SPEC® CFP2006 Result
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Acer Incorporated

Acer Altos G330 Mk2 (Intel Xeon X3210)

$SPECfp®\_rate2006 =$ 39.6

$SPECfp\_rate\_base2006 =$ 37.4
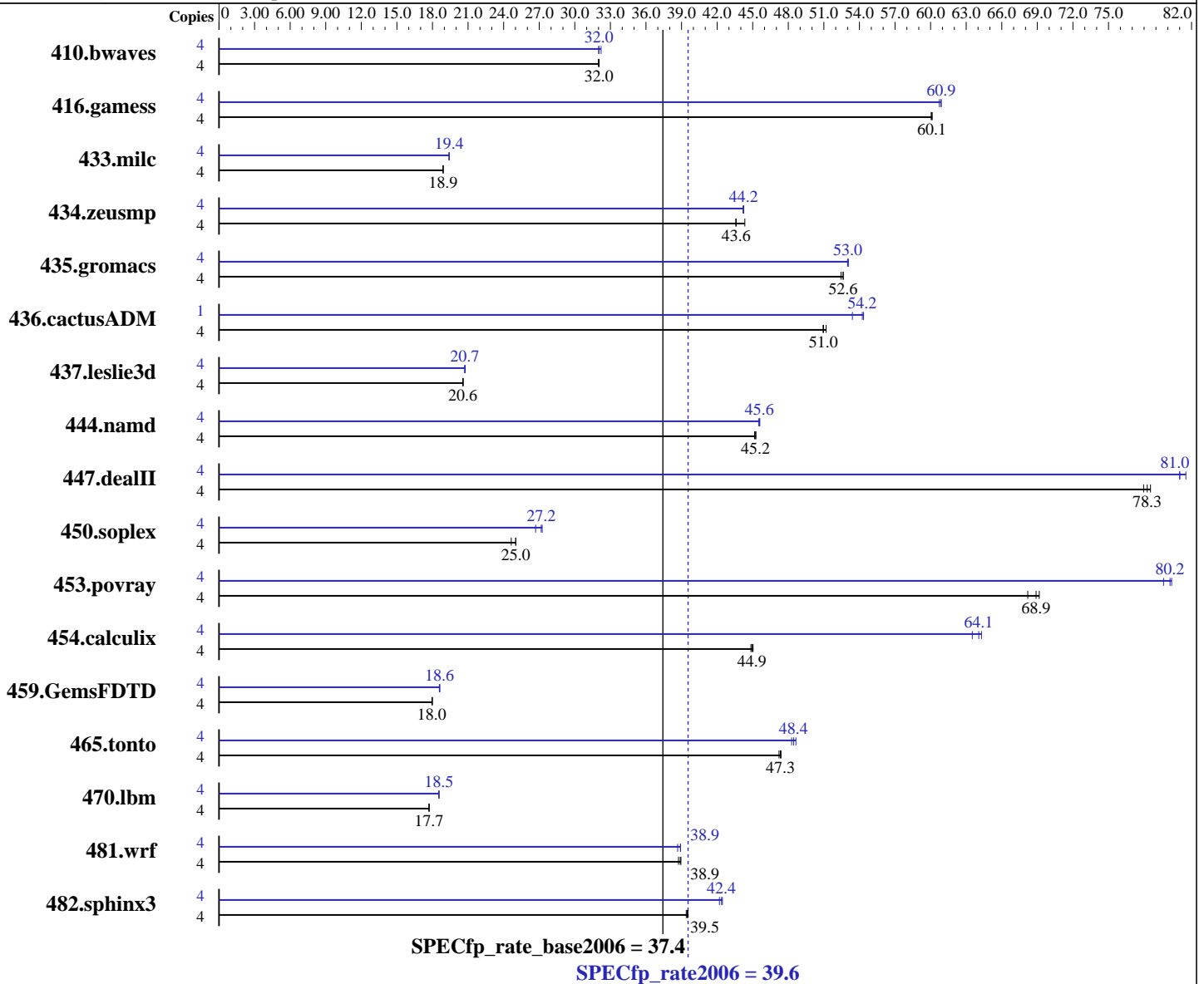
CPU2006 license: 97
Test sponsor: Acer Incorporated
Tested by: Acer Incorporated

