



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Intel Corporation

Gigabyte X99-SOC Force-CF Motherboard (Intel Core i7-5960X)

SPECfp<sup>®</sup>2006 = 90.8

SPECfp\_base2006 = 88.6

CPU2006 license: 13

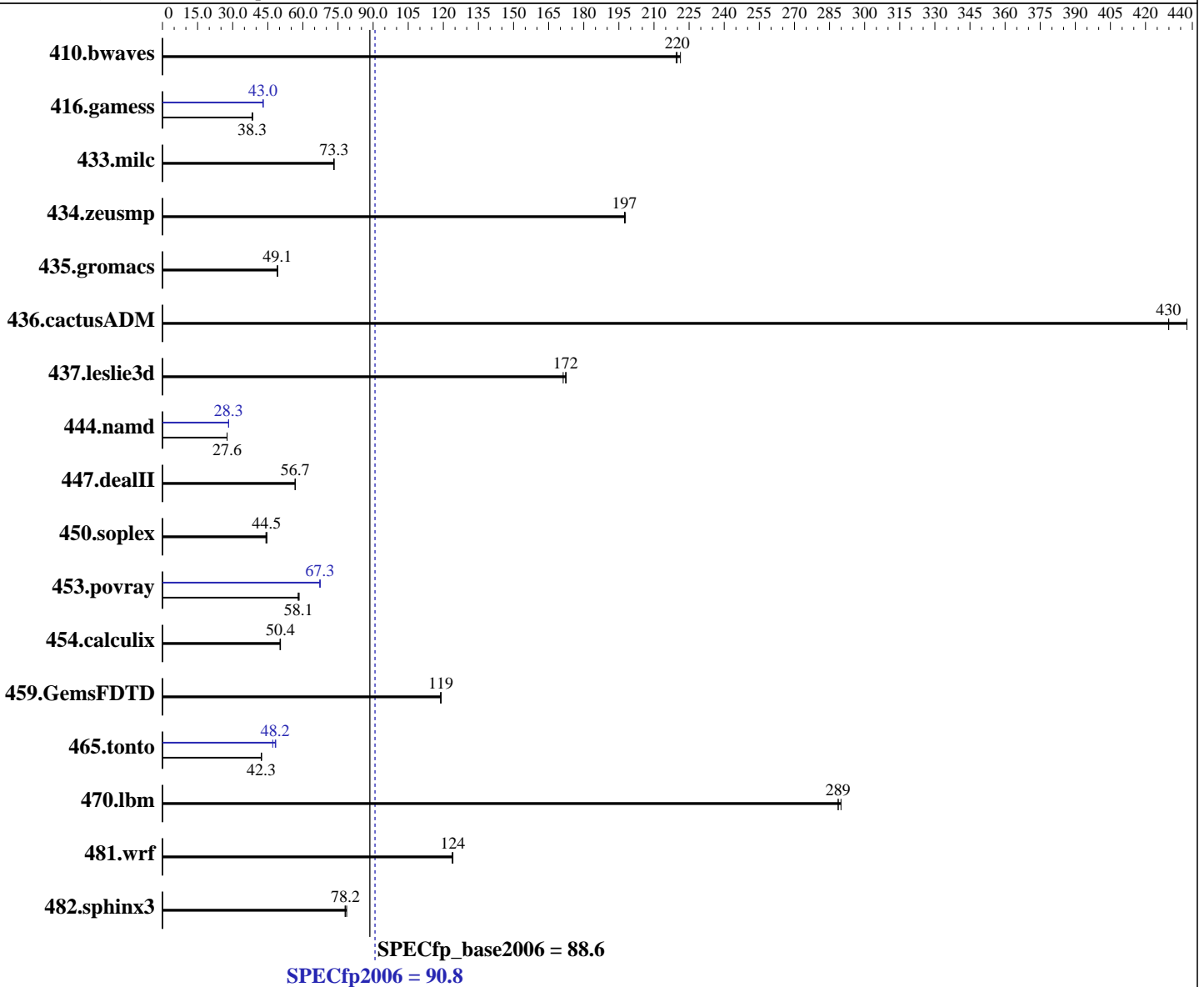
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Aug-2014

