



SPEC® CFP2006 Result

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GIGA-BYTE Technology Co. Ltd.

(Test Sponsor: Intel Corporation)

Gigabyte MA78GM-S2H Motherboard (AMD Phenom II X3 710)

SPECfp®_rate2006 = 32.4

SPECfp_rate_base2006 = 31.7

CPU2006 license: 13

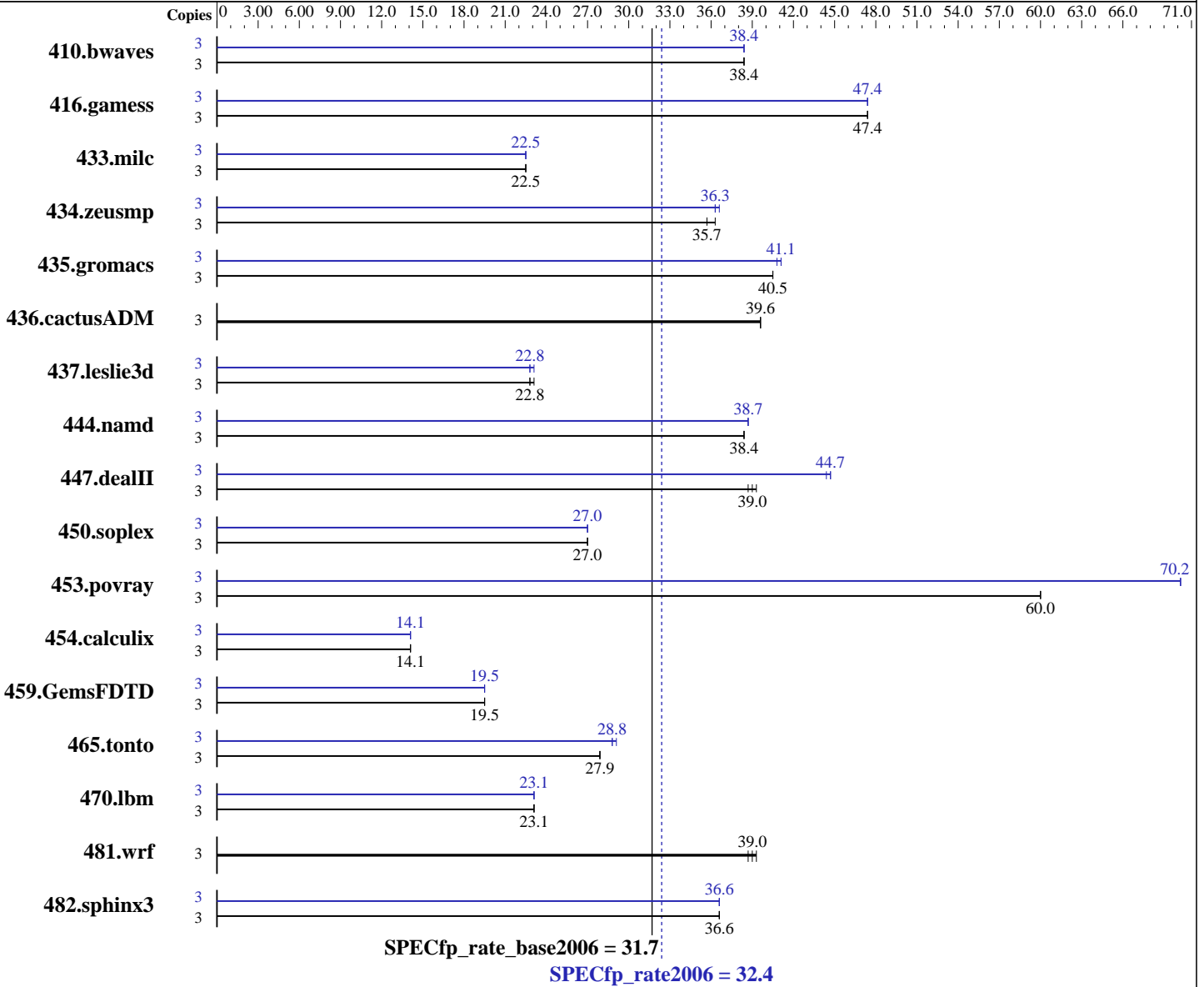
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: May-2009

