



SPEC® CFP2006 Result

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Intel Corporation

Intel Desktop Board DQ35JO (Intel Core 2 Duo Q9300)

SPECfp®_rate2006 = 40.0

SPECfp_rate_base2006 = 38.8

CPU2006 license: 13

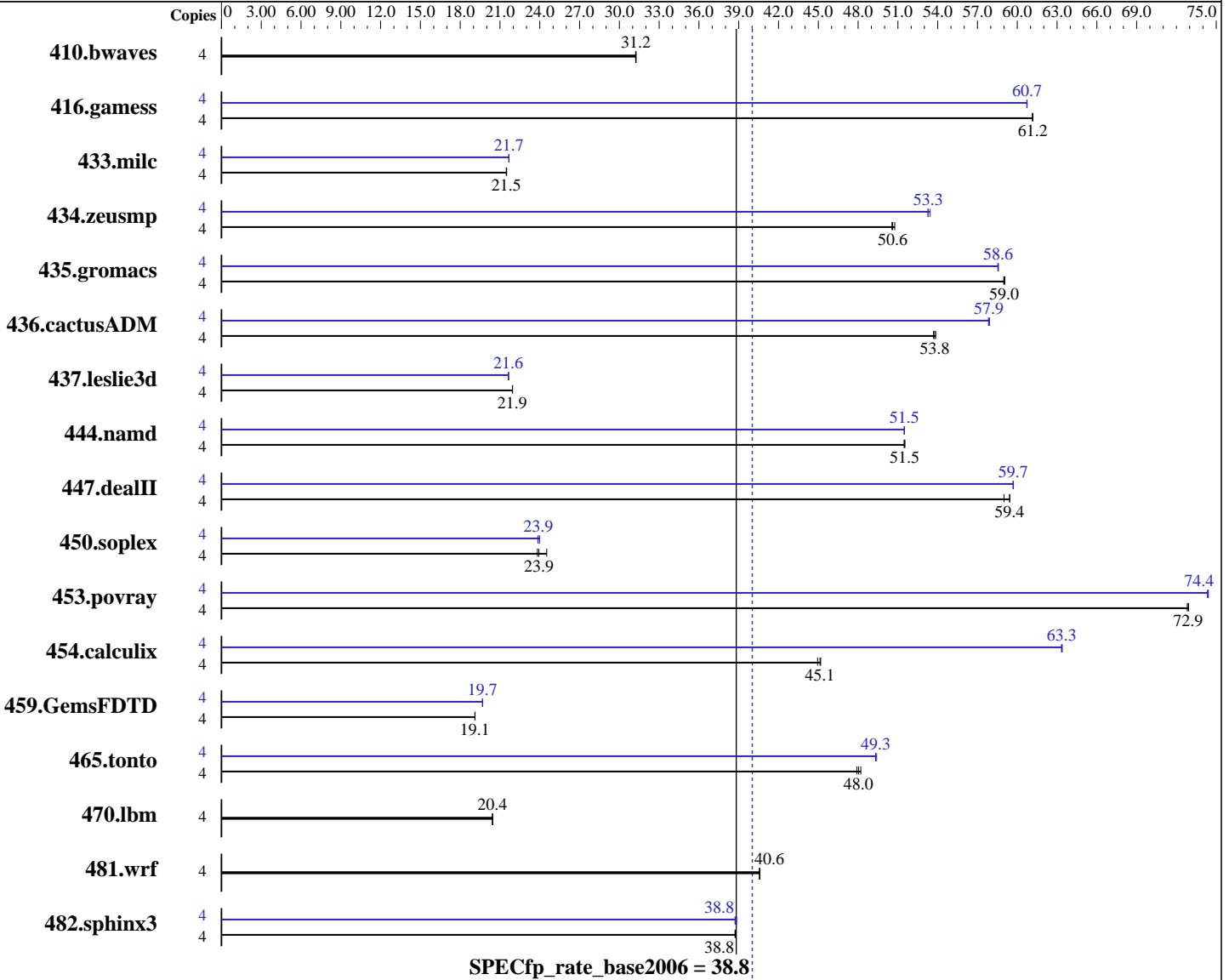
Test sponsor: Intel Corporation

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: No
 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 | | | | | | | |
|---------------|--------|-------------|-------------|-------------|-------------|-------------|-------------|--------|-------------|-------------|-------------|-------------|-------------|-------------|--|--|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | | |
| 410.bwaves | 4 | 1741 | 31.2 | 1740 | 31.2 | 1739 | 31.3 | 4 | 1741 | 31.2 | 1740 | 31.2 | 1739 | 31.3 | | |
| 416.gamess | 4 | 1281 | 61.1 | 1280 | 61.2 | 1280 | 61.2 | 4 | 1290 | 60.7 | 1289 | 60.7 | 1290 | 60.7 | | |
| 433.milc | 4 | 1709 | 21.5 | 1710 | 21.5 | 1708 | 21.5 | 4 | 1694 | 21.7 | 1694 | 21.7 | 1694 | 21.7 | | |
| 434.zeusmp | 4 | 719 | 50.6 | 720 | 50.6 | 717 | 50.8 | 4 | 683 | 53.3 | 683 | 53.3 | 681 | 53.4 | | |
| 435.gromacs | 4 | 484 | 59.1 | 484 | 59.0 | 484 | 59.0 | 4 | 488 | 58.6 | 488 | 58.6 | 488 | 58.5 | | |
| 436.cactusADM | 4 | 888 | 53.8 | 889 | 53.8 | 890 | 53.7 | 4 | 827 | 57.8 | 826 | 57.9 | 825 | 57.9 | | |
| 437.leslie3d | 4 | 1714 | 21.9 | 1714 | 21.9 | 1713 | 21.9 | 4 | 1736 | 21.7 | 1738 | 21.6 | 1738 | 21.6 | | |
| 444.namd | 4 | 623 | 51.5 | 623 | 51.5 | 623 | 51.5 | 4 | 623 | 51.5 | 623 | 51.5 | 623 | 51.5 | | |
| 447.dealII | 4 | 776 | 59.0 | 770 | 59.4 | 770 | 59.4 | 4 | 766 | 59.7 | 767 | 59.7 | 767 | 59.7 | | |
| 450.soplex | 4 | 1400 | 23.8 | 1360 | 24.5 | 1394 | 23.9 | 4 | 1397 | 23.9 | 1398 | 23.9 | 1390 | 24.0 | | |
| 453.povray | 4 | 292 | 72.9 | 292 | 72.9 | 292 | 72.8 | 4 | 286 | 74.4 | 286 | 74.4 | 286 | 74.3 | | |
