



SPEC® CFP2006 Result

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Fujitsu Siemens Computers

SPECfp®2006 = 22.2

CELSIUS M460, Intel Core 2 Extreme QX9650

SPECfp_base2006 = 20.8

CPU2006 license: 22

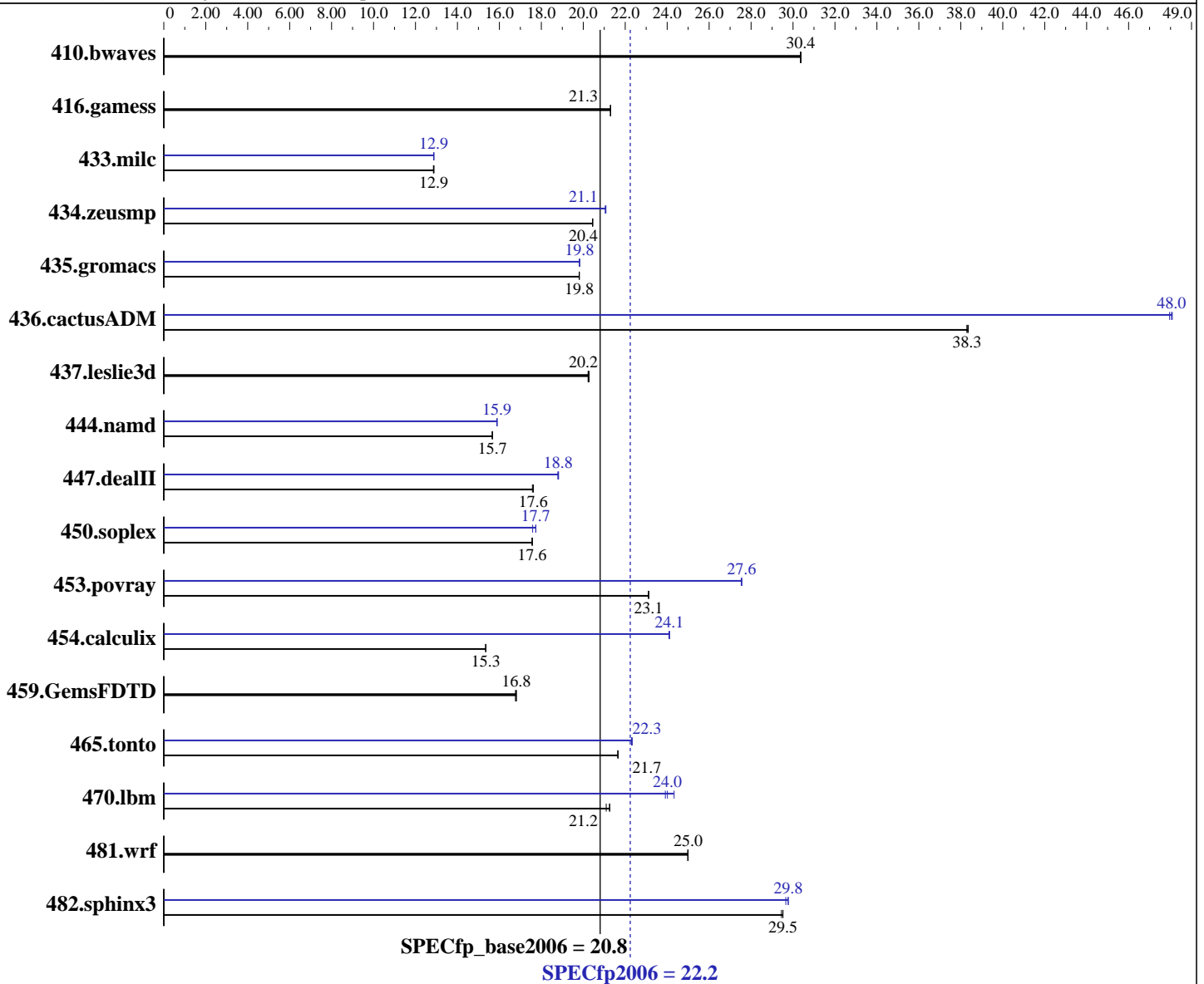
Test date: Feb-2008

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: Mar-2008

Tested by: Fujitsu Siemens Computers

Software Availability: Nov-2007



Hardware

CPU Name: Intel Core 2 Extreme QX9650
 CPU Characteristics:
 CPU MHz: 3000
 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: 12 MB I+D on chip per chip, 6 MB shared / 2 cores

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Software

Operating System: Windows Vista Ultimate, 64 bit Version

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Hardware (Continued)

L3 Cache: None
 Other Cache: None
 Memory: 4 GB (4x1 GB PC2-6400 CL6 SDRAM)
 Disk Subsystem: 1 x 400 GB SATA 7200 RPM
 Other Hardware: None

Software (Continued)

Compiler: Intel C++ Compiler for applications running on Intel 64, Version 10.1, Build 20070913
 Intel Visual Fortran Compiler for applications running on Intel 64, Version 10.1, Build 20070913
 Microsoft Visual Studio 2005 with SP1 (for libraries)
 Auto Parallel: Yes
 File System: NTFS
 System State: Default
 Base Pointers: 64-bit
 Peak Pointers: 64-bit
 Other Software: MicroQuill SmartHeap Library 8.0 (64 bit)

