



SPEC® CFP2006 Result

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ASUSTeK Computer Inc.
(Test Sponsor: Intel Corporation)

SPECfp®2006 = 30.4

Asus M4A89GTD-PRO (Phenom II X4 955)

SPECfp_base2006 = 29.4

CPU2006 license: 13

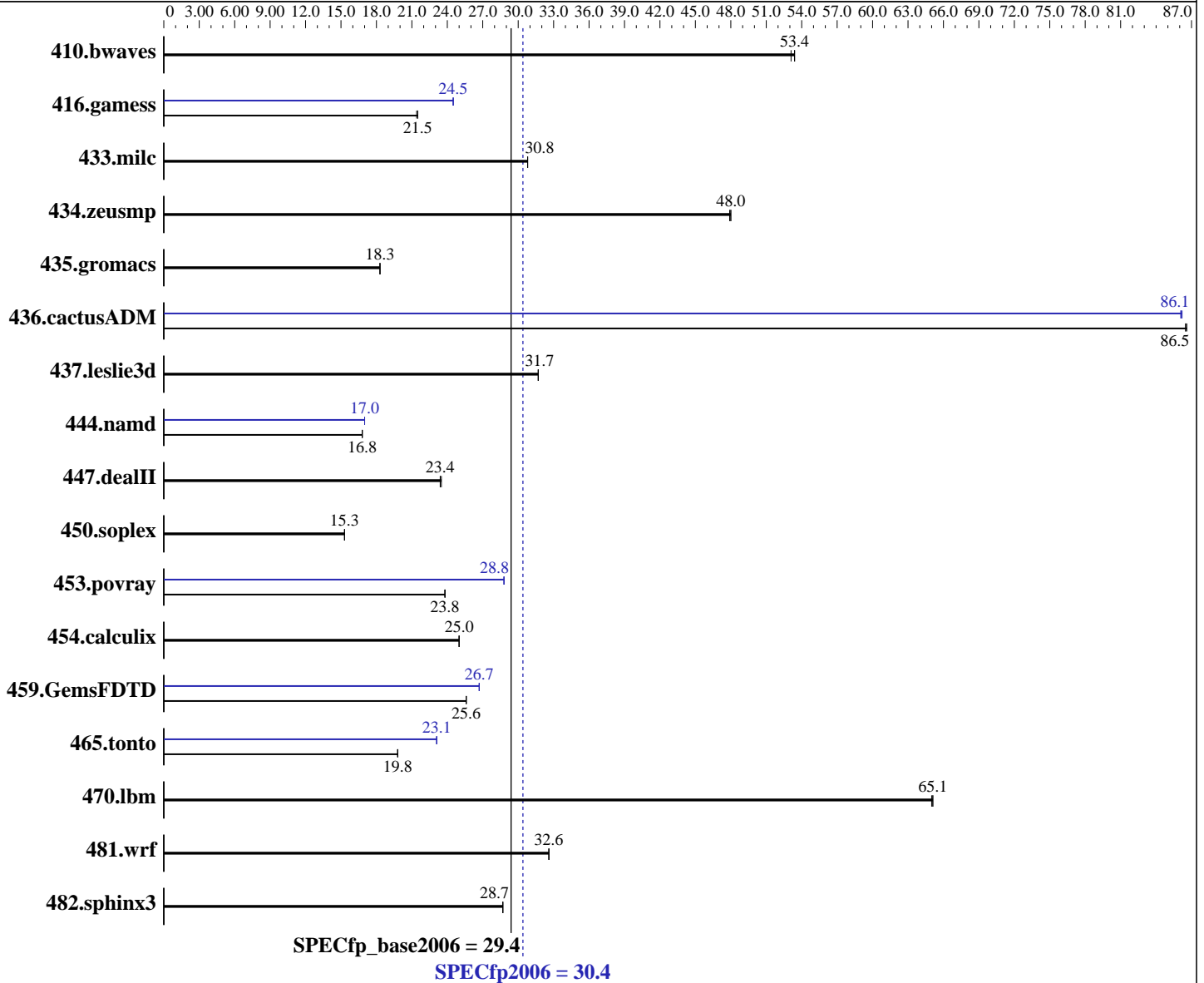
Test date: May-2011

Test sponsor: Intel Corporation

Hardware Availability: Mar-2010

Tested by: Intel Corporation

Software Availability: Apr-2011



Hardware

CPU Name: AMD Phenom II X4 955
 CPU Characteristics:
 CPU MHz: 3200
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 CPU(s) orderable: 1 chip
 Primary Cache: 64 KB I + 64 KB D on chip per core
 Secondary Cache: 512 KB I+D on chip per core

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Software

Operating System: Windows 7 Ultimate (64-bit)
 Compiler: Intel C++ Compiler XE for Intel 64
 Version 12.0.3.176 Build 20110309
 Intel Visual Fortran Compiler XE for Intel 64
 Version 12.0.3.176 Build 20110309
 Microsoft Visual Studio 2008 Professional SP1
 (for libraries)
 Auto Parallel: Yes
 File System: NTFS

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L3 Cache: 6 MB I+D on chip per chip
Other Cache: None
Memory: 8 GB (2 x 4 GB 2Rx8 PC3-10600U-9)
Disk Subsystem: Seagate 1 TB SATA, 7200 RPM
Other Hardware: None

