SPEC® CFP2006 Result

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ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

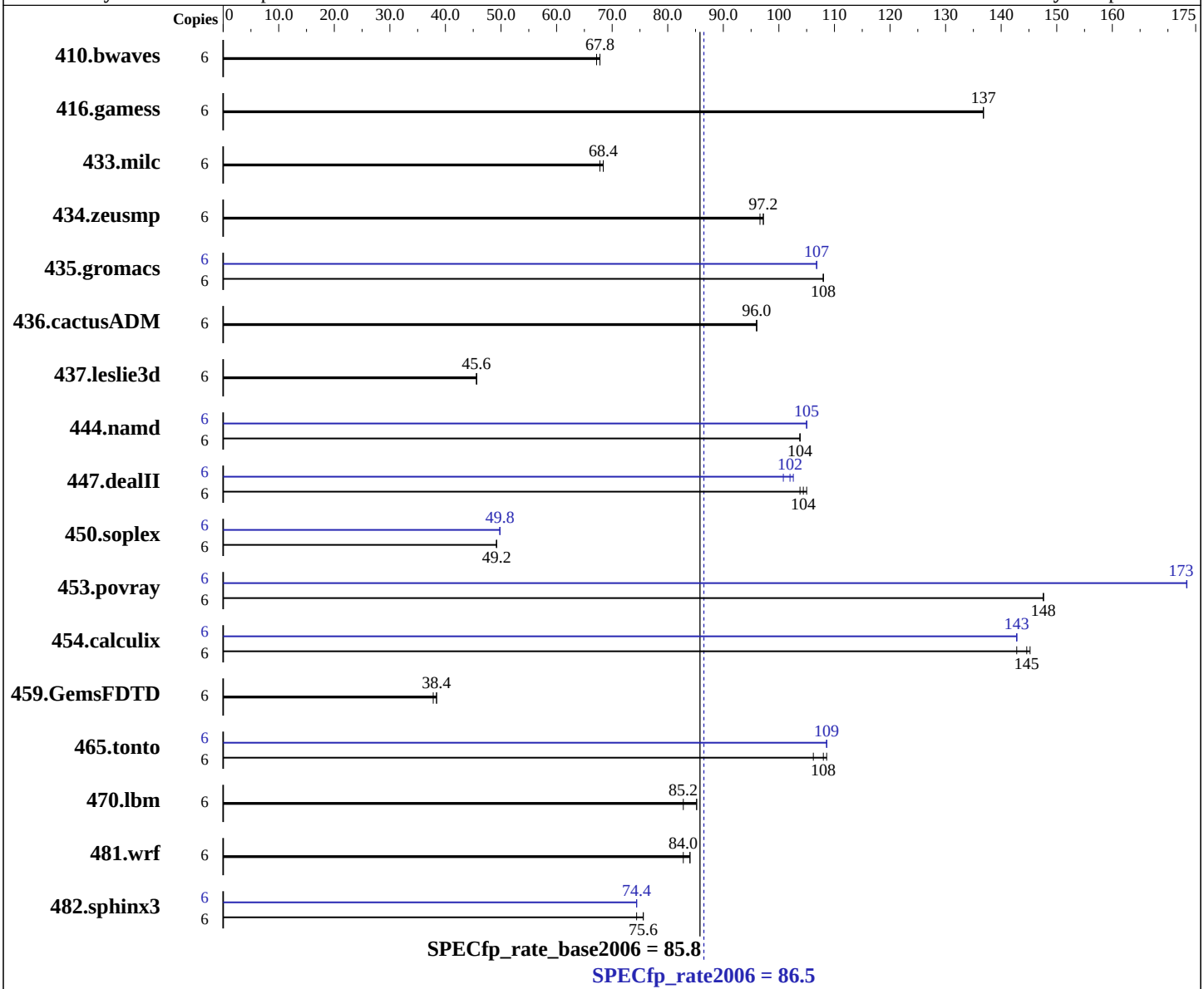
ASUS M4A89GTD-PRO (AMD Phenom II X6 1100T)

SPECfp®_rate2006 = 86.5

SPECfp_rate_base2006 = 85.8

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

Test date: Oct-2011
Hardware Availability: Dec-2010
Software Availability: Apr-2011



Hardware

CPU Name:	AMD Phenom II X6 1100T
CPU Characteristics:	AMD Turbo CORE technology up to 3.70 GHz
CPU MHz:	3300
FPU:	Integrated
CPU(s) enabled:	6 cores, 1 chip, 6 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 SP1 (64-bit)
Compiler:	C/C++: Version 12.0.3.176 of Intel C++ Studio XE for Windows; Fortran: Version 12.0.3.176 of Intel Visual Fortran Studio XE for Windows; Libraries: Version 15.00.30729.01 of Microsoft Visual Studio 2008 Professional SP1
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 2Rx4 PC3-10600U-9)
Disk Subsystem: Intel 160GB SSD
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	6	1215	67.2	1206	67.8	**1207**	**67.8**	6	1215	67.2	1206	67.8	**1207**	**67.8**
416.gamess	6	860	137	**860**	**137**	860	137	6	860	137	**860**	**137**	860	137
433.milc	6	812	67.8	807	68.4	**808**	**68.4**	6	812	67.8	807	68.4	**808**	**68.4**
434.zeusmp	6	561	97.2	**562**	**97.2**	564	96.6	6	561	97.2	**562**	**97.2**	564	96.6
435.gromacs	6	**397**	**108**	397	108	397	108	6	402	107	**402**	**107**	402	107
436.cactusADM	6	748	96.0	**746**	**96.0**	745	96.0	6	748	96.0	**746**	**96.0**	745	96.0
437.leslie3d	6	1237	45.6	1234	45.6	**1235**	**45.6**	6	1237	45.6	1234	45.6	**1235**	**45.6**
444.namd	6	464	104	464	104	**464**	**104**	6	459	105	**459**	**105**	459	105
447.dealII	6	653	105	662	104	**656**	**104**	6	681	101	**672**	**102**	669	103
450.soplex	6	**1013**	**49.2**	1012	49.2	1021	49.2	6	**1011**	**49.8**	1011	49.8	1011	49.8
453.povray	6	216	148	**216**	**148**	216	148	6	184	173	184	173	**184**	**173**
454.calculix	6	**343**	**145**	342	145	346	143	6	**347**	**143**	347	143	347	143
459.GemsFDTD	6	1667	38.4	**1669**	**38.4**	1695	37.8	6	1667	38.4	**1669**	**38.4**	1695	37.8
465.tonto	6	544	109	**545**	**108**	557	106	6	**545**	**109**	544	109	545	109
470.lbm	6	967	85.2	**968**	**85.2**	993	82.8	6	967	85.2	**968**	**85.2**	993	82.8
481.wrf	6	796	84.0	**798**	**84.0**	812	82.8	6	796	84.0	**798**	**84.0**	812	82.8
482.sphinx3	6	1549	75.6	**1550**	**75.6**	1571	74.4	6	**1572**	**74.4**	1572	74.4	1575	74.4

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
```

Component Notes

```
Tested systems can be used with Shin-G ATX case,
PC Power and Cooling 1200W power supply
System was configured with an ATI HD 6990 discrete graphics card
```

Base 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
```

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
```

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Base Optimization Flags (Continued)

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

Continued on next page

Peak Optimization Flags (Continued)

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

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.20111012.html
http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings-revC.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revC.20111012.xml
http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings-revC.xml

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

Tested with SPEC CPU2006 v1.1.
Report generated on Thu Jul 24 01:22:10 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 6 December 2011.