Results Table

| Benchmark | Base | | | | | | Peak | | | | | |
|---------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|
| | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 410.bwaves | 448 | 30.4 | 448 | 30.4 | 447 | 30.4 | 448 | 30.4 | 448 | 30.4 | 447 | 30.4 |
| 416.gamess | 919 | 21.3 | 919 | 21.3 | 919 | 21.3 | 919 | 21.3 | 919 | 21.3 | 919 | 21.3 |
| 433.milc | 713 | 12.9 | 713 | 12.9 | 714 | 12.9 | 713 | 12.9 | 713 | 12.9 | 713 | 12.9 |
| 434.zeusmp | 445 | 20.4 | 445 | 20.4 | 445 | 20.4 | 432 | 21.1 | 432 | 21.1 | 432 | 21.1 |
| 435.gromacs | 361 | 19.8 | 360 | 19.8 | 360 | 19.8 | 360 | 19.8 | 360 | 19.8 | 360 | 19.8 |
| 436.cactusADM | 312 | 38.4 | 312 | 38.3 | 312 | 38.3 | 249 | 48.0 | 249 | 48.1 | 249 | 48.0 |
| 437.leslie3d | 464 | 20.2 | 465 | 20.2 | 464 | 20.3 | 464 | 20.2 | 465 | 20.2 | 464 | 20.3 |
| 444.namd | 512 | 15.7 | 512 | 15.7 | 512 | 15.7 | 505 | 15.9 | 505 | 15.9 | 505 | 15.9 |
| 447.dealII | 651 | 17.6 | 650 | 17.6 | 649 | 17.6 | 608 | 18.8 | 609 | 18.8 | 608 | 18.8 |
| 450.soplex | 475 | 17.6 | 475 | 17.6 | 475 | 17.6 | 474 | 17.6 | 470 | 17.7 | 470 | 17.7 |
| 453.povray | 230 | 23.1 | 230 | 23.1 | 230 | 23.1 | 193 | 27.6 | 193 | 27.6 | 193 | 27.5 |
| 454.calculix | 537 | 15.4 | 537 | 15.3 | 538 | 15.3 | 342 | 24.1 | 342 | 24.1 | 342 | 24.1 |
| 459.GemsFDTD | 633 | 16.8 | 631 | 16.8 | 631 | 16.8 | 633 | 16.8 | 631 | 16.8 | 631 | 16.8 |
| 465.tonto | 454 | 21.7 | 455 | 21.6 | 454 | 21.7 | 441 | 22.3 | 441 | 22.3 | 441 | 22.3 |
| 470.lbm | 651 | 21.1 | 647 | 21.2 | 646 | 21.3 | 575 | 23.9 | 572 | 24.0 | 565 | 24.3 |
| 481.wrf | 447 | 25.0 | 447 | 25.0 | 447 | 25.0 | 447 | 25.0 | 447 | 25.0 | 447 | 25.0 |
| 482.sphinx3 | 660 | 29.5 | 662 | 29.4 | 660 | 29.5 | 657 | 29.7 | 655 | 29.8 | 655 | 29.8 |

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Platform Notes

BIOS default settings have been used.



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General Notes

For information about Fujitsu Siemens Computers please see:
<http://www.fujitsu-siemens.com/>

Compiler Invocation

C benchmarks:
icl -Qvc8 -Qc99

C++ benchmarks:
icl -Qvc8

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qvc8 -Qc99 ifort

Portability Flags

410.bwaves: -DSPEC_CPU_P64
416.gamess: -DSPEC_CPU_P64
433.milc: -DSPEC_CPU_P64
434.zeusmp: -DSPEC_CPU_P64
435.gromacs: -DSPEC_CPU_P64
436.cactusADM: -DSPEC_CPU_P64 -Qlowercase /assume:underscore
437.leslie3d: -DSPEC_CPU_P64
444.namd: -DSPEC_CPU_P64 /TP
447.dealII: -DSPEC_CPU_P64 -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
450.soplex: -DSPEC_CPU_P64
453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
454.calculix: -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER -Qlowercase
459.GemsFDTD: -DSPEC_CPU_P64
465.tonto: -DSPEC_CPU_P64
470.lbm: -DSPEC_CPU_P64
481.wrf: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
482.sphinx3: -DSPEC_CPU_P64

Base Optimization Flags

C benchmarks:
-fast -Qparallel -F1000000000 libguide40.lib

C++ benchmarks:
-fast -Qparallel -Qcxx-features -F1000000000 libguide40.lib
shlW64M.lib -link -FORCE:MULTIPLE

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Base Optimization Flags (Continued)

Fortran benchmarks:

-fast -Qparallel -F1000000000 libguide40.lib

Benchmarks using both Fortran and C:

-fast -Qparallel -F1000000000 libguide40.lib

Peak Optimization Flags

C benchmarks:

433.milc: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -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 -Qcxx-features -Oa -F1000000000 libguide40.lib sh1W64M.lib -link -FORCE:MULTIPLE

447.dealII: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx-features -F1000000000 libguide40.lib sh1W64M.lib -link -FORCE:MULTIPLE

450.soplex: Same as 447.dealII

453.povray: Same as 447.dealII

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: basepeak = yes

434.zeusmp: -O2 -Qunroll10 -QxT -Qscalar-rep- -Qprec-div- -F1000000000 libguide40.lib

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -fast -Qunroll14 -Qauto -F1000000000 libguide40.lib

Benchmarks using both Fortran and C:

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Peak Optimization Flags (Continued)

435.gromacs: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -F1000000000 libguide40.lib

436.cactusADM: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qparallel -Qprefetch -Qunroll2 -F1000000000 libguide40.lib

454.calculix: -Qprof_gen(pass 1) -Qprof_use(pass 2) -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/CPU2006_flags.20090713.03.html

You can also download the XML flags source by saving the following link:

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090713.03.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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