



SPEC[®] CFP2006 Result

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Fujitsu

SPECfp[®]2006 = **33.7**

CELSIUS W380, Intel Core i5-650

SPECfp_base2006 = **32.0**

CPU2006 license: 19

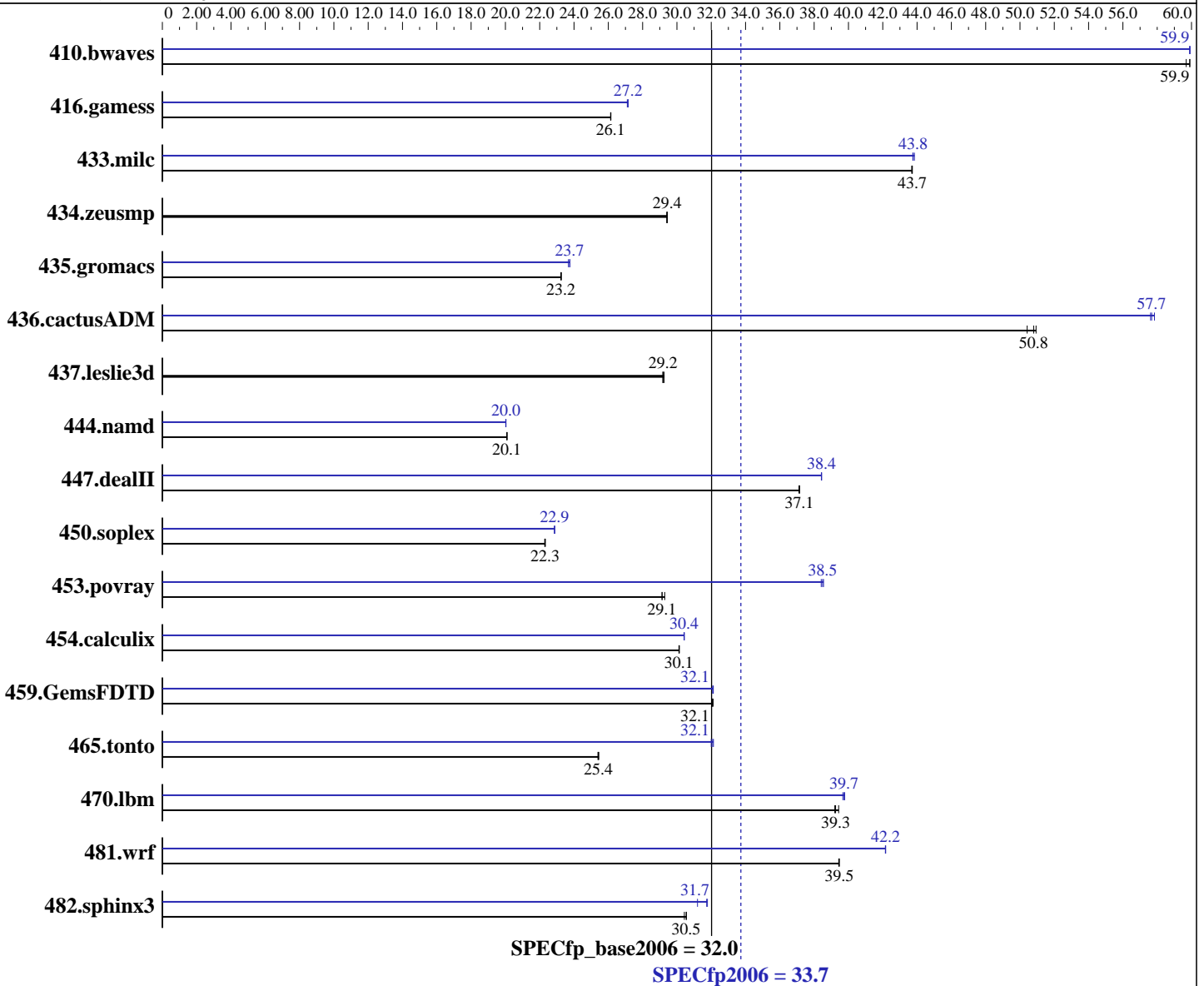
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Feb-2010

Hardware Availability: Jan-2010

Software Availability: Oct-2009



Hardware

CPU Name: Intel Core i5-650
 CPU Characteristics: Intel Turbo Boost Technology up to 3.46 GHz
 CPU MHz: 3200
 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: 256 KB I+D on chip per core

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Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64), kernel 2.6.27.19-5-default
 Compiler: Intel C++ and Fortran Compiler for IA32 and Intel 64, Version 11.1
 Build 20091012 Package ID: l_cproc_p_11.1.059, l_cprof_p_11.1.059
 Auto Parallel: Yes
 File System: ext3
 System State: Multi-User Run Level 3

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L3 Cache: 4 MB I+D on chip per chip
Other Cache: None
Memory: 8 GB (2x4 GB PC3-10600U, 2 rank, CL9)
Disk Subsystem: 1 x SATA II, 400 GB, 7200 rpm
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: Binutils 2.18.50.0.7.20080502

