



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp®_rate2006 = 119

Intel DQ87PG motherboard (Intel Core i5-4570)

SPECfp_rate_base2006 = 118

CPU2006 license: 13

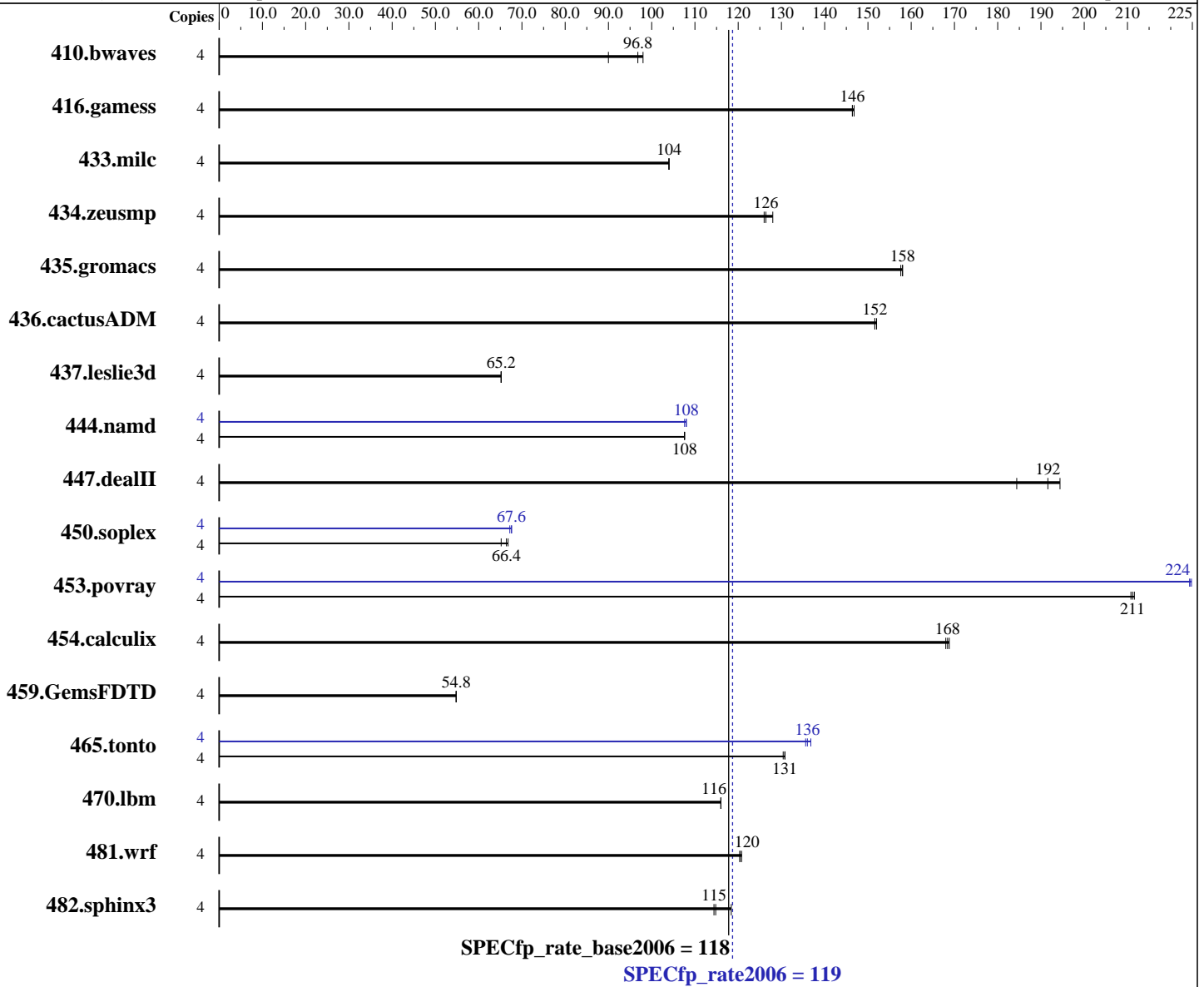
Test date: Oct-2013

Test sponsor: Intel Corporation

Hardware Availability: Jul-2013

Tested by: Intel Corporation

Software Availability: Apr-2013



Hardware

CPU Name: Intel Core i5-4570
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
 CPU MHz: 3200
 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 13.1.1.171 of Intel C++ Studio XE for Windows;
 Fortran: Version 13.1.1.171 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 = 119

