Cache: None  
Other Cache: None  
Memory: 64 GB (16x4GB, ECC REG PC25300 CLS)  
Disk Subsystem: 250GB IDE, 7200RPM  
Other Hardware: None

Base Pointers: 64-bit  
Peak Pointers: 64-bit  
Other Software: None

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	1037	52.4	<b>1049</b>	<b>51.8</b>	1064	51.1	4	1037	52.4	<b>1049</b>	<b>51.8</b>	1064	51.1
416.gamess	4	1330	58.9	1326	59.1	<b>1329</b>	<b>58.9</b>	4	1330	58.9	1326	59.1	<b>1329</b>	<b>58.9</b>
433.milc	4	1118	32.8	1121	32.8	<b>1120</b>	<b>32.8</b>	4	1118	32.8	1121	32.8	<b>1120</b>	<b>32.8</b>
434.zeusmp	4	805	45.2	789	46.1	<b>800</b>	<b>45.5</b>	4	805	45.2	789	46.1	<b>800</b>	<b>45.5</b>
435.gromacs	4	594	48.0	596	47.9	<b>595</b>	<b>48.0</b>	4	594	48.0	596	47.9	<b>595</b>	<b>48.0</b>
436.cactusADM	4	<b>1039</b>	<b>46.0</b>	1037	46.1	1042	45.9	4	<b>1039</b>	<b>46.0</b>	1037	46.1	1042	45.9
437.leslie3d	4	<b>1230</b>	<b>30.6</b>	1225	30.7	1237	30.4	4	<b>1230</b>	<b>30.6</b>	1225	30.7	1237	30.4
444.namd	4	<b>655</b>	<b>49.0</b>	654	49.0	656	48.9	4	<b>655</b>	<b>49.0</b>	654	49.0	656	48.9
447.dealII	4	<b>879</b>	<b>52.0</b>	880	52.0	877	52.2	4	<b>879</b>	<b>52.0</b>	880	52.0	877	52.2
450.soplex	4	994	33.6	<b>998</b>	<b>33.4</b>	999	33.4	4	994	33.6	<b>998</b>	<b>33.4</b>	999	33.4
453.povray	4	<b>326</b>	<b>65.3</b>	325	65.4	326	65.3	4	<b>326</b>	<b>65.3</b>	325	65.4	326	65.3
454.calculix	4	1047	31.5	<b>1048</b>	<b>31.5</b>	1050	31.4	4	1047	31.5	<b>1048</b>	<b>31.5</b>	1050	31.4
459.GemsFDTD	4	<b>1506</b>	<b>28.2</b>	1490	28.5	1510	28.1	4	<b>1506</b>	<b>28.2</b>	1490	28.5	1510	28.1
465.tonto	4	<b>915</b>	<b>43.0</b>	913	43.1	916	42.9	4	<b>915</b>	<b>43.0</b>	913	43.1	916	42.9
470.lbm	4	1823	30.1	<b>1845</b>	<b>29.8</b>	1850	29.7	4	1823	30.1	<b>1845</b>	<b>29.8</b>	1850	29.7
481.wrf	4	908	49.2	<b>925</b>	<b>48.3</b>	937	47.7	4	908	49.2	<b>925</b>	<b>48.3</b>	937	47.7
482.sphinx3	4	2018	38.6	1627	47.9	<b>1630</b>	<b>47.8</b>	4	2018	38.6	1627	47.9	<b>1630</b>	<b>47.8</b>

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

## General Notes

Environment stack size set to 'unlimited'

Tested systems can be used with CSE-825S2-560LPV case,

To ensure system stability, a 550W (minimum) ATX power supply [ 4-pin (+12V), 8-pin (+12V) and 24-pin are required]  
Product description located as of <http://www.supermicro.com/Aplus/motherboard/Opteron2000/MCP55/H8DM8-2.cfm>

## Base Compiler Invocation

C benchmarks:

/opt/pgi/624/linux86-64/6.2/bin/pgcc

C++ benchmarks:

/opt/pgi/624/linux86-64/6.2/bin/pgCC

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## Base Compiler Invocation (Continued)

Fortran benchmarks:

/opt/pgi/624/linux86-64/6.2/bin/pgf90

Benchmarks using both Fortran and C:

/opt/pgi/624/linux86-64/6.2/bin/pgcc

/opt/pgi/624/linux86-64/6.2/bin/pgf90

## 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 -Mnomain  
436.cactusADM: -DSPEC\_CPU\_LP64 -Mnomain  
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 -Mnomain  
459.GemsFDTD: -DSPEC\_CPU\_LP64  
465.tonto: -DSPEC\_CPU\_LP64  
470.lbm: -DSPEC\_CPU\_LP64  
481.wrf: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_CASE\_FLAG -DSPEC\_CPU\_LINUX  
482.sphinx3: -DSPEC\_CPU\_LP64

## Base Optimization Flags

C benchmarks:

-fastsse -Mipa=fast -Mipa=inline -Mfprelaxed=rsqrt -Msmaralloc  
-Msignextend -tp k8-64

C++ benchmarks:

-fastsse -Mipa=fast -Mipa=inline -Mfprelaxed=rsqrt -Msmaralloc  
-tp k8-64

Fortran benchmarks:

-fastsse -Mipa=fast -Mipa=inline -Mfprelaxed=rsqrt -Msmaralloc  
-tp k8-64

Benchmarks using both Fortran and C:

-fastsse -Mipa=fast -Mipa=inline -Mfprelaxed=rsqrt -Msmaralloc  
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## Base Other Flags

C benchmarks:

-w

C++ benchmarks:

-w

Fortran benchmarks:

-w

Benchmarks using both Fortran and C:

-w

## Peak Compiler Invocation

C benchmarks:

/opt/pgi/624/linux86-64/6.2/bin/pgcc

C++ benchmarks:

/opt/pgi/624/linux86-64/6.2/bin/pgCC

Fortran benchmarks:

/opt/pgi/624/linux86-64/6.2/bin/pgf90

Benchmarks using both Fortran and C:

/opt/pgi/624/linux86-64/6.2/bin/pgcc

/opt/pgi/624/linux86-64/6.2/bin/pgf90

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

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## Peak Optimization Flags (Continued)

444.namd: basepeak = yes

447.dealII: basepeak = yes

450.soplex: basepeak = yes

453.povray: basepeak = yes

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: basepeak = yes

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: basepeak = yes

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes

## Peak Other Flags

C benchmarks:

-w

C++ benchmarks:

-w

Fortran benchmarks:

-w

Benchmarks using both Fortran and C:

-w



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

[http://www.spec.org/cpu2006/flags/pgi62\\_flags.html](http://www.spec.org/cpu2006/flags/pgi62_flags.html)

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

[http://www.spec.org/cpu2006/flags/pgi62\\_flags.xml](http://www.spec.org/cpu2006/flags/pgi62_flags.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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