SPEC® CFP2006 Result

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Clevo

(Test Sponsor: Intel Corporation)

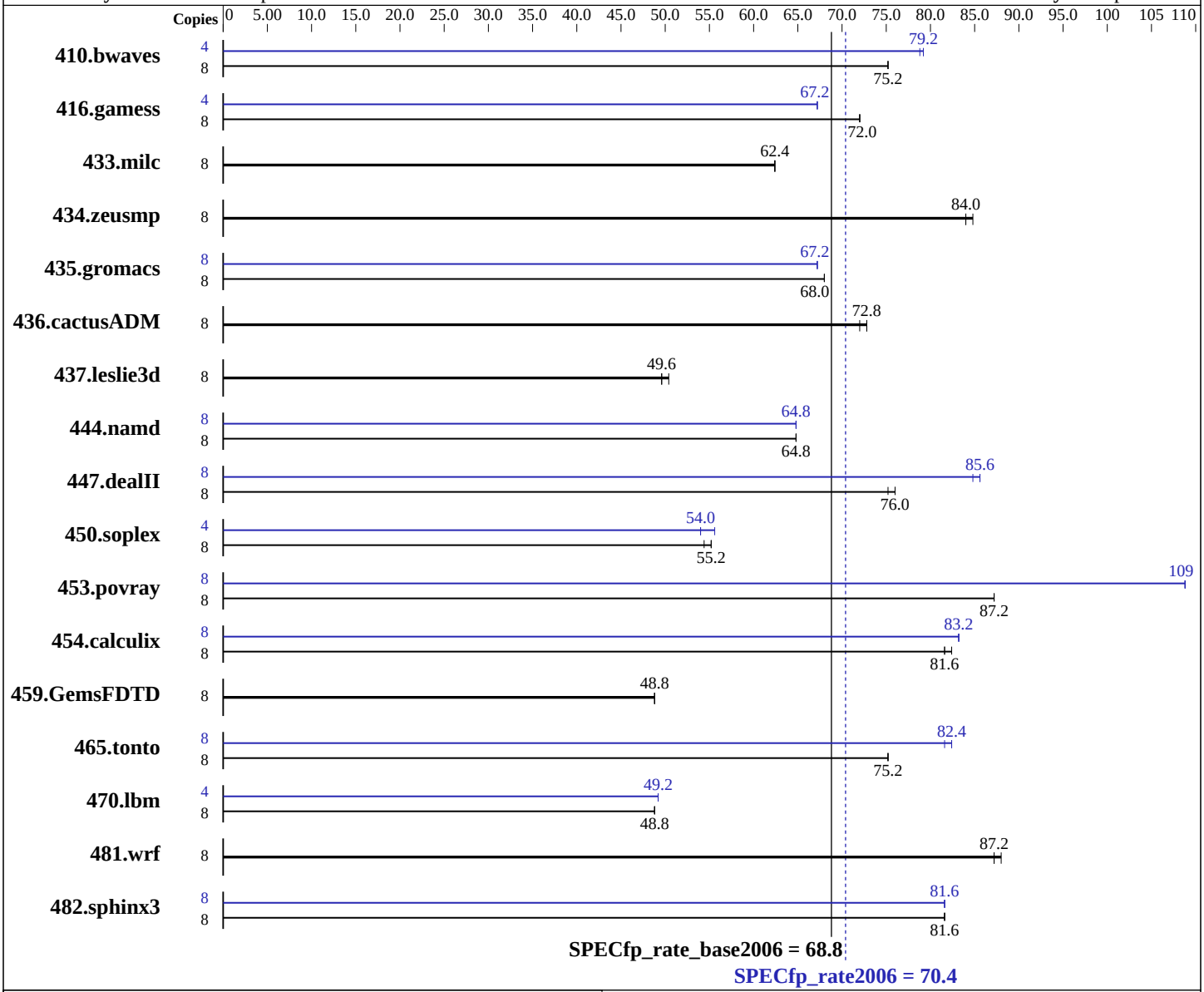
Clevo STYLE-NOTE

SPECfp®_rate2006 = 70.4

SPECfp_rate_base2006 = 68.8

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

Test date: Apr-2010
Hardware Availability: Jun-2010
Software Availability: Sep-2009



Hardware

CPU Name:	Intel Core i7-940XM
CPU Characteristics:	Intel Turbo Boost Technology up to 3.33 GHz
CPU MHz:	2133
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 cores/chip, 2 threads/core
CPU(s) orderable:	1 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core