Intel DQ87PG motherboard (Intel Core i5-4570)

SPECfp_rate_base2006 = 118

CPU2006 license: 13

Test date: Oct-2013

Test sponsor: Intel Corporation

Hardware Availability: Jul-2013

Tested by: Intel Corporation

Software Availability: Apr-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	605	90.0	554	98.0	562	96.8	4	605	90.0	554	98.0	562	96.8		
416.gamess	4	535	146	534	147	534	146	4	535	146	534	147	534	146		
433.milc	4	353	104	353	104	353	104	4	353	104	353	104	353	104		
434.zeusmp	4	289	126	288	126	285	128	4	289	126	288	126	285	128		
435.gromacs	4	181	158	181	158	181	158	4	181	158	181	158	181	158		
436.cactusADM	4	315	152	315	152	315	152	4	315	152	315	152	315	152		
437.leslie3d	4	576	65.2	576	65.2	575	65.2	4	576	65.2	576	65.2	575	65.2		
444.namd	4	298	108	298	108	298	108	4	297	108	298	108	298	108		
447.dealII	4	248	184	235	194	239	192	4	248	184	235	194	239	192		
450.soplex	4	500	66.8	512	65.2	504	66.4	4	494	67.6	496	67.2	494	67.6		
453.povray	4	101	211	101	212	101	211	4	94.9	224	94.9	224	94.6	225		
454.calculix	4	196	168	196	169	196	168	4	196	168	196	169	196	168		
459.GemsFDTD	4	772	54.8	773	54.8	772	54.8	4	772	54.8	773	54.8	772	54.8		
465.tonto	4	301	131	302	130	301	131	4	287	137	289	136	290	136		
470.lbm	4	473	116	474	116	474	116	4	473	116	474	116	474	116		
481.wrf	4	370	121	371	120	371	120	4	370	121	371	120	371	120		
482.sphinx3	4	682	114	679	115	659	118	4	682	114	679	115	659	118		

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 13.1 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 = 119

Intel DQ87PG motherboard (Intel Core i5-4570)

SPECfp_rate_base2006 = 118

CPU2006 license: 13

Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Oct-2013

Hardware Availability: Jul-2013

Software Availability: Apr-2013

Platform Notes

Sysinfo program C:\SPEC13.1/Docs/sysinfo
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c
running on Clt7C05070FB2B7 Wed Oct 2 00:27:18 2013

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 ~3201 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 : 3201
Name : Intel(R) Core(TM) i5-4570 CPU @ 3.20GHz
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 = 119

Intel DQ87PG motherboard (Intel Core i5-4570)

SPECfp_rate_base2006 = 118

CPU2006 license: 13

Test date: Oct-2013

Test sponsor: Intel Corporation

Hardware Availability: Jul-2013

Tested by: Intel Corporation

Software Availability: Apr-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 = 119

Intel DQ87PG motherboard (Intel Core i5-4570)

SPECfp_rate_base2006 = 118

CPU2006 license: 13

Test date: Oct-2013

Test sponsor: Intel Corporation

Hardware Availability: Jul-2013

Tested by: Intel Corporation

Software Availability: Apr-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
shlW64M.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 shlW64M.lib
-link /FORCE:MULTIPLE`

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp_rate2006 = 119

Intel DQ87PG motherboard (Intel Core i5-4570)

SPECfp_rate_base2006 = 118

CPU2006 license: 13

Test date: Oct-2013

Test sponsor: Intel Corporation

Hardware Availability: Jul-2013

Tested by: Intel Corporation

Software Availability: Apr-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-ic13.1-official-windows.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic13.1-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 10:56:21 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 15 July 2014.