SPEC® CFP2006 Result

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Intel Corporation

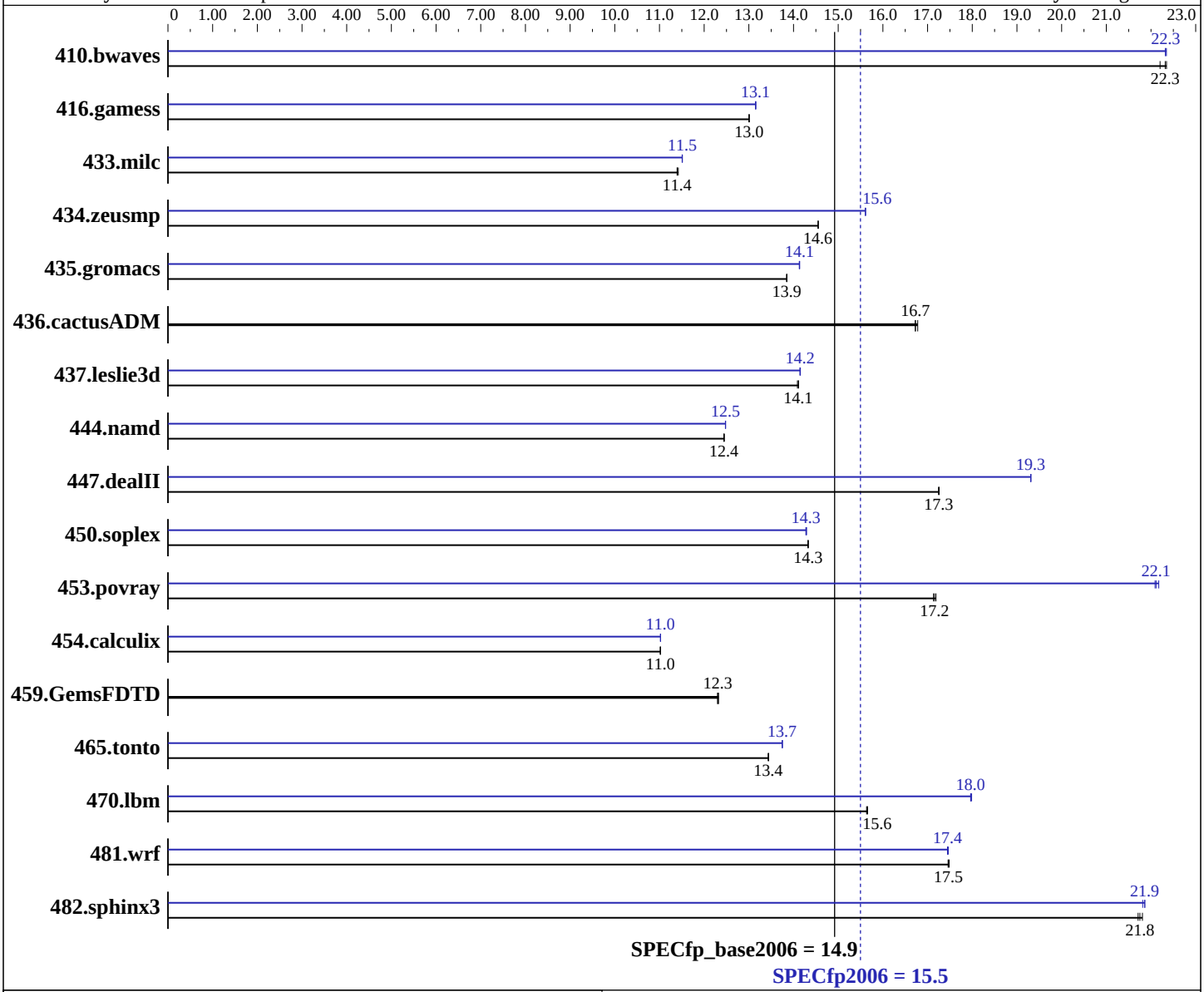
Intel DQ965GF motherboard (Intel Core 2 Quad Q6600)

