SPEC® CFP2006 Result

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GIGA-BYTE Technology Co. Ltd.

(Test Sponsor: Intel Corporation)

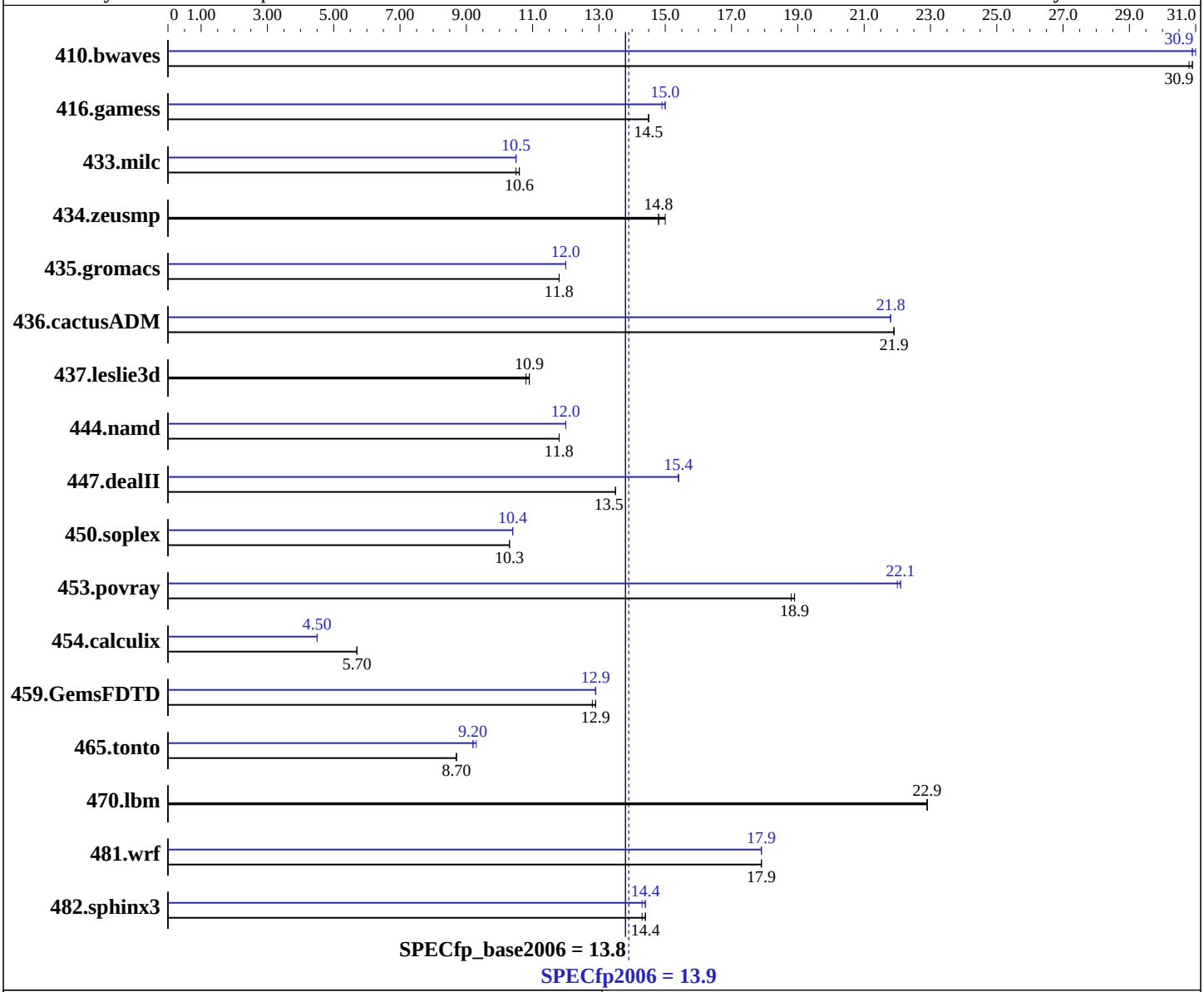
Gigabyte MA78GM-S2H Motherboard (AMD Athlon X2 7550)

SPECfp®2006 = 13.9

SPECfp_base2006 = 13.8

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: May-2009
Hardware Availability: Dec-2008
Software Availability: Nov-2008



Hardware

CPU Name:	AMD Athlon X2 7550
CPU Characteristics:	
CPU MHz:	2500
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 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:	Yes
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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	441	30.8	**440**	**30.9**	440	30.9	**440**	**30.9**	440	30.9	439	31.0
416.gamess	**1346**	**14.5**	1347	14.5	1346	14.5	**1309**	**15.0**	1309	15.0	1311	14.9
433.milc	875	10.5	867	10.6	**868**	**10.6**	875	10.5	872	10.5	**873**	**10.5**
434.zeusmp	608	15.0	**614**	**14.8**	616	14.8	608	15.0	**614**	**14.8**	616	14.8
435.gromacs	605	11.8	**605**	**11.8**	605	11.8	594	12.0	**595**	**12.0**	595	12.0
436.cactusADM	546	21.9	547	21.9	**546**	**21.9**	547	21.8	548	21.8	**547**	**21.8**
437.leslie3d	864	10.9	**865**	**10.9**	867	10.8	864	10.9	**865**	**10.9**	867	10.8
444.namd	681	11.8	682	11.8	**681**	**11.8**	669	12.0	669	12.0	**669**	**12.0**
447.dealII	846	13.5	846	13.5	**846**	**13.5**	742	15.4	**742**	**15.4**	743	15.4
450.soplex	**809**	**10.3**	809	10.3	809	10.3	805	10.4	804	10.4	**804**	**10.4**
453.povray	283	18.8	282	18.9	**282**	**18.9**	**241**	**22.1**	241	22.1	241	22.0
454.calculix	**1447**	**5.70**	1447	5.70	1447	5.70	**1833**	**4.50**	1833	4.50	1833	4.50
459.GemsFDTD	824	12.9	827	12.8	**825**	**12.9**	823	12.9	824	12.9	**823**	**12.9**
465.tonto	1132	8.70	1131	8.70	**1131**	**8.70**	1068	9.20	**1064**	**9.20**	1063	9.30
470.lbm	**601**	**22.9**	601	22.9	601	22.9	**601**	**22.9**	601	22.9	601	22.9
481.wrf	626	17.9	624	17.9	**625**	**17.9**	624	17.9	**625**	**17.9**	625	17.9
482.sphinx3	1355	14.4	**1356**	**14.4**	1362	14.3	1365	14.3	**1351**	**14.4**	1350	14.4

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, Antec NeoPower 480W power supply
Binaries were built on Windows Vista Ultimate (32-bit)
OMP_NUM_THREADS set to number of logical processors as seen by the OS
KMP_AFFINITY set to physical,0
```

Base Compiler Invocation

C benchmarks:

```
icl -Qvc9 -Qc99
```

C++ benchmarks:

```
icl -Qvc9
```

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Base Compiler Invocation (Continued)

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- -Qparallel -Qopt-prefetch
/F1000000000

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

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

Benchmarks using both Fortran and C:
/arch:SSE2 -Qipo -O3 -Qprec-div- -Qparallel -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: basepeak = yes

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 -Qopt-prefetch
-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:

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

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Peak Optimization Flags (Continued)

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: `basepeak = yes`

437.leslie3d: `basepeak = yes`

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

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

481.wrf: `/arch:SSE2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel /F1000000000`

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

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