



SPEC® CFP2006 Result

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Intel Corporation

SPECfp®2006 = 49.2

Intel DQ77MK motherboard (Intel Core i3-3220)

SPECfp_base2006 = 48.0

CPU2006 license: 13

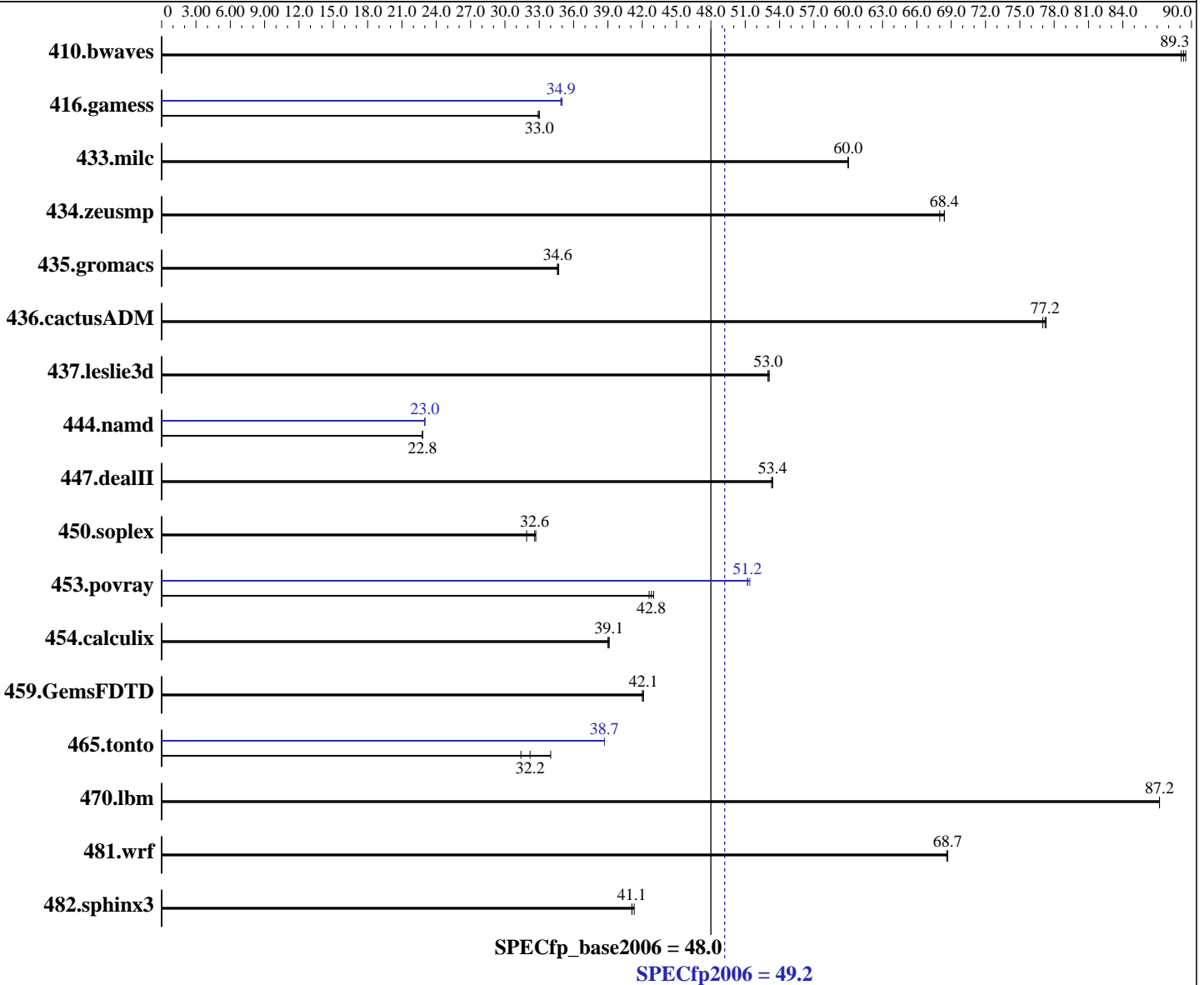
Test date: Dec-2013

Test sponsor: Intel Corporation

Hardware Availability: Sep-2013

Tested by: Intel Corporation

Software Availability: Apr-2013



Hardware

CPU Name: Intel Core i3-3220
 CPU Characteristics:
 CPU MHz: 3300
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 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