| 454.calculix | 4 | 734 | 44.9 | 730 | 45.2 | 731 | 45.1 | 4 | 521 | 63.3 | 521 | 63.4 | 521 | 63.3 | | |
| 459.GemsFDTD | 4 | 2220 | 19.1 | 2220 | 19.1 | 2222 | 19.1 | 4 | 2157 | 19.7 | 2156 | 19.7 | 2155 | 19.7 | | |
| 465.tonto | 4 | 817 | 48.2 | 822 | 47.9 | 819 | 48.0 | 4 | 798 | 49.3 | 797 | 49.4 | 798 | 49.3 | | |
| 470.lbm | 4 | 2689 | 20.4 | 2689 | 20.4 | 2689 | 20.4 | 4 | 2689 | 20.4 | 2689 | 20.4 | 2689 | 20.4 | | |
| 481.wrf | 4 | 1101 | 40.6 | 1101 | 40.6 | 1102 | 40.6 | 4 | 1101 | 40.6 | 1101 | 40.6 | 1102 | 40.6 | | |
| 482.sphinx3 | 4 | 2011 | 38.8 | 2014 | 38.7 | 2012 | 38.8 | 4 | 2008 | 38.8 | 2014 | 38.7 | 2011 | 38.8 | | |

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

The start command with the /affinity switch was used to bind processes to cores



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Base Compiler Invocation

C benchmarks:

`icl -Qvc8 -Qc99`

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`

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Peak Compiler Invocation (Continued)

Fortran benchmarks:

ifort

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: basepeak = yes

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

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Peak Optimization Flags (Continued)

434.zeusmp: -QxT -O2 -Qprec-div- -Qunroll10 -Qscalar-rep- /F1000000000

437.leslie3d: -fast -Qprefetch /F1000000000

459.GemsFDTD: -fast -Qunroll12 -Ob0 -Qprefetch /F1000000000

465.tonto: -fast -Qunroll14 -Qauto /F1000000000

Benchmarks using both Fortran and C:

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

436.cactusADM: -fast -Qunroll12 -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-ic10.1-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 questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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