



SPEC[®] CFP2006 Result

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Intel Corporation

Alienware Area-51 M15x-R1 (Intel Core 2 Extreme X7900)

SPECfp[®]2006 = 16.5

SPECfp_base2006 = 16.0

CPU2006 license: 13

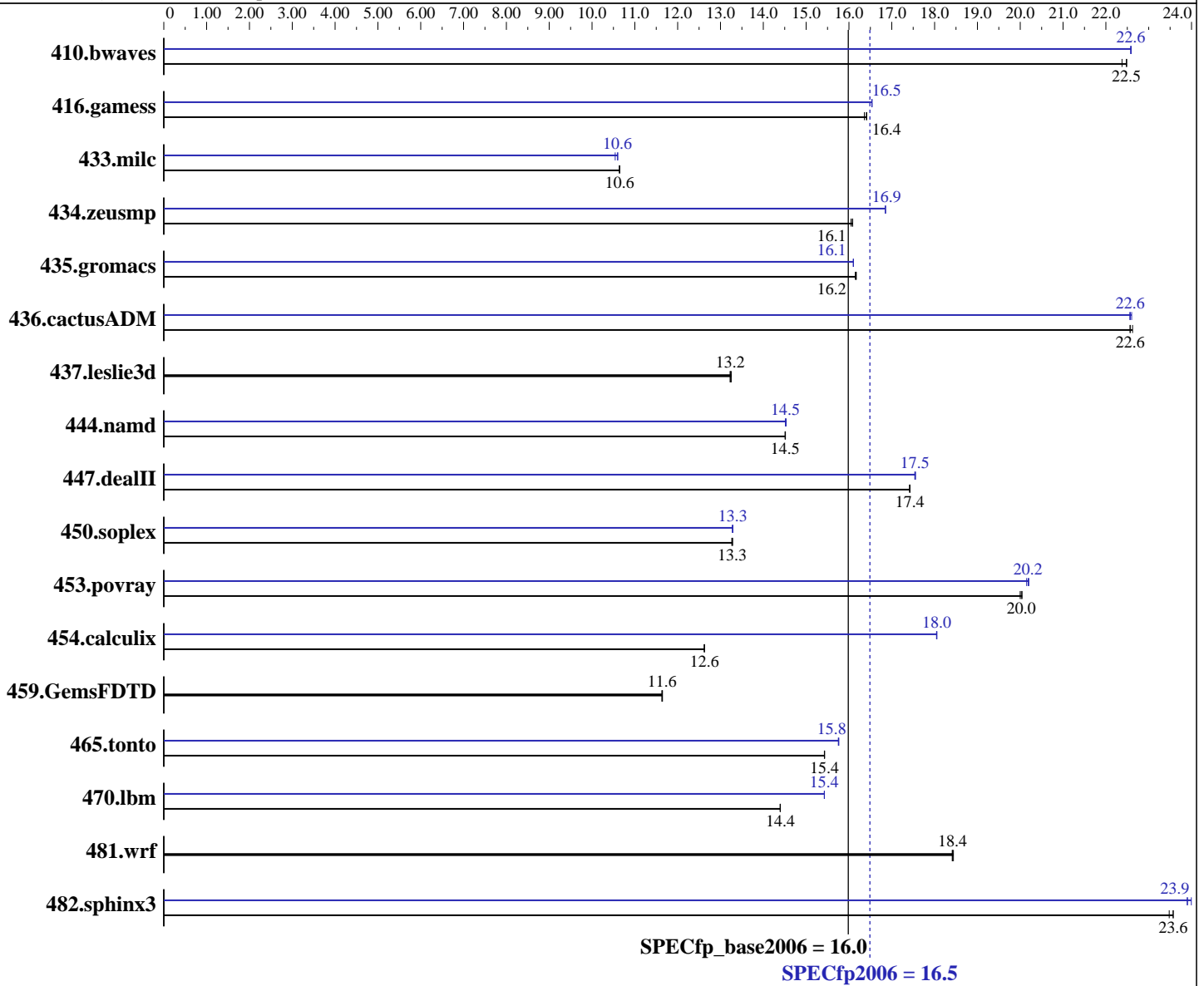
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Dec-2007

Hardware Availability: Jan-2008

Software Availability: Nov-2007



Hardware

CPU Name: Intel Core 2 Extreme X7900
 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: 4 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	607	22.4	605	22.5	604	22.5	602	22.6	602	22.6	602	22.6
416.gamess	1197	16.4	1193	16.4	1193	16.4	1184	16.5	1184	16.5	1184	16.5
433.milc	863	10.6	862	10.6	862	10.6	871	10.5	866	10.6	866	10.6
434.zeusmp	567	16.0	566	16.1	566	16.1	540	16.9	540	16.9	540	16.9
435.gromacs	442	16.1	441	16.2	442	16.2	443	16.1	443	16.1	443	16.1
436.cactusADM	530	22.6	530	22.6	528	22.6	530	22.6	529	22.6	529	22.6
437.leslie3d	711	13.2	709	13.3	711	13.2	711	13.2	709	13.3	711	13.2
444.namd	553	14.5	552	14.5	553	14.5	552	14.5	552	14.5	552	14.5
447.dealII	657	17.4	657	17.4	656	17.4	652	17.5	652	17.5	652	17.6
450.soplex	628	13.3	629	13.3	628	13.3	628	13.3	628	13.3	628	13.3
453.povray	266	20.0	265	20.0	266	20.0	264	20.1	264	20.2	263	20.2
454.calculix	654	12.6	653	12.6	653	12.6	457	18.1	457	18.0	457	18.0
459.GemsFDTD	912	11.6	912	11.6	911	11.6	912	11.6	912	11.6	911	11.6
465.tonto	638	15.4	638	15.4	638	15.4	624	15.8	624	15.8	625	15.8
470.lbm	955	14.4	954	14.4	954	14.4	891	15.4	891	15.4	891	15.4
481.wrf	607	18.4	606	18.4	606	18.4	607	18.4	606	18.4	606	18.4
482.sphinx3	830	23.5	827	23.6	827	23.6	815	23.9	812	24.0	816	23.9

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 -Qunroll14 -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- -Qunroll10 -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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