



SPEC[®] CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp[®]_rate2006 = 124

Intel DX58SO2 Motherboard (Intel Core i7-990X)

SPECfp_rate_base2006 = 122

CPU2006 license: 13

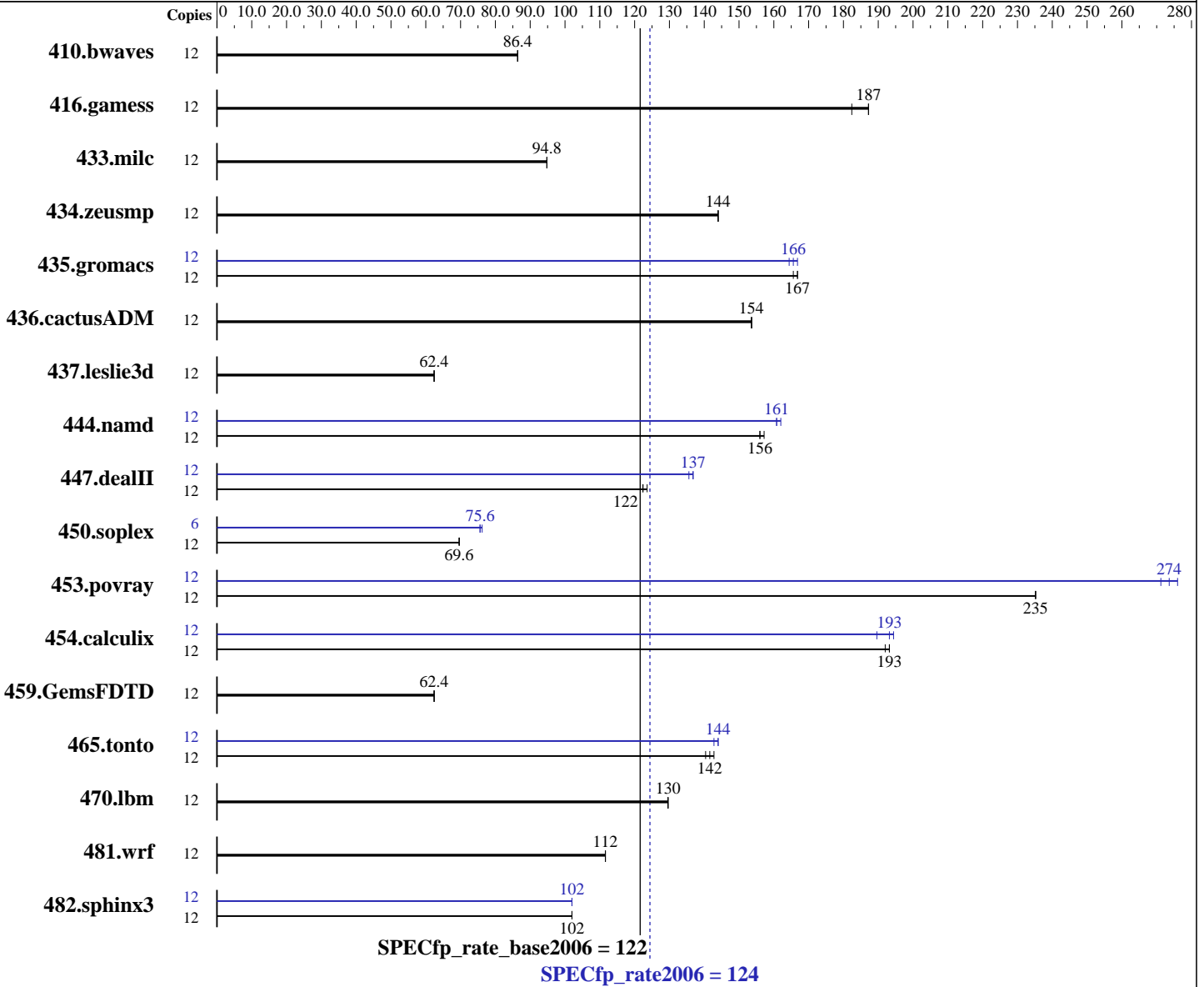
Test date: Apr-2011

Test sponsor: Intel Corporation

Hardware Availability: Feb-2011

Tested by: Intel Corporation

Software Availability: Apr-2011



Hardware

CPU Name: Intel Core i7-990X
 CPU Characteristics: Intel Turbo Boost Technology up to 3.73 GHz
 CPU MHz: 3466
 FPU: Integrated
 CPU(s) enabled: 6 cores, 1 chip, 6 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