Hardware Availability: Feb-2009

Software Availability: Nov-2008



Hardware

CPU Name: AMD Phenom II X3 710
 CPU Characteristics:
 CPU MHz: 2600
 FPU: Integrated
 CPU(s) enabled: 3 cores, 1 chip, 3 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 Vista Ultimate w/ SP1 (64-bit)
 Compiler: Intel C++ Compiler Professional 11.0 for IA32
 Build 20080930 Package ID: w_cproc_p_11.0.054
 Intel Visual Fortran Compiler Professional 11.0 for IA32
 Build 20080930 Package ID: w_cprof_p_11.0.054
 Microsoft Visual Studio 2008 (for libraries)
 Auto Parallel: No
 File System: NTFS

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L3 Cache: 6 MB I+D on chip per chip
Other Cache: None
Memory: 4 GB (4x1GB DDR2-800 CL5)
Disk Subsystem: Seagate 320 GB SATA, 7200RPM
Other Hardware: None

System State: Default
Base Pointers: 32-bit
Peak Pointers: 32-bit
Other Software: SmartHeap Library Version 8.1 from <http://www.microquill.com/>

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	3	1063	38.4	1061	38.4	<u>1062</u>	<u>38.4</u>	3	1061	38.4	<u>1061</u>	<u>38.4</u>	1062	38.4
416.gamess	3	1241	47.4	<u>1239</u>	<u>47.4</u>	1239	47.4	3	1242	47.4	<u>1242</u>	<u>47.4</u>	1242	47.4
433.milc	3	1229	22.5	1232	22.5	<u>1229</u>	<u>22.5</u>	3	1229	22.5	<u>1229</u>	<u>22.5</u>	1230	22.5
434.zeusmp	3	752	36.3	763	35.7	<u>762</u>	<u>35.7</u>	3	744	36.6	751	36.3	<u>750</u>	<u>36.3</u>
435.gromacs	3	531	40.5	531	40.5	<u>531</u>	<u>40.5</u>	3	523	40.8	523	41.1	<u>523</u>	<u>41.1</u>
436.cactusADM	3	907	39.6	<u>907</u>	<u>39.6</u>	907	39.6	3	907	39.6	<u>907</u>	<u>39.6</u>	907	39.6
437.leslie3d	3	1228	23.1	<u>1231</u>	<u>22.8</u>	1231	22.8	3	1228	23.1	1232	22.8	<u>1230</u>	<u>22.8</u>
444.namd	3	625	38.4	<u>625</u>	<u>38.4</u>	625	38.4	3	621	38.7	<u>621</u>	<u>38.7</u>	621	38.7
447.dealII	3	884	38.7	876	39.3	<u>878</u>	<u>39.0</u>	3	<u>770</u>	<u>44.7</u>	769	44.7	771	44.4
450.soplex	3	924	27.0	<u>927</u>	<u>27.0</u>	927	27.0	3	<u>927</u>	<u>27.0</u>	927	27.0	930	27.0
453.povray	3	<u>266</u>	<u>60.0</u>	266	60.0	266	60.0	3	<u>227</u>	<u>70.2</u>	228	70.2	227	70.2
454.calculix	3	<u>1765</u>	<u>14.1</u>	1765	14.1	1765	14.1	3	1766	14.1	1765	14.1	<u>1765</u>	<u>14.1</u>
459.GemsFDTD	3	<u>1625</u>	<u>19.5</u>	1625	19.5	1625	19.5	3	1626	19.5	1627	19.5	<u>1626</u>	<u>19.5</u>
465.tonto	3	1062	27.9	<u>1059</u>	<u>27.9</u>	1059	27.9	3	1018	29.1	1022	28.8	<u>1020</u>	<u>28.8</u>
470.lbm	3	1795	23.1	1795	23.1	<u>1795</u>	<u>23.1</u>	3	1795	23.1	<u>1795</u>	<u>23.1</u>	1795	23.1
481.wrf	3	866	38.7	856	39.3	<u>857</u>	<u>39.0</u>	3	866	38.7	856	39.3	<u>857</u>	<u>39.0</u>
482.sphinx3	3	1597	36.6	1594	36.6	<u>1594</u>	<u>36.6</u>	3	1591	36.6	1596	36.6	<u>1596</u>	<u>36.6</u>

