SPEC® CFP2006 Result

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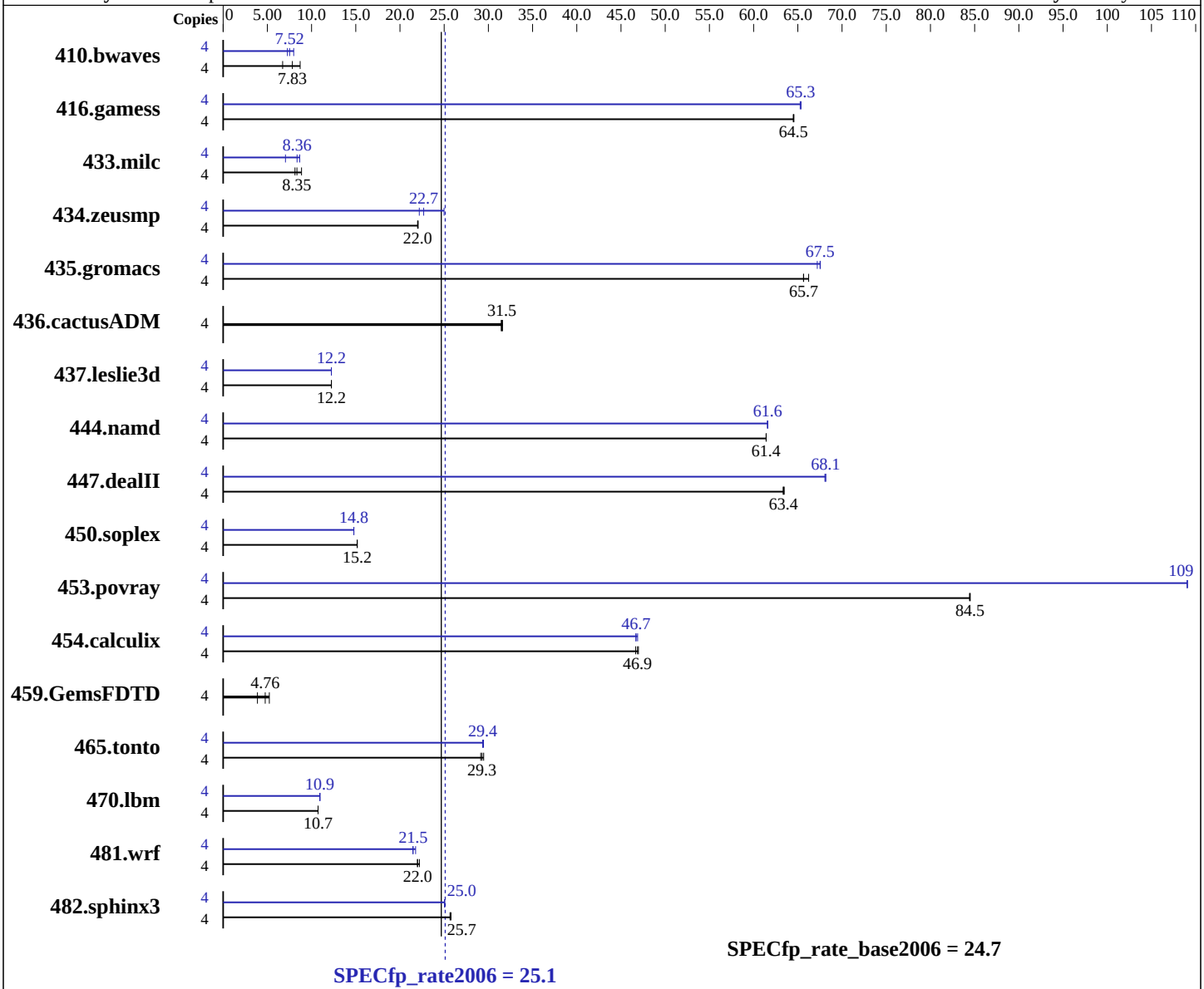
Supermicro Motherboard X7DB3

SPECfp®_rate2006 = 25.1

SPECfp_rate_base2006 = 24.7

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

Test date: Jul-2007
Hardware Availability: May-2007
Software Availability: May-2007



Hardware

CPU Name:	Intel Xeon 5160
CPU Characteristics:	3.0GHz 1333MHz System Bus
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1, 2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per chip

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Software

Operating System:	Windows Server 2003 Enterprise Edition W/ SP1
Compiler:	Intel C++ Compiler for IA32 version 10.0 Build 20070426 Package ID: W_CC_P_10.0.025 Intel Fortran Compiler for IA32 version 10.0 Build 20070426 Package ID: W_FC_P_10.0.025 Microsoft Visual Studio .Net 2003 (for libraries)
Auto Parallel:	No
File System:	NTFS
System State:	Default

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L3 Cache: None
Other Cache: None
Memory: 2 GB (2 X 1GB ECC PC2-4200 FBDIMM)
Disk Subsystem: 1 X WD1600JB IDE 7200 RPM
Other Hardware: None

Base Pointers: 32-bit
Peak Pointers: 32-bit
Other Software: SmartHeap Library Version 8.0 from http://www.microquill.com/