Continued on next page

Software

Operating System: Windows 7 Ultimate (64-bit)
 Compiler: Intel C++ Compiler XE for Intel64
 Version 12.0.3.163 Build 20110217
 Intel Visual Fortran Compiler XE for Intel64
 Version 12.0.3.163 Build 20110217
 Microsoft Visual Studio 2008 Professional SP1
 (for libraries)
 Auto Parallel: No
 File System: NTFS

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp_rate2006 = 124

Intel DX58SO2 Motherboard (Intel Core i7-990X)

SPECfp_rate_base2006 = 122

CPU2006 license: 13

Test date: Apr-2011

Test sponsor: Intel Corporation

Hardware Availability: Feb-2011

Tested by: Intel Corporation

Software Availability: Apr-2011

L3 Cache: 12 MB I+D on chip per chip
 Other Cache: None
 Memory: 12 GB (3 x 4 GB 2Rx8 PC3-8500U-7)
 Disk Subsystem: Seagate 1 TB 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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	12	1890	86.4	1884	86.4	1886	86.4	12	1890	86.4	1884	86.4	1886	86.4
416.gamess	12	1259	187	1284	182	1259	187	12	1259	187	1284	182	1259	187
433.milc	12	1155	94.8	1155	94.8	1155	94.8	12	1155	94.8	1155	94.8	1155	94.8
434.zeusmp	12	759	144	762	144	761	144	12	759	144	762	144	761	144
435.gromacs	12	514	167	515	167	518	166	12	520	164	519	166	514	167
436.cactusADM	12	934	154	933	154	933	154	12	934	154	933	154	933	154
437.leslie3d	12	1791	62.4	1800	62.4	1798	62.4	12	1791	62.4	1800	62.4	1798	62.4
444.namd	12	619	156	617	156	610	157	12	599	161	598	161	593	162
447.dealII	12	1118	122	1111	124	1122	122	12	1011	136	1004	137	1002	137
450.soplex	12	1435	69.6	1435	69.6	1435	69.6	6	660	75.6	659	76.2	659	75.6
453.povray	12	271	235	272	235	272	235	12	231	276	235	271	234	274
454.calculix	12	515	192	513	193	513	193	12	512	193	510	194	524	190
459.GemsFDTD	12	2056	62.4	2057	62.4	2057	62.4	12	2056	62.4	2057	62.4	2057	62.4
465.tonto	12	838	140	828	143	835	142	12	829	143	820	144	822	144
470.lbm	12	1276	130	1276	130	1276	130	12	1276	130	1276	130	1276	130
481.wrf	12	1197	112	1195	112	1201	112	12	1197	112	1195	112	1201	112
482.sphinx3	12	2295	102	2295	102	2297	102	12	2297	102	2294	102	2295	102

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

General Notes

Tested systems can be used with Shin-G ATX case,
 PC Power and Cooling 1200W power supply
 System was configured with an ATI HD6990 discrete graphics card



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp_rate2006 = 124

Intel DX58SO2 Motherboard (Intel Core i7-990X)

SPECfp_rate_base2006 = 122

CPU2006 license: 13

Test date: Apr-2011

Test sponsor: Intel Corporation

Hardware Availability: Feb-2011

Tested by: Intel Corporation

Software Availability: Apr-2011

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.lelie3d: -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



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp_rate2006 = 124

Intel DX58SO2 Motherboard (Intel Core i7-990X)

SPECfp_rate_base2006 = 122

CPU2006 license: 13

Test date: Apr-2011

Test sponsor: Intel Corporation

Hardware Availability: Feb-2011

Tested by: Intel Corporation

Software Availability: Apr-2011

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.dealIII: -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



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp_rate2006 = 124

Intel DX58SO2 Motherboard (Intel Core i7-990X)

SPECfp_rate_base2006 = 122

CPU2006 license: 13

Test date: Apr-2011

Test sponsor: Intel Corporation

Hardware Availability: Feb-2011

Tested by: Intel Corporation

Software Availability: Apr-2011

Peak Optimization Flags (Continued)

450.soplex: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qauto-ilp32 /F1000000000 sh1W64M.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 sh1W64M.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-revB.html>

<http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.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.xml>



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp_rate2006 = 124

Intel DX58SO2 Motherboard (Intel Core i7-990X)

SPECfp_rate_base2006 = 122

CPU2006 license: 13

Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Apr-2011

Hardware Availability: Feb-2011

Software Availability: Apr-2011

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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 20:58:18 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 10 May 2011.