Test date: Dec-2007
Hardware Availability: Nov-2007
Software Availability: Nov-2007

Copies	Benchmark	Result (blue)	Result (black)
4 / 4	410.bwaves	32.0	32.0
4 / 4	416.gamess	60.9	60.1
4 / 4	433.milc	19.4	18.9
4 / 4	434.zeusmp	44.2	43.6
4 / 4	435.gromacs	53.0	52.6
1 / 4	436.cactusADM	54.2	51.0
4 / 4	437.leslie3d	20.7	20.6
4 / 4	444.namd	45.6	45.2
4 / 4	447.dealII	81.0	78.3
4 / 4	450.soplex	27.2	25.0
4 / 4	453.povray	80.2	68.9
4 / 4	454.calculix	64.1	44.9
4 / 4	459.GemsFDTD	18.6	18.0
4 / 4	465.tonto	48.4	47.3
4 / 4	470.lbm	18.5	17.7
4 / 4	481.wrf	38.9	38.9
4 / 4	482.sphinx3	42.4	39.5

SPECfp_rate_base2006 = 37.4

SPECfp_rate2006 = 39.6

Hardware

CPU Name: Intel Xeon X3210
CPU Characteristics: 1066 MHz system bus
CPU MHz: 2130
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

Continued on next page

Software

Operating System: SuSE Linux Enterprise Server 10 SP1 (x86_64)
Kernel 2.6.16.46-0.12-smp
Compiler: Intel C++ and Fortran Compiler 10.1 for Linux
Build 20070913 Package ID: l_cc_p_10.1.008,
l_fc_p_10.1.008
Auto Parallel: Yes
File System: ReiserFS
System State: Multi-user, level 3
Base Pointers: 64-bit

Continued on next page

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L3 Cache:	None	Peak Pointers:	32/64-bit
Other Cache:	None	Other Software:	Microquill SmartHeap V8.1
Memory:	8 GB (4 x 2048 MB ECC Unbuffered DDR2-800 CL5)		Binutils 2.17.50.0.15
Disk Subsystem:	1 x 160 GB 7200RPM SATA HDD		
Other Hardware:	None		

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	**1697**	**32.0**	1696	32.1	1699	32.0	4	1698	32.0	1687	32.2	**1697**	**32.0**
416.gamess	4	1303	60.1	1304	60.0	**1303**	**60.1**	4	1289	60.7	**1286**	**60.9**	1286	60.9
433.milc	4	**1943**	**18.9**	1943	18.9	1944	18.9	4	**1892**	**19.4**	1891	19.4	1893	19.4
434.zeusmp	4	835	43.6	821	44.3	**835**	**43.6**	4	**823**	**44.2**	823	44.2	824	44.2
435.gromacs	4	**543**	**52.6**	545	52.4	543	52.6	4	539	53.0	**539**	**53.0**	538	53.1
436.cactusADM	4	934	51.2	939	50.9	**938**	**51.0**	1	220	54.3	**220**	**54.2**	224	53.4
437.leslie3d	4	1829	20.6	1826	20.6	**1828**	**20.6**	4	1816	20.7	1811	20.8	**1813**	**20.7**
444.namd	4	709	45.3	710	45.2	**709**	**45.2**	4	705	45.5	703	45.6	**704**	**45.6**
447.dealII	4	587	78.0	583	78.5	**585**	**78.3**	4	**565**	**81.0**	561	81.5	565	81.0
450.soplex	4	1354	24.6	**1333**	**25.0**	1333	25.0	4	1250	26.7	**1228**	**27.2**	1224	27.3
453.povray	4	312	68.2	308	69.2	**309**	**68.9**	4	267	79.6	**265**	**80.2**	265	80.3
454.calculix	4	733	45.0	**734**	**44.9**	736	44.8	4	**515**	**64.1**	513	64.3	520	63.5
459.GemsFDTD	4	2364	18.0	**2364**	**18.0**	2357	18.0	4	2284	18.6	**2281**	**18.6**	2279	18.6
465.tonto	4	**832**	**47.3**	834	47.2	831	47.4	4	815	48.3	809	48.6	**812**	**48.4**
470.lbm	4	3101	17.7	3103	17.7	**3103**	**17.7**	4	2963	18.5	**2963**	**18.5**	2964	18.5
481.wrf	4	**1149**	**38.9**	1147	38.9	1153	38.7	4	**1149**	**38.9**	1155	38.7	1148	38.9
482.sphinx3	4	**1975**	**39.5**	1972	39.5	1979	39.4	4	1848	42.2	1837	42.4	**1840**	**42.4**

