



SPEC[®] CFP2006 Result

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Fujitsu

SPECfp[®]2006 = **42.8**

PRIMERGY BX920 S2, Intel Xeon X5650, 2.67 GHz

SPECfp_base2006 = **39.9**

CPU2006 license: 19

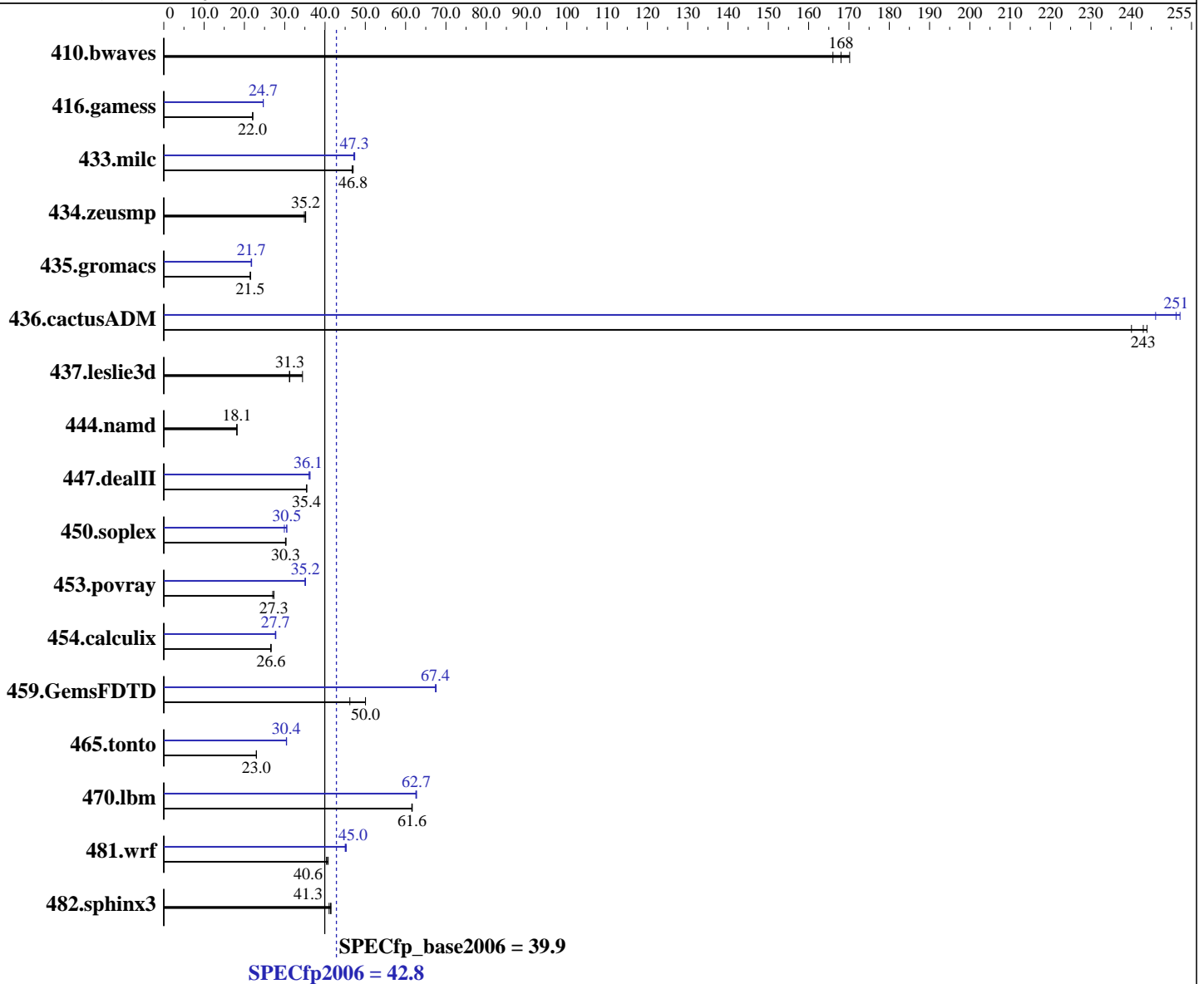
Test date: May-2010

Test sponsor: Fujitsu

Hardware Availability: Aug-2010

Tested by: Fujitsu

Software Availability: Jan-2010



Hardware

CPU Name: Intel Xeon X5650
 CPU Characteristics: Intel Turbo Boost Technology up to 3.06 GHz
 CPU MHz: 2667
 FPU: Integrated
 CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip
 CPU(s) orderable: 1,2 chips
 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 Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20091130 Package ID: l_cproc_p_11.1.064, l_cprof_p_11.1.064
 Auto Parallel: Yes
 File System: ext3
 System State: Multi-User Run Level 3

