SPEC® CFP2006 Result

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ASUS Computer International

(Test Sponsor: Intel Corporation)

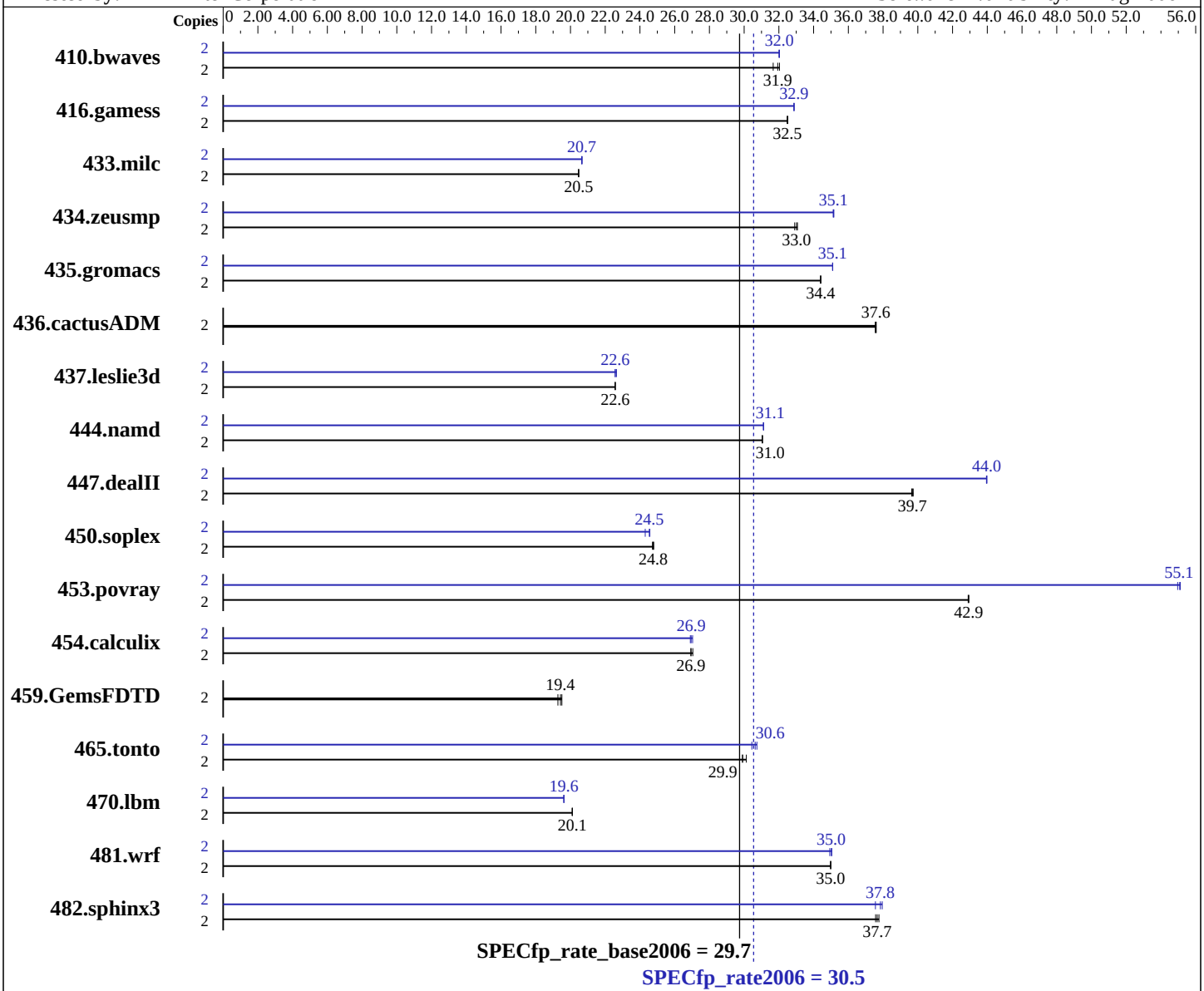
ASUS P5K3 motherboard (Intel Core 2 Duo E6850)

SPECfp®_rate2006 = 30.5

SPECfp_rate_base2006 = 29.7

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 Duo E6850
CPU Characteristics:	3.00 GHz, 1333 MHz bus
CPU MHz:	3000
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:	4 MB I+D on chip per chip

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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 (2x1GB ELPIDA PC3-8500U-7-00-BP DDR3-1066 7-7-7-20)
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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	2	858	31.7	**851**	**31.9**	848	32.0	2	848	32.0	849	32.0	**849**	**32.0**
416.gamess	2	1204	32.5	**1206**	**32.5**	1206	32.5	2	**1191**	**32.9**	1192	32.9	1191	32.9
433.milc	2	**897**	**20.5**	897	20.5	898	20.5	2	**889**	**20.7**	888	20.7	889	20.6
434.zeusmp	2	550	33.1	553	32.9	**551**	**33.0**	2	518	35.1	**518**	**35.1**	518	35.2
435.gromacs	2	415	34.4	**415**	**34.4**	415	34.4	2	407	35.1	407	35.1	**407**	**35.1**
436.cactusADM	2	636	37.6	636	37.6	**636**	**37.6**	2	636	37.6	636	37.6	**636**	**37.6**
437.leslie3d	2	833	22.6	833	22.6	**833**	**22.6**	2	830	22.6	833	22.6	**832**	**22.6**
444.namd	2	**517**	**31.0**	517	31.1	517	31.0	2	**516**	**31.1**	515	31.1	516	31.1
447.dealII	2	577	39.7	**576**	**39.7**	576	39.7	2	520	44.0	521	44.0	**520**	**44.0**
450.soplex	2	675	24.7	673	24.8	**674**	**24.8**	2	679	24.6	686	24.3	**680**	**24.5**
453.povray	2	248	42.9	**248**	**42.9**	248	42.9	2	**193**	**55.1**	193	55.1	194	55.0
454.calculix	2	**613**	**26.9**	610	27.0	613	26.9	2	610	27.0	613	26.9	**612**	**26.9**
459.GemsFDTD	2	1088	19.5	**1092**	**19.4**	1101	19.3	2	1088	19.5	**1092**	**19.4**	1101	19.3
465.tonto	2	658	29.9	653	30.1	**658**	**29.9**	2	640	30.7	646	30.4	**642**	**30.6**
470.lbm	2	**1367**	**20.1**	1367	20.1	1367	20.1	2	1401	19.6	**1401**	**19.6**	1400	19.6
481.wrf	2	**639**	**35.0**	639	35.0	639	35.0	2	640	34.9	**638**	**35.0**	637	35.0
482.sphinx3	2	**1035**	**37.7**	1032	37.8	1038	37.6	2	1027	38.0	1038	37.6	**1030**	**37.8**

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://usa.asus.com/products.aspx?l1=3&l2=11&l3=534&l4=0&model=1645&modelmenu=1
The system bus runs at 1333 MHz
System has a discrete gfx card - Asus EN8800GTX/HTDP/768M w/ nVidia 8800GTX
Binaries were built on Windows XP Professional SP2 with 4GB of RAM and /3GB boot switch
The start command with the /affinity switch was used to bind processes to cores
```

Base Compiler Invocation

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

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
```

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Peak Compiler Invocation (Continued)

Fortran benchmarks:
ifort

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

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Peak Optimization Flags (Continued)

Fortran benchmarks:

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 12:48:44 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 8 August 2007.