SPECfp®2006 = 15.5

SPECfp_base2006 = 14.9

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

Test date: Jun-2007
Hardware Availability: Jan-2007
Software Availability: Aug-2006



Hardware

CPU Name:	Intel Core 2 Quad Q6600
CPU Characteristics:	2.40 GHz, 1066 MHz bus
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 cores/chip
CPU(s) orderable:	1 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	8 MB I+D on chip per chip, 4 MB shared / 2 cores

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Software

Operating System:	Windows Vista32 Ultimate
Compiler:	Intel C++ Compiler for IA32 version 10.0 Build 20070426 Package ID: W_CC_P_10.0.025 Intel Fortran Compiler for IA32 version 10.0 Build 20070426 Package ID: W_FC_P_10.0.025 Microsoft Visual Studio .Net 2003 (for libraries)
Auto Parallel:	No
File System:	NTFS
System State:	Default

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L3 Cache: None
Other Cache: None
Memory: 2 GB (2 1GB Micron MT16HTF12864AY-80ED4 DDR2 800, CL5)
Disk Subsystem: Seagate ST3320620AS 320GB Barracuda 7200.10 NCQ SATA II
Other Hardware: None

Base Pointers: 32-bit
Peak Pointers: 32-bit
Other Software: SmartHeap Library Version 8.0 from http://www.microquill.com/

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	612	22.2	**609**	**22.3**	608	22.3	**609**	**22.3**	608	22.3	609	22.3
416.gamess	1505	13.0	1506	13.0	**1505**	**13.0**	1488	13.2	**1489**	**13.1**	1489	13.1
433.milc	804	11.4	806	11.4	**806**	**11.4**	798	11.5	797	11.5	**798**	**11.5**
434.zeusmp	625	14.5	625	14.6	**625**	**14.6**	583	15.6	583	15.6	**583**	**15.6**
435.gromacs	515	13.9	516	13.8	**516**	**13.9**	505	14.1	505	14.1	**505**	**14.1**
436.cactusADM	**714**	**16.7**	712	16.8	714	16.7	**714**	**16.7**	712	16.8	714	16.7
437.leslie3d	667	14.1	666	14.1	**666**	**14.1**	664	14.2	**664**	**14.2**	665	14.1
444.namd	644	12.5	645	12.4	**645**	**12.4**	**643**	**12.5**	643	12.5	643	12.5
447.dealII	**663**	**17.3**	663	17.2	663	17.3	592	19.3	**592**	**19.3**	593	19.3
450.soplex	582	14.3	**582**	**14.3**	582	14.3	584	14.3	584	14.3	**584**	**14.3**
453.povray	310	17.2	**310**	**17.2**	311	17.1	240	22.2	**241**	**22.1**	241	22.1
454.calculix	749	11.0	**749**	**11.0**	748	11.0	**748**	**11.0**	749	11.0	748	11.0
459.GemsFDTD	863	12.3	**862**	**12.3**	861	12.3	863	12.3	**862**	**12.3**	861	12.3
465.tonto	**732**	**13.4**	733	13.4	732	13.4	716	13.7	716	13.8	**716**	**13.7**
470.lbm	**878**	**15.6**	879	15.6	878	15.7	**765**	**18.0**	765	18.0	764	18.0
481.wrf	**639**	**17.5**	640	17.5	639	17.5	640	17.4	640	17.5	**640**	**17.4**
482.sphinx3	894	21.8	898	21.7	**896**	**21.8**	893	21.8	**892**	**21.9**	891	21.9

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

General Notes

```
Tested systems can be used with Shin-G ATX case, Antec NeoPower 480W power supply
Product description located as of 7/2007:
http://www.intel.com/products/motherboard/DQ965GF/index.htm
The system bus runs at 1066 MHz
System was configured with integrated graphics card
Binaries were built on Windows XP Professional SP2 with 4GB of RAM and /3GB boot switch
```