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Software

Operating System:	Windows 7 Ultimate (64-bit)
Compiler:	Intel C++ Compiler Professional 11.1 for Intel 64 Build 20090903 Package ID: w_cproc_p_11.1.045 Intel Visual Fortran Compiler Professional 11.1 for Intel 64 Build 20090903 Package ID: w_cproc_p_11.1.045, w_cprof_p_11.1.045 Microsoft Visual Studio 2008 Professional SP1 (for libraries)
Auto Parallel:	No

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L3 Cache:	8 MB I+D on chip per chip
Other Cache:	None
Memory:	8 GB (2 x 4 GB 2Rx8 PC3-10600S-9)
Disk Subsystem:	Hitachi 320 GB SATA, 7200 RPM
Other Hardware:	None

File System:	NTFS
System State:	Default
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other Software:	None SmartHeap Library Version 8.1 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	1446	75.2	**1441**	**75.2**	1439	75.2	4	**687**	**79.2**	687	79.2	689	78.8
416.gamess	8	2178	72.0	**2178**	**72.0**	2177	72.0	4	1167	67.2	1167	67.2	**1167**	**67.2**
433.milc	8	1177	62.4	**1177**	**62.4**	1178	62.4	8	1177	62.4	**1177**	**62.4**	1178	62.4
434.zeusmp	8	864	84.0	862	84.8	**863**	**84.0**	8	864	84.0	862	84.8	**863**	**84.0**
435.gromacs	8	837	68.0	844	68.0	**837**	**68.0**	8	847	67.2	**847**	**67.2**	847	67.2
436.cactusADM	8	1324	72.0	1317	72.8	**1319**	**72.8**	8	1324	72.0	1317	72.8	**1319**	**72.8**
437.leslie3d	8	**1505**	**49.6**	1507	49.6	1503	50.4	8	**1505**	**49.6**	1507	49.6	1503	50.4
444.namd	8	994	64.8	995	64.8	**995**	**64.8**	8	**987**	**64.8**	988	64.8	987	64.8
447.dealII	8	**1200**	**76.0**	1200	76.0	1214	75.2	8	**1070**	**85.6**	1075	84.8	1067	85.6
450.soplex	8	**1211**	**55.2**	1220	54.4	1211	55.2	4	619	54.0	**618**	**54.0**	600	55.6
453.povray	8	487	87.2	489	87.2	**488**	**87.2**	8	391	109	390	109	**390**	**109**
454.calculix	8	806	81.6	804	82.4	**805**	**81.6**	8	796	83.2	**795**	**83.2**	795	83.2
459.GemsFDTD	8	**1751**	**48.8**	1751	48.8	1748	48.8	8	**1751**	**48.8**	1751	48.8	1748	48.8
465.tonto	8	1049	75.2	**1051**	**75.2**	1051	75.2	8	961	81.6	**960**	**82.4**	960	82.4
470.lbm	8	**2256**	**48.8**	2256	48.8	2254	48.8	4	1116	49.2	1121	49.2	**1118**	**49.2**
481.wrf	8	**1021**	**87.2**	1019	88.0	1021	87.2	8	**1021**	**87.2**	1019	88.0	1021	87.2
482.sphinx3	8	1910	81.6	**1912**	**81.6**	1918	81.6	8	1917	81.6	1916	81.6	**1917**	**81.6**

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 Windows command 'start' was used to bind copies to cores.
(For details, please see the config file.)
```

Base Compiler Invocation

C benchmarks:

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

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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 /Qlowercase
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 -Qlowercase /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 -Qlowercase
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:
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qauto-ilp32
/F1000000000 -link /FORCE:MULTIPLE

C++ benchmarks:
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features
-Qauto-ilp32 /F1000000000 shlW64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000
-link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -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:
```
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch
-Qauto-ilp32 /F1000000000            -link /FORCE:MULTIPLE
```

482.sphinx3:
```
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qunroll2 -Qauto-ilp32
/F1000000000            -link /FORCE:MULTIPLE
```

C++ benchmarks:

444.namd:
```
-QxSSE4.2(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:
```
-QxSSE4.2(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:
```
-QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qauto-ilp32 /F1000000000 shlW64M.lib
            -link /FORCE:MULTIPLE
```

453.povray:
```
-QxSSE4.2(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
```

Continued on next page

Peak Optimization Flags (Continued)

Fortran benchmarks:

410.bwaves: `-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000 -link /FORCE:MULTIPLE`

416.gamess: `Same as 410.bwaves`

434.zeusmp: `basepeak = yes`

437.leslie3d: `basepeak = yes`

459.GemsFDTD: `basepeak = yes`

465.tonto: `-QxSSE4.2`(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: `-QxSSE4.2`(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: `-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE`

481.wrf: `basepeak = yes`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic11.0-winx64-revA.20101221.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic11.0-winx64-revA.20101221.xml`

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