



SPEC[®] CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp[®]_rate2006 = 150

Intel DH87MC Motherboard (Intel Core i7-4770)

SPECfp_rate_base2006 = 147

CPU2006 license: 13

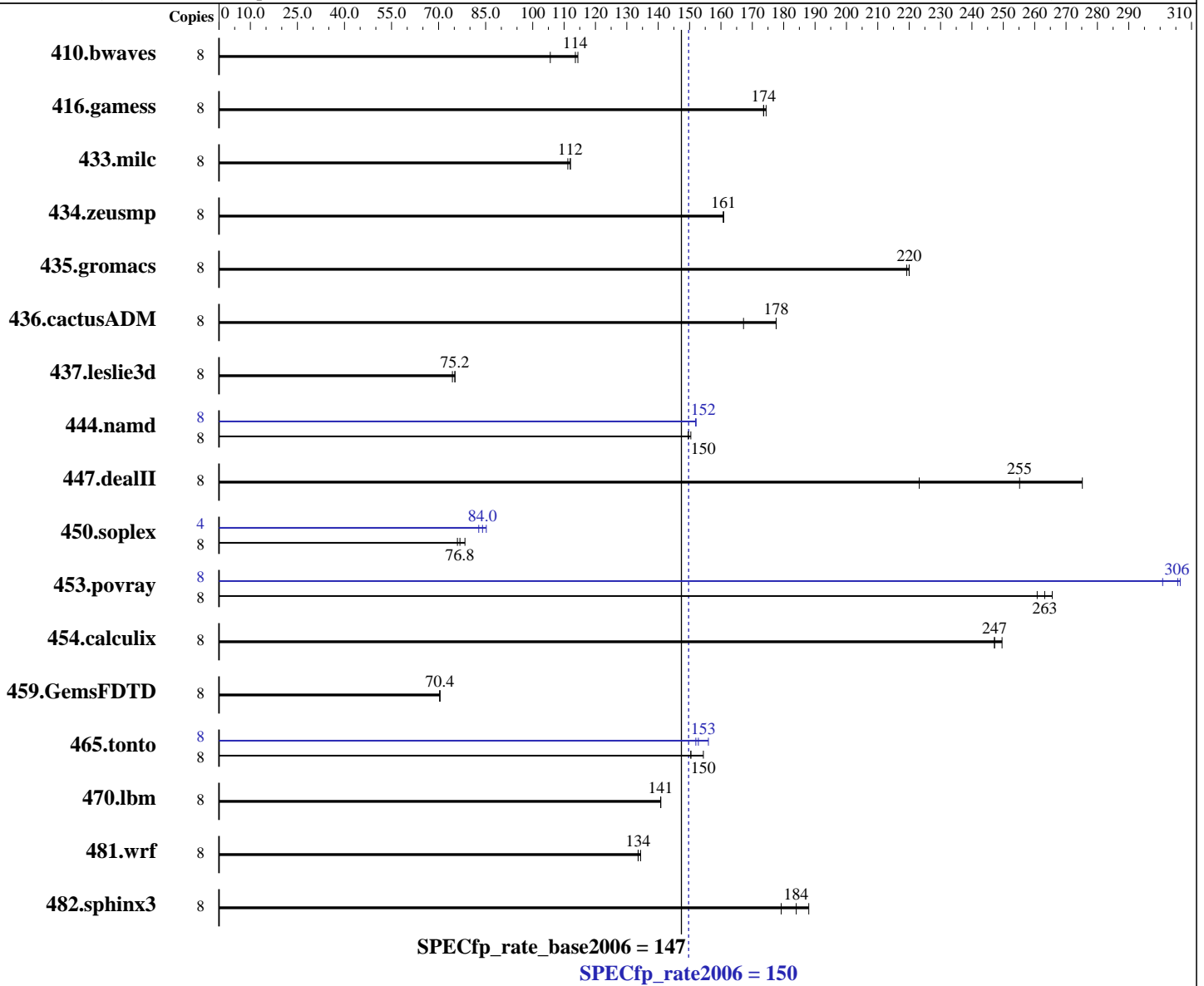
Test date: Jul-2014

Test sponsor: Intel Corporation

Hardware Availability: Jun-2013

Tested by: Intel Corporation

Software Availability: Oct-2013



Hardware

CPU Name: Intel Core i7-4770
 CPU Characteristics: Intel Turbo Boost Technology up to 3.90 GHz
 CPU MHz: 3400
 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

Continued on next page

Software

Operating System: Microsoft Windows 8.1 Pro
 6.3.9600 N/A Build 9600
 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 = 150

Intel DH87MC Motherboard (Intel Core i7-4770)