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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: Yes

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L3 Cache: 3 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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	153	89.1	<u>152</u>	<u>89.3</u>	152	89.5	153	89.1	<u>152</u>	<u>89.3</u>	152	89.5
416.gamess	<u>594</u>	<u>33.0</u>	595	32.9	594	33.0	<u>561</u>	<u>34.9</u>	560	35.0	561	34.9
433.milc	153	60.0	<u>153</u>	<u>60.0</u>	153	60.0	153	60.0	<u>153</u>	<u>60.0</u>	153	60.0
434.zeusmp	<u>133</u>	<u>68.4</u>	133	68.4	134	68.0	<u>133</u>	<u>68.4</u>	133	68.4	134	68.0
435.gromacs	206	34.7	<u>206</u>	<u>34.6</u>	206	34.6	206	34.7	<u>206</u>	<u>34.6</u>	206	34.6
436.cactusADM	155	77.3	<u>155</u>	<u>77.2</u>	155	77.0	155	77.3	<u>155</u>	<u>77.2</u>	155	77.0
437.leslie3d	177	53.1	178	53.0	<u>177</u>	<u>53.0</u>	177	53.1	178	53.0	<u>177</u>	<u>53.0</u>
444.namd	<u>351</u>	<u>22.8</u>	351	22.8	351	22.8	<u>349</u>	<u>23.0</u>	349	23.0	349	23.0
447.dealII	214	53.4	<u>214</u>	<u>53.4</u>	215	53.3	214	53.4	<u>214</u>	<u>53.4</u>	215	53.3
450.soplex	255	32.7	262	31.9	<u>256</u>	<u>32.6</u>	255	32.7	262	31.9	<u>256</u>	<u>32.6</u>
453.povray	125	42.6	124	43.0	<u>124</u>	<u>42.8</u>	104	51.2	104	51.4	<u>104</u>	<u>51.2</u>
454.calculix	211	39.1	211	39.0	<u>211</u>	<u>39.1</u>	211	39.1	211	39.0	<u>211</u>	<u>39.1</u>
459.GemsFDTD	252	42.1	<u>252</u>	<u>42.1</u>	252	42.0	252	42.1	<u>252</u>	<u>42.1</u>	252	42.0
465.tonto	290	34.0	<u>305</u>	<u>32.2</u>	313	31.4	254	38.7	254	38.7	<u>254</u>	<u>38.7</u>
470.lbm	<u>158</u>	<u>87.2</u>	158	87.2	158	87.2	<u>158</u>	<u>87.2</u>	158	87.2	158	87.2
481.wrf	163	68.6	<u>163</u>	<u>68.7</u>	163	68.7	163	68.6	<u>163</u>	<u>68.7</u>	163	68.7
482.sphinx3	<u>474</u>	<u>41.1</u>	474	41.1	472	41.3	<u>474</u>	<u>41.1</u>	474	41.1	472	41.3

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)

Platform Notes

Sysinfo program C:\SPEC13.1\Docs\sysinfo
 \$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c
 running on Clt7054D217ADD3 Sat Dec 7 16:13:00 2013

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

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Platform Notes (Continued)

<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   : DQ77MK__
Processor(s)  : 1 Processor(s) Installed.
               [01]: Intel64 Family 6 Model 58 Stepping 9 GenuineIntel ~3300 Mhz
BIOS Version  : Intel Corp. MKQ7710H.86A.0054.2012.1120.1444, 11/20/2012
Total Physical Memory: 3,912 MB

```

Trying 'wmic cpu get /value'

```

DeviceID      : CPU0
L2CacheSize   : 512
L3CacheSize   : 3072
MaxClockSpeed : 3300
Name          : Intel(R) Core(TM) i3-3220 CPU @ 3.30GHz
NumberOfCores : 2
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

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

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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:

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

C++ benchmarks:

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

Fortran benchmarks:

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

Benchmarks using both Fortran and C:

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



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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: -QxAVX(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: basepeak = yes

453.povray: -QxAVX(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: -QxAVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo
-O3 -Qprec-div- -Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep-
/F1000000000

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Peak Optimization Flags (Continued)

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -QxAVX(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-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>

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