SPEC® CFP2006 Result

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Intel Corporation

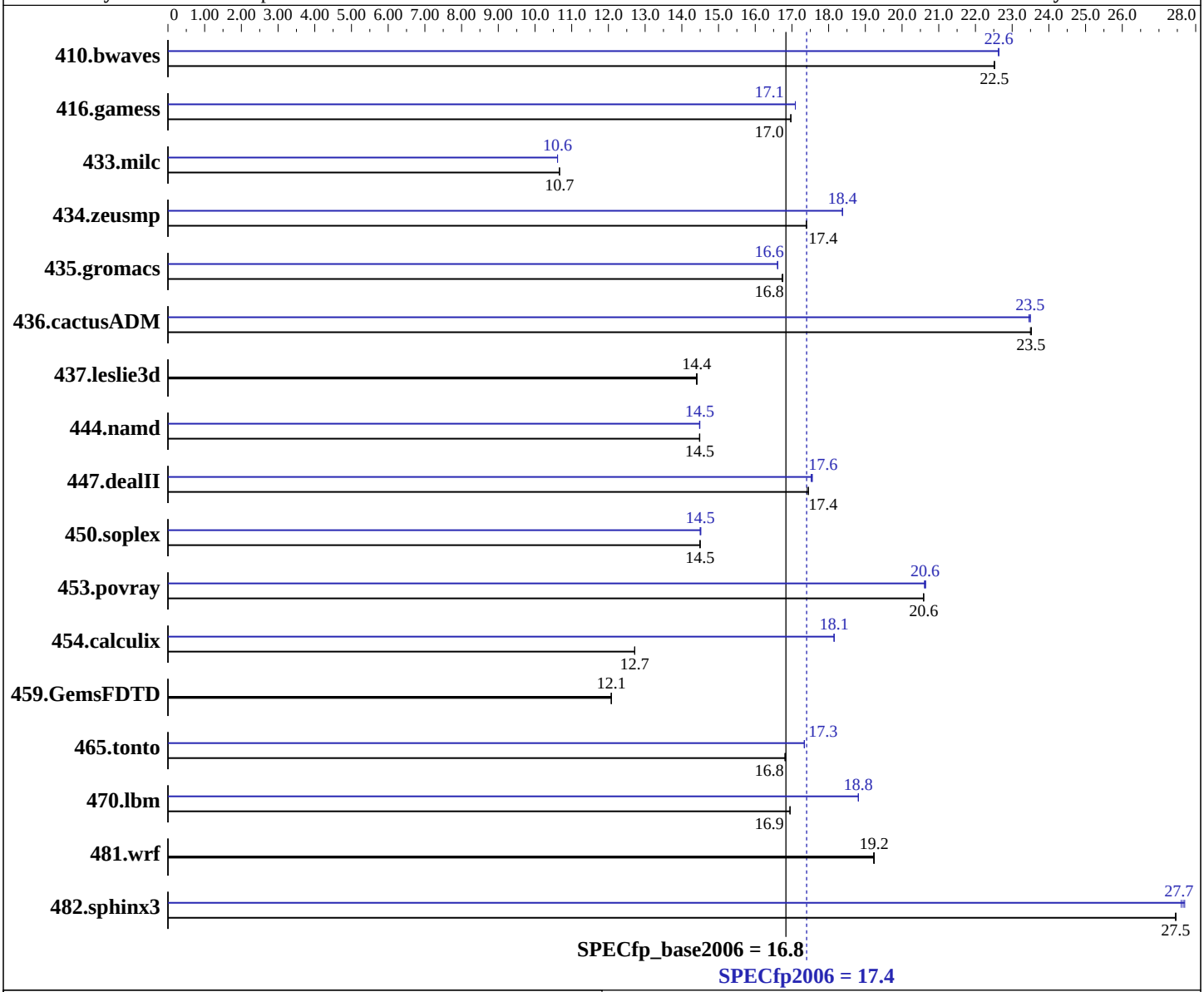
Alienware Area-51 M15x-R1 (Intel Core 2 Extreme X9000)

SPECfp®2006 = 17.4

SPECfp_base2006 = 16.8

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 Extreme X9000
CPU Characteristics:	
CPU MHz:	2800
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	604	22.5	603	22.5	**604**	**22.5**	600	22.6	601	22.6	**600**	**22.6**
416.gamess	**1154**	**17.0**	1154	17.0	1154	17.0	**1146**	**17.1**	1145	17.1	1146	17.1
433.milc	861	10.7	861	10.7	**861**	**10.7**	865	10.6	865	10.6	**865**	**10.6**
434.zeusmp	523	17.4	523	17.4	**523**	**17.4**	495	18.4	**495**	**18.4**	495	18.4
435.gromacs	427	16.7	426	16.8	**426**	**16.8**	430	16.6	430	16.6	**430**	**16.6**
436.cactusADM	509	23.5	508	23.5	**508**	**23.5**	**509**	**23.5**	509	23.5	509	23.5
437.leslie3d	653	14.4	**652**	**14.4**	652	14.4	653	14.4	**652**	**14.4**	652	14.4
444.namd	554	14.5	**554**	**14.5**	553	14.5	553	14.5	554	14.5	**554**	**14.5**
447.dealII	657	17.4	**656**	**17.4**	656	17.5	653	17.5	**652**	**17.6**	652	17.6
450.soplex	576	14.5	**575**	**14.5**	575	14.5	575	14.5	574	14.5	**575**	**14.5**
453.povray	**258**	**20.6**	258	20.6	258	20.6	**258**	**20.6**	258	20.6	258	20.6
454.calculix	649	12.7	649	12.7	**649**	**12.7**	455	18.1	**455**	**18.1**	455	18.2
459.GemsFDTD	879	12.1	878	12.1	**878**	**12.1**	879	12.1	878	12.1	**878**	**12.1**
465.tonto	**585**	**16.8**	585	16.8	585	16.8	**568**	**17.3**	568	17.3	567	17.3
470.lbm	**811**	**16.9**	811	17.0	811	16.9	731	18.8	**730**	**18.8**	730	18.8
481.wrf	581	19.2	580	19.2	**581**	**19.2**	581	19.2	580	19.2	**581**	**19.2**
482.sphinx3	710	27.5	710	27.4	**710**	**27.5**	704	27.7	**705**	**27.7**	706	27.6

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

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

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