System State: Default
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: SmartHeap Library Version 9.01 from <http://www.microquill.com/>

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	256	53.1	<u>255</u>	<u>53.4</u>	254	53.4	256	53.1	<u>255</u>	<u>53.4</u>	254	53.4
416.gamess	913	21.4	912	21.5	<u>913</u>	<u>21.5</u>	800	24.5	799	24.5	<u>800</u>	<u>24.5</u>
433.milc	299	30.8	<u>298</u>	<u>30.8</u>	298	30.8	299	30.8	<u>298</u>	<u>30.8</u>	298	30.8
434.zeusmp	190	48.0	<u>190</u>	<u>48.0</u>	190	47.9	190	48.0	<u>190</u>	<u>48.0</u>	190	47.9
435.gromacs	<u>391</u>	<u>18.3</u>	391	18.3	391	18.3	<u>391</u>	<u>18.3</u>	391	18.3	391	18.3
436.cactusADM	138	86.6	<u>138</u>	<u>86.5</u>	138	86.5	<u>139</u>	<u>86.1</u>	139	86.2	139	86.1
437.leslie3d	296	31.7	<u>297</u>	<u>31.7</u>	297	31.7	296	31.7	<u>297</u>	<u>31.7</u>	297	31.7
444.namd	476	16.8	476	16.8	<u>476</u>	<u>16.8</u>	472	17.0	<u>472</u>	<u>17.0</u>	472	17.0
447.dealII	487	23.5	<u>488</u>	<u>23.4</u>	488	23.4	487	23.5	<u>488</u>	<u>23.4</u>	488	23.4
450.soplex	<u>545</u>	<u>15.3</u>	545	15.3	545	15.3	<u>545</u>	<u>15.3</u>	545	15.3	545	15.3
453.povray	<u>224</u>	<u>23.8</u>	224	23.8	224	23.8	185	28.8	<u>185</u>	<u>28.8</u>	185	28.8
454.calculix	330	25.0	330	25.0	<u>330</u>	<u>25.0</u>	330	25.0	330	25.0	<u>330</u>	<u>25.0</u>
459.GemsFDTD	415	25.6	<u>414</u>	<u>25.6</u>	414	25.6	<u>398</u>	<u>26.7</u>	398	26.7	397	26.7
465.tonto	496	19.8	497	19.8	<u>497</u>	<u>19.8</u>	427	23.1	<u>427</u>	<u>23.1</u>	427	23.1
470.lbm	211	65.1	<u>211</u>	<u>65.1</u>	211	65.0	211	65.1	<u>211</u>	<u>65.1</u>	211	65.0
481.wrf	343	32.6	<u>343</u>	<u>32.6</u>	343	32.6	343	32.6	<u>343</u>	<u>32.6</u>	343	32.6
482.sphinx3	<u>680</u>	<u>28.7</u>	679	28.7	680	28.7	<u>680</u>	<u>28.7</u>	679	28.7	680	28.7

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

General Notes

Tested systems can be used with Shin-G ATX case,
PC Power and Cooling 1200W power supply
OMP_NUM_THREADS set to number of processors cores
KMP_AFFINITY set to granularity=fine,scatter

Base Compiler Invocation

C benchmarks:
icl -Qvc9 -Qstd=c99

C++ benchmarks:
icl -Qvc9

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Base Compiler Invocation (Continued)

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qvc9 -Qstd=c99 ifort

Base Portability Flags

410.bwaves: -DSPEC_CPU_P64 -names:lowercase
 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 -names:lowercase /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 -names:lowercase
 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:

/arch:SSE3 -Qipo -O3 -Qparallel -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000

C++ benchmarks:

/arch:SSE3 -Qipo -O3 -Qparallel -Qansi-alias -Qopt-prefetch
-Qcxx-features -Qauto-ilp32 -Qprec-div- /F1000000000 shlw64M.lib
-link /FORCE:MULTIPLE

Fortran benchmarks:

/arch:SSE3 -Qipo -O3 -Qparallel -Qansi-alias -Qopt-prefetch
/F1000000000

Benchmarks using both Fortran and C:

/arch:SSE3 -Qipo -O3 -Qparallel -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000



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Peak Compiler Invocation

C benchmarks:

icl -Qvc9 -Qstd=c99

C++ benchmarks:

icl -Qvc9

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qvc9 -Qstd=c99 ifort

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Oa -Qauto-ilp32 /F1000000000
sh1W64M.lib -link /FORCE:MULTIPLE

447.dealII: basepeak = yes

450.soplex: basepeak = yes

453.povray: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll4 -Qansi-alias -Qauto-ilp32
/F1000000000 sh1W64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qansi-alias
-Qscalar-rep- /F1000000000

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Peak Optimization Flags (Continued)

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll2 -Qopt-prefetch -Qparallel
/F1000000000

465.tonto: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll4 -Qauto -Qinline-calloc
/F1000000000

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel -Qunroll2
-Qauto-ilp32 /F1000000000

454.calculix: basepeak = yes

481.wrf: basepeak = yes

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revB.html>

<http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.20110719.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revB.xml>

<http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.20110719.xml>

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

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