SPEC® CFP2006 Result

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Intel Corporation

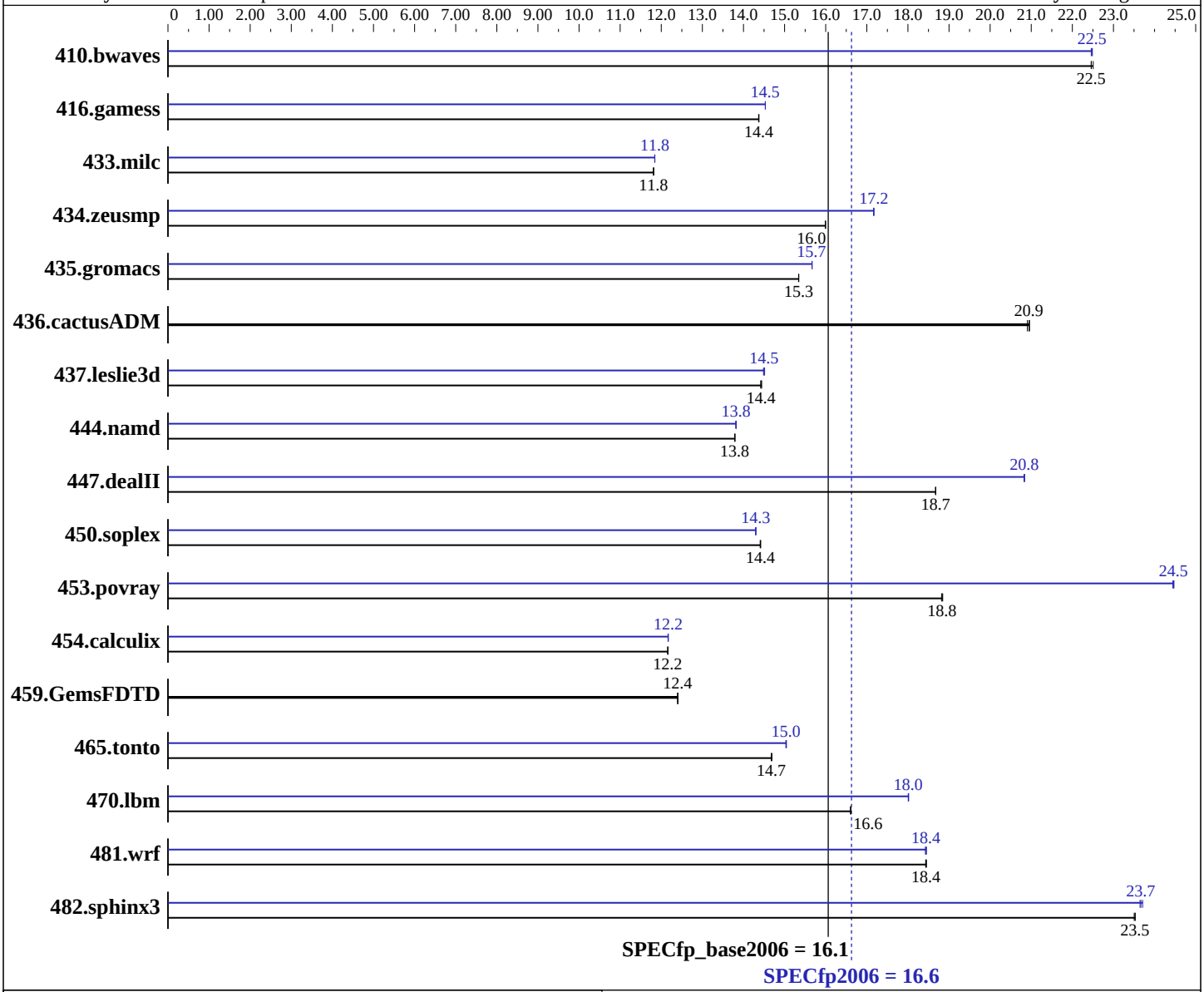
Intel DQ965GF motherboard (Intel Core 2 Quad Q6700)

SPECfp®2006 = 16.6

SPECfp_base2006 = 16.1

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

Test date: Jul-2007
Hardware Availability: Jul-2007
Software Availability: Aug-2006



Hardware

CPU Name:	Intel Core 2 Quad Q6700
CPU Characteristics:	2.67 GHz, 1066 MHz bus
CPU MHz:	2667
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	604	22.5	**605**	**22.5**	605	22.5	605	22.5	**605**	**22.5**	604	22.5
416.gamess	1363	14.4	**1362**	**14.4**	1362	14.4	1347	14.5	1348	14.5	**1347**	**14.5**
433.milc	**777**	**11.8**	777	11.8	777	11.8	775	11.8	**775**	**11.8**	775	11.8
434.zeusmp	569	16.0	569	16.0	**569**	**16.0**	**530**	**17.2**	530	17.2	530	17.2
435.gromacs	465	15.3	465	15.3	**465**	**15.3**	**456**	**15.7**	456	15.7	456	15.7
436.cactusADM	572	20.9	**571**	**20.9**	570	21.0	572	20.9	**571**	**20.9**	570	21.0
437.leslie3d	652	14.4	651	14.4	**652**	**14.4**	648	14.5	649	14.5	**648**	**14.5**
444.namd	**582**	**13.8**	582	13.8	581	13.8	581	13.8	**580**	**13.8**	580	13.8
447.dealII	613	18.7	612	18.7	**613**	**18.7**	**549**	**20.8**	549	20.8	549	20.8
450.soplex	**579**	**14.4**	579	14.4	578	14.4	**583**	**14.3**	583	14.3	583	14.3
453.povray	283	18.8	**282**	**18.8**	282	18.8	217	24.5	**217**	**24.5**	218	24.4
454.calculix	679	12.2	**679**	**12.2**	678	12.2	678	12.2	**678**	**12.2**	678	12.2
459.GemsFDTD	856	12.4	855	12.4	**856**	**12.4**	856	12.4	855	12.4	**856**	**12.4**
465.tonto	**670**	**14.7**	670	14.7	670	14.7	654	15.0	**654**	**15.0**	655	15.0
470.lbm	827	16.6	**827**	**16.6**	827	16.6	763	18.0	763	18.0	**763**	**18.0**
481.wrf	606	18.4	**606**	**18.4**	605	18.5	**606**	**18.4**	606	18.4	605	18.5
482.sphinx3	829	23.5	828	23.5	**828**	**23.5**	822	23.7	824	23.6	**823**	**23.7**

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
```

Continued on next page

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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