SPEC® CFP2006 Result
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Acer Incorporated

Gateway GB460 F1 (Intel Xeon X5670, 2.93 GHz)

$SPECfp^{®}2006 =$ 44.6
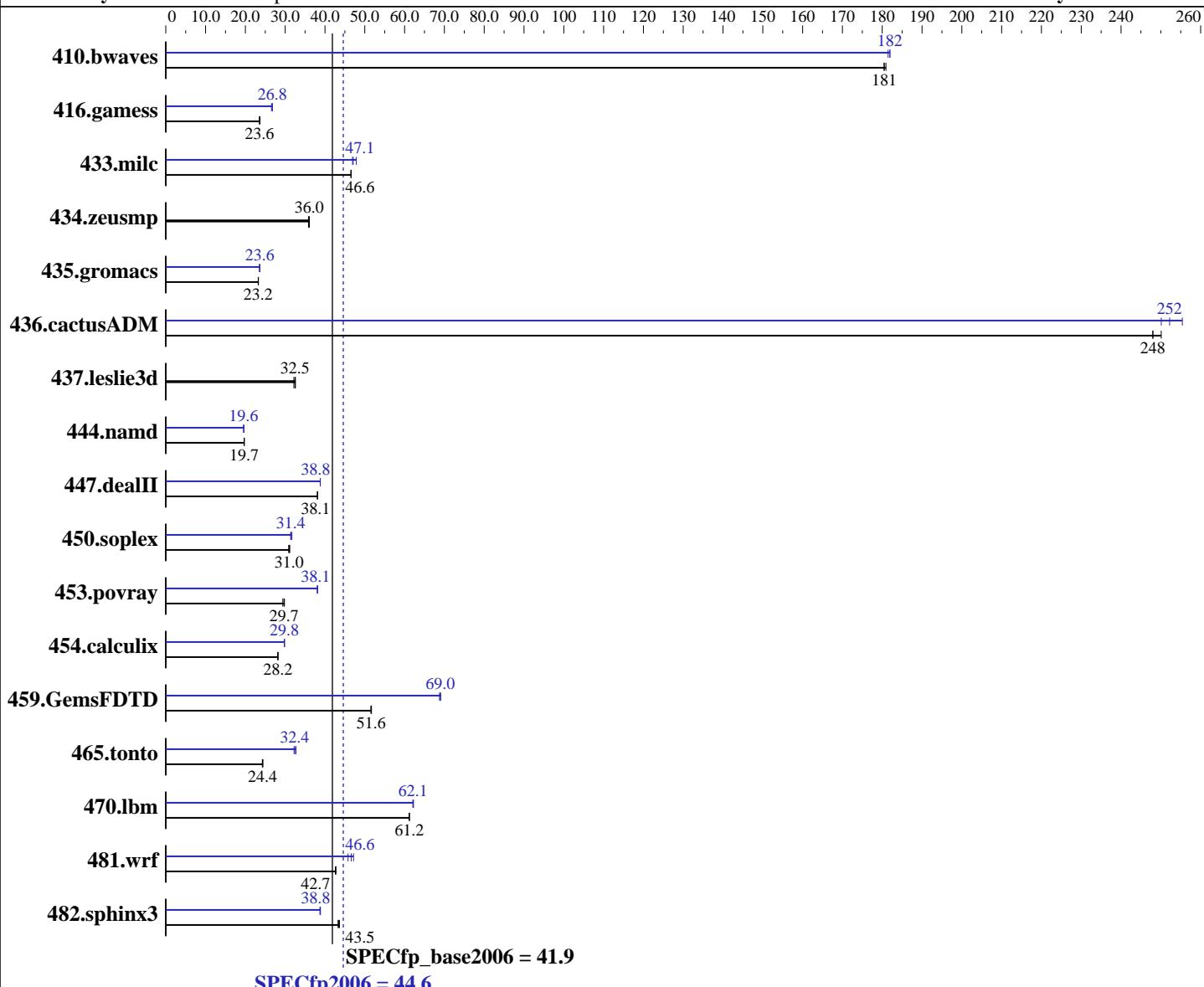
$SPECfp\_base2006 =$ 41.9

