SPEC® CFP2006 Result

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Intel Corporation

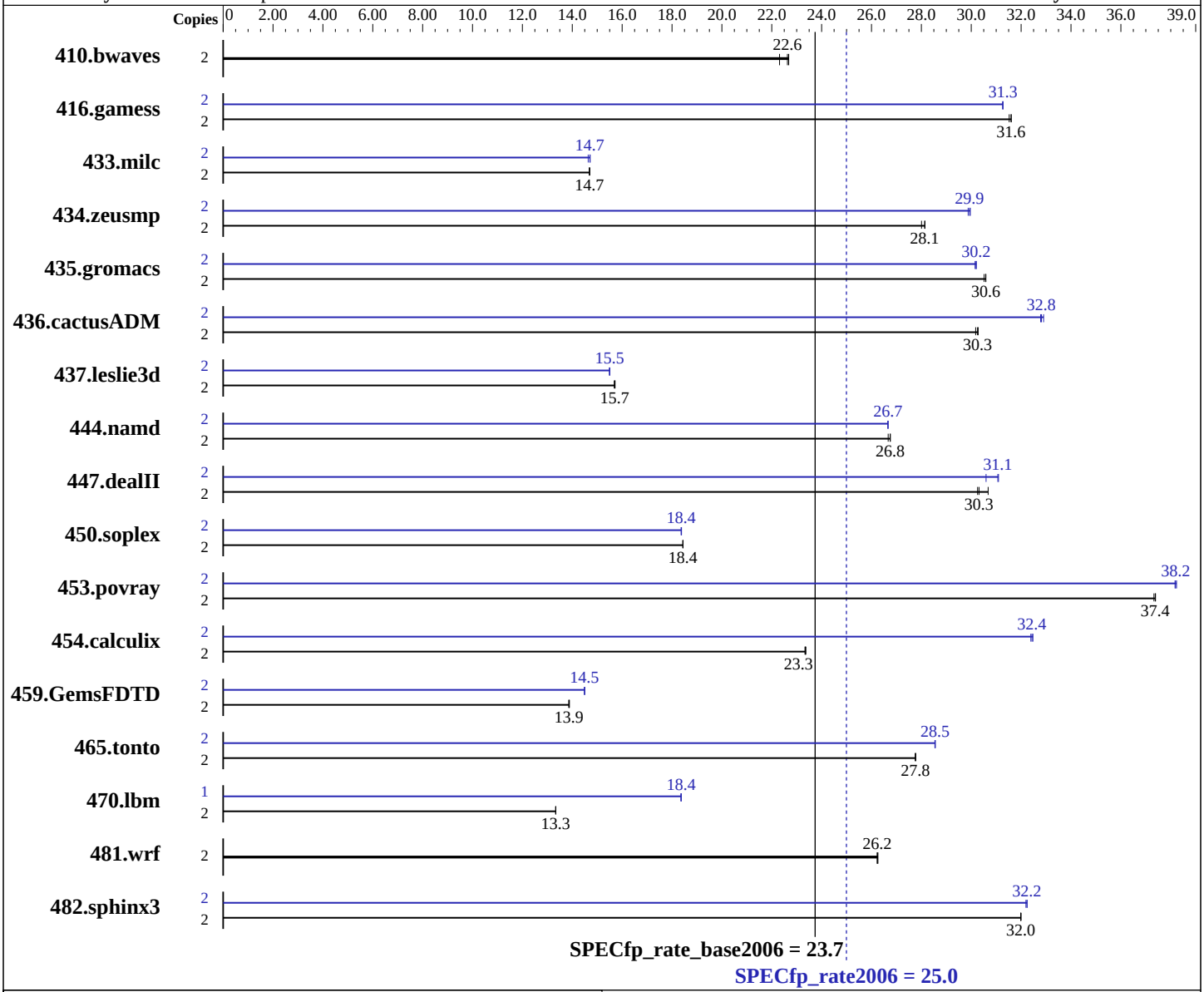
Alienware Area-51 M15x-R1 (Intel Core 2 Duo T9500)

SPECfp®_rate2006 = 25.0

SPECfp_rate_base2006 = 23.7

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: Dec-2007
Hardware Availability: Jan-2008
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Core 2 Duo T9500
CPU Characteristics:	
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
CPU(s) orderable:	1 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	6 MB I+D on chip per chip

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Software

Operating System:	Windows Vista Ultimate(32-bit)
Compiler:	Intel C++ Compiler for IA32 version 10.1 Build 20070913 Package ID: w_cc_p_10.1.011 Intel Fortran Compiler for IA32 version 10.1 Build 20070913 Package ID: w_fc_p_10.1.011 Microsoft Visual Studio 2005 SP1 (for libraries)
Auto Parallel:	Yes
File System:	NTFS
System State:	Default

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L3 Cache: None
Other Cache: None
Memory: 2 GB (2x1GB Qimonda DDR2-667 CL5)
Disk Subsystem: Fujitsu 120GB GB SATA, 7200 RPM
Other Hardware: None

