SPEC® CFP2006 Result

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ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

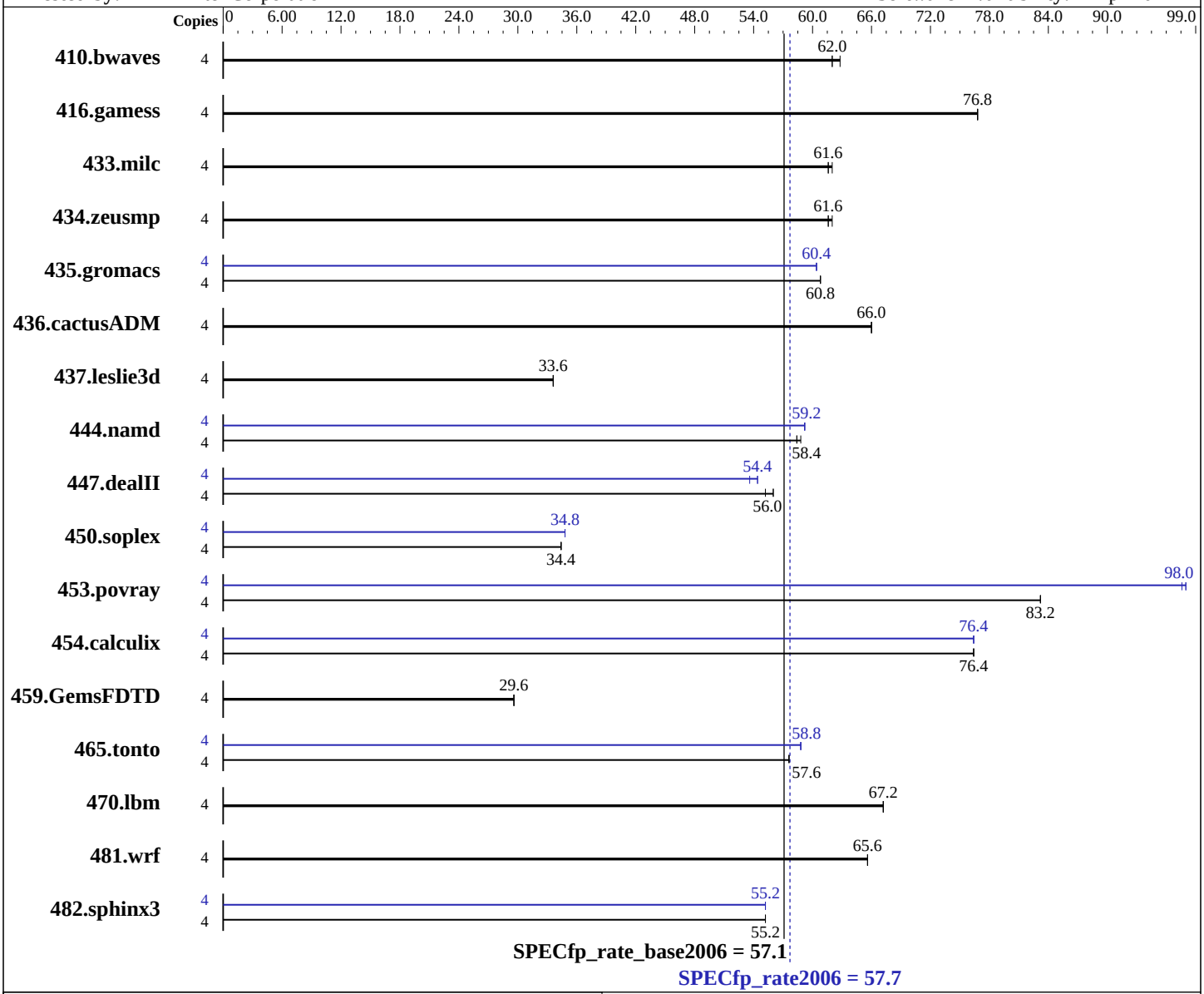
ASUSTek M4A89GTD PRO/USB3 (Athlon II X4 630)

SPECfp®_rate2006 = 57.7

SPECfp_rate_base2006 = 57.1

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

Test date: Jun-2011
Hardware Availability: Feb-2011
Software Availability: Apr-2011



Hardware

CPU Name:	AMD Athlon II X4 630
CPU Characteristics:	
CPU MHz:	2800
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: None
Other Cache: None
Memory: 4 GB (2 x 2 GB 2Rx4 PC3-10600U-9)
Disk Subsystem: 1 TB Seagate 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	**876**	**62.0**	879	62.0	868	62.8	4	**876**	**62.0**	879	62.0	868	62.8
416.gamess	4	1020	76.8	**1021**	**76.8**	1021	76.8	4	1020	76.8	**1021**	**76.8**	1021	76.8
433.milc	4	594	62.0	**595**	**61.6**	595	61.6	4	594	62.0	**595**	**61.6**	595	61.6
434.zeusmp	4	589	62.0	**591**	**61.6**	591	61.6	4	589	62.0	**591**	**61.6**	591	61.6
435.gromacs	4	470	60.8	471	60.8	**470**	**60.8**	4	472	60.4	**472**	**60.4**	473	60.4
436.cactusADM	4	722	66.0	**723**	**66.0**	723	66.0	4	722	66.0	**723**	**66.0**	723	66.0
437.leslie3d	4	1116	33.6	1117	33.6	**1117**	**33.6**	4	1116	33.6	1117	33.6	**1117**	**33.6**
444.namd	4	547	58.8	**548**	**58.4**	548	58.4	4	541	59.2	541	59.2	**541**	**59.2**
447.dealII	4	826	55.2	818	56.0	**818**	**56.0**	4	840	54.4	856	53.6	**843**	**54.4**
450.soplex	4	971	34.4	**971**	**34.4**	971	34.4	4	**955**	**34.8**	954	34.8	955	34.8
453.povray	4	256	83.2	256	83.2	**256**	**83.2**	4	218	97.6	217	98.0	**217**	**98.0**
454.calculix	4	**431**	**76.4**	431	76.4	431	76.4	4	431	76.4	432	76.4	**431**	**76.4**
459.GemsFDTD	4	1429	29.6	**1431**	**29.6**	1431	29.6	4	1429	29.6	**1431**	**29.6**	1431	29.6
465.tonto	4	**683**	**57.6**	681	57.6	684	57.6	4	**670**	**58.8**	670	58.8	669	58.8
470.lbm	4	**816**	**67.2**	816	67.2	816	67.2	4	**816**	**67.2**	816	67.2	816	67.2
481.wrf	4	682	65.6	680	65.6	**681**	**65.6**	4	682	65.6	680	65.6	**681**	**65.6**
482.sphinx3	4	1412	55.2	**1411**	**55.2**	1411	55.2	4	1412	55.2	**1413**	**55.2**	1413	55.2

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.
 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
```

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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-revC.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-revC.xml
http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.20110719.xml

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

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