SPEC® CFP2006 Result

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ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

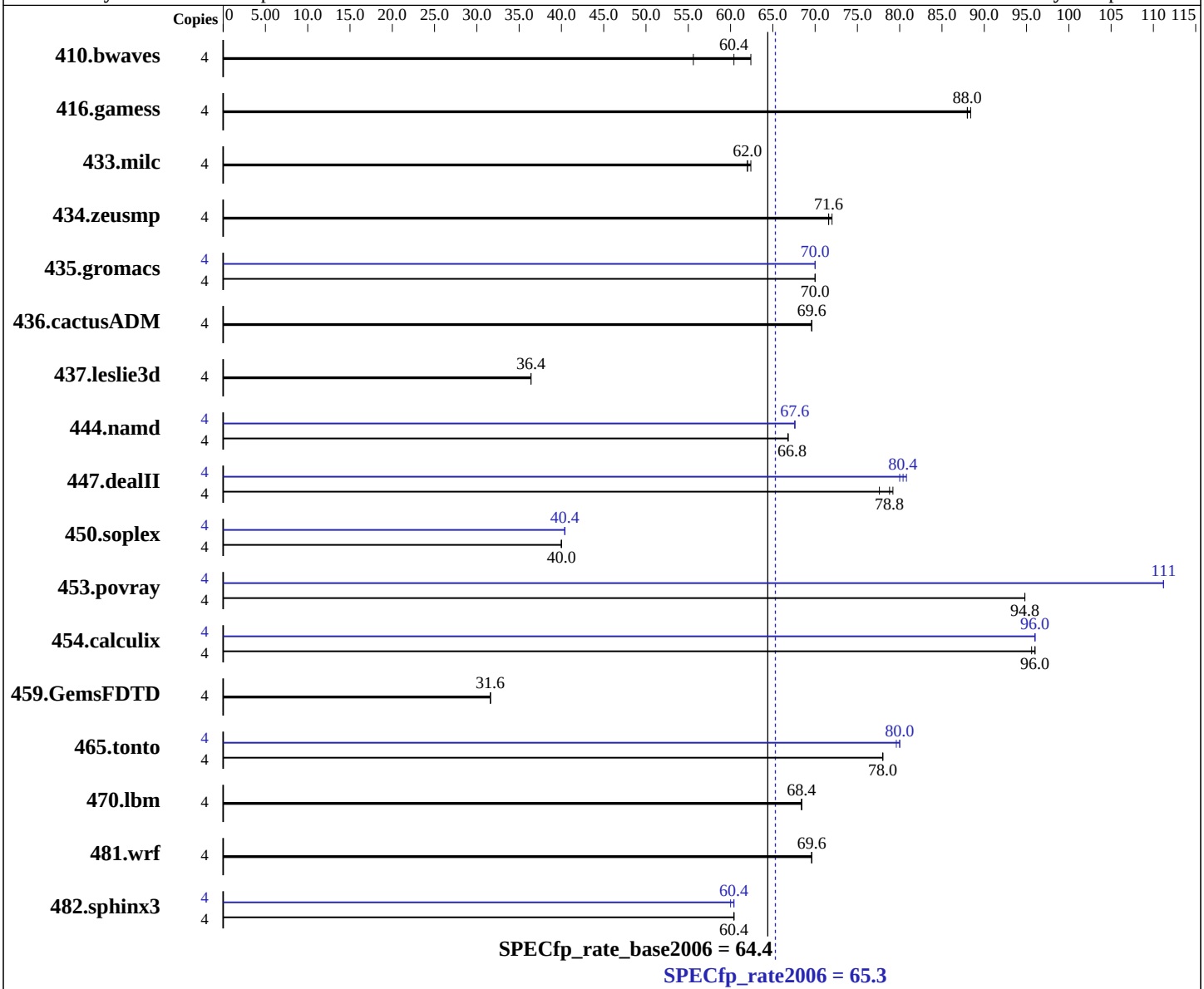
Asus M4A89GTD-PRO (Phenom II X4 955)