CPU2006 license: 97
Test sponsor: Acer Incorporated
Tested by: Acer Incorporated

Test date: May-2010
Hardware Availability: Jul-2010
Software Availability: Jan-2010

Benchmark	Base	Peak
410.bwaves	181	182
416.gamess	23.6	26.8
433.milc	46.6	47.1
434.zeusmp	36.0	
435.gromacs	23.2	23.6
436.cactusADM	248	252
437.leslie3d	32.5	
444.namd	19.7	19.6
447.dealII	38.1	38.8
450.soplex	31.0	31.4
453.povray	29.7	38.1
454.calculix	28.2	29.8
459.GemsFDTD	51.6	69.0
465.tonto	24.4	32.4
470.lbm	61.2	62.1
481.wrf	42.7	46.6
482.sphinx3	43.5	38.8

SPECfp_base2006 = 41.9

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Hardware

CPU Name: Intel Xeon X5670
CPU Characteristics: Intel Turbo Boost Technology up to 3.33 GHz
CPU MHz: 2933
FPU: Integrated
CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core
CPU(s) orderable: 1,2 chips
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 256 KB I+D on chip per core

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64)
Kernel 2.6.27.19-5-default
Compiler: Intel C++ and Fortran Professional Compiler for IA32 and Intel 64, Version 11.1
Build 20091130 Package ID: l_cproc_p_11.1.064, l_cprof_p_11.1.064
Auto Parallel: Yes
File System: ReiserFS
System State: Run level 3 (multi-user)

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L3 Cache:	12 MB I+D on chip per chip	Base Pointers:	64-bit
Other Cache:	None	Peak Pointers:	32/64-bit
Memory:	48 GB (12 x 4 GB DDR3-1333 RDIMM, ECC, CL9)	Other Software:	None
Disk Subsystem:	1 x 300 GB SATA II, 10000 RPM		
Other Hardware:	None		

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	**75.3**	**181**	75.1	181	75.3	180	74.9	181	**74.7**	**182**	74.7	182
416.gamess	832	23.5	**831**	**23.6**	827	23.7	737	26.6	**732**	**26.8**	731	26.8
433.milc	197	46.5	**197**	**46.6**	197	46.6	196	46.9	**195**	**47.1**	192	47.9
434.zeusmp	**253**	**36.0**	254	35.9	252	36.1	**253**	**36.0**	254	35.9	252	36.1
435.gromacs	**307**	**23.2**	307	23.3	307	23.2	303	23.5	**303**	**23.6**	302	23.6
436.cactusADM	48.2	248	**48.2**	**248**	47.8	250	46.8	255	**47.4**	**252**	47.8	250
437.leslie3d	292	32.2	**289**	**32.5**	289	32.6	292	32.2	**289**	**32.5**	289	32.6
444.namd	407	19.7	407	19.7	**407**	**19.7**	410	19.6	409	19.6	**409**	**19.6**
447.dealII	**300**	**38.1**	300	38.2	300	38.1	295	38.8	295	38.8	**295**	**38.8**
450.soplex	**269**	**31.0**	268	31.1	270	30.9	**265**	**31.4**	263	31.7	266	31.4
453.povray	181	29.4	**179**	**29.7**	178	29.8	140	38.1	**140**	**38.1**	139	38.2
454.calculix	293	28.2	293	28.2	**293**	**28.2**	**277**	**29.8**	277	29.8	277	29.8
459.GemsFDTD	206	51.5	**205**	**51.6**	205	51.7	154	69.1	**154**	**69.0**	154	68.8
465.tonto	**404**	**24.4**	406	24.3	404	24.4	**304**	**32.4**	301	32.7	305	32.2
470.lbm	225	61.2	225	61.2	**225**	**61.2**	221	62.1	**221**	**62.1**	221	62.2
481.wrf	262	42.6	**262**	**42.7**	261	42.7	**240**	**46.6**	237	47.2	244	45.8
482.sphinx3	**448**	**43.5**	447	43.6	450	43.3	503	38.7	502	38.9	**502**	**38.8**

