SPEC® CFP2006 Result

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Intel Corporation

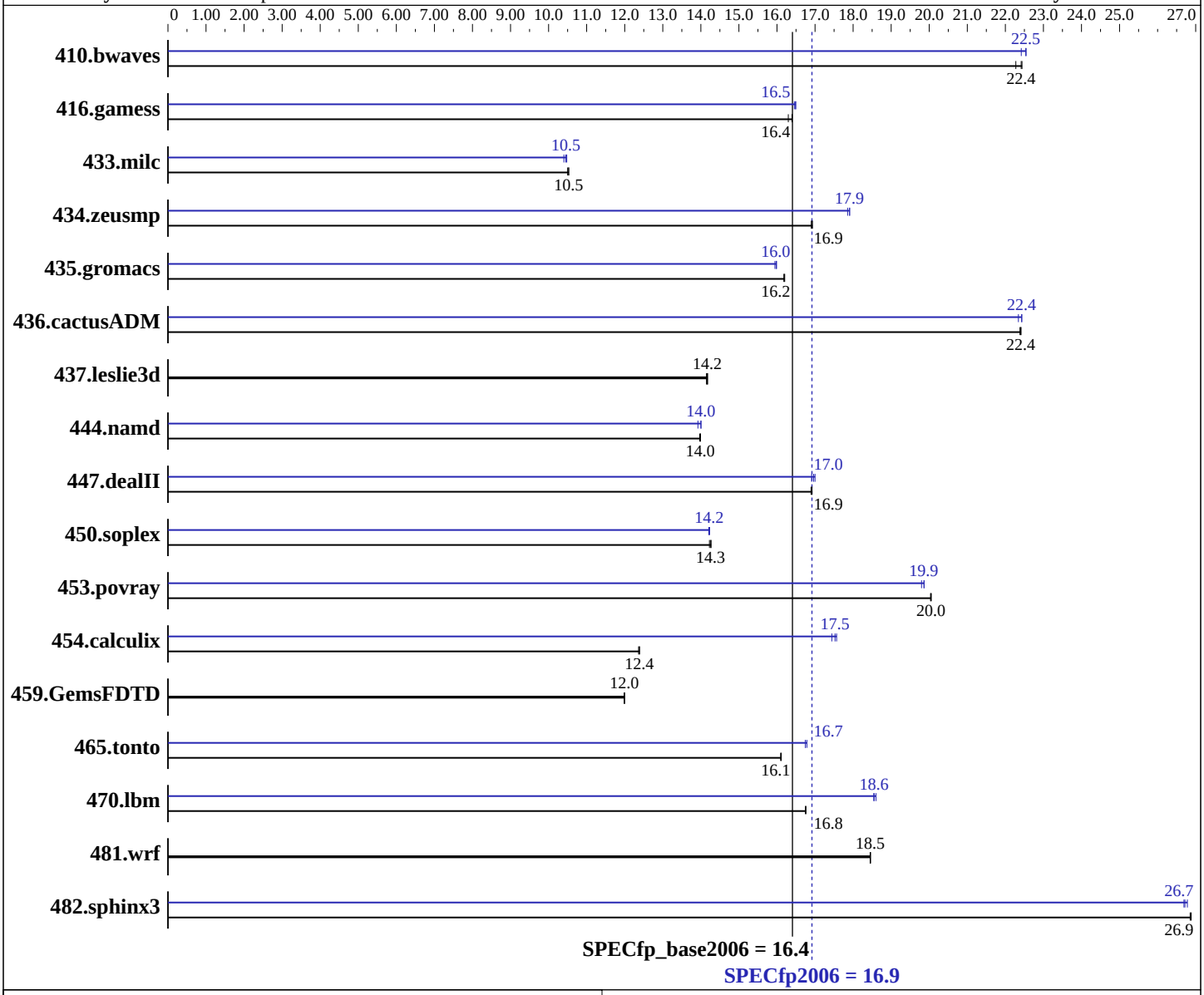
Alienware Area-51 M15x-R1 (Intel Core 2 Duo T9500)