Base Compiler Invocation

C benchmarks:

```
icl -Qvc7.1 -Qc99
```

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Base Compiler Invocation (Continued)

C++ benchmarks:
```
icl -Qvc7.1
```

Fortran benchmarks:
```
ifort
```

Benchmarks using both Fortran and C:
```
icl -Qvc7.1 -Qc99 ifort
```

Base Portability Flags

436.cactusADM: `-Qlowercase /assume:underscore`
444.namd: `-TP`
447.dealII: `-DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG -DBOOST_NO_INTRINSIC_WCHAR_T`
453.povray: `-DSPEC_CPU_WINDOWS_ICL`
454.calculix: `-DSPEC_CPU_NOZMODIFIER -Qlowercase`
481.wrf: `-DSPEC_CPU_WINDOWS_ICL`

Base Optimization Flags

C benchmarks:
```
-fast /F950000000 shlw32m.lib            -link /FORCE:MULTIPLE
```

C++ benchmarks:
```
-fast -Qcxx_features /F950000000 shlw32m.lib
            -link /FORCE:MULTIPLE
```

Fortran benchmarks:
```
-fast /F950000000
```

Benchmarks using both Fortran and C:
```
-fast /F950000000
```

Peak Compiler Invocation

C benchmarks:
```
icl -Qvc7.1 -Qc99
```

C++ benchmarks:
```
icl -Qvc7.1
```

Fortran benchmarks:
```
ifort
```

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Peak Compiler Invocation (Continued)

Benchmarks using both Fortran and C:
icl -Qvc7.1 -Qc99 ifort

Peak Portability Flags

436.cactusADM: -Qlowercase /assume:underscore
444.namd: -TP
447.dealII: -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
-DBOOST_NO_INTRINSIC_WCHAR_T
453.povray: -DSPEC_CPU_WINDOWS_ICL
454.calculix: -DSPEC_CPU_NOZMODIFIER -Qlowercase
481.wrf: -DSPEC_CPU_WINDOWS_ICL

Peak Optimization Flags

C benchmarks:

433.milc: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qunroll2 -Oa
/F950000000 shlw32m.lib -link /FORCE:MULTIPLE

470.lbm: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qunroll2
-Qscalar-rep- -Qprefetch /F950000000 shlw32m.lib
-link /FORCE:MULTIPLE

482.sphinx3: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qunroll2
/F950000000 shlw32m.lib -link /FORCE:MULTIPLE

C++ benchmarks:

444.namd: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Oa
-Qcxx_features /F950000000 shlw32m.lib
-link /FORCE:MULTIPLE

447.dealII: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qprefetch
-Qcxx_features /F950000000 shlw32m.lib
-link /FORCE:MULTIPLE

450.soplex: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx_features
/F950000000 shlw32m.lib -link /FORCE:MULTIPLE

453.povray: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qansi-alias
-Qcxx_features /F950000000 shlw32m.lib
-link /FORCE:MULTIPLE

Fortran benchmarks:

Continued on next page

Peak Optimization Flags (Continued)

410.bwaves: `-fast /F950000000`

416.gamess: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast -Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep- /F950000000`

434.zeusmp: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-QxT -O2 -Qprec_div- -Qunroll0 -Qscalar-rep- /F950000000`

437.leslie3d: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast /F950000000`

459.GemsFDTD: `basepeak = yes`

465.tonto: `Same as 437.leslie3d`

Benchmarks using both Fortran and C:

435.gromacs: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast -Oa /F950000000`

436.cactusADM: `basepeak = yes`

454.calculix: `-fast /F950000000`

481.wrf: `Same as 454.calculix`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.42.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.42.xml`

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Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 12:56:49 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 8 August 2007.