SPEC® CFP2006 Result

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Intel Corporation

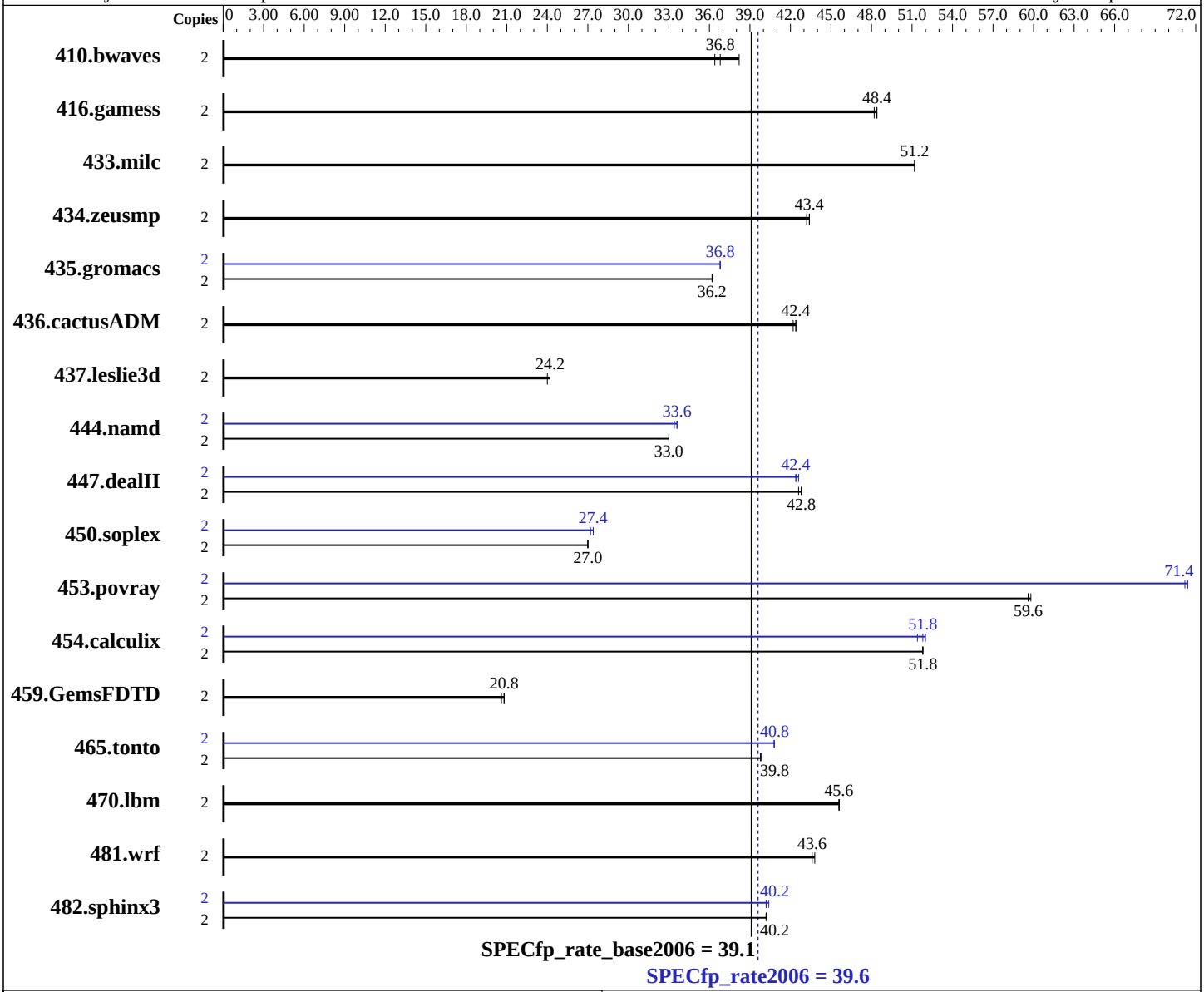
Intel DH61WW motherboard (Intel Celeron G540)

