



SPEC® CFP2006 Result

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Supermicro

SPECfp®2006 = 46.6

Motherboard X8DAH+-F (Intel Xeon X5667, 3.06GHz)

SPECfp_base2006 = 43.6

CPU2006 license: 001176

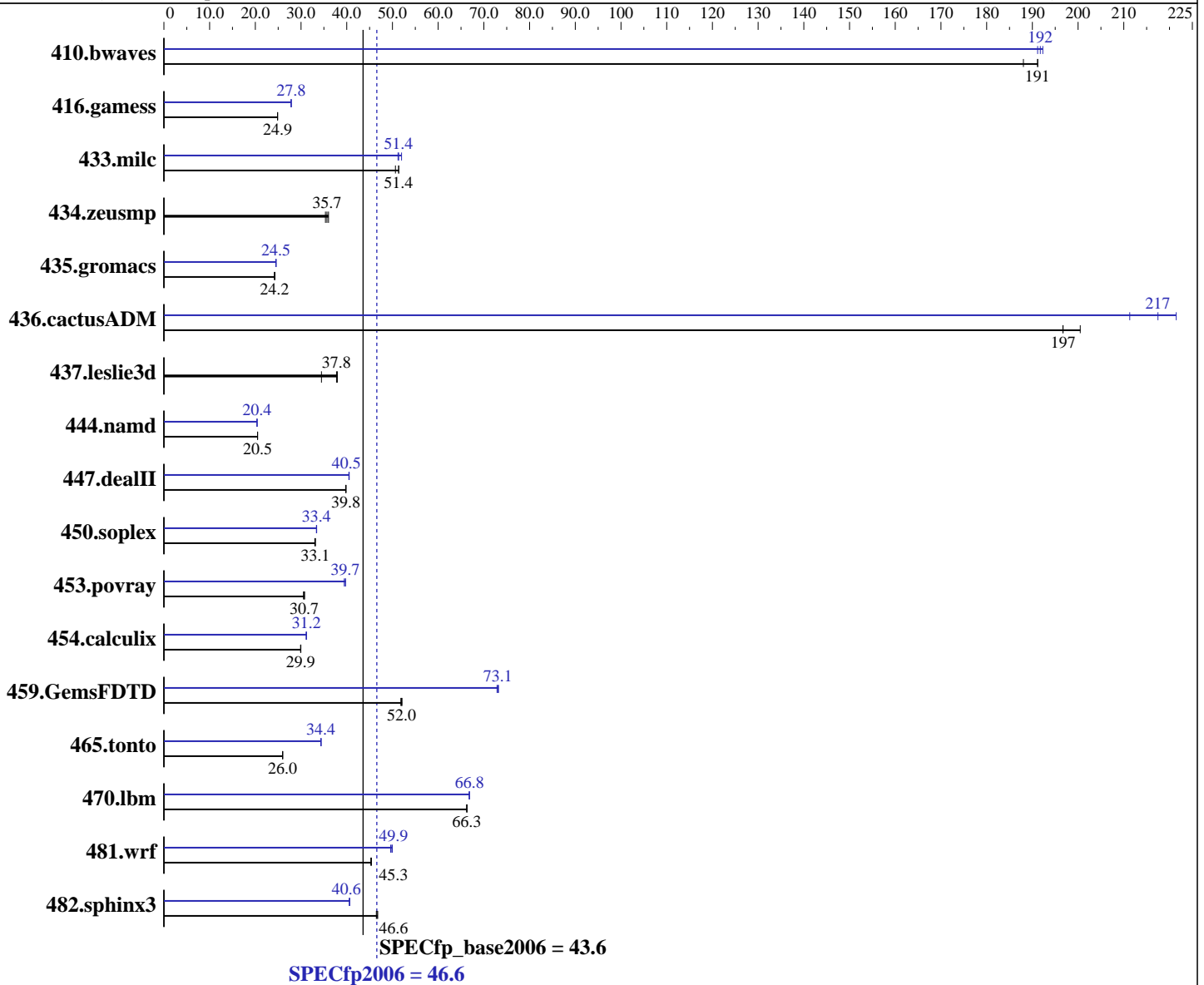
Test date: May-2010

Test sponsor: Supermicro

Hardware Availability: Mar-2010

Tested by: Supermicro

Software Availability: Jan-2010



Hardware

CPU Name: Intel Xeon X5667
 CPU Characteristics: Intel Turbo Boost Technology up to 3.46 GHz
 CPU MHz: 3067
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip, 2 threads/core
 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: ReiserFS
 System State: Run level 3 (multi-user)

