SPEC® CFP2006 Result

ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

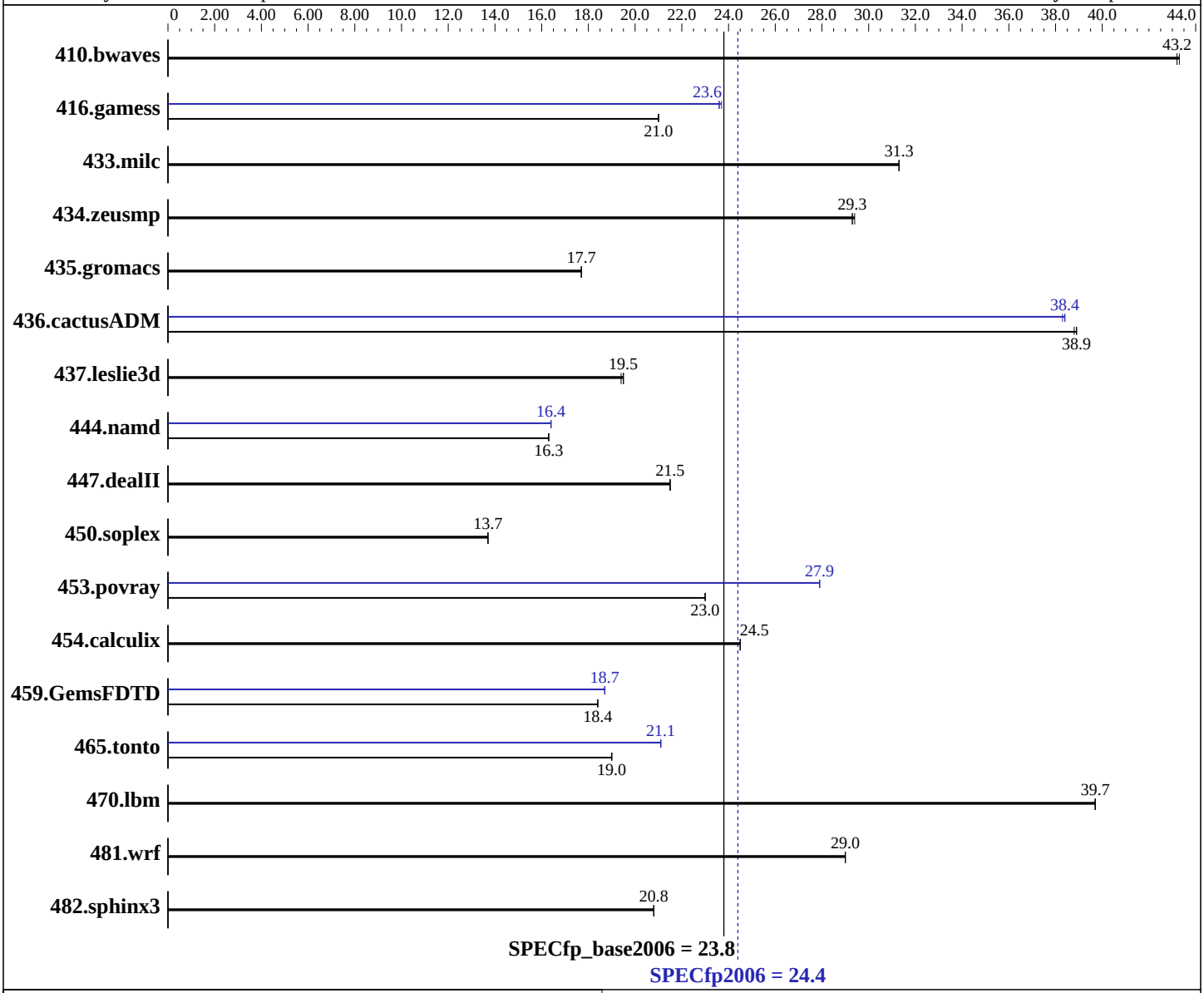
Asus M4A89GTD-PRO (Athlon II X2 255)

SPECfp®2006 = 24.4

SPECfp_base2006 = 23.8

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

Test date: May-2011
Hardware Availability: Jul-2010
Software Availability: Apr-2011



Hardware

CPU Name:	AMD Athlon II X2 255
CPU Characteristics:	
CPU MHz:	3100
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:	1 MB 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:	None	System State:	Default
Other Cache:	None	Base Pointers:	32/64-bit
Memory:	4 GB (2 x 2 GB 2Rx8 PC3-10600U-9)	Peak Pointers:	32/64-bit
Disk Subsystem:	Seagate 1 TB SATA, 7200 RPM	Other Software:	SmartHeap Library Version 9.01 from http://www.microquill.com/
Other Hardware:	None		

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	315	43.2	314	43.3	**315**	**43.2**	315	43.2	314	43.3	**315**	**43.2**
416.gamess	931	21.0	**932**	**21.0**	933	21.0	**829**	**23.6**	829	23.6	828	23.7
433.milc	294	31.3	294	31.3	**294**	**31.3**	294	31.3	294	31.3	**294**	**31.3**
434.zeusmp	309	29.4	310	29.3	**310**	**29.3**	309	29.4	310	29.3	**310**	**29.3**
435.gromacs	**404**	**17.7**	404	17.7	405	17.7	**404**	**17.7**	404	17.7	405	17.7
436.cactusADM	307	38.9	308	38.8	**307**	**38.9**	312	38.3	311	38.4	**312**	**38.4**
437.leslie3d	**483**	**19.5**	484	19.4	483	19.5	**483**	**19.5**	484	19.4	483	19.5
444.namd	493	16.3	493	16.3	**493**	**16.3**	488	16.4	**488**	**16.4**	488	16.4
447.dealII	531	21.5	**531**	**21.5**	531	21.5	531	21.5	**531**	**21.5**	531	21.5
450.soplex	**607**	**13.7**	607	13.7	607	13.7	**607**	**13.7**	607	13.7	607	13.7
453.povray	**232**	**23.0**	232	23.0	231	23.0	191	27.9	**191**	**27.9**	191	27.9
454.calculix	337	24.5	337	24.5	**337**	**24.5**	337	24.5	337	24.5	**337**	**24.5**
459.GemsFDTD	577	18.4	577	18.4	**577**	**18.4**	568	18.7	568	18.7	**568**	**18.7**
465.tonto	518	19.0	**518**	**19.0**	518	19.0	465	21.1	465	21.1	**465**	**21.1**
470.lbm	346	39.7	346	39.7	**346**	**39.7**	346	39.7	346	39.7	**346**	**39.7**
481.wrf	**385**	**29.0**	386	29.0	385	29.0	**385**	**29.0**	386	29.0	385	29.0
482.sphinx3	937	20.8	**936**	**20.8**	935	20.8	937	20.8	**936**	**20.8**	935	20.8

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-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

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 Wed Jul 23 21:19:16 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 19 July 2011.