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

Operating System Notes

```
'ulimit -s unlimited' was used to set the stack size to unlimited prior to run
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=fine,scatter
KMP_STACKSIZE set to 200M
```

Platform Notes

```
Fan speed set to full Speed (ie. Enterprise Blade mode) with
Smart Blade Console through CMM (Chassis Management Module)
```

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General Notes

    Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502

    The Acer AB460 F1, and Gateway GB460 F1 are electronically equivalent.
    This result was measured on Gateway GB460 F1.

Base Compiler Invocation

C benchmarks:
    icc   -m64

C++ benchmarks:
    icpc   -m64

Fortran benchmarks:
    ifort -m64

Benchmarks using both Fortran and C:
    icc   -m64 ifort -m64

Base Portability Flags

        410.bwaves: -DSPEC_CPU_LP64
        416.gamess: -DSPEC_CPU_LP64
          433.milc: -DSPEC_CPU_LP64
        434.zeusmp: -DSPEC_CPU_LP64
       435.gromacs: -DSPEC_CPU_LP64 -nofor_main
     436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
       437.leslie3d: -DSPEC_CPU_LP64
          444.namd: -DSPEC_CPU_LP64
         447.dealII: -DSPEC_CPU_LP64
        450.soplex: -DSPEC_CPU_LP64
        453.povray: -DSPEC_CPU_LP64
       454.calculix: -DSPEC_CPU_LP64 -nofor_main
      459.GemsFDTD: -DSPEC_CPU_LP64
         465.tonto: -DSPEC_CPU_LP64
          470.lbm: -DSPEC_CPU_LP64
           481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
       482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
    -xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

C++ benchmarks:
    -xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

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Base Optimization Flags (Continued)

Fortran benchmarks:

```
-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
```

Benchmarks using both Fortran and C:

```
-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
```

Peak Compiler Invocation

C benchmarks:

```
icc    -m64
```

C++ benchmarks:

```
icpc   -m64
```

Fortran benchmarks:

```
ifort -m64
```

Benchmarks using both Fortran and C:

```
icc    -m64 ifort -m64
```

Peak Portability Flags

```
Same as Base Portability Flags
```

Peak Optimization Flags

C benchmarks:

```
433.milc: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
          -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
          -ansi-alias

470.lbm: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
         -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
         -parallel -ansi-alias -auto-ilp32

482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32
             -unroll2
```

C++ benchmarks:

```
444.namd: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
          -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
          -fno-alias -auto-ilp32
```

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Peak Optimization Flags (Continued)

```
   447.dealII: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
               -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
               -unroll2 -ansi-alias -scalar-rep- -auto-ilp32

   450.soplex: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
               -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
               -opt-malloc-options=3 -auto-ilp32

   453.povray: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
               -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
               -unroll4 -ansi-alias
```

Fortran benchmarks:

```
  410.bwaves: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch
              -parallel

  416.gamess: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
              -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
              -unroll2 -Ob0 -ansi-alias -scalar-rep-

  434.zeusmp: basepeak = yes

  437.leslie3d: basepeak = yes

 459.GemsFDTD: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
               -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
               -unroll2 -Ob0 -opt-prefetch -parallel

    465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
               -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
               -inline-calloc -opt-malloc-options=3 -auto -unroll4
```

Benchmarks using both Fortran and C:

```
  435.gromacs: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
               -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
               -opt-prefetch -auto-ilp32

 436.cactusADM: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
                -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
                -unroll2 -opt-prefetch -parallel -auto-ilp32

  454.calculix: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32

      481.wrf: Same as 454.calculix
```

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The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100316.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100316.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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