Base Pointers: 32-bit
Peak Pointers: 32-bit
Other Software: None
SmartHeap Library Version 8.1 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	2	1218	22.3	1198	22.7	**1201**	**22.6**	2	1218	22.3	1198	22.7	**1201**	**22.6**
416.gamess	2	1242	31.5	1239	31.6	**1239**	**31.6**	2	1253	31.3	1252	31.3	**1252**	**31.3**
433.milc	2	1250	14.7	1249	14.7	**1250**	**14.7**	2	1254	14.6	1247	14.7	**1249**	**14.7**
434.zeusmp	2	650	28.0	**647**	**28.1**	647	28.1	2	607	30.0	**608**	**29.9**	609	29.9
435.gromacs	2	468	30.5	467	30.6	**467**	**30.6**	2	**473**	**30.2**	474	30.2	473	30.2
436.cactusADM	2	792	30.2	**790**	**30.3**	789	30.3	2	726	32.9	729	32.8	**728**	**32.8**
437.leslie3d	2	1199	15.7	**1197**	**15.7**	1196	15.7	2	1214	15.5	1212	15.5	**1213**	**15.5**
444.namd	2	601	26.7	**600**	**26.8**	600	26.8	2	**602**	**26.7**	602	26.7	602	26.7
447.dealII	2	746	30.7	**755**	**30.3**	756	30.3	2	748	30.6	**736**	**31.1**	736	31.1
450.soplex	2	905	18.4	904	18.4	**905**	**18.4**	2	908	18.4	**908**	**18.4**	907	18.4
453.povray	2	285	37.3	285	37.4	**285**	**37.4**	2	279	38.2	**279**	**38.2**	278	38.2
454.calculix	2	707	23.3	**707**	**23.3**	706	23.4	2	509	32.4	508	32.5	**509**	**32.4**
459.GemsFDTD	2	1528	13.9	1531	13.9	**1529**	**13.9**	2	1465	14.5	**1464**	**14.5**	1463	14.5
465.tonto	2	**709**	**27.8**	709	27.8	709	27.8	2	**689**	**28.5**	689	28.6	689	28.5
470.lbm	2	2060	13.3	2061	13.3	**2060**	**13.3**	1	748	18.4	**748**	**18.4**	749	18.4
481.wrf	2	852	26.2	**852**	**26.2**	851	26.3	2	852	26.2	**852**	**26.2**	851	26.3
482.sphinx3	2	1218	32.0	**1219**	**32.0**	1219	32.0	2	1211	32.2	**1209**	**32.2**	1209	32.2

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

General Notes

```
The system bus runs at 800 MHz
Binaries were built on Windows Vista32
The following VS 2005 SP1 updates were applied: KB926601 and KB932232
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to physical,0
The start command with the /affinity switch was used to bind processes to cores
```

Base Compiler Invocation

C benchmarks:

```
icl -Qvc8 -Qc99
```

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Base Compiler Invocation (Continued)

C++ benchmarks:
```
icl -Qvc8
```

Fortran benchmarks:
```
ifort
```

Benchmarks using both Fortran and C:
```
icl -Qvc8 -Qc99 ifort
```

Base Portability Flags

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

Base Optimization Flags

C benchmarks:
```
-fast /F1000000000
```

C++ benchmarks:
```
-fast -Qcxx_features /F1000000000 shlw32m.lib
            -link /FORCE:MULTIPLE
```

Fortran benchmarks:
```
-fast /F1000000000
```

Benchmarks using both Fortran and C:
```
-fast /F1000000000
```

Peak Compiler Invocation

C benchmarks:
```
icl -Qvc8 -Qc99
```

C++ benchmarks:
```
icl -Qvc8
```

Fortran benchmarks:
```
ifort
```

Continued on next page

Peak Compiler Invocation (Continued)

Benchmarks using both Fortran and C:
icl -Qvc8 -Qc99 ifort

Peak Portability Flags

436.cactusADM: -Qlowercase /assume:underscore
444.namd: -TP
447.dealII: -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
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: -fast -Qunroll2 -Oa /F1000000000

470.lbm: -fast -Qunroll2 -Qscalar-rep- -Qprefetch /F1000000000

482.sphinx3: -fast -Qunroll2 /F1000000000

C++ benchmarks:

444.namd: -fast -Oa -Qcxx_features /F1000000000 shlw32m.lib
-link /FORCE:MULTIPLE

447.dealII: -fast -Qunroll2 -Qprefetch -Qcxx_features /F1000000000
shlw32m.lib -link /FORCE:MULTIPLE

450.soplex: -fast -Qcxx_features /F1000000000 shlw32m.lib
-link /FORCE:MULTIPLE

453.povray: -fast -Qunroll4 -Qansi-alias -Qcxx_features /F1000000000
shlw32m.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -fast -Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep-
/F1000000000

434.zeusmp: -QxT -O2 -Qprec-div- -Qunroll0 -Qscalar-rep- /F1000000000

Continued on next page

Peak Optimization Flags (Continued)

437.leslie3d: `-fast -Qprefetch /F1000000000`

459.GemsFDTD: `-fast -Qunroll2 -Ob0 -Qprefetch /F1000000000`

465.tonto: `-fast -Qunroll4 -Qauto /F1000000000`

Benchmarks using both Fortran and C:

435.gromacs: `-fast -Oa -Qprefetch /F1000000000`

436.cactusADM: `-fast -Qunroll2 -Qprefetch /F1000000000`

454.calculix: `-fast -Qunroll-aggressive /F1000000000`

481.wrf: `basepeak = yes`

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.20090714.09.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.20090714.09.xml`

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

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