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.

General Notes

Tested systems can be used with Shin-G ATX case, Antec NeoPower 480W power supply
Binaries were built on Windows Vista Ultimate (32-bit)

Base Compiler Invocation

C benchmarks:
icl -Qvc9 -Qc99

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Base Compiler Invocation (Continued)

C++ benchmarks:

icl -Qvc9

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qvc9 -Qc99 ifort

Base Portability Flags

436.cactusADM: -Qlowercase /assume:underscore
444.namd: -TP
447.dealII: -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
453.povray: -DSPEC_CPU_WINDOWS_ICL
454.calculix: -DSPEC_CPU_NOZMODIFIER -Qlowercase
481.wrf: -DSPEC_CPU_WINDOWS_ICL

Base Optimization Flags

C benchmarks:

/arch:SSE2 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000

C++ benchmarks:

/arch:SSE2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features
/F1000000000 shlw32m.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

/arch:SSE2 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000

Benchmarks using both Fortran and C:

/arch:SSE2 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000

Peak Compiler Invocation

C benchmarks:

icl -Qvc9 -Qc99

C++ benchmarks:

icl -Qvc9

Fortran benchmarks:

ifort

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Benchmarks using both Fortran and C:

icl -Qvc9 -Qc99 ifort

Peak Portability Flags

436.cactusADM: -Qlowercase /assume:underscore
444.namd: -TP
447.dealII: -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
453.povray: -DSPEC_CPU_WINDOWS_ICL
454.calculix: -DSPEC_CPU_NOZMODIFIER -Qlowercase
481.wrf: -DSPEC_CPU_WINDOWS_ICL

Peak Optimization Flags

C benchmarks:

433.milc: /arch:SSE2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Oa /F1000000000

470.lbm: /arch:SSE2 -Qipo -O3 -Qprec-div- -Qopt-prefetch
/F1000000000

482.sphinx3: /arch:SSE2 -Qipo -O3 -Qprec-div- -Qunroll2 /F1000000000

C++ benchmarks:

444.namd: /arch:SSE2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Oa /F1000000000 shlw32m.lib
-link /FORCE:MULTIPLE

447.dealII: /arch:SSE2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias
-Qscalar-rep- /F1000000000 shlw32m.lib
-link /FORCE:MULTIPLE

450.soplex: /arch:SSE2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- /F1000000000 shlw32m.lib
-link /FORCE:MULTIPLE

453.povray: /arch:SSE2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll4 -Qansi-alias /F1000000000
shlw32m.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

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Peak Optimization Flags (Continued)

410.bwaves: /arch:SSE2 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000

416.gamess: /arch:SSE2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep- /F1000000000

434.zeusmp: /arch:SSE2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- /F1000000000

437.leslie3d: /arch:SSE2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000

459.GemsFDTD: /arch:SSE2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qopt-prefetch /F1000000000

465.tonto: /arch:SSE2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4 -Qauto /F1000000000

Benchmarks using both Fortran and C:

435.gromacs: /arch:SSE2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000

436.cactusADM: basepeak = yes

454.calculix: /arch:SSE2 -Qipo -O3 -Qprec-div- /F1000000000

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-win32-revA.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-win32-revA.xml>

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