SPEC® CFP2006 Result

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Intel Corporation

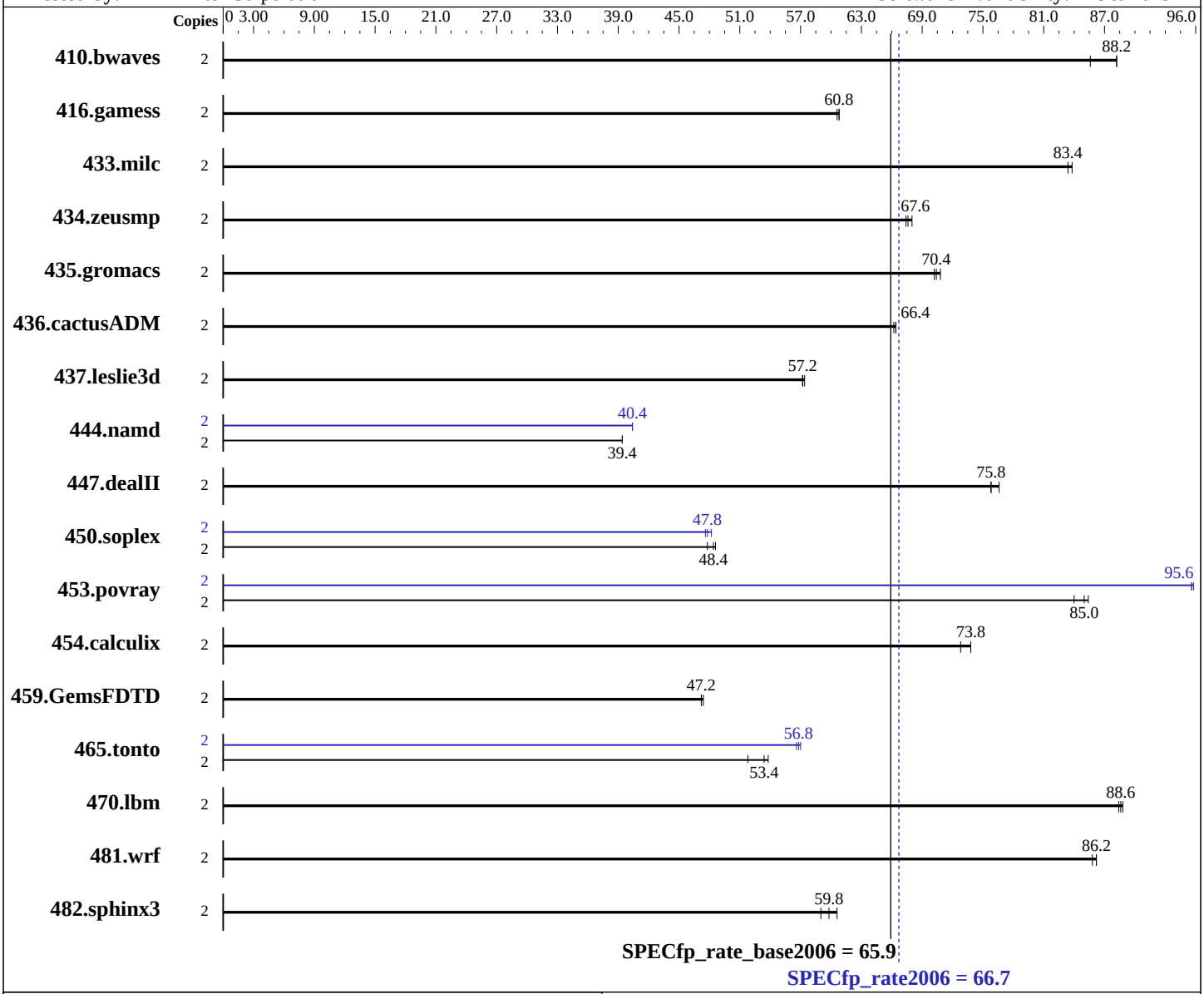
Intel DH87MC Motherboard (Intel Celeron G1820)

