



SPEC® CFP2006 Result

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Intel Corporation

SPECfp®2006 = 32.8

Intel DH61WW motherboard (Intel Pentium G620)

SPECfp_base2006 = 32.2

CPU2006 license: 13

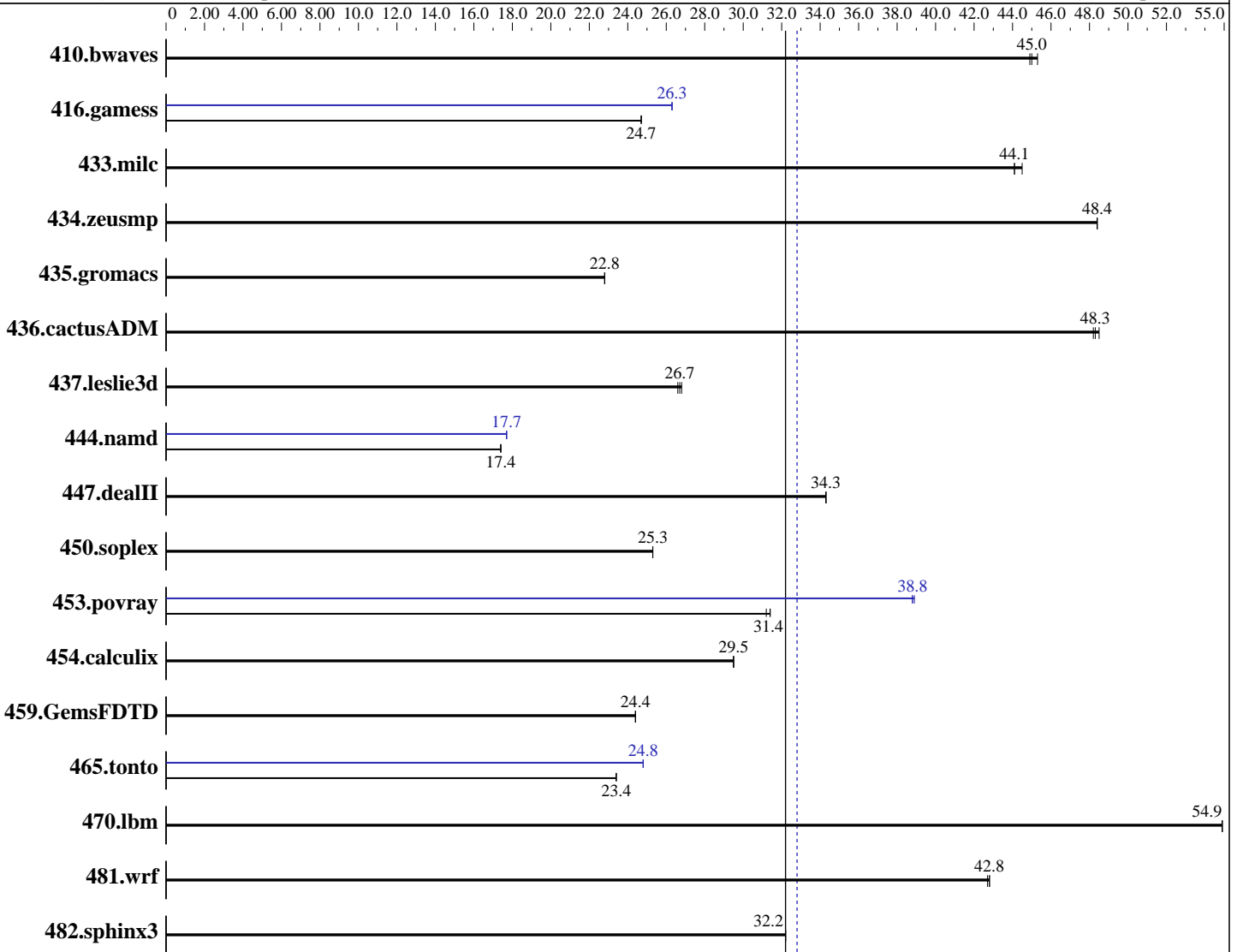
Test date: Dec-2011

Test sponsor: Intel Corporation

Hardware Availability: May-2011

Tested by: Intel Corporation

Software Availability: Sep-2011



SPECfp_base2006 = 32.2

SPECfp2006 = 32.8

Hardware

CPU Name: Intel Pentium G620
 CPU Characteristics:
 CPU MHz: 2600
 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