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L3 Cache: 12 MB I+D on chip per chip
 Other Cache: None
 Memory: 48 GB (12 x 4 GB DDR3-1333 RDIMM, ECC, CL9)
 Disk Subsystem: 1 x 320 GB SATA II, 7200 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	72.3	188	<u>71.1</u>	<u>191</u>	71.1	191	71.1	191	70.7	192	<u>70.9</u>	<u>192</u>
416.gamess	<u>788</u>	<u>24.9</u>	787	24.9	788	24.9	<u>703</u>	<u>27.8</u>	703	27.9	703	27.8
433.milc	179	51.4	<u>179</u>	<u>51.4</u>	181	50.6	179	51.2	177	52.0	<u>179</u>	<u>51.4</u>
434.zeusmp	<u>255</u>	<u>35.7</u>	253	36.0	257	35.3	<u>255</u>	<u>35.7</u>	253	36.0	257	35.3
435.gromacs	294	24.3	296	24.2	<u>295</u>	<u>24.2</u>	291	24.5	<u>291</u>	<u>24.5</u>	292	24.5
436.cactusADM	59.6	200	60.8	197	<u>60.7</u>	<u>197</u>	56.6	211	54.0	221	<u>54.9</u>	<u>217</u>
437.leslie3d	273	34.5	248	37.9	<u>249</u>	<u>37.8</u>	273	34.5	248	37.9	<u>249</u>	<u>37.8</u>
444.namd	391	20.5	<u>391</u>	<u>20.5</u>	392	20.5	393	20.4	394	20.4	<u>394</u>	<u>20.4</u>
447.dealII	288	39.8	287	39.8	<u>287</u>	<u>39.8</u>	283	40.5	282	40.5	<u>282</u>	<u>40.5</u>
450.soplex	253	33.0	252	33.1	<u>252</u>	<u>33.1</u>	250	33.4	250	33.4	<u>250</u>	<u>33.4</u>
453.povray	<u>173</u>	<u>30.7</u>	174	30.5	173	30.8	<u>134</u>	<u>39.7</u>	135	39.5	134	39.7
454.calculix	276	29.9	275	30.0	<u>276</u>	<u>29.9</u>	<u>265</u>	<u>31.2</u>	265	31.2	265	31.1
459.GemsFDTD	205	51.8	204	52.1	<u>204</u>	<u>52.0</u>	146	72.9	<u>145</u>	<u>73.1</u>	145	73.2
465.tonto	379	26.0	<u>379</u>	<u>26.0</u>	379	26.0	287	34.3	286	34.4	<u>286</u>	<u>34.4</u>
470.lbm	207	66.2	207	66.3	<u>207</u>	<u>66.3</u>	<u>206</u>	<u>66.8</u>	206	66.8	206	66.8
481.wrf	246	45.4	247	45.3	<u>246</u>	<u>45.3</u>	224	50.0	<u>224</u>	<u>49.9</u>	225	49.6
482.sphinx3	<u>418</u>	<u>46.6</u>	419	46.5	417	46.8	<u>480</u>	<u>40.6</u>	480	40.6	480	40.6

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 stack size to unlimited prior to run
 OMP_NUM_THREADS set to number of cores
 KMP_AFFINITY set to granularity=fine,scatter
 KMP_STACKSIZE set to 200M

Platform Notes

Fan speed set to Full Speed in BIOS Setup.
 As tested, the system used a Supermicro
 PWS-865-PQ power supply, 2 SNK-P0035AP4 heatsinks,
 along with 2 Nidec UltraFlo T92T12MMA7-57 T072 and
 1 SANYO DENKI San Ace 80 9G0812G103 cooling fans.



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General Notes

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.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

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Base Optimization Flags (Continued)

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: `-xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32
-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.dealIII: `-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`

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Peak Optimization Flags (Continued)

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: -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

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-revE.20100316.html>



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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100316.xml>

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Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 08:47:45 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 9 June 2010.