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

General Notes

```
    All benchmarks compiled in 64-bit mode except 437.leslie3d, 450.soplex
    470.lbm and 482.sphinx3, at peak, are compiled in 32-bit mode
    "ulimit -s unlimited" was set for stacksize unlimited
    All results used taskset to bind processes to cores.
    OMP_NUM_THREADS set to number of cores
```

Base Compiler Invocation

C benchmarks:
```
    icc
```

Continued on next page

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Base Compiler Invocation (Continued)

C++ benchmarks:
```
icpc
```

Fortran benchmarks:
```
ifort
```

Benchmarks using both Fortran and C:
```
icc ifort
```

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:
```
-fast
```

C++ benchmarks:
```
-fast
```

Fortran benchmarks:
```
-fast
```

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

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Peak Compiler Invocation

C benchmarks (except as noted below):
```
/opt/intel/cc/10.1.008/bin/icc -L/opt/intel/cc/10.1.008/lib
-I/opt/intel/cc/10.1.008/include
```

   433.milc: `icc`

C++ benchmarks (except as noted below):
```
icpc
```

   450.soplex: `/opt/intel/cc/10.1.008/bin/icpc -L/opt/intel/cc/10.1.008/lib`
         `-I/opt/intel/cc/10.1.008/include`

Fortran benchmarks (except as noted below):
```
ifort
```

   437.leslie3d: `/opt/intel/fc/10.1.008/bin/ifort -L/opt/intel/fc/10.1.008/lib`
         `-I/opt/intel/fc/10.1.008/include`

Benchmarks using both Fortran and C:
```
icc ifort
```

Peak 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`
         444.namd: `-DSPEC_CPU_LP64`
        447.dealII: `-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`
           481.wrf: `-DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

       433.milc: `-prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias`
             `-auto-ilp32`

       470.lbm: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2`
             `-scalar-rep- -prefetch -opt-malloc-options=3`

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Peak Optimization Flags (Continued)

482.sphinx3: `-fast -unroll2`

C++ benchmarks:

444.namd: `-prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias -auto-ilp32`

447.dealII: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -ansi-alias -scalar-rep-`

450.soplex: `-prof-gen(pass 1) -prof-use(pass 2) -fast -opt-malloc-options=3`

453.povray: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -ansi-alias`

Fortran benchmarks:

410.bwaves: `-fast -prefetch`

416.gamess: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0 -ansi-alias -scalar-rep-`

434.zeusmp: `-prof-gen(pass 1) -prof-use(pass 2) -fast`

437.leslie3d: `-prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch -opt-malloc-options=3`

459.GemsFDTD: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0 -prefetch`

465.tonto: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -auto`

Benchmarks using both Fortran and C:

435.gromacs: `-prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch -auto-ilp32`

436.cactusADM: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -prefetch -parallel -auto-ilp32`

454.calculix: `-fast -unroll-aggressive -auto-ilp32`

481.wrf: `-fast -auto-ilp32`

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.10.html

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You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.10.xml

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

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