



SPEC[®] CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp[®]_rate2006 = 126

Intel DQ87PG motherboard (Intel Core i5-4670K)

SPECfp_rate_base2006 = 123

CPU2006 license: 13

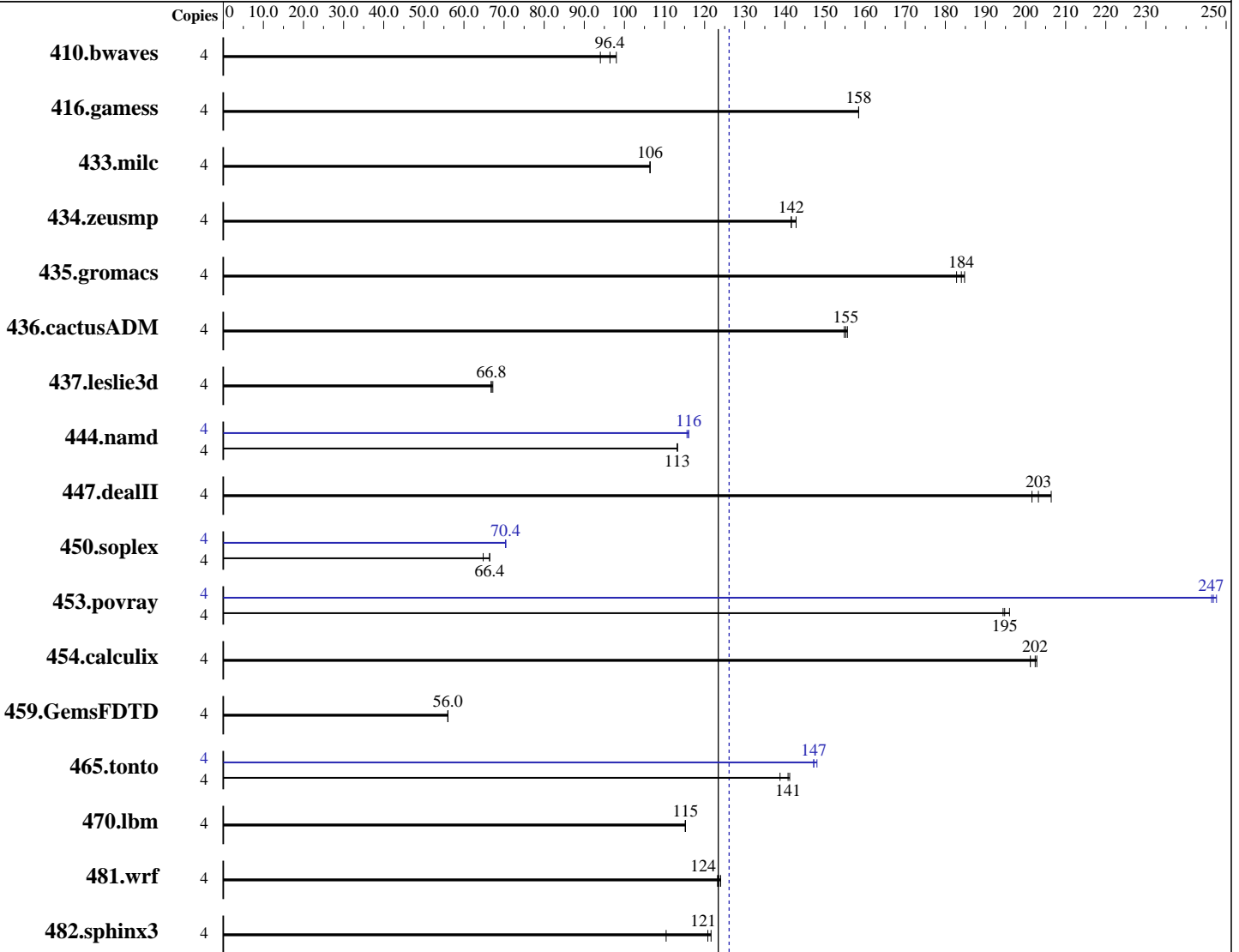
Test date: Jun-2014

Test sponsor: Intel Corporation

Hardware Availability: Jul-2013

Tested by: Intel Corporation

Software Availability: Oct-2013



SPECfp_rate_base2006 = 123

SPECfp_rate2006 = 126

Hardware

CPU Name: Intel Core i5-4670K
 CPU Characteristics: Intel Turbo Boost Technology up to 3.80 GHz
 CPU MHz: 3400
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 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