Hardware Availability: Aug-2014

Software Availability: Oct-2013



### Hardware

CPU Name: Intel Core i7-5960X  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz  
 CPU MHz: 3000  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 1 chip, 8 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: Yes

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Intel Corporation

Gigabyte X99-SOC Force-CF Motherboard (Intel Core i7-5960X)

SPECfp2006 = **90.8**

SPECfp\_base2006 = **88.6**

CPU2006 license: 13

Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Aug-2014

Hardware Availability: Aug-2014

Software Availability: Oct-2013

L3 Cache: 20 MB I+D on chip per chip  
Other Cache: None  
Memory: 16 GB (4 x 4 GB 1Rx8 PC4-2133N-U)  
Disk Subsystem: 480 GB Intel 520 Series SATA SSD  
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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	61.4	221	<b>61.8</b>	<b>220</b>	61.9	220	61.4	221	<b>61.8</b>	<b>220</b>	61.9	220
416.gamess	507	38.6	<b>511</b>	<b>38.3</b>	511	38.3	<b>456</b>	<b>43.0</b>	456	43.0	455	43.0
433.milc	125	73.3	<b>125</b>	<b>73.3</b>	125	73.2	125	73.3	<b>125</b>	<b>73.3</b>	125	73.2
434.zeusmp	46.0	198	<b>46.1</b>	<b>197</b>	46.1	197	46.0	198	<b>46.1</b>	<b>197</b>	46.1	197
435.gromacs	146	49.1	145	49.2	<b>145</b>	<b>49.1</b>	146	49.1	145	49.2	<b>145</b>	<b>49.1</b>
436.cactusADM	<b>27.8</b>	<b>430</b>	27.8	430	27.3	438	<b>27.8</b>	<b>430</b>	27.8	430	27.3	438
437.leslie3d	54.9	171	54.5	173	<b>54.6</b>	<b>172</b>	54.9	171	54.5	173	<b>54.6</b>	<b>172</b>
444.namd	291	27.6	<b>291</b>	<b>27.6</b>	291	27.6	<b>284</b>	<b>28.3</b>	284	28.3	284	28.2
447.dealII	<b>202</b>	<b>56.7</b>	202	56.7	202	56.7	<b>202</b>	<b>56.7</b>	202	56.7	202	56.7
450.soplex	<b>187</b>	<b>44.5</b>	187	44.6	189	44.2	<b>187</b>	<b>44.5</b>	187	44.6	189	44.2
453.povray	<b>91.6</b>	<b>58.1</b>	91.1	58.4	91.7	58.0	78.9	67.4	<b>79.1</b>	<b>67.3</b>	79.2	67.2
454.calculix	164	50.2	<b>164</b>	<b>50.4</b>	164	50.4	164	50.2	<b>164</b>	<b>50.4</b>	164	50.4
459.GemsFDTD	89.3	119	<b>89.2</b>	<b>119</b>	89.1	119	89.3	119	<b>89.2</b>	<b>119</b>	89.1	119
465.tonto	233	42.2	233	42.3	<b>233</b>	<b>42.3</b>	204	48.4	209	47.1	<b>204</b>	<b>48.2</b>
470.lbm	47.4	290	<b>47.6</b>	<b>289</b>	47.6	289	47.4	290	<b>47.6</b>	<b>289</b>	47.6	289
481.wrf	<b>90.1</b>	<b>124</b>	90.0	124	90.2	124	<b>90.1</b>	<b>124</b>	90.0	124	90.2	124
482.sphinx3	248	78.7	<b>249</b>	<b>78.2</b>	250	78.0	248	78.7	<b>249</b>	<b>78.2</b>	250	78.0