SPECfp®_rate2006 = 39.6

SPECfp_rate_base2006 = 39.1

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

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



Hardware

CPU Name:	Intel Celeron G540
CPU Characteristics:	
CPU MHz:	2500
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
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:	Fortran: Version 12.0.3.176 of Intel Fortran Studio XE for Windows; Libraries: Version 15.00.30729.01 of Microsoft Visual Studio 2008 Professional SP1
Auto Parallel:	No
File System:	NTFS
System State:	Default

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L3 Cache: 2 MB I+D on chip per chip
Other Cache: None
Memory: 2 GB (2 x 1 GB 2Rx4 PC3-10600U-9, running at 1066 MHz)
Disk Subsystem: 1 TB Seagate SATA, 7200 RPM
Other Hardware: None

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	2	713	38.2	746	36.4	**740**	**36.8**	2	713	38.2	746	36.4	**740**	**36.8**
416.gamess	2	812	48.2	**810**	**48.4**	810	48.4	2	812	48.2	**810**	**48.4**	810	48.4
433.milc	2	358	51.2	**358**	**51.2**	358	51.2	2	358	51.2	**358**	**51.2**	358	51.2
434.zeusmp	2	422	43.2	419	43.4	**419**	**43.4**	2	422	43.2	419	43.4	**419**	**43.4**
435.gromacs	2	**394**	**36.2**	394	36.2	394	36.2	2	389	36.8	387	36.8	**388**	**36.8**
436.cactusADM	2	**564**	**42.4**	566	42.2	563	42.4	2	**564**	**42.4**	566	42.2	563	42.4
437.leslie3d	2	783	24.0	778	24.2	**780**	**24.2**	2	783	24.0	778	24.2	**780**	**24.2**
444.namd	2	**486**	**33.0**	486	33.0	487	33.0	2	479	33.4	**478**	**33.6**	478	33.6
447.dealII	2	534	42.8	537	42.6	**536**	**42.8**	2	538	42.6	**539**	**42.4**	539	42.4
450.soplex	2	619	27.0	**619**	**27.0**	619	27.0	2	611	27.2	609	27.4	**610**	**27.4**
453.povray	2	**178**	**59.6**	178	59.8	179	59.6	2	149	71.4	149	71.2	**149**	**71.4**
454.calculix	2	**318**	**51.8**	318	51.8	318	51.8	2	**318**	**51.8**	317	52.0	321	51.4
459.GemsFDTD	2	1027	20.6	**1021**	**20.8**	1020	20.8	2	1027	20.6	**1021**	**20.8**	1020	20.8
465.tonto	2	495	39.8	**495**	**39.8**	494	39.8	2	**482**	**40.8**	483	40.8	482	40.8
470.lbm	2	604	45.6	**604**	**45.6**	603	45.6	2	604	45.6	**604**	**45.6**	603	45.6
481.wrf	2	510	43.8	**512**	**43.6**	512	43.6	2	510	43.8	**512**	**43.6**	512	43.6
482.sphinx3	2	**971**	**40.2**	972	40.2	968	40.2	2	969	40.2	**967**	**40.2**	967	40.4

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
```

Component Notes

```
Tested systems can be used with Shin-G ATX case,
PC Power and Cooling 1200W power supply
```

General Notes

```
Binaries compiled on a system with 1x Intel Core i7-860 CPU
+ 8GB memory using Windows 7 Enterprise 64-bit
```

Base 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
```

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:
```
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qansi-alias -Qauto-ilp32
/F1000000000            -link /FORCE:MULTIPLE
```

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

Fortran benchmarks:
```
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qansi-alias /F1000000000
           -link /FORCE:MULTIPLE
```

Continued on next page

Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:
-QxSSE4.2 -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: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias
-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

Continued on next page

Peak Optimization Flags (Continued)

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- -Qopt-prefetch -Qauto-ilp32
/F1000000000 shlW64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: basepeak = yes

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 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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