Continued on next page

Software

Operating System: Microsoft Windows 7 Enterprise 6.1.7601 Service Pack 1 Build 7601
 Compiler: C/C++: Version 14.0.1.139 of Intel C++ Studio XE for Windows;
 Fortran: Version 14.0.1.139 of Intel Fortran Studio XE for Windows;
 Libraries: Version 16.00.30319.01 of Microsoft Visual Studio 2010 Professional SP1
 Auto Parallel: No

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp_rate2006 = 126

Intel DQ87PG motherboard (Intel Core i5-4670K)

SPECfp_rate_base2006 = 123

CPU2006 license: 13

Test date: Jun-2014

Test sponsor: Intel Corporation

Hardware Availability: Jul-2013

Tested by: Intel Corporation

Software Availability: Oct-2013

L3 Cache: 6 MB I+D on chip per chip
 Other Cache: None
 Memory: 4 GB (2 x 2 GB 1Rx8 PC3-12800U-11)
 Disk Subsystem: 250 GB Seagate SATA HDD, 7200 RPM
 Other Hardware: None

File System: NTFS
 System State: Default
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: SmartHeap Library Version 10.0 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	4	579	94.0	565	96.4	554	98.0	4	579	94.0	565	96.4	554	98.0
416.gamess	4	494	158	495	158	494	158	4	494	158	495	158	494	158
433.milc	4	345	106	345	106	345	106	4	345	106	345	106	345	106
434.zeusmp	4	255	143	257	142	257	142	4	255	143	257	142	257	142
435.gromacs	4	156	183	154	185	155	184	4	156	183	154	185	155	184
436.cactusADM	4	308	155	308	155	307	156	4	308	155	308	155	307	156
437.leslie3d	4	561	66.8	561	67.2	561	66.8	4	561	66.8	561	67.2	561	66.8
444.namd	4	284	113	284	113	284	113	4	277	116	277	116	277	116
447.dealII	4	225	203	222	206	227	202	4	225	203	222	206	227	202
450.soplex	4	514	64.8	501	66.4	504	66.4	4	473	70.4	473	70.4	473	70.4
453.povray	4	109	196	109	195	109	194	4	86.2	247	86.4	246	85.9	248
454.calculix	4	164	201	163	202	163	203	4	164	201	163	202	163	203
459.GemsFDTD	4	760	56.0	759	56.0	759	56.0	4	760	56.0	759	56.0	759	56.0
465.tonto	4	279	141	284	139	280	141	4	267	147	266	148	268	147
470.lbm	4	476	115	477	115	476	115	4	476	115	477	115	476	115
481.wrf	4	362	124	361	124	363	123	4	362	124	361	124	363	123
482.sphinx3	4	646	121	707	110	641	122	4	646	121	707	110	641	122

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Compiler Invocation Notes

To compile these binaries, the Intel Compiler 14.0 was set up to generate 64-bit binaries with the command:
 "ipsxe-comp-vars.bat intel64 vs2010" (shortcut provided in the Intel(r) Parallel Studio XE 2013 program folder)

Submit Notes

Processes were bound to specific processors using the start command with the /affinity switch. The config file option 'submit' was used to generate the affinity mask for each process.



