SPEC® CFP2006 Result

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Intel Corporation

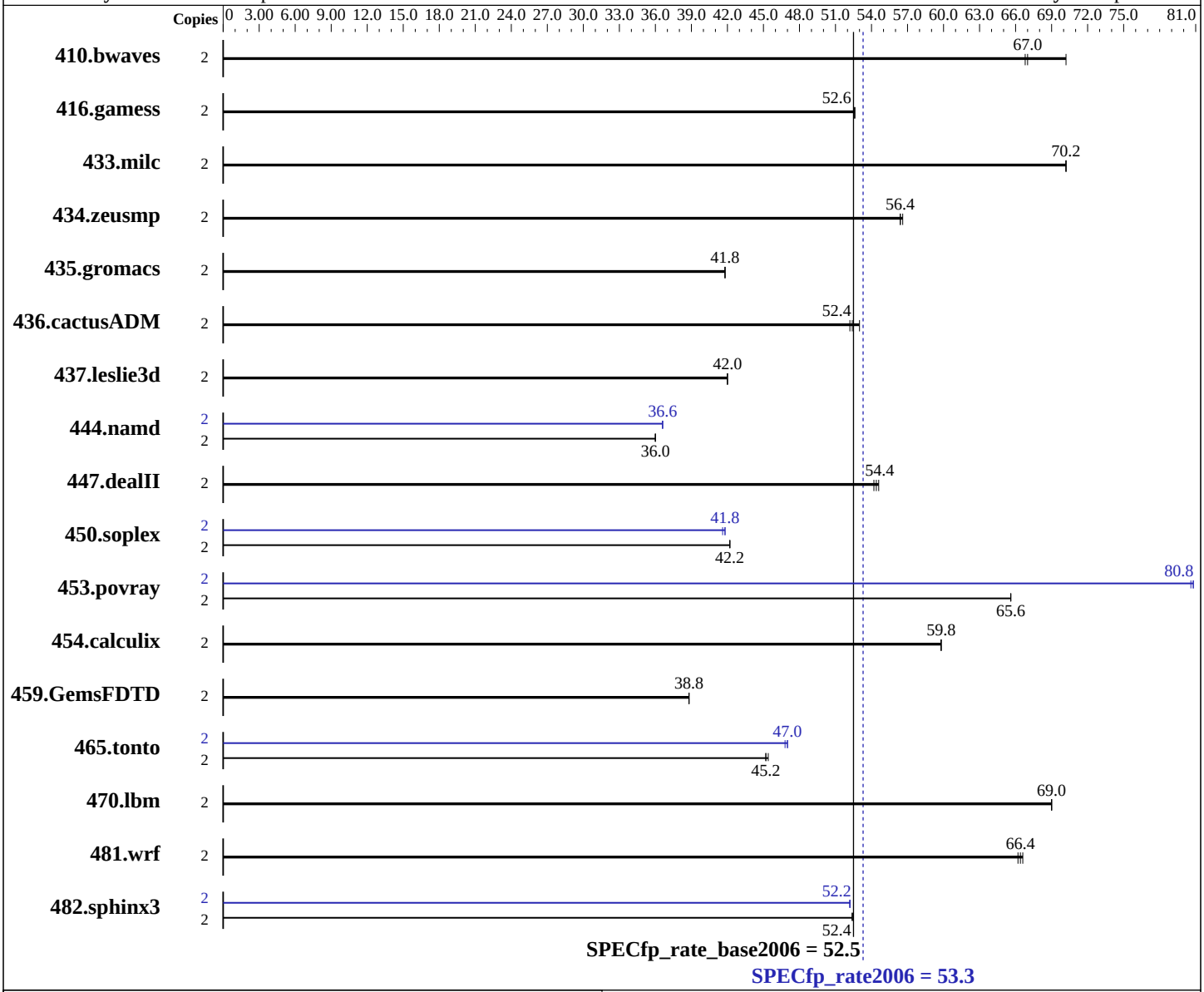
Intel DH61WW motherboard (Intel Pentium G630)

SPECfp®_rate2006 = 53.3

SPECfp_rate_base2006 = 52.5

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

Test date: Dec-2011
Hardware Availability: Sep-2011
Software Availability: Sep-2011



Hardware

CPU Name:	Intel Pentium G630
CPU Characteristics:	
CPU MHz:	2700
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 7 Ultimate 6.1.7601 Service Pack 1 Build 7601
Compiler:	C/C++: Version 12.1.0.229 of Intel C++ Studio XE for Windows; Fortran: Version 12.1.0.229 of Intel Fortran Studio XE for Windows; Libraries: Version 15.00.30729.01 of Microsoft Visual Studio 2008 Professional SP1
Auto Parallel:	No