SPECfp®2006 = 16.9

SPECfp_base2006 = 16.4

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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	610	22.3	**606**	**22.4**	606	22.4	**603**	**22.5**	603	22.5	606	22.4
416.gamess	1201	16.3	1194	16.4	**1194**	**16.4**	**1188**	**16.5**	1187	16.5	1190	16.5
433.milc	874	10.5	872	10.5	**872**	**10.5**	876	10.5	**878**	**10.5**	882	10.4
434.zeusmp	538	16.9	538	16.9	**538**	**16.9**	**508**	**17.9**	508	17.9	510	17.9
435.gromacs	**441**	**16.2**	441	16.2	441	16.2	**447**	**16.0**	447	16.0	448	15.9
436.cactusADM	534	22.4	**533**	**22.4**	533	22.4	**533**	**22.4**	533	22.4	535	22.3
437.leslie3d	664	14.1	**663**	**14.2**	663	14.2	664	14.1	**663**	**14.2**	663	14.2
444.namd	574	14.0	573	14.0	**573**	**14.0**	**573**	**14.0**	573	14.0	576	13.9
447.dealII	**676**	**16.9**	677	16.9	676	16.9	**674**	**17.0**	673	17.0	676	16.9
450.soplex	586	14.2	585	14.3	**585**	**14.3**	586	14.2	**587**	**14.2**	587	14.2
453.povray	**265**	**20.0**	265	20.1	266	20.0	268	19.9	269	19.8	**268**	**19.9**
454.calculix	667	12.4	666	12.4	**666**	**12.4**	470	17.6	473	17.4	**471**	**17.5**
459.GemsFDTD	**885**	**12.0**	885	12.0	885	12.0	**885**	**12.0**	885	12.0	885	12.0
465.tonto	**611**	**16.1**	611	16.1	611	16.1	586	16.8	588	16.7	**588**	**16.7**
470.lbm	**820**	**16.8**	820	16.8	820	16.8	739	18.6	**741**	**18.6**	741	18.5
481.wrf	605	18.4	**605**	**18.5**	605	18.5	605	18.4	**605**	**18.5**	605	18.5
482.sphinx3	726	26.9	**725**	**26.9**	725	26.9	728	26.8	**729**	**26.7**	730	26.7

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
```

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 -Qparallel /F1000000000 libguide40.lib
```

C++ benchmarks:
```
-fast -Qparallel -Qcxx_features /F1000000000 shlw32m.lib
libguide40.lib             -link /FORCE:MULTIPLE
```

Fortran benchmarks:
```
-fast -Qparallel /F1000000000 libguide40.lib
```

Benchmarks using both Fortran and C:
```
-fast -Qparallel /F1000000000 libguide40.lib
```

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 libguide40.lib

470.lbm: -fast -Qunroll2 -Qscalar-rep- -Qprefetch /F1000000000 libguide40.lib

482.sphinx3: -fast -Qunroll2 /F1000000000 libguide40.lib

C++ benchmarks:

444.namd: -fast -Oa -Qcxx_features /F1000000000 shlw32m.lib libguide40.lib -link /FORCE:MULTIPLE

447.dealII: -fast -Qunroll2 -Qprefetch -Qcxx_features /F1000000000 shlw32m.lib libguide40.lib -link /FORCE:MULTIPLE

450.soplex: -fast -Qparallel -Qcxx_features /F1000000000 shlw32m.lib libguide40.lib -link /FORCE:MULTIPLE

453.povray: -fast -Qunroll4 -Qcxx_features /F1000000000 shlw32m.lib libguide40.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: -fast -Qparallel -Qprefetch /F1000000000 libguide40.lib

416.gamess: -fast -Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep- /F1000000000 libguide40.lib

434.zeusmp: -QxT -O2 -Qprec-div- -Qunroll0 -Qscalar-rep- /F1000000000 libguide40.lib

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Peak Optimization Flags (Continued)

437.leslie3d: `basepeak = yes`

459.GemsFDTD: `basepeak = yes`

465.tonto: `-fast -Qunroll4 -Qauto /F1000000000 libguide40.lib`

Benchmarks using both Fortran and C:

435.gromacs: `-fast -Oa -Qprefetch /F1000000000 libguide40.lib`

436.cactusADM: `-fast -Qunroll2 -Qparallel -Qprefetch /F1000000000 libguide40.lib`

454.calculix: `-fast -Qunroll-aggressive /F1000000000 libguide40.lib`

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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