SPECfp®_rate2006 = 65.3

SPECfp_rate_base2006 = 64.4

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

Test date: May-2011
Hardware Availability: Mar-2010
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:	No
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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	**898**	**60.4**	979	55.6	871	62.4	4	**898**	**60.4**	979	55.6	871	62.4
416.gamess	4	**889**	**88.0**	887	88.4	890	88.0	4	**889**	**88.0**	887	88.4	890	88.0
433.milc	4	590	62.4	592	62.0	**591**	**62.0**	4	590	62.4	592	62.0	**591**	**62.0**
434.zeusmp	4	507	72.0	508	71.6	**507**	**71.6**	4	507	72.0	508	71.6	**507**	**71.6**
435.gromacs	4	407	70.0	**407**	**70.0**	408	70.0	4	408	70.0	**408**	**70.0**	408	70.0
436.cactusADM	4	688	69.6	**687**	**69.6**	686	69.6	4	688	69.6	**687**	**69.6**	686	69.6
437.leslie3d	4	1032	36.4	1033	36.4	**1033**	**36.4**	4	1032	36.4	1033	36.4	**1033**	**36.4**
444.namd	4	480	66.8	480	66.8	**480**	**66.8**	4	474	67.6	**474**	**67.6**	474	67.6
447.dealII	4	577	79.2	**581**	**78.8**	591	77.6	4	565	80.8	572	80.0	**569**	**80.4**
450.soplex	4	835	40.0	**835**	**40.0**	835	40.0	4	**823**	**40.4**	823	40.4	822	40.4
453.povray	4	**225**	**94.8**	224	94.8	225	94.8	4	191	111	**191**	**111**	192	111
454.calculix	4	345	95.6	344	96.0	**344**	**96.0**	4	**344**	**96.0**	344	96.0	344	96.0
459.GemsFDTD	4	1348	31.6	1349	31.6	**1349**	**31.6**	4	1348	31.6	1349	31.6	**1349**	**31.6**
465.tonto	4	**505**	**78.0**	504	78.0	506	78.0	4	**493**	**80.0**	492	80.0	494	79.6
470.lbm	4	**805**	**68.4**	805	68.4	805	68.4	4	**805**	**68.4**	805	68.4	805	68.4
481.wrf	4	640	69.6	**641**	**69.6**	641	69.6	4	640	69.6	**641**	**69.6**	641	69.6
482.sphinx3	4	1292	60.4	1295	60.4	**1293**	**60.4**	4	**1295**	**60.4**	1296	60.0	1294	60.4

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.
 The start command with the /affinity switch was used to bind processes to cores
```

General Notes

```
Tested systems can be used with Shin-G ATX case,
PC Power and Cooling 1200W power supply
```

Base Compiler Invocation

C benchmarks:

```
icl -Qvc9 -Qstd=c99
```

Continued on next page

Base Compiler Invocation (Continued)

C++ benchmarks:
icl -Qvc9

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 -Qprec-div- -Qansi-alias -Qauto-ilp32
/F1000000000 -link /FORCE:MULTIPLE

C++ benchmarks:
/arch:SSE3 -Qipo -O3 -Qprec-div- -Qansi-alias -Qcxx-features
-Qauto-ilp32 /F1000000000 shlW64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:
/arch:SSE3 -Qipo -O3 -Qprec-div- -Qansi-alias /F1000000000
-link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:
/arch:SSE3 -Qipo -O3 -Qprec-div- -Qansi-alias -Qauto-ilp32
/F1000000000 -link /FORCE:MULTIPLE

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: `/arch:SSE3 -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias -Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE`

C++ benchmarks:

444.namd: `/arch:SSE3`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- -Oa -Qauto-ilp32 /F1000000000 shlW64M.lib -link /FORCE:MULTIPLE`

447.dealII: `/arch:SSE3`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias -Qscalar-rep- -Qauto-ilp32 /F1000000000 shlW64M.lib -link /FORCE:MULTIPLE`

450.soplex: `/arch:SSE3`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qauto-ilp32 /F1000000000 shlW64M.lib -link /FORCE:MULTIPLE`

453.povray: `/arch:SSE3`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qauto-ilp32 /F1000000000 shlW64M.lib -link /FORCE:MULTIPLE`

Continued on next page

Peak Optimization Flags (Continued)

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: basepeak = yes

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

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

Benchmarks using both Fortran and C:

435.gromacs: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE

436.cactusADM: basepeak = yes

454.calculix: /arch:SSE3 -Qipo -O3 -Qprec-div- -Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE

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 questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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