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	6242	8.71	8080	6.73	**6945**	**7.83**	4	7481	7.27	6812	7.98	**7230**	**7.52**
416.gamess	4	1213	64.6	**1214**	**64.5**	1215	64.5	4	1200	65.3	1198	65.4	**1199**	**65.3**
433.milc	4	**4400**	**8.35**	4142	8.87	4520	8.12	4	5210	7.05	**4393**	**8.36**	4239	8.66
434.zeusmp	4	1650	22.1	**1653**	**22.0**	1655	22.0	4	1457	25.0	**1605**	**22.7**	1641	22.2
435.gromacs	4	**435**	**65.7**	435	65.6	431	66.2	4	**423**	**67.5**	425	67.2	423	67.6
436.cactusADM	4	1513	31.6	1520	31.4	**1516**	**31.5**	4	1513	31.6	1520	31.4	**1516**	**31.5**
437.leslie3d	4	3072	12.2	**3071**	**12.2**	3071	12.2	4	**3072**	**12.2**	3071	12.2	3072	12.2
444.namd	4	522	61.4	522	61.4	**522**	**61.4**	4	521	61.6	**521**	**61.6**	521	61.6
447.dealII	4	721	63.5	722	63.3	**722**	**63.4**	4	672	68.1	**672**	**68.1**	671	68.2
450.soplex	4	2199	15.2	**2200**	**15.2**	2202	15.2	4	2257	14.8	**2257**	**14.8**	2256	14.8
453.povray	4	252	84.5	**252**	**84.5**	252	84.4	4	**195**	**109**	195	109	195	109
454.calculix	4	707	46.7	703	47.0	**704**	**46.9**	4	707	46.7	704	46.9	**707**	**46.7**
459.GemsFDTD	4	10944	3.88	**8922**	**4.76**	8126	5.22	4	10944	3.88	**8922**	**4.76**	8126	5.22
465.tonto	4	**1344**	**29.3**	1336	29.5	1351	29.1	4	**1340**	**29.4**	1337	29.4	1341	29.3
470.lbm	4	**5119**	**10.7**	5119	10.7	5121	10.7	4	5022	10.9	**5023**	**10.9**	5025	10.9
481.wrf	4	2033	22.0	2012	22.2	**2031**	**22.0**	4	**2079**	**21.5**	2052	21.8	2082	21.5
482.sphinx3	4	**3031**	**25.7**	3026	25.8	3038	25.7	4	**3112**	**25.0**	3114	25.0	3111	25.1

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

General Notes

```
Tested systems can be used with CSE-825TQ-R700LPV case,
Product description located as of
http://www.supermicro.com/products/motherboard/Xeon1333/5000P/X7DB3.cfm
The system bus runs at 1333 MHz
submit was used to bind processes to cores
```

Base Compiler Invocation

C benchmarks:

```
icl -Qvc7.1 -Qc99
```

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Base Compiler Invocation (Continued)

C++ benchmarks:
icl -Qvc7.1

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qvc7.1 -Qc99 ifort

Base Portability Flags

436.cactusADM: -Qlowercase /assume:underscore
444.namd: -TP
447.dealII: -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG -DBOOST_NO_INTRINSIC_WCHAR_T
453.povray: -DSPEC_CPU_WINDOWS_ICL
454.calculix: -DSPEC_CPU_NOZMODIFIER -Qlowercase
481.wrf: -DSPEC_CPU_WINDOWS_ICL

Base Optimization Flags

C benchmarks:
-fast /F950000000 shlw32m.lib -link /FORCE:MULTIPLE

C++ benchmarks:
-fast -Qcxx_features /F950000000 shlw32m.lib -link /FORCE:MULTIPLE

Fortran benchmarks:
-fast /F950000000

Benchmarks using both Fortran and C:
-fast /F950000000

Peak Compiler Invocation

C benchmarks:
icl -Qvc7.1 -Qc99

C++ benchmarks:
icl -Qvc7.1

Fortran benchmarks:
ifort

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Peak Compiler Invocation (Continued)

Benchmarks using both Fortran and C:
icl -Qvc7.1 -Qc99 ifort

Peak Portability Flags

436.cactusADM: -Qlowercase /assume:underscore
444.namd: -TP
447.dealII: -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
-DBOOST_NO_INTRINSIC_WCHAR_T
453.povray: -DSPEC_CPU_WINDOWS_ICL
454.calculix: -DSPEC_CPU_NOZMODIFIER -Qlowercase
481.wrf: -DSPEC_CPU_WINDOWS_ICL

Peak Optimization Flags

C benchmarks:

433.milc: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qunroll2 -Oa
/F950000000 shlw32m.lib -link /FORCE:MULTIPLE

470.lbm: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qunroll2
-Qscalar-rep- -Qprefetch /F950000000 shlw32m.lib
-link /FORCE:MULTIPLE

482.sphinx3: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qunroll2
/F950000000 shlw32m.lib -link /FORCE:MULTIPLE

C++ benchmarks:

444.namd: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Oa
-Qcxx_features /F950000000 shlw32m.lib
-link /FORCE:MULTIPLE

447.dealII: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qprefetch
-Qcxx_features /F950000000 shlw32m.lib
-link /FORCE:MULTIPLE

450.soplex: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx_features
/F950000000 shlw32m.lib -link /FORCE:MULTIPLE

453.povray: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qansi-alias
-Qcxx_features /F950000000 shlw32m.lib
-link /FORCE:MULTIPLE

Fortran benchmarks:

Continued on next page

Peak Optimization Flags (Continued)

410.bwaves: `-fast /F950000000`

416.gamess: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast -Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep- /F950000000`

434.zeusmp: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-QxT -O2 -Qprec_div- -Qunroll0 -Qscalar-rep- /F950000000`

437.leslie3d: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast /F950000000`

459.GemsFDTD: `basepeak = yes`

465.tonto: `Same as 437.leslie3d`

Benchmarks using both Fortran and C:

435.gromacs: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast -Oa /F950000000`

436.cactusADM: `basepeak = yes`

454.calculix: `-fast /F950000000`

481.wrf: `Same as 454.calculix`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.18.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.18.xml`

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For other inquiries, please contact webmaster@spec.org.

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