SPEC® CFP2006 Result

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ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

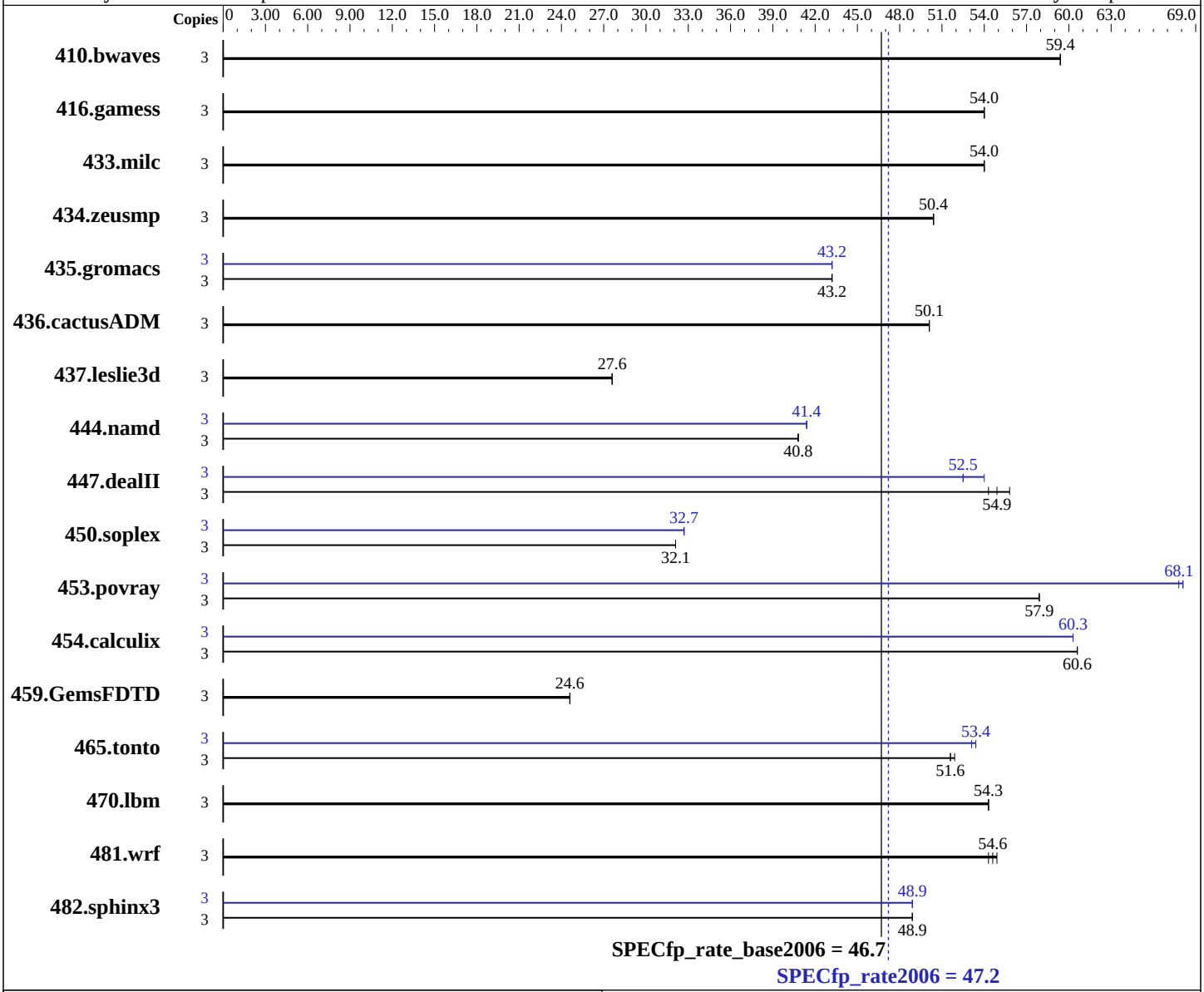
ASUSTek M4A89GTD PRO/USB3 (Phenom II X3 720)

SPECfp®_rate2006 = 47.2

SPECfp_rate_base2006 = 46.7

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 Phenom II X3 710
CPU Characteristics:	
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	3 cores, 1 chip, 3 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: 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	3	687	59.4	687	59.4	**687**	**59.4**	3	687	59.4	687	59.4	**687**	**59.4**
416.gamess	3	1091	54.0	1090	54.0	**1090**	**54.0**	3	1091	54.0	1090	54.0	**1090**	**54.0**
433.milc	3	509	54.0	509	54.0	**509**	**54.0**	3	509	54.0	509	54.0	**509**	**54.0**
434.zeusmp	3	**541**	**50.4**	541	50.4	540	50.4	3	**541**	**50.4**	541	50.4	540	50.4
435.gromacs	3	495	43.2	495	43.2	**495**	**43.2**	3	497	43.2	497	43.2	**497**	**43.2**
436.cactusADM	3	**717**	**50.1**	718	50.1	717	50.1	3	**717**	**50.1**	718	50.1	717	50.1
437.leslie3d	3	**1022**	**27.6**	1022	27.6	1021	27.6	3	**1022**	**27.6**	1022	27.6	1021	27.6
444.namd	3	588	40.8	588	40.8	**588**	**40.8**	3	581	41.4	581	41.4	**581**	**41.4**
447.dealII	3	633	54.3	**624**	**54.9**	616	55.8	3	637	54.0	**653**	**52.5**	653	52.5
450.soplex	3	777	32.1	777	32.1	**777**	**32.1**	3	767	32.7	**767**	**32.7**	767	32.7
453.povray	3	**276**	**57.9**	276	57.9	276	57.9	3	234	68.1	**235**	**68.1**	235	67.8
454.calculix	3	409	60.6	409	60.6	**409**	**60.6**	3	411	60.3	**411**	**60.3**	411	60.3
459.GemsFDTD	3	1295	24.6	**1296**	**24.6**	1300	24.6	3	1295	24.6	**1296**	**24.6**	1300	24.6
465.tonto	3	571	51.6	570	51.9	**571**	**51.6**	3	**554**	**53.4**	555	53.1	554	53.4
470.lbm	3	759	54.3	**759**	**54.3**	759	54.3	3	759	54.3	**759**	**54.3**	759	54.3
481.wrf	3	617	54.3	612	54.9	**613**	**54.6**	3	617	54.3	612	54.9	**613**	**54.6**
482.sphinx3	3	1194	48.9	1193	48.9	**1194**	**48.9**	3	1194	48.9	**1194**	**48.9**	1194	48.9

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-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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