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp_rate2006 = 126

Intel DQ87PG motherboard (Intel Core i5-4670K)

SPECfp_rate_base2006 = 123

CPU2006 license: 13

Test date: Jun-2014

Test sponsor: Intel Corporation

Hardware Availability: Jul-2013

Tested by: Intel Corporation

Software Availability: Oct-2013

Platform Notes

Sysinfo program C:\BENCHM~1\SPEC14.0\Docs\sysinfo
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c
running on Clt00224D4FB715 Sun Jun 29 13:18:00 2014

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:
<http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

Trying 'systeminfo'

OS Name : Microsoft Windows 7 Enterprise
OS Version : 6.1.7601 Service Pack 1 Build 7601
System Manufacturer: INTEL_
System Model : DQ87PG__
Processor(s) : 1 Processor(s) Installed.
 [01]: Intel64 Family 6 Model 60 Stepping 3 GenuineIntel ~3401 Mhz
BIOS Version : Intel(R) Corp. PGQ8710H.86A.0036.2013.0702.1908, 7/2/2013
Total Physical Memory: 3,749 MB

Trying 'wmic cpu get /value'

DeviceID : CPU0
L2CacheSize : 1024
L3CacheSize : 6144
MaxClockSpeed : 3401
Name : Intel(R) Core(TM) i5-4670K CPU @ 3.40GHz
NumberOfCores : 4
NumberOfLogicalProcessors: 4

(End of data from sysinfo program)

BIOS: SATA mode set to RAID
Windows Disk Driver: Intel Rapid Storage Technology 12.5.0.1066
Windows Chipset Driver: Intel Chipset Driver 9.4.0.1027

Component Notes

Tested systems can be used with Shin-G ATX case,
PC Power and Cooling 1200W power supply
Micron MT8JTF25664AZ-1G6 Series Memory DIMMs

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 -Qvc10 -Qstd=c99

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp_rate2006 = 126

Intel DQ87PG motherboard (Intel Core i5-4670K)

SPECfp_rate_base2006 = 123

CPU2006 license: 13

Test date: Jun-2014

Test sponsor: Intel Corporation

Hardware Availability: Jul-2013

Tested by: Intel Corporation

Software Availability: Oct-2013

Base Compiler Invocation (Continued)

C++ benchmarks:

icl -Qvc10

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qvc10 -Qstd=c99 ifort

Base Portability Flags

410.bwaves: -DSPEC_CPU_P64
 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
 -Qoption,cpp,--ms_incompat_treatment_of_commas_in_macros
 450.soplex: -DSPEC_CPU_P64
 453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_NEED_INVHYP -DNEED_INVHYP
 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:

-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE

C++ benchmarks:

-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
-Qcxx-features -Qauto-ilp32 /F1000000000 shlw64M.lib
-link /FORCE:MULTIPLE

Fortran benchmarks:

-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
/F1000000000 -link /FORCE:MULTIPLE

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp_rate2006 = 126

Intel DQ87PG motherboard (Intel Core i5-4670K)

SPECfp_rate_base2006 = 123

CPU2006 license: 13

Test date: Jun-2014

Test sponsor: Intel Corporation

Hardware Availability: Jul-2013

Tested by: Intel Corporation

Software Availability: Oct-2013

Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

`-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE`

Peak Compiler Invocation

C benchmarks:

`icl -Qvc10 -Qstd=c99`

C++ benchmarks:

`icl -Qvc10`

Fortran benchmarks:

`ifort`

Benchmarks using both Fortran and C:

`icl -Qvc10 -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: `-QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Oa -Qauto-ilp32 /F1000000000
sh1W64M.lib -link /FORCE:MULTIPLE`

447.dealII: basepeak = yes

450.soplex: `-QxCORE-AVX2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qauto-ilp32 /F1000000000 sh1W64M.lib
-link /FORCE:MULTIPLE`

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp_rate2006 = 126

Intel DQ87PG motherboard (Intel Core i5-4670K)

SPECfp_rate_base2006 = 123

CPU2006 license: 13

Test date: Jun-2014

Test sponsor: Intel Corporation

Hardware Availability: Jul-2013

Tested by: Intel Corporation

Software Availability: Oct-2013

Peak Optimization Flags (Continued)

453.povray: -QxCORE-AVX2(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: -QxCORE-AVX2(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: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

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-ic14.0-official-windows.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-windows.xml>

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 v1.2.
Report generated on Tue Sep 9 10:56:02 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 15 July 2014.