SPEC® CFP2006 Result

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ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

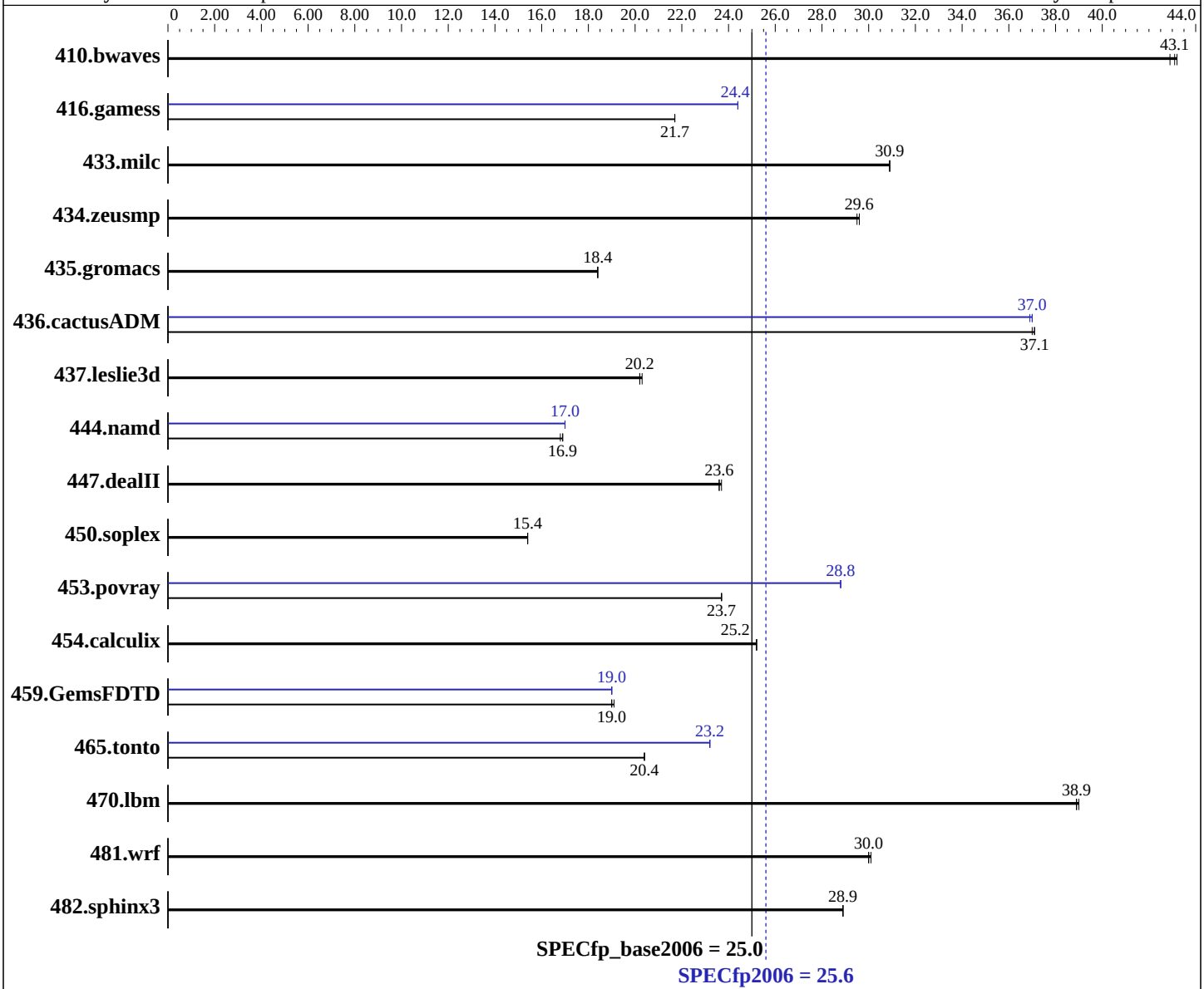
ASUSTek M4A89GTD PRO/USB3 (Phenom II X2 555)

SPECfp®2006 = 25.6

SPECfp_base2006 = 25.0

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 X2 555
CPU Characteristics:	
CPU MHz:	3200
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 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:	Yes
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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	317	42.9	**315**	**43.1**	315	43.2	317	42.9	**315**	**43.1**	315	43.2
416.gamess	901	21.7	901	21.7	**901**	**21.7**	**801**	**24.4**	801	24.4	801	24.4
433.milc	297	30.9	297	30.9	**297**	**30.9**	297	30.9	297	30.9	**297**	**30.9**
434.zeusmp	308	29.5	307	29.6	**308**	**29.6**	308	29.5	307	29.6	**308**	**29.6**
435.gromacs	389	18.4	**388**	**18.4**	388	18.4	389	18.4	**388**	**18.4**	388	18.4
436.cactusADM	323	37.0	322	37.1	**322**	**37.1**	324	36.9	**323**	**37.0**	323	37.0
437.leslie3d	465	20.2	464	20.3	**464**	**20.2**	465	20.2	464	20.3	**464**	**20.2**
444.namd	476	16.8	476	16.9	**476**	**16.9**	471	17.0	**471**	**17.0**	471	17.0
447.dealII	483	23.7	485	23.6	**484**	**23.6**	483	23.7	485	23.6	**484**	**23.6**
450.soplex	543	15.4	542	15.4	**542**	**15.4**	543	15.4	542	15.4	**542**	**15.4**
453.povray	224	23.7	**224**	**23.7**	224	23.7	185	28.8	185	28.8	**185**	**28.8**
454.calculix	328	25.2	328	25.2	**328**	**25.2**	328	25.2	328	25.2	**328**	**25.2**
459.GemsFDTD	559	19.0	**557**	**19.0**	557	19.1	559	19.0	**559**	**19.0**	558	19.0
465.tonto	**482**	**20.4**	482	20.4	483	20.4	424	23.2	**424**	**23.2**	424	23.2
470.lbm	353	39.0	**353**	**38.9**	353	38.9	353	39.0	**353**	**38.9**	353	38.9
481.wrf	372	30.0	**372**	**30.0**	372	30.1	372	30.0	**372**	**30.0**	372	30.1
482.sphinx3	675	28.9	675	28.9	**675**	**28.9**	675	28.9	675	28.9	**675**	**28.9**

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,
PC Power and Cooling 1200W power supply
OMP_NUM_THREADS set to number of processors cores
KMP_AFFINITY set to granularity=fine,scatter
```

Base Compiler Invocation

C benchmarks:

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

C++ benchmarks:

```
icl -Qvc9
```

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Base Compiler Invocation (Continued)

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 -Qparallel -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000

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

Fortran benchmarks:
/arch:SSE3 -Qipo -O3 -Qparallel -Qansi-alias -Qopt-prefetch
/F1000000000

Benchmarks using both Fortran and C:
/arch:SSE3 -Qipo -O3 -Qparallel -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000

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: `basepeak = yes`

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: `basepeak = yes`

450.soplex: `basepeak = yes`

453.povray: `/arch:SSE3`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- -Qunroll4 -Qansi-alias -Qauto-ilp32 /F1000000000 shlW64M.lib -link /FORCE:MULTIPLE`

Fortran benchmarks:

410.bwaves: `basepeak = yes`

416.gamess: `/arch:SSE3`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep- /F1000000000`

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Peak Optimization Flags (Continued)

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2 -Qopt-prefetch -Qparallel /F1000000000

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

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: /arch:SSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel -Qunroll2 -Qauto-ilp32 /F1000000000

454.calculix: basepeak = yes

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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