SPEC® CFP2006 Result

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Intel Corporation

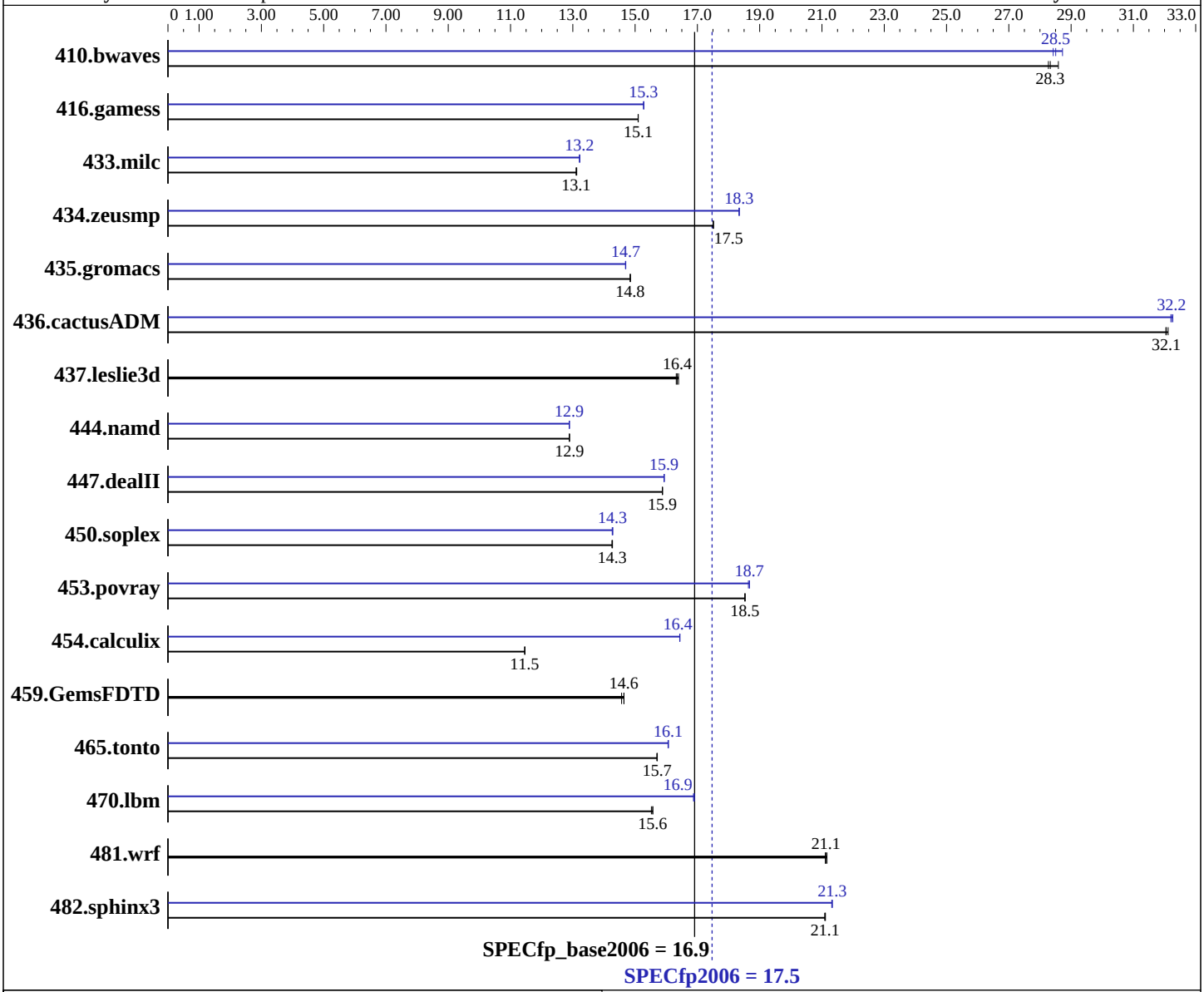
Intel Desktop Board DQ35JO (Intel Core 2 Duo Q9300)

SPECfp®2006 = 17.5

SPECfp_base2006 = 16.9

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

Test date: Feb-2008
Hardware Availability: Mar-2008
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Core 2 Quad Q9300
CPU Characteristics:	2.50 GHz, 1333 FSB
CPU MHz:	2500
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 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, 3 MB shared / 2 cores

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Software

Operating System:	Windows Vista Ultimate (64-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: 4 GB (4x1GB Micron DDR2-800 CL5)
Disk Subsystem: Seagate 320GB NCQ SATA, 16MB cache, 7200 RPM
Other Hardware: None

Base Pointers: 32-bit
Peak Pointers: 32-bit
Other Software: 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	**480**	**28.3**	481	28.3	475	28.6	**477**	**28.5**	478	28.4	473	28.7
416.gamess	**1297**	**15.1**	1297	15.1	1297	15.1	1282	15.3	1281	15.3	**1282**	**15.3**
433.milc	699	13.1	700	13.1	**700**	**13.1**	**695**	**13.2**	694	13.2	695	13.2
434.zeusmp	519	17.5	**520**	**17.5**	520	17.5	496	18.3	**496**	**18.3**	496	18.3
435.gromacs	481	14.8	**481**	**14.8**	481	14.8	486	14.7	486	14.7	**486**	**14.7**
436.cactusADM	**373**	**32.1**	372	32.1	373	32.0	**371**	**32.2**	370	32.3	371	32.2
437.leslie3d	573	16.4	**575**	**16.4**	576	16.3	573	16.4	**575**	**16.4**	576	16.3
444.namd	622	12.9	623	12.9	**622**	**12.9**	622	12.9	**622**	**12.9**	622	12.9
447.dealII	720	15.9	721	15.9	**720**	**15.9**	718	15.9	**718**	**15.9**	718	15.9
450.soplex	**585**	**14.3**	584	14.3	585	14.3	585	14.3	**584**	**14.3**	584	14.3
453.povray	287	18.5	**287**	**18.5**	287	18.5	**285**	**18.7**	285	18.6	285	18.7
454.calculix	720	11.5	**720**	**11.5**	720	11.5	502	16.4	**502**	**16.4**	502	16.4
459.GemsFDTD	728	14.6	725	14.6	**725**	**14.6**	728	14.6	725	14.6	**725**	**14.6**
465.tonto	**626**	**15.7**	627	15.7	626	15.7	613	16.1	**612**	**16.1**	612	16.1
470.lbm	885	15.5	**883**	**15.6**	883	15.6	814	16.9	813	16.9	**813**	**16.9**
481.wrf	529	21.1	**529**	**21.1**	528	21.2	529	21.1	**529**	**21.1**	528	21.2
482.sphinx3	923	21.1	924	21.1	**924**	**21.1**	**914**	**21.3**	914	21.3	914	21.3

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 Shin-G ATX case, Antec NeoPower 480W power supply
Product description located as of 03/2008:
http://www.intel.com/products/motherboard/DQ35JO/index.htm
The system bus runs at 1333 MHz
System was configured with Asus EN8800GTX discrete graphics card
Binaries were built on Windows Vista Ultimate (32-bit)
The following VS 2005 SP1 updates were applied: KB926601 and KB932232
```

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-ic10.1-win32-flags.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic10.1-win32-flags.xml`

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

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