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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: Yes

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L3 Cache: 3 MB I+D on chip per chip
 Other Cache: None
 Memory: 2 GB (2 x 1 GB 1Rx16 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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	300	45.3	303	44.9	302	45.0	300	45.3	303	44.9	302	45.0
416.gamess	794	24.7	794	24.7	794	24.7	744	26.3	744	26.3	744	26.3
433.milc	207	44.5	208	44.1	208	44.1	207	44.5	208	44.1	208	44.1
434.zeusmp	188	48.4	188	48.4	188	48.4	188	48.4	188	48.4	188	48.4
435.gromacs	314	22.8	313	22.8	313	22.8	314	22.8	313	22.8	313	22.8
436.cactusADM	248	48.2	246	48.5	248	48.3	248	48.2	246	48.5	248	48.3
437.leslie3d	354	26.6	351	26.8	352	26.7	354	26.6	351	26.8	352	26.7
444.namd	461	17.4	461	17.4	461	17.4	453	17.7	453	17.7	453	17.7
447.dealII	334	34.3	334	34.3	334	34.3	334	34.3	334	34.3	334	34.3
450.soplex	329	25.3	329	25.3	329	25.3	329	25.3	329	25.3	329	25.3
453.povray	169	31.4	170	31.2	169	31.4	137	38.8	137	38.8	137	38.9
454.calculix	280	29.5	280	29.5	280	29.5	280	29.5	280	29.5	280	29.5
459.GemsFDTD	434	24.4	435	24.4	436	24.4	434	24.4	435	24.4	436	24.4
465.tonto	420	23.4	421	23.4	421	23.4	396	24.8	396	24.8	396	24.8
470.lbm	250	54.9	250	54.9	250	54.9	250	54.9	250	54.9	250	54.9
481.wrf	261	42.8	261	42.8	262	42.7	261	42.8	261	42.8	262	42.7
482.sphinx3	605	32.2	605	32.2	605	32.2	605	32.2	605	32.2	605	32.2

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

Platform Notes

Sysinfo program C:\SPEC12.1/Docs/sysinfo
 \$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c
 running on CltE06995A30C92 Wed Dec 28 15:35:13 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'

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Platform Notes (Continued)

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 ~2600 Mhz
 BIOS Version : Intel Corp. BEH6110H.86A.0016.2011.0118.1128, 1/18/2011
 Total Physical Memory: 1,956 MB

```
Trying 'wmic cpu get /value'
DeviceID      : CPU0
L2CacheSize  : 512
L3CacheSize  : 3072
MaxClockSpeed : 2600
Name          : Intel(R) Pentium(R) CPU G620 @ 2.60GHz
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

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 -Qvc9 -Qstd=c99

C++ benchmarks:
 icl -Qvc9

Fortran benchmarks:
 ifort

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



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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.deall: -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- -Qparallel -Qansi-alias
-Qopt-prefetch -Qauto-ilp32 /F1000000000

```

C++ benchmarks:

```

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias
-Qopt-prefetch -Qcxx-features -Qauto-ilp32 /F1000000000 shlw64M.lib
-link /FORCE:MULTIPLE

```

Fortran benchmarks:

```

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias
-Qopt-prefetch /F1000000000

```

Benchmarks using both Fortran and C:

```

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias
-Qopt-prefetch -Qauto-ilp32 /F1000000000

```

Peak Compiler Invocation

C benchmarks:

```

icl -Qvc9 -Qstd=c99

```

C++ benchmarks:

```

icl -Qvc9

```

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Peak Compiler Invocation (Continued)

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: 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
sh1W64M.lib -link /FORCE:MULTIPLE

447.dealIII: basepeak = yes

450.soplex: basepeak = yes

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

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Peak Optimization Flags (Continued)

459.GemsFDTD: basepeak = yes

465.tonto: -QxSSE4.2(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-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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