SPEC® CFP2006 Result

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ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

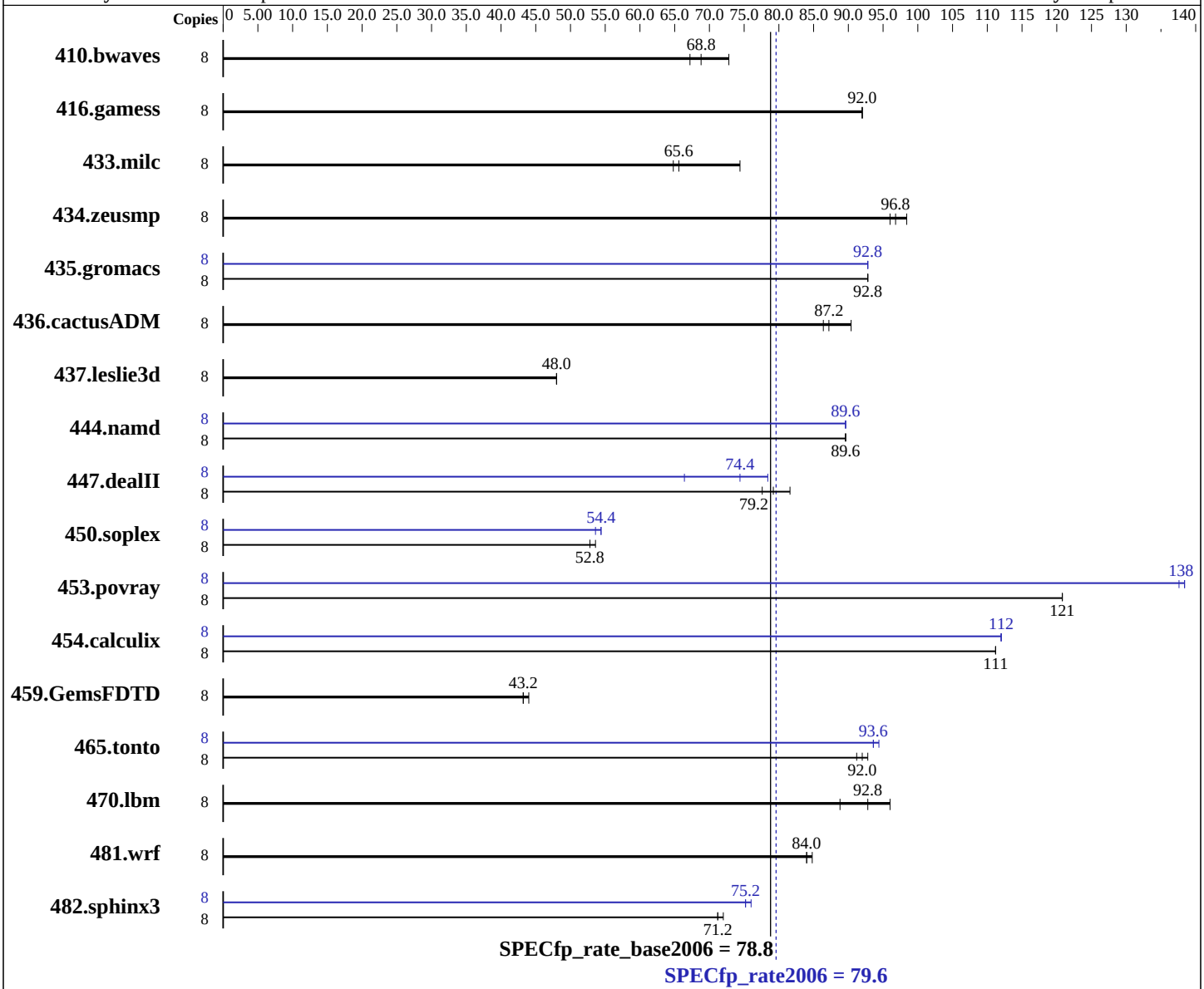
ASUS Sabertooth 990FX (AMD FX-8150)

SPECfp®_rate2006 = 79.6

SPECfp_rate_base2006 = 78.8

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

Test date: Oct-2011
Hardware Availability: Nov-2011
Software Availability: Apr-2011



Hardware

CPU Name:	AMD FX-8150
CPU Characteristics:	AMD Turbo CORE technology up to 4.20 GHz
CPU MHz:	3600
FPU:	Integrated
CPU(s) enabled:	8 cores, 1 chip, 8 cores/chip
CPU(s) orderable:	1 chip

Continued on next page

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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Primary Cache:	256 KB I on chip per chip, 64 KB I shared / 2 cores; 16 KB D on chip per core
Secondary Cache:	8 MB I+D on chip per chip, 2 MB shared / 2 cores
L3 Cache:	8 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	8	1501	72.8	**1579**	**68.8**	1627	67.2	8	1501	72.8	**1579**	**68.8**	1627	67.2
416.gamess	8	1701	92.0	**1700**	**92.0**	1696	92.0	8	1701	92.0	**1700**	**92.0**	1696	92.0
433.milc	8	989	74.4	**1118**	**65.6**	1126	64.8	8	989	74.4	**1118**	**65.6**	1126	64.8
434.zeusmp	8	759	96.0	**751**	**96.8**	742	98.4	8	759	96.0	**751**	**96.8**	742	98.4
435.gromacs	8	618	92.8	615	92.8	**616**	**92.8**	8	616	92.8	617	92.8	**617**	**92.8**
436.cactusADM	8	1102	86.4	1061	90.4	**1094**	**87.2**	8	1102	86.4	1061	90.4	**1094**	**87.2**
437.leslie3d	8	1567	48.0	**1573**	**48.0**	1577	48.0	8	1567	48.0	**1573**	**48.0**	1577	48.0
444.namd	8	**719**	**89.6**	719	89.6	717	89.6	8	**717**	**89.6**	717	89.6	717	89.6
447.dealII	8	**1160**	**79.2**	1178	77.6	1119	81.6	8	1382	66.4	**1226**	**74.4**	1169	78.4
450.soplex	8	1251	53.6	1258	52.8	**1256**	**52.8**	8	**1234**	**54.4**	1239	53.6	1226	54.4
453.povray	8	352	121	**352**	**121**	352	121	8	309	138	308	138	**308**	**138**
454.calculix	8	**594**	**111**	594	111	591	111	8	591	112	**591**	**112**	591	112
459.GemsFDTD	8	1946	44.0	1978	43.2	**1962**	**43.2**	8	1946	44.0	1978	43.2	**1962**	**43.2**
465.tonto	8	851	92.8	**853**	**92.0**	863	91.2	8	834	94.4	**839**	**93.6**	842	93.6
470.lbm	8	**1186**	**92.8**	1241	88.8	1148	96.0	8	**1186**	**92.8**	1241	88.8	1148	96.0
481.wrf	8	1065	84.0	1053	84.8	**1061**	**84.0**	8	1065	84.0	1053	84.8	**1061**	**84.0**
482.sphinx3	8	2187	71.2	**2182**	**71.2**	2176	72.0	8	**2063**	**75.2**	2070	75.2	2058	76.0

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
```

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

Tested with SPEC CPU2006 v1.1.
Report generated on Thu Jul 24 01:23:13 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 6 December 2011.