



SPEC[®] CFP2006 Result

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ASUSTeK Computer Inc.

SPECfp[®]_rate2006 = 96.3

ASUS D5EB-DG server motherboard (Intel Xeon X5492)

SPECfp_rate_base2006 = 88.1

CPU2006 license: 009016

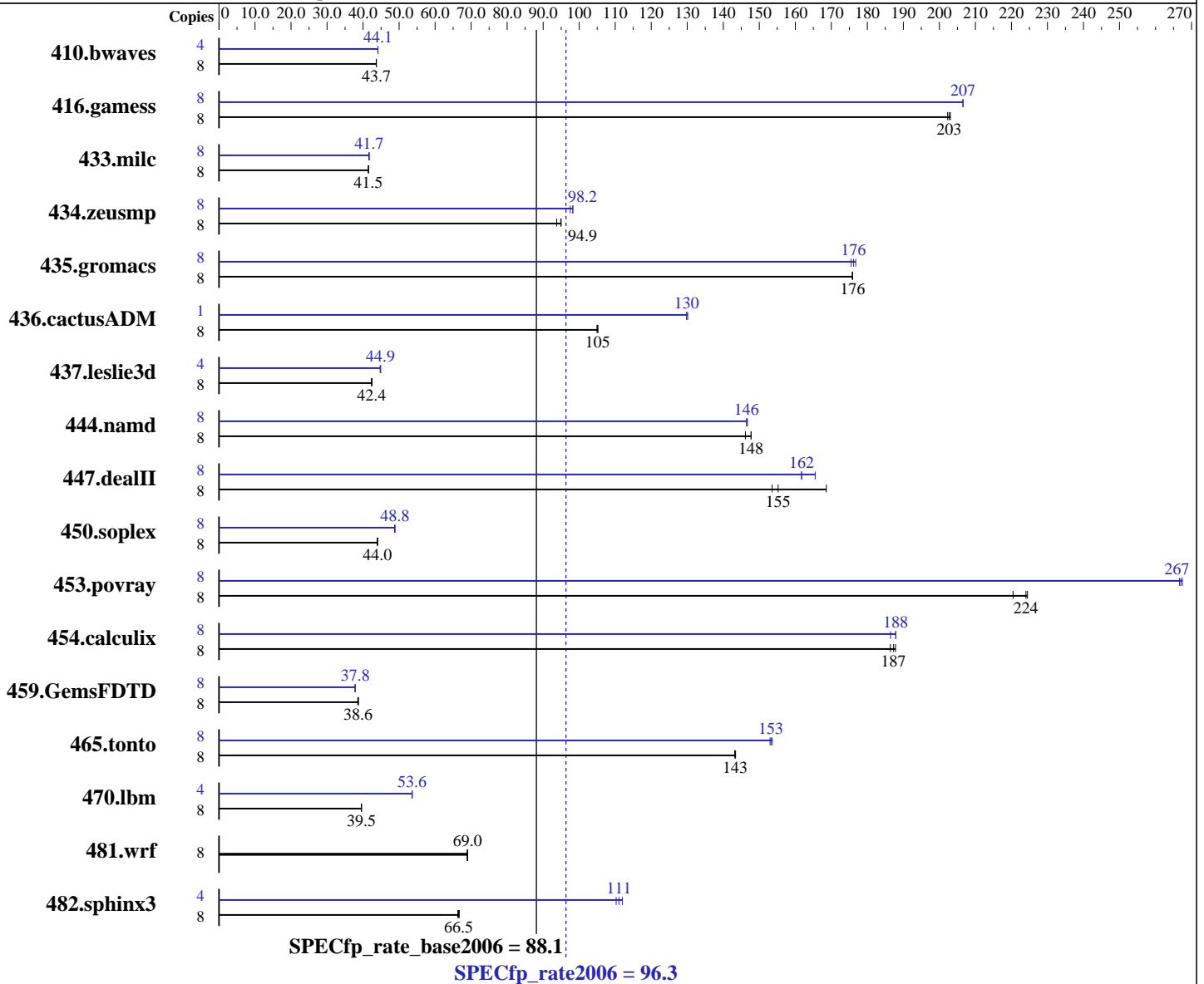
Test date: Oct-2008

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: Feb-2008

Tested by: ASUSTeK Computer Inc.

