SPEC® CFP2006 Result

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ASUS Computer International

(Test Sponsor: Intel Corporation)

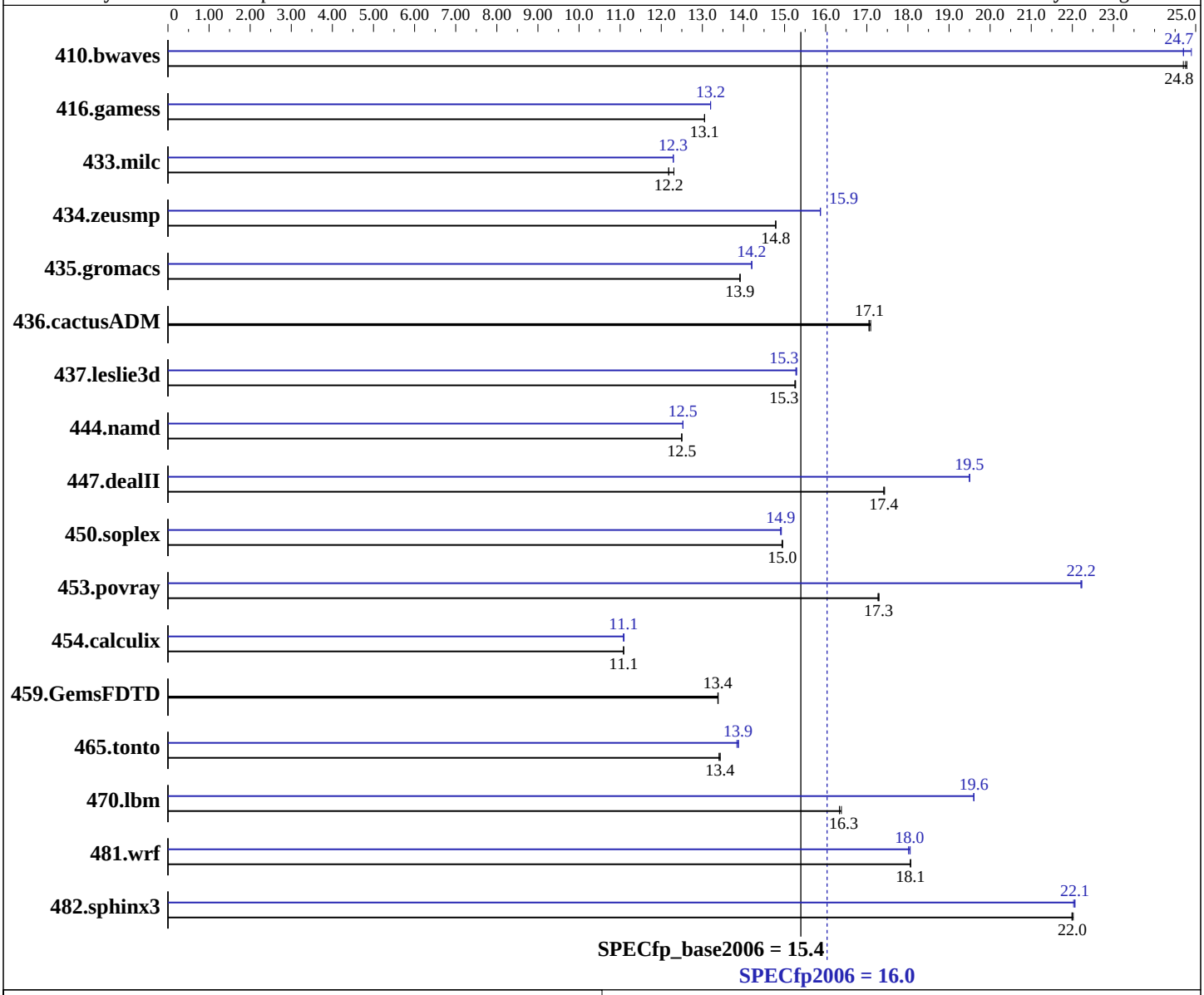
ASUS P5K3 motherboard (Intel Core 2 Quad Q6600)

SPECfp®2006 = 16.0

SPECfp_base2006 = 15.4

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 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 (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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	548	24.8	550	24.7	**549**	**24.8**	546	24.9	**550**	**24.7**	550	24.7
416.gamess	1500	13.1	**1500**	**13.1**	1500	13.1	1484	13.2	1483	13.2	**1483**	**13.2**
433.milc	746	12.3	**754**	**12.2**	754	12.2	747	12.3	**747**	**12.3**	747	12.3
434.zeusmp	615	14.8	**615**	**14.8**	616	14.8	**573**	**15.9**	573	15.9	573	15.9
435.gromacs	513	13.9	**513**	**13.9**	513	13.9	503	14.2	**503**	**14.2**	503	14.2
436.cactusADM	699	17.1	**700**	**17.1**	701	17.1	699	17.1	**700**	**17.1**	701	17.1
437.leslie3d	616	15.2	**616**	**15.3**	616	15.3	**615**	**15.3**	615	15.3	615	15.3
444.namd	**642**	**12.5**	642	12.5	642	12.5	640	12.5	640	12.5	**640**	**12.5**
447.dealII	656	17.4	**657**	**17.4**	657	17.4	**587**	**19.5**	587	19.5	587	19.5
450.soplex	**558**	**15.0**	558	15.0	558	14.9	559	14.9	560	14.9	**559**	**14.9**
453.povray	308	17.3	308	17.3	**308**	**17.3**	240	22.2	**240**	**22.2**	239	22.2
454.calculix	744	11.1	744	11.1	**744**	**11.1**	**744**	**11.1**	744	11.1	745	11.1
459.GemsFDTD	793	13.4	793	13.4	**793**	**13.4**	793	13.4	793	13.4	**793**	**13.4**
465.tonto	**733**	**13.4**	734	13.4	733	13.4	709	13.9	711	13.8	**709**	**13.9**
470.lbm	841	16.3	**841**	**16.3**	839	16.4	701	19.6	701	19.6	**701**	**19.6**
481.wrf	**618**	**18.1**	618	18.1	618	18.1	**619**	**18.0**	619	18.1	620	18.0
482.sphinx3	**886**	**22.0**	886	22.0	885	22.0	**883**	**22.1**	885	22.0	883	22.1

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
```

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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