SPECfp_rate_base2006 = 147

CPU2006 license: 13

Test date: Jul-2014

Test sponsor: Intel Corporation

Hardware Availability: Jun-2013

Tested by: Intel Corporation

Software Availability: Oct-2013

L3 Cache: 8 MB I+D on chip per chip
 Other Cache: None
 Memory: 8 GB (2 x 4 GB 2Rx4 PC3-12800U-11)
 Disk Subsystem: 1 TB 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	8	1032	106	<u>955</u>	<u>114</u>	951	114	8	1032	106	<u>955</u>	<u>114</u>	951	114
416.gamess	8	<u>901</u>	<u>174</u>	897	174	901	174	8	<u>901</u>	<u>174</u>	897	174	901	174
433.milc	8	<u>658</u>	<u>112</u>	659	111	658	112	8	<u>658</u>	<u>112</u>	659	111	658	112
434.zeusmp	8	<u>453</u>	<u>161</u>	452	161	454	161	8	<u>453</u>	<u>161</u>	452	161	454	161
435.gromacs	8	260	220	261	219	<u>260</u>	<u>220</u>	8	260	220	261	219	<u>260</u>	<u>220</u>
436.cactusADM	8	573	167	<u>539</u>	<u>178</u>	539	178	8	573	167	<u>539</u>	<u>178</u>	539	178
437.leslie3d	8	1007	74.4	<u>1002</u>	<u>75.2</u>	1002	75.2	8	1007	74.4	<u>1002</u>	<u>75.2</u>	1002	75.2
444.namd	8	<u>428</u>	<u>150</u>	427	150	429	150	8	421	152	<u>421</u>	<u>152</u>	422	152
447.dealII	8	<u>359</u>	<u>255</u>	333	275	410	223	8	<u>359</u>	<u>255</u>	333	275	410	223
450.soplex	8	<u>869</u>	<u>76.8</u>	848	78.4	879	76.0	4	403	82.8	392	85.2	<u>397</u>	<u>84.0</u>
453.povray	8	<u>162</u>	<u>263</u>	160	266	163	261	8	139	306	142	301	<u>139</u>	<u>306</u>
454.calculix	8	265	250	<u>267</u>	<u>247</u>	267	247	8	265	250	<u>267</u>	<u>247</u>	267	247
459.GemsFDTD	8	<u>1200</u>	<u>70.4</u>	1199	70.4	1203	70.4	8	<u>1200</u>	<u>70.4</u>	1199	70.4	1203	70.4
465.tonto	8	524	150	511	154	<u>523</u>	<u>150</u>	8	517	152	<u>515</u>	<u>153</u>	505	156
470.lbm	8	<u>780</u>	<u>141</u>	780	141	780	141	8	<u>780</u>	<u>141</u>	780	141	780	141
481.wrf	8	667	134	<u>667</u>	<u>134</u>	670	134	8	667	134	<u>667</u>	<u>134</u>	670	134
482.sphinx3	8	<u>847</u>	<u>184</u>	830	188	870	179	8	<u>847</u>	<u>184</u>	830	188	870	179

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 = 150

Intel DH87MC Motherboard (Intel Core i7-4770)

SPECfp_rate_base2006 = 147

CPU2006 license: 13

Test date: Jul-2014

Test sponsor: Intel Corporation

Hardware Availability: Jun-2013

Tested by: Intel Corporation

Software Availability: Oct-2013

Platform Notes

Sysinfo program C:\SPEC14.0/Docs/sysinfo
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c
running on Clt7C05070D8262 Sat Jul 26 10:58:06 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 8.1 Pro
OS Version : 6.3.9600 N/A Build 9600
System Manufacturer: INTEL_
System Model : DH87MC_
Processor(s) : 1 Processor(s) Installed.
 [01]: Intel64 Family 6 Model 60 Stepping 3 GenuineIntel ~3401 Mhz
BIOS Version : Intel Corp. MCH8710H.86A.0047.2013.0606.1508, 6/6/2013
Total Physical Memory: 7,862 MB

Trying 'wmic cpu get /value'

DeviceID : CPU0
L2CacheSize : 1024
L3CacheSize : 8192
MaxClockSpeed : 3401
Name : Intel(R) Core(TM) i7-4770 CPU @ 3.40GHz
NumberOfCores : 4
NumberOfLogicalProcessors: 8

(End of data from sysinfo program)

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 -Qvc10 -Qstd=c99

C++ benchmarks:

icl -Qvc10

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp_rate2006 = 150

Intel DH87MC Motherboard (Intel Core i7-4770)

SPECfp_rate_base2006 = 147

CPU2006 license: 13

Test date: Jul-2014

Test sponsor: Intel Corporation

Hardware Availability: Jun-2013

Tested by: Intel Corporation

Software Availability: Oct-2013

Base Compiler Invocation (Continued)

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

Benchmarks using both Fortran and C:

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



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp_rate2006 = 150

Intel DH87MC Motherboard (Intel Core i7-4770)

SPECfp_rate_base2006 = 147

CPU2006 license: 13

Test date: Jul-2014

Test sponsor: Intel Corporation

Hardware Availability: Jun-2013

Tested by: Intel Corporation

Software Availability: Oct-2013

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

453.povray: -QxCORE-AVX2(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

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp_rate2006 = 150

Intel DH87MC Motherboard (Intel Core i7-4770)

SPECfp_rate_base2006 = 147

CPU2006 license: 13

Test date: Jul-2014

Test sponsor: Intel Corporation

Hardware Availability: Jun-2013

Tested by: Intel Corporation

Software Availability: Oct-2013

Peak Optimization Flags (Continued)

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 10:50:24 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 12 August 2014.