SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

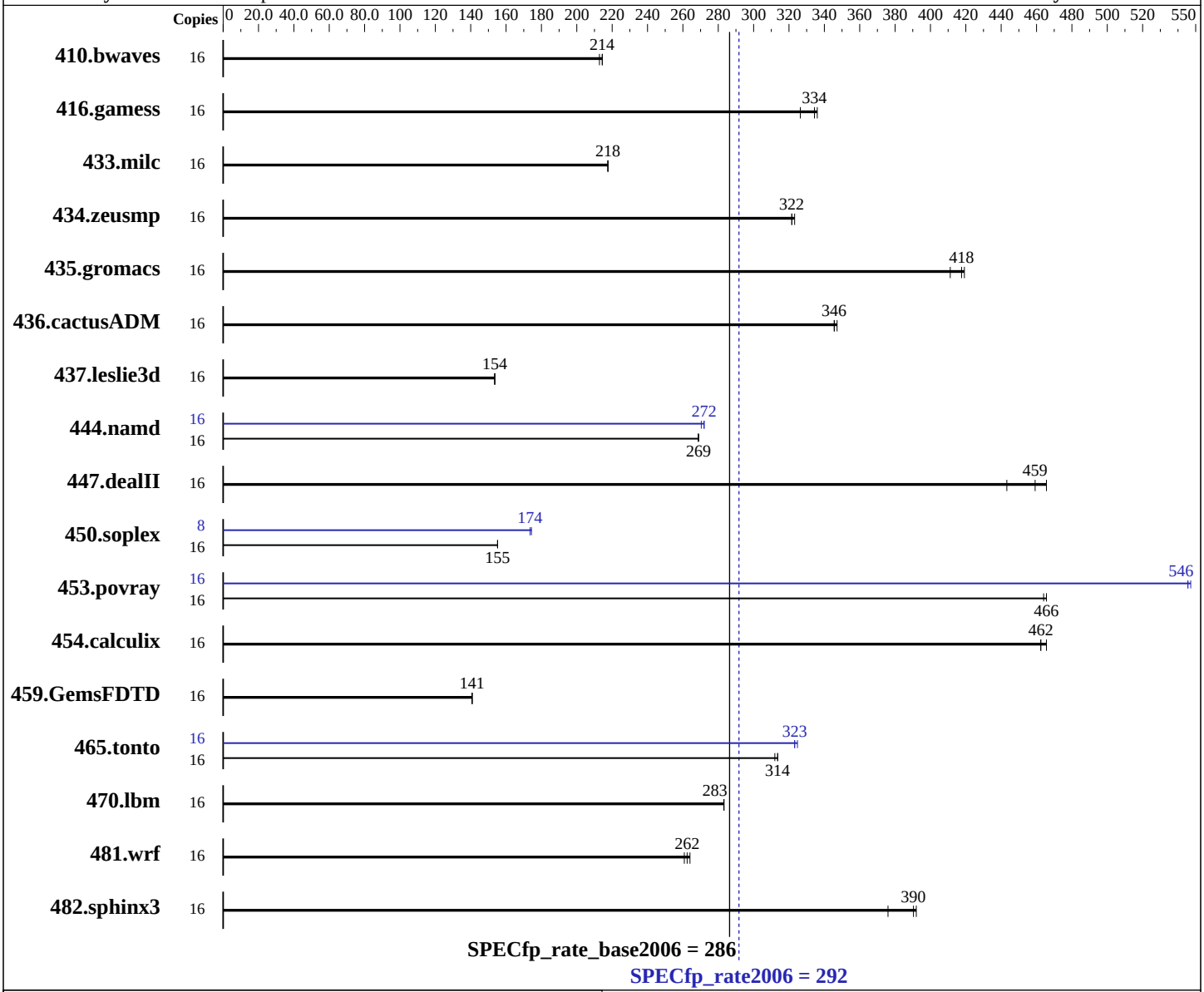
Gigabyte X99-SOC Force-CF Motherboard (Intel Core i7-5960X)

SPECfp®_rate2006 = 292

SPECfp_rate_base2006 = 286

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:	No

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)

SPECfp_rate2006 = 292

SPECfp_rate_base2006 = 286

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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	16	1020	213	1017	214	**1017**	**214**	16	1020	213	1017	214	**1017**	**214**
416.gamess	16	932	336	959	326	**935**	**334**	16	932	336	959	326	**935**	**334**
433.milc	16	**677**	**218**	676	218	677	218	16	**677**	**218**	676	218	677	218
434.zeusmp	16	453	322	**452**	**322**	450	323	16	453	322	**452**	**322**	450	323
435.gromacs	16	272	419	**274**	**418**	278	411	16	272	419	**274**	**418**	278	411
436.cactusADM	16	554	346	550	347	**553**	**346**	16	554	346	550	347	**553**	**346**
437.leslie3d	16	980	154	**979**	**154**	978	154	16	980	154	**979**	**154**	978	154
444.namd	16	477	269	477	269	**477**	**269**	16	470	272	**471**	**272**	473	270
447.dealII	16	412	443	393	466	**398**	**459**	16	412	443	393	466	**398**	**459**
450.soplex	16	861	155	856	155	**857**	**155**	8	382	174	**384**	**174**	384	174
453.povray	16	**183**	**466**	183	466	183	464	16	**156**	**546**	155	547	156	546
454.calculix	16	**285**	**462**	284	466	285	462	16	**285**	**462**	284	466	285	462
459.GemsFDTD	16	**1204**	**141**	1204	141	1204	141	16	**1204**	**141**	1204	141	1204	141
465.tonto	16	502	314	**503**	**314**	504	312	16	**487**	**323**	485	325	487	323
470.lbm	16	**777**	**283**	776	283	777	283	16	**777**	**283**	776	283	777	283
481.wrf	16	**682**	**262**	683	261	679	264	16	**682**	**262**	683	261	679	264
482.sphinx3	16	797	392	830	376	**798**	**390**	16	797	392	830	376	**798**	**390**

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.
```

Platform Notes

```
Sysinfo program C:\SPEC14.0/Docs/sysinfo
$Rev: 6775 $ $Date:: 2011-08-16 #$ \8787f7622badcf24e01c368b1db4377c
running on Clt888888888788 Mon Aug 18 08:04:31 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: 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. F1o, 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

```
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

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

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

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 Wed Sep 10 16:13:00 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 9 September 2014.