



SPEC® CFP2006 Result

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GIGA-BYTE Technology Co. Ltd.

(Test Sponsor: Intel Corporation)

Gigabyte MA78GM-S2H Motherboard (AMD Phenom II X4 810)

SPECfp®_rate2006 = 37.9

SPECfp_rate_base2006 = 37.2

CPU2006 license: 13

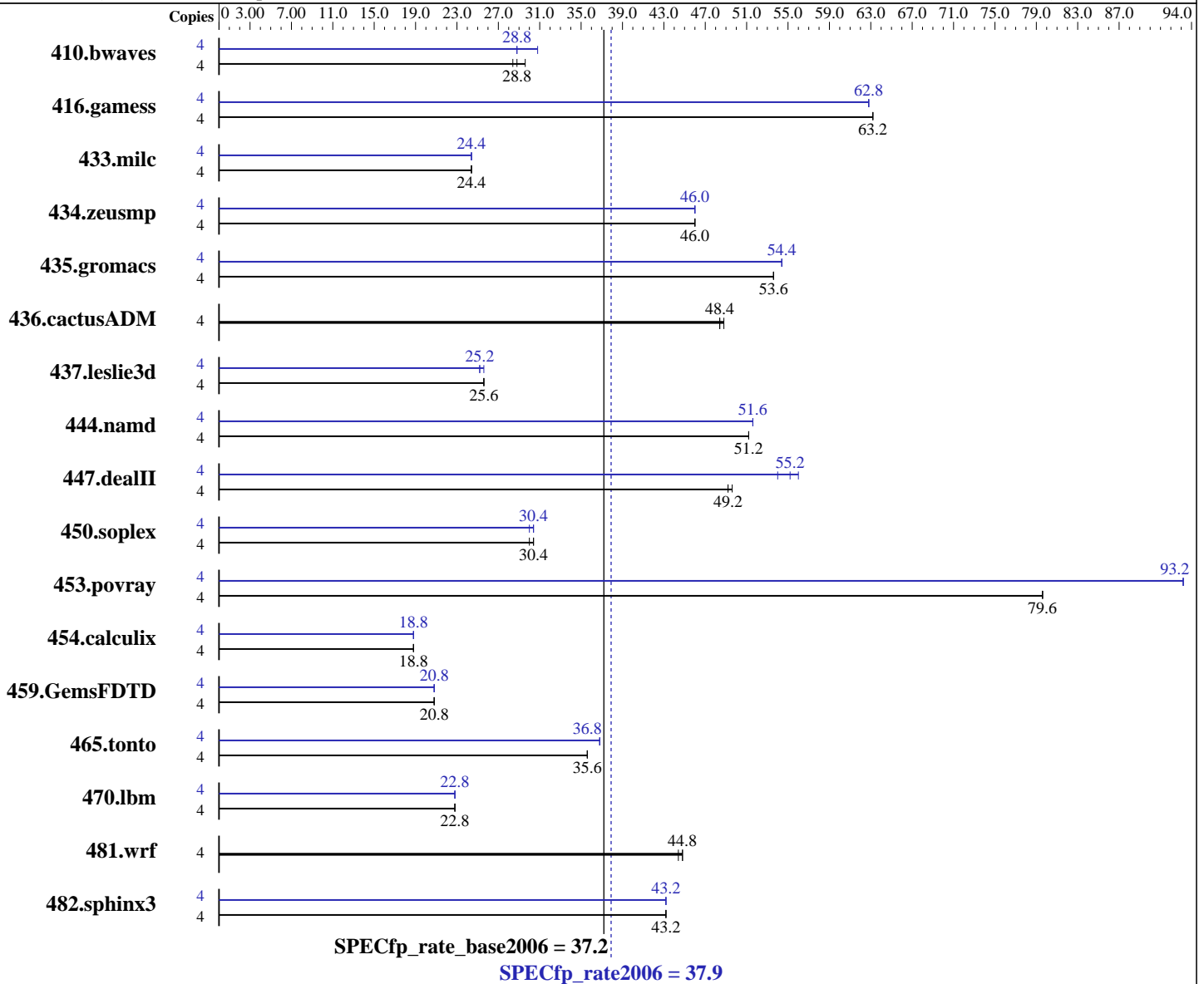
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: May-2009

Hardware Availability: Feb-2009

Software Availability: Nov-2008



Hardware

CPU Name: AMD Phenom II X4 810
 CPU Characteristics:
 CPU MHz: 2600
 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 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: 4 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	4	1911	28.4	<u>1886</u>	<u>28.8</u>	1837	29.6	4	1763	30.8	1884	28.8	<u>1880</u>	<u>28.8</u>
416.gamess	4	1241	63.2	<u>1242</u>	<u>63.2</u>	1242	63.2	4	1244	62.8	<u>1244</u>	<u>62.8</u>	1244	62.8
433.milc	4	1500	24.4	<u>1500</u>	<u>24.4</u>	1501	24.4	4	<u>1501</u>	<u>24.4</u>	1501	24.4	1500	24.4
434.zeusmp	4	791	46.0	793	46.0	<u>792</u>	<u>46.0</u>	4	788	46.0	793	46.0	<u>791</u>	<u>46.0</u>
435.gromacs	4	<u>533</u>	<u>53.6</u>	533	53.6	533	53.6	4	<u>526</u>	<u>54.4</u>	526	54.4	526	54.4
436.cactusADM	4	985	48.4	983	48.8	<u>984</u>	<u>48.4</u>	4	985	48.4	983	48.8	<u>984</u>	<u>48.4</u>
437.leslie3d	4	1478	25.6	<u>1479</u>	<u>25.6</u>	1480	25.6	4	1478	25.6	<u>1481</u>	<u>25.2</u>	1481	25.2
444.namd	4	627	51.2	627	51.2	<u>627</u>	<u>51.2</u>	4	<u>621</u>	<u>51.6</u>	622	51.6	621	51.6
447.dealII	4	926	49.6	928	49.2	<u>928</u>	<u>49.2</u>	4	846	54.0	<u>827</u>	<u>55.2</u>	818	56.0
450.soplex	4	1109	30.0	<u>1102</u>	<u>30.4</u>	1101	30.4	4	1113	30.0	<u>1103</u>	<u>30.4</u>	1102	30.4
453.povray	4	267	79.6	<u>267</u>	<u>79.6</u>	268	79.6	4	229	93.2	228	93.2	<u>228</u>	<u>93.2</u>
454.calculix	4	1769	18.8	1770	18.8	<u>1769</u>	<u>18.8</u>	4	<u>1769</u>	<u>18.8</u>	1768	18.8	1769	18.8
459.GemsFDTD	4	2055	20.8	<u>2047</u>	<u>20.8</u>	2033	20.8	4	<u>2043</u>	<u>20.8</u>	2035	20.8	2046	20.8
465.tonto	4	1106	35.6	1110	35.6	<u>1109</u>	<u>35.6</u>	4	1069	36.8	<u>1071</u>	<u>36.8</u>	1073	36.8
470.lbm	4	2395	22.8	2395	22.8	<u>2395</u>	<u>22.8</u>	4	<u>2395</u>	<u>22.8</u>	2395	22.8	2395	22.8
481.wrf	4	<u>1001</u>	<u>44.8</u>	1008	44.4	999	44.8	4	<u>1001</u>	<u>44.8</u>	1008	44.4	999	44.8
482.sphinx3	4	1805	43.2	<u>1804</u>	<u>43.2</u>	1802	43.2	4	<u>1802</u>	<u>43.2</u>	1805	43.2	1802	43.2

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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Peak Compiler Invocation (Continued)

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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