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L3 Cache: 3 MB I+D on chip per chip
Other Cache: None
Memory: 4 GB (2 x 2 GB 2Rx8 PC3-10600U-9, running at 1066 MHz and CL7)
Disk Subsystem: 1 TB Seagate SATA, 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 9.01 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	387	70.2	**406**	**67.0**	407	66.8	2	387	70.2	**406**	**67.0**	407	66.8
416.gamess	2	**746**	**52.6**	746	52.6	745	52.6	2	**746**	**52.6**	746	52.6	745	52.6
433.milc	2	262	70.2	**261**	**70.2**	261	70.2	2	262	70.2	**261**	**70.2**	261	70.2
434.zeusmp	2	**322**	**56.4**	323	56.4	322	56.6	2	**322**	**56.4**	323	56.4	322	56.6
435.gromacs	2	341	41.8	341	41.8	**341**	**41.8**	2	341	41.8	341	41.8	**341**	**41.8**
436.cactusADM	2	451	53.0	457	52.2	**457**	**52.4**	2	451	53.0	457	52.2	**457**	**52.4**
437.leslie3d	2	**448**	**42.0**	449	42.0	448	42.0	2	**448**	**42.0**	449	42.0	448	42.0
444.namd	2	445	36.0	**445**	**36.0**	445	36.0	2	**437**	**36.6**	437	36.6	437	36.6
447.dealII	2	420	54.6	422	54.2	**421**	**54.4**	2	420	54.6	422	54.2	**421**	**54.4**
450.soplex	2	396	42.2	**396**	**42.2**	396	42.2	2	401	41.6	400	41.8	**400**	**41.8**
453.povray	2	162	65.6	162	65.6	**162**	**65.6**	2	132	80.8	**132**	**80.8**	132	80.6
454.calculix	2	276	59.8	**276**	**59.8**	276	59.8	2	276	59.8	**276**	**59.8**	276	59.8
459.GemsFDTD	2	546	38.8	546	38.8	**546**	**38.8**	2	546	38.8	546	38.8	**546**	**38.8**
465.tonto	2	434	45.4	436	45.2	**436**	**45.2**	2	420	46.8	419	47.0	**419**	**47.0**
470.lbm	2	399	69.0	**399**	**69.0**	399	69.0	2	399	69.0	**399**	**69.0**	399	69.0
481.wrf	2	336	66.6	338	66.2	**336**	**66.4**	2	336	66.6	338	66.2	**336**	**66.4**
482.sphinx3	2	745	52.4	**744**	**52.4**	744	52.4	2	748	52.2	**748**	**52.2**	748	52.2

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Compiler Invocation Notes

```
ipsxe-comp-vars batch file invoked with intel64
```

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:\SPEC12.1/Docs/sysinfo
$Rev: 6775 $ $Date:: 2011-08-16 #$ \8787f7622badcf24e01c368b1db4377c
running on CltE06995A30CB5 Fri Dec 30 02:09:02 2011

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 7 Ultimate
OS Version    : 6.1.7601 Service Pack 1 Build 7601
System Manufacturer: INTEL_
System Model  : DH61WW__
Processor(s)  : 1 Processor(s) Installed.
     [01]: Intel64 Family 6 Model 42 Stepping 7 GenuineIntel ~2700 Mhz
BIOS Version  : Intel Corp. BEH6110H.86A.0016.2011.0118.1128, 1/18/2011
Total Physical Memory: 4,004 MB

Trying 'wmic cpu get /value'
DeviceID      : CPU0
L2CacheSize   : 512
L3CacheSize   : 3072
MaxClockSpeed : 2700
Name          : Intel(R) Pentium(R) CPU G630 @ 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 -Qvc9 -Qstd=c99
```

C++ benchmarks:

```
icl -Qvc9
```

Continued on next page

Base Compiler Invocation (Continued)

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qvc9 -Qstd=c99 ifort

Base Portability Flags

410.bwaves: -DSPEC_CPU_P64 -names:lowercase
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
450.soplex: -DSPEC_CPU_P64
453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
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 -Qvc9 -Qstd=c99

C++ benchmarks:
icl -Qvc9

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qvc9 -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: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias -Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE

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:

Continued on next page

Peak Optimization Flags (Continued)

410.bwaves: basepeak = yes

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-ic12.1-official-windows.20120117.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-windows.20120117.xml

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Tested with SPEC CPU2006 v1.2.
Report generated on Thu Jul 24 02:10:48 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 17 January 2012.