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	228	59.7	227	59.9	<u>227</u>	<u>59.9</u>	<u>227</u>	<u>59.9</u>	227	59.9	227	59.9
416.gamess	<u>749</u>	<u>26.1</u>	749	26.1	749	26.2	721	27.2	<u>721</u>	<u>27.2</u>	722	27.1
433.milc	<u>210</u>	<u>43.7</u>	210	43.7	210	43.7	<u>210</u>	<u>43.8</u>	210	43.8	209	43.8
434.zeusmp	<u>309</u>	<u>29.4</u>	309	29.4	309	29.4	<u>309</u>	<u>29.4</u>	309	29.4	309	29.4
435.gromacs	307	23.3	<u>307</u>	<u>23.2</u>	307	23.2	300	23.8	<u>301</u>	<u>23.7</u>	302	23.7
436.cactusADM	235	50.9	<u>235</u>	<u>50.8</u>	237	50.4	207	57.8	207	57.6	<u>207</u>	<u>57.7</u>
437.leslie3d	322	29.2	321	29.3	<u>322</u>	<u>29.2</u>	322	29.2	321	29.3	<u>322</u>	<u>29.2</u>
444.namd	<u>399</u>	<u>20.1</u>	399	20.1	399	20.1	400	20.0	401	20.0	<u>400</u>	<u>20.0</u>
447.dealII	308	37.2	308	37.1	<u>308</u>	<u>37.1</u>	<u>298</u>	<u>38.4</u>	298	38.4	298	38.4
450.soplex	374	22.3	374	22.3	<u>374</u>	<u>22.3</u>	<u>365</u>	<u>22.9</u>	365	22.9	365	22.9
453.povray	182	29.3	<u>183</u>	<u>29.1</u>	183	29.1	138	38.5	138	38.4	<u>138</u>	<u>38.5</u>
454.calculix	<u>274</u>	<u>30.1</u>	274	30.1	274	30.1	<u>271</u>	<u>30.4</u>	271	30.4	271	30.4
459.GemsFDTD	330	32.1	331	32.1	<u>331</u>	<u>32.1</u>	<u>330</u>	<u>32.1</u>	330	32.1	331	32.1
465.tonto	387	25.4	<u>387</u>	<u>25.4</u>	387	25.4	306	32.1	<u>307</u>	<u>32.1</u>	308	32.0
470.lbm	348	39.4	350	39.2	<u>350</u>	<u>39.3</u>	<u>346</u>	<u>39.7</u>	345	39.8	346	39.7
481.wrf	283	39.4	<u>283</u>	<u>39.5</u>	283	39.5	<u>265</u>	<u>42.2</u>	265	42.2	265	42.2
482.sphinx3	638	30.6	640	30.4	<u>638</u>	<u>30.5</u>	<u>614</u>	<u>31.7</u>	613	31.8	625	31.2

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

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run

General Notes

OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=fine,scatter
KMP_STACKSIZE set to 200M

Base Compiler Invocation

C benchmarks:
icc -m64

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Base Compiler Invocation (Continued)

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64
 416.gamess: -DSPEC_CPU_LP64
 433.milc: -DSPEC_CPU_LP64
 434.zeusmp: -DSPEC_CPU_LP64
 435.gromacs: -DSPEC_CPU_LP64 -nofor_main
 436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
 437.leslie3d: -DSPEC_CPU_LP64
 444.namd: -DSPEC_CPU_LP64
 447.dealII: -DSPEC_CPU_LP64
 450.soplex: -DSPEC_CPU_LP64
 453.povray: -DSPEC_CPU_LP64
 454.calculix: -DSPEC_CPU_LP64 -nofor_main
 459.GemsFDTD: -DSPEC_CPU_LP64
 465.tonto: -DSPEC_CPU_LP64
 470.lbm: -DSPEC_CPU_LP64
 481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
 482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Fortran benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Benchmarks using both Fortran and C:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch



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Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

482.sphinx3: icc -m32

C++ benchmarks (except as noted below):

icpc -m64

450.soplex: icpc -m32

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

Peak Portability Flags

410.bwaves: -DSPEC_CPU_LP64
 416.gamess: -DSPEC_CPU_LP64
 433.milc: -DSPEC_CPU_LP64
 434.zeusmp: -DSPEC_CPU_LP64
 435.gromacs: -DSPEC_CPU_LP64 -nofor_main
 436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
 437.leslie3d: -DSPEC_CPU_LP64
 444.namd: -DSPEC_CPU_LP64
 447.dealII: -DSPEC_CPU_LP64
 453.povray: -DSPEC_CPU_LP64
 454.calculix: -DSPEC_CPU_LP64 -nofor_main
 459.GemsFDTD: -DSPEC_CPU_LP64
 465.tonto: -DSPEC_CPU_LP64
 470.lbm: -DSPEC_CPU_LP64
 481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

433.milc: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
 -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
 -ansi-alias

470.lbm: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
 -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
 -parallel -ansi-alias -auto-ilp32

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Peak Optimization Flags (Continued)

482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2

C++ benchmarks:

444.namd: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-fno-alias -auto-ilp32

447.dealII: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-unroll2 -ansi-alias -scalar-rep- -auto-ilp32

450.soplex: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-opt-malloc-options=3

453.povray: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch
-parallel

416.gamess: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-unroll2 -Ob0 -ansi-alias -scalar-rep-

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-unroll2 -Ob0 -opt-prefetch -parallel

465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-inline-calloc -opt-malloc-options=3 -auto -unroll4

Benchmarks using both Fortran and C:

435.gromacs: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-opt-prefetch -auto-ilp32

436.cactusADM: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-unroll2 -opt-prefetch -parallel -auto-ilp32

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Peak Optimization Flags (Continued)

454.calculix: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32

481.wrf: Same as 454.calculix

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revD.20100119.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revD.20100119.xml>

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

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