Software Availability: Nov-2008



Hardware

CPU Name: Intel Xeon X5492
 CPU Characteristics: 1600 MHz Bus Speed
 CPU MHz: 3400
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
 CPU(s) orderable: 1,2 chips
 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: SUSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
 Compiler: Intel C++ and Fortran Compiler 11.0 for Linux Build 20080730 Package ID: l_cproc_b_11.0.042, l_fproc_b_11.0.042
 Auto Parallel: Yes
 File System: ReiserFS
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit

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L3 Cache: None
Other Cache: None
Memory: 32 GB (8 X 4GB PC2-6400F, CL5, FBDIMM)
Disk Subsystem: Seagate ST3500830AS 500GB SATAII, 7200RPM
Other Hardware: None

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

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	2489	43.7	<u>2489</u>	<u>43.7</u>	2489	43.7	4	<u>1232</u>	<u>44.1</u>	1232	44.1	1232	44.1
416.gamess	8	771	203	<u>773</u>	<u>203</u>	774	202	8	758	207	<u>758</u>	<u>207</u>	758	207
433.milc	8	1770	41.5	<u>1770</u>	<u>41.5</u>	1770	41.5	8	<u>1762</u>	<u>41.7</u>	1763	41.7	1762	41.7
434.zeusmp	8	<u>767</u>	<u>94.9</u>	767	95.0	777	93.8	8	747	97.5	741	98.2	<u>741</u>	<u>98.2</u>
435.gromacs	8	325	176	<u>325</u>	<u>176</u>	325	176	8	323	177	<u>324</u>	<u>176</u>	325	175
436.cactusADM	8	911	105	<u>909</u>	<u>105</u>	909	105	1	<u>92.0</u>	<u>130</u>	91.8	130	92.1	130
437.leslie3d	8	1770	42.5	<u>1775</u>	<u>42.4</u>	1776	42.4	4	838	44.9	<u>838</u>	<u>44.9</u>	841	44.7
444.namd	8	439	146	<u>434</u>	<u>148</u>	434	148	8	437	147	438	146	<u>438</u>	<u>146</u>
447.dealII	8	596	154	<u>590</u>	<u>155</u>	543	169	8	566	162	553	166	<u>566</u>	<u>162</u>
450.soplex	8	1518	44.0	<u>1517</u>	<u>44.0</u>	1515	44.1	8	<u>1367</u>	<u>48.8</u>	1365	48.9	1369	48.7
453.povray	8	190	224	193	220	<u>190</u>	<u>224</u>	8	160	267	159	267	<u>159</u>	<u>267</u>
454.calculix	8	351	188	<u>352</u>	<u>187</u>	354	186	8	<u>351</u>	<u>188</u>	354	186	351	188
459.GemsFDTD	8	2192	38.7	2202	38.5	<u>2196</u>	<u>38.6</u>	8	<u>2244</u>	<u>37.8</u>	2246	37.8	2244	37.8
465.tonto	8	549	143	550	143	<u>549</u>	<u>143</u>	8	512	154	<u>514</u>	<u>153</u>	515	153
470.lbm	8	2781	39.5	<u>2780</u>	<u>39.5</u>	2778	39.6	4	1025	53.6	1025	53.6	<u>1025</u>	<u>53.6</u>
481.wrf	8	<u>1295</u>	<u>69.0</u>	1294	69.0	1297	68.9	8	<u>1295</u>	<u>69.0</u>	1294	69.0	1297	68.9
482.sphinx3	8	2338	66.7	2352	66.3	<u>2344</u>	<u>66.5</u>	4	696	112	<u>702</u>	<u>111</u>	707	110

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

Submit Notes

The config file option 'submit' was used.

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
OMP_NUM_THREADS set to number of processors
KMP_AFFINITY set to "physical,0"
KMP_STACKSIZE set to 64M



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Platform Notes

Tested system case can be used with Intel EEB 3.61 spec
PC Power and Cooling 650W power supply
System was configured with XGI Z9s VGA (on board VGA)

Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icc ifort

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:

-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

C++ benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

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Base Optimization Flags (Continued)

Fortran benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

Benchmarks using both Fortran and C:

-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

Peak Compiler Invocation

C benchmarks (except as noted below):

icc

482.sphinx3: /opt/intel/Compiler/11.0/042/bin/ia32/icc
-L/opt/intel/Compiler/11.0/042/ipp/ia32/lib
-I/opt/intel/Compiler/11.0/042/ipp/ia32/include

C++ benchmarks (except as noted below):

icpc

450.soplex: /opt/intel/Compiler/11.0/042/bin/ia32/icpc
-L/opt/intel/Compiler/11.0/042/ipp/ia32/lib
-I/opt/intel/Compiler/11.0/042/ipp/ia32/include

Fortran benchmarks (except as noted below):

ifort

437.leslie3d: /opt/intel/Compiler/11.0/042/bin/ia32/ifort
-L/opt/intel/Compiler/11.0/042/ipp/ia32/lib
-I/opt/intel/Compiler/11.0/042/ipp/ia32/include

Benchmarks using both Fortran and C:

icc ifort

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
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

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Peak Portability Flags (Continued)

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

470.lbm: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch
-auto-ilp32

482.sphinx3: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2

C++ benchmarks:

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

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

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

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

Fortran benchmarks:

410.bwaves: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

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

434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static

437.leslie3d: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -opt-malloc-options=3 -opt-prefetch

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

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Peak Optimization Flags (Continued)

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -unroll4 -auto

Benchmarks using both Fortran and C:

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

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

454.calculix: -xSSE4.1 -ipo -O3 -no-prec-div -static -auto-ilp32

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-ic11.0-fp-linux64-revA.20090713.01.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090713.01.xml>

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