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L3 Cache: 12 MB I+D on chip per chip
Other Cache: None
Memory: 48 GB (6x8 GB PC3-10600R, 2 rank, CL9-9-9, ECC)
Disk Subsystem: 1 x SATA, 160 GB, 5400 RPM
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	79.9	170	81.9	166	<u>80.9</u>	<u>168</u>	79.9	170	81.9	166	<u>80.9</u>	<u>168</u>
416.gamess	889	22.0	<u>889</u>	<u>22.0</u>	887	22.1	<u>794</u>	<u>24.7</u>	793	24.7	794	24.7
433.milc	<u>196</u>	<u>46.8</u>	196	46.7	195	47.0	194	47.4	<u>194</u>	<u>47.3</u>	195	47.1
434.zeusmp	258	35.2	<u>259</u>	<u>35.2</u>	261	34.9	258	35.2	<u>259</u>	<u>35.2</u>	261	34.9
435.gromacs	332	21.5	333	21.5	<u>333</u>	<u>21.5</u>	329	21.7	328	21.8	<u>329</u>	<u>21.7</u>
436.cactusADM	49.8	240	49.0	244	<u>49.2</u>	<u>243</u>	48.6	246	<u>47.6</u>	<u>251</u>	47.4	252
437.leslie3d	<u>301</u>	<u>31.3</u>	273	34.4	302	31.2	<u>301</u>	<u>31.3</u>	273	34.4	302	31.2
444.namd	442	18.2	<u>442</u>	<u>18.1</u>	442	18.1	442	18.2	<u>442</u>	<u>18.1</u>	442	18.1
447.dealII	323	35.4	<u>323</u>	<u>35.4</u>	323	35.5	315	36.3	<u>317</u>	<u>36.1</u>	317	36.1
450.soplex	275	30.3	<u>276</u>	<u>30.3</u>	276	30.2	273	30.5	<u>273</u>	<u>30.5</u>	279	29.9
453.povray	195	27.3	<u>195</u>	<u>27.3</u>	197	27.0	<u>151</u>	<u>35.2</u>	152	35.0	151	35.2
454.calculix	311	26.5	310	26.6	<u>310</u>	<u>26.6</u>	298	27.7	<u>297</u>	<u>27.7</u>	297	27.8
459.GemsFDTD	<u>212</u>	<u>50.0</u>	230	46.2	212	50.0	157	67.4	<u>157</u>	<u>67.4</u>	157	67.6
465.tonto	<u>428</u>	<u>23.0</u>	429	23.0	428	23.0	323	30.4	<u>323</u>	<u>30.4</u>	323	30.5
470.lbm	223	61.5	<u>223</u>	<u>61.6</u>	223	61.6	219	62.7	<u>219</u>	<u>62.7</u>	220	62.5
481.wrf	277	40.4	<u>275</u>	<u>40.6</u>	274	40.8	247	45.3	248	45.0	<u>248</u>	<u>45.0</u>
482.sphinx3	<u>471</u>	<u>41.3</u>	470	41.5	475	41.0	<u>471</u>	<u>41.3</u>	470	41.5	475	41.0

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

Platform Notes

BIOS configuration:
Data Reuse Optimization = Disable
Intel HT Technology = Disable
Performance/Power Setting = Traditional



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General Notes

OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=fine,scatter
KMP_STACKSIZE set to 200M
For information about Fujitsu please visit: <http://www.fujitsu.com>
Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502

Base Compiler Invocation

C benchmarks:
icc -m64

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.deallI: -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

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Base Optimization Flags (Continued)

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

Peak Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

Peak Portability Flags

Same as Base Portability Flags

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

482.sphinx3: basepeak = yes

C++ benchmarks:

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Peak Optimization Flags (Continued)

444.namd: basepeak = yes

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 -auto-ilp32

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: basepeak = yes

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

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

481.wrf: Same as 454.calculix



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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100330.02.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100330.02.xml>

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