SPEC® CFP2006 Result

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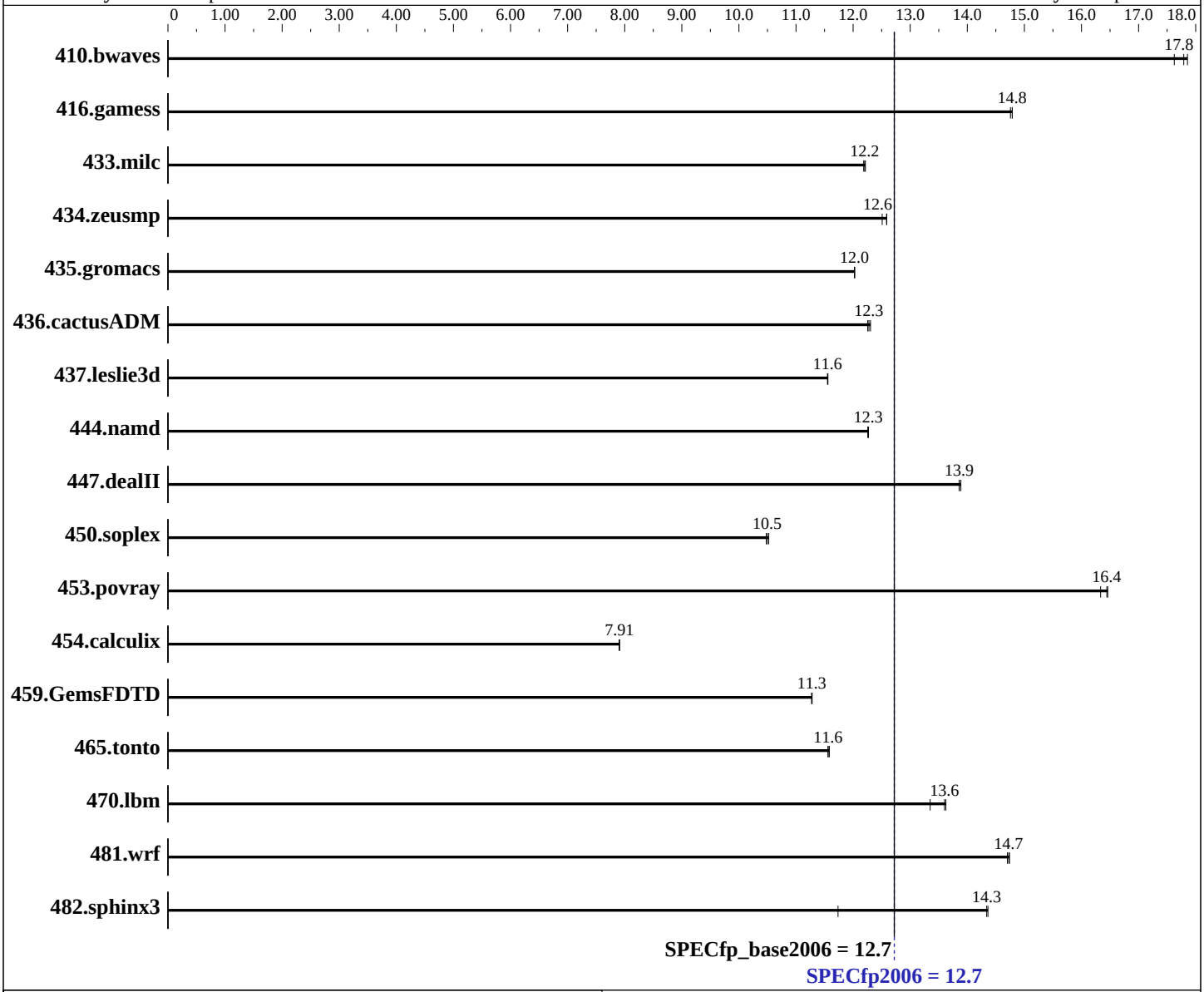
Supermicro Motherboard H8DM8-2

SPECfp®2006 = 12.7

SPECfp_base2006 = 12.7

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

Test date: Mar-2007
Hardware Availability: Jan-2007
Software Availability: Sep-2006



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

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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, 7200 RPM
Other Hardware: None

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

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	**764**	**17.8**	771	17.6	761	17.9	**764**	**17.8**	771	17.6	761	17.9
416.gamess	1324	14.8	1327	14.8	**1324**	**14.8**	1324	14.8	1327	14.8	**1324**	**14.8**
433.milc	752	12.2	753	12.2	**752**	**12.2**	752	12.2	753	12.2	**752**	**12.2**
434.zeusmp	723	12.6	727	12.5	**723**	**12.6**	723	12.6	727	12.5	**723**	**12.6**
435.gromacs	594	12.0	594	12.0	**594**	**12.0**	594	12.0	594	12.0	**594**	**12.0**
436.cactusADM	975	12.3	971	12.3	**973**	**12.3**	975	12.3	971	12.3	**973**	**12.3**
437.leslie3d	**813**	**11.6**	814	11.6	813	11.6	**813**	**11.6**	814	11.6	813	11.6
444.namd	**654**	**12.3**	654	12.3	654	12.3	**654**	**12.3**	654	12.3	654	12.3
447.dealII	824	13.9	825	13.9	**825**	**13.9**	824	13.9	825	13.9	**825**	**13.9**
450.soplex	**795**	**10.5**	793	10.5	796	10.5	**795**	**10.5**	793	10.5	796	10.5
453.povray	323	16.5	**324**	**16.4**	326	16.3	323	16.5	**324**	**16.4**	326	16.3
454.calculix	1044	7.90	1043	7.91	**1043**	**7.91**	1044	7.90	1043	7.91	**1043**	**7.91**
459.GemsFDTD	940	11.3	941	11.3	**941**	**11.3**	940	11.3	941	11.3	**941**	**11.3**
465.tonto	849	11.6	**851**	**11.6**	851	11.6	849	11.6	**851**	**11.6**	851	11.6
470.lbm	1008	13.6	1029	13.3	**1010**	**13.6**	1008	13.6	1029	13.3	**1010**	**13.6**
481.wrf	**759**	**14.7**	758	14.7	760	14.7	**759**	**14.7**	758	14.7	760	14.7
482.sphinx3	**1359**	**14.3**	1357	14.4	1661	11.7	**1359**	**14.3**	1357	14.4	1661	11.7

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 -Msmartalloc
-Msignextend -tp k8-64

C++ benchmarks:
-fastsse -Mipa=fast -Mipa=inline -Mfprelaxed=rsqrt -Msmartalloc
-tp k8-64

Fortran benchmarks:
-fastsse -Mipa=fast -Mipa=inline -Mfprelaxed=rsqrt -Msmartalloc
-tp k8-64

Benchmarks using both Fortran and C:
-fastsse -Mipa=fast -Mipa=inline -Mfprelaxed=rsqrt -Msmartalloc
-Msignextend -tp k8-64

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:

Continued on next page

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

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

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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