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)

## Platform Notes

Sysinfo program C:\SPEC14.0\Docs\sysinfo  
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c  
running on Clt8888888888788 Sun Aug 17 17:28:04 2014

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Intel Corporation**

**SPECfp2006 = 90.8**

Gigabyte X99-SOC Force-CF Motherboard (Intel Core i7-5960X)

**SPECfp\_base2006 = 88.6**

**CPU2006 license:** 13

**Test date:** Aug-2014

**Test sponsor:** Intel Corporation

**Hardware Availability:** Aug-2014

**Tested by:** Intel Corporation

**Software Availability:** Oct-2013

## Platform Notes (Continued)

<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: Gigabyte Technology Co., Ltd.
System Model  : To be filled by O.E.M.
Processor(s)  : 1 Processor(s) Installed.
               [01]: Intel64 Family 6 Model 63 Stepping 2 GenuineIntel ~3001 Mhz
BIOS Version  : American Megatrends Inc. Flo, 7/22/2014
Total Physical Memory: 16,218 MB

```

Trying 'wmic cpu get /value'

```

DeviceID      : CPU0
L2CacheSize  : 2048
L3CacheSize  : 4096
MaxClockSpeed : 3001
Name         : Intel(R) Core(TM) i7-5960X CPU @ 3.00GHz
NumberOfCores : 8
NumberOfLogicalProcessors: 16

```

(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

OMP\_NUM\_THREADS set to number of processors cores  
 KMP\_AFFINITY set to granularity=fine,scatter  
 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

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qvc10 -Qstd=c99 ifort



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Intel Corporation**

Gigabyte X99-SOC Force-CF Motherboard (Intel Core i7-5960X)

**SPECfp2006 = 90.8**

**SPECfp\_base2006 = 88.6**

**CPU2006 license:** 13

**Test sponsor:** Intel Corporation

**Tested by:** Intel Corporation

**Test date:** Aug-2014

**Hardware Availability:** Aug-2014

**Software Availability:** Oct-2013

## 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- -Qparallel -Qansi-alias
-Qopt-prefetch -Qauto-ilp32 /F1000000000

```

C++ benchmarks:

```

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

```

Fortran benchmarks:

```

-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias
-Qopt-prefetch /F1000000000

```

Benchmarks using both Fortran and C:

```

-QxCORE-AVX2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias
-Qopt-prefetch -Qauto-ilp32 /F1000000000

```

## Peak 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**

Gigabyte X99-SOC Force-CF Motherboard (Intel Core i7-5960X)

**SPECfp2006 = 90.8**

**SPECfp\_base2006 = 88.6**

**CPU2006 license:** 13

**Test sponsor:** Intel Corporation

**Tested by:** Intel Corporation

**Test date:** Aug-2014

**Hardware Availability:** Aug-2014

**Software Availability:** Oct-2013

## Peak Compiler Invocation (Continued)

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.dealIII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -QxCORE-AVX2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qunroll4 -Qansi-alias -Qauto-ilp32  
/F1000000000 sh1W64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -QxCORE-AVX2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qansi-alias  
-Qscalar-rep- /F1000000000

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Intel Corporation**

Gigabyte X99-SOC Force-CF Motherboard (Intel Core i7-5960X)

**SPECfp2006 = 90.8**

**SPECfp\_base2006 = 88.6**

**CPU2006 license:** 13

**Test sponsor:** Intel Corporation

**Tested by:** Intel Corporation

**Test date:** Aug-2014

**Hardware Availability:** Aug-2014

**Software Availability:** Oct-2013

## Peak Optimization Flags (Continued)

459.GemsFDTD: basepeak = yes

465.tonto: -QxCORE-AVX2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qunroll4 -Qauto -Qinline-calloc  
/F1000000000

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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Wed Sep 10 16:12:58 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 9 September 2014.