



SPEC® CFP2006 Result

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GIGA-BYTE Technology Co. Ltd.

(Test Sponsor: Intel Corporation)

Gigabyte MA78GM-S2H Motherboard (AMD Phenom X4 9750)

SPECfp®_rate2006 = 35.9

SPECfp_rate_base2006 = 35.1

CPU2006 license: 13

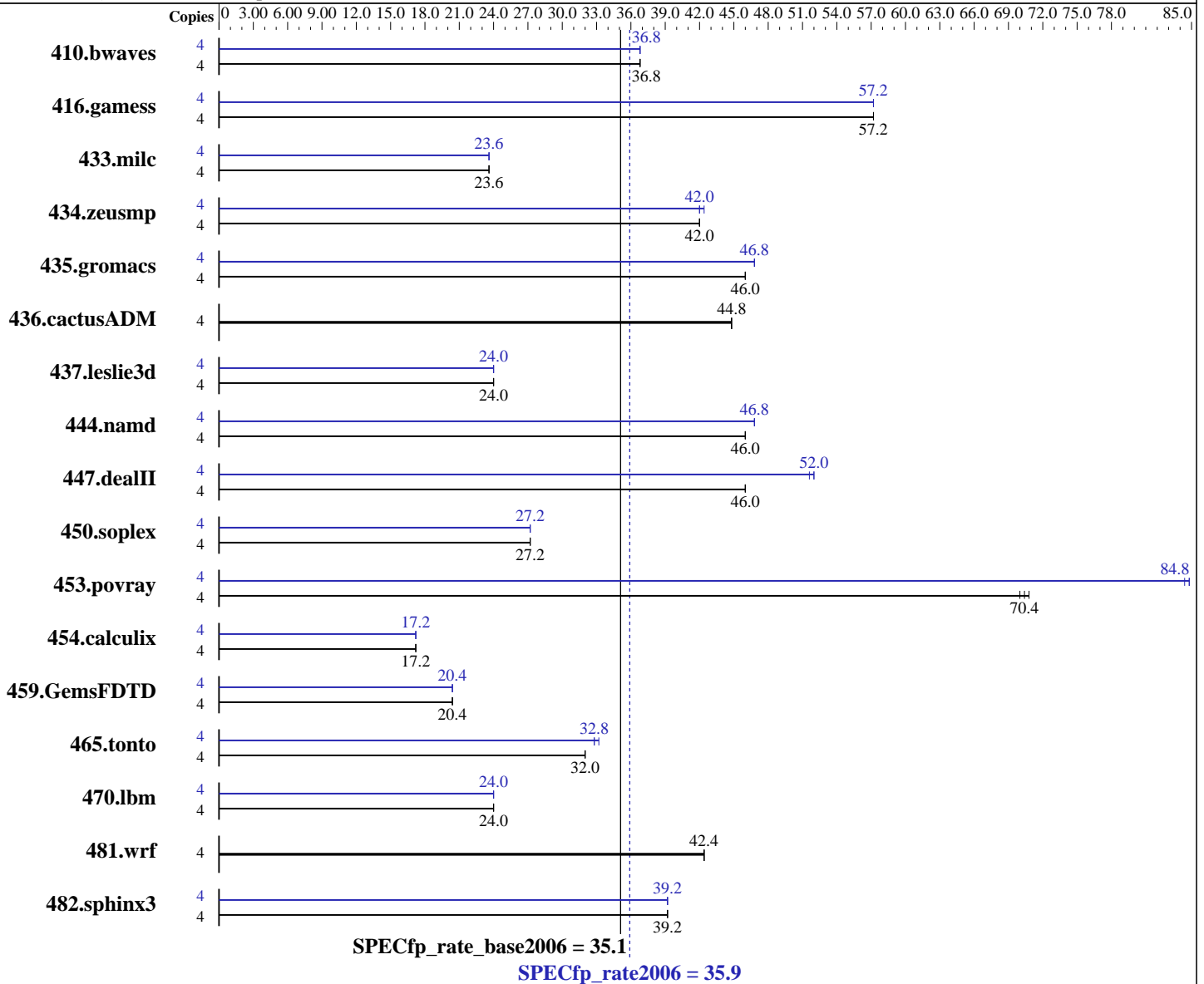
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Jan-2009

Hardware Availability: Apr-2008

Software Availability: Nov-2008



Hardware

CPU Name: AMD Phenom X4 9750
 CPU Characteristics:
 CPU MHz: 2400
 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: 2 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	1472	36.8	1474	36.8	<u>1472</u>	<u>36.8</u>	4	1471	36.8	<u>1471</u>	<u>36.8</u>	1473	36.8
416.gamess	4	1371	57.2	1371	57.2	<u>1371</u>	<u>57.2</u>	4	1366	57.2	1368	57.2	<u>1368</u>	<u>57.2</u>
433.milc	4	<u>1564</u>	<u>23.6</u>	1565	23.6	1563	23.6	4	1563	23.6	1565	23.6	<u>1565</u>	<u>23.6</u>
434.zeusmp	4	866	42.0	870	42.0	<u>869</u>	<u>42.0</u>	4	863	42.0	<u>863</u>	<u>42.0</u>	861	42.4
435.gromacs	4	<u>621</u>	<u>46.0</u>	620	46.0	622	46.0	4	610	46.8	609	46.8	<u>610</u>	<u>46.8</u>
436.cactusADM	4	1068	44.8	1069	44.8	<u>1068</u>	<u>44.8</u>	4	1068	44.8	1069	44.8	<u>1068</u>	<u>44.8</u>
437.leslie3d	4	1569	24.0	1570	24.0	<u>1570</u>	<u>24.0</u>	4	1569	24.0	1568	24.0	<u>1569</u>	<u>24.0</u>
444.namd	4	<u>698</u>	<u>46.0</u>	698	46.0	697	46.0	4	686	46.8	<u>687</u>	<u>46.8</u>	687	46.8
447.dealII	4	996	46.0	992	46.0	<u>993</u>	<u>46.0</u>	4	<u>881</u>	<u>52.0</u>	887	51.6	880	52.0
450.soplex	4	<u>1224</u>	<u>27.2</u>	1219	27.2	1226	27.2	4	1219	27.2	1218	27.2	<u>1218</u>	<u>27.2</u>
453.povray	4	304	70.0	300	70.8	<u>303</u>	<u>70.4</u>	4	251	84.8	252	84.4	<u>252</u>	<u>84.8</u>
454.calculix	4	<u>1914</u>	<u>17.2</u>	1913	17.2	1914	17.2	4	<u>1914</u>	<u>17.2</u>	1913	17.2	1914	17.2
459.GemsFDTD	4	2079	20.4	2076	20.4	<u>2078</u>	<u>20.4</u>	4	2081	20.4	<u>2080</u>	<u>20.4</u>	2078	20.4
465.tonto	4	1223	32.0	1227	32.0	<u>1227</u>	<u>32.0</u>	4	1196	32.8	<u>1194</u>	<u>32.8</u>	1189	33.2
470.lbm	4	2304	24.0	2304	24.0	<u>2304</u>	<u>24.0</u>	4	2304	24.0	2304	24.0	<u>2304</u>	<u>24.0</u>
481.wrf	4	1049	42.4	<u>1051</u>	<u>42.4</u>	1051	42.4	4	1049	42.4	<u>1051</u>	<u>42.4</u>	1051	42.4
482.sphinx3	4	1988	39.2	1993	39.2	<u>1992</u>	<u>39.2</u>	4	1989	39.2	<u>1991</u>	<u>39.2</u>	1994	39.2

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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