SPECfp®_rate2006 = 66.7

SPECfp_rate_base2006 = 65.9

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: Jun-2014
Hardware Availability: Dec-2013
Software Availability: Oct-2013



Hardware

CPU Name:	Intel Celeron G1820
CPU Characteristics:	
CPU MHz:	2694
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 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 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

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L3 Cache: 2 MB I+D on chip per chip
Other Cache: None
Memory: 8 GB (2 x 4 GB 2Rx4 PC3-12800U-11, running at 1333 MHz and CL9)
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	2	317	85.6	**308**	**88.2**	308	88.2	2	317	85.6	**308**	**88.2**	308	88.2
416.gamess	2	647	60.6	644	60.8	**644**	**60.8**	2	647	60.6	644	60.8	**644**	**60.8**
433.milc	2	**220**	**83.4**	219	83.8	220	83.4	2	**220**	**83.4**	219	83.8	220	83.4
434.zeusmp	2	**269**	**67.6**	270	67.4	268	68.0	2	**269**	**67.6**	270	67.4	268	68.0
435.gromacs	2	202	70.8	203	70.2	**203**	**70.4**	2	202	70.8	203	70.2	**203**	**70.4**
436.cactusADM	2	**360**	**66.4**	360	66.4	361	66.2	2	**360**	**66.4**	360	66.4	361	66.2
437.leslie3d	2	**328**	**57.2**	327	57.4	329	57.2	2	**328**	**57.2**	327	57.4	329	57.2
444.namd	2	408	39.4	**408**	**39.4**	408	39.4	2	398	40.4	**398**	**40.4**	397	40.4
447.dealII	2	302	75.8	299	76.6	**302**	**75.8**	2	302	75.8	299	76.6	**302**	**75.8**
450.soplex	2	348	47.8	**345**	**48.4**	343	48.6	2	351	47.6	347	48.2	**348**	**47.8**
453.povray	2	**125**	**85.0**	127	84.0	125	85.4	2	111	95.8	**111**	**95.6**	111	95.6
454.calculix	2	**224**	**73.8**	227	72.8	223	73.8	2	**224**	**73.8**	227	72.8	223	73.8
459.GemsFDTD	2	**449**	**47.2**	450	47.2	449	47.4	2	**449**	**47.2**	450	47.2	449	47.4
465.tonto	2	379	51.8	**369**	**53.4**	366	53.8	2	348	56.6	**347**	**56.8**	345	57.0
470.lbm	2	**310**	**88.6**	311	88.4	310	88.8	2	**310**	**88.6**	311	88.4	310	88.8
481.wrf	2	259	86.2	**259**	**86.2**	260	85.8	2	259	86.2	**259**	**86.2**	260	85.8
482.sphinx3	2	**651**	**59.8**	660	59.0	643	60.6	2	**651**	**59.8**	660	59.0	643	60.6

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 Clt54BEF70B2EDF Sat Jun 28 14:48:57 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 ~2694 Mhz
BIOS Version  : Intel Corp. MCH8710H.86A.0047.2013.0606.1508, 6/6/2013
Total Physical Memory: 7,864 MB

Trying 'wmic cpu get /value'
DeviceID      : CPU0
L2CacheSize   : 512
L3CacheSize   : 2048
MaxClockSpeed : 2694
Name          : Intel(R) Celeron(R) CPU G1820 @ 2.70GHz
NumberOfCores : 2
NumberOfLogicalProcessors: 2

(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:
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch -Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE

C++ benchmarks:
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch -Qcxx-features -Qauto-ilp32 /F1000000000 shlW64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch /F1000000000 -link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:
-QxSSE4.2 -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: -QxSSE4.2(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: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qauto-ilp32 /F1000000000 shlW64M.lib
-link /FORCE:MULTIPLE

453.povray: -QxSSE4.2(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: -QxSSE4.2(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

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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 Jul 30 10:54:18 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 29 July 2014.