SPEC® CFP2006 Result

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Acer Incorporated

Acer Altos G540 (Intel Xeon E5320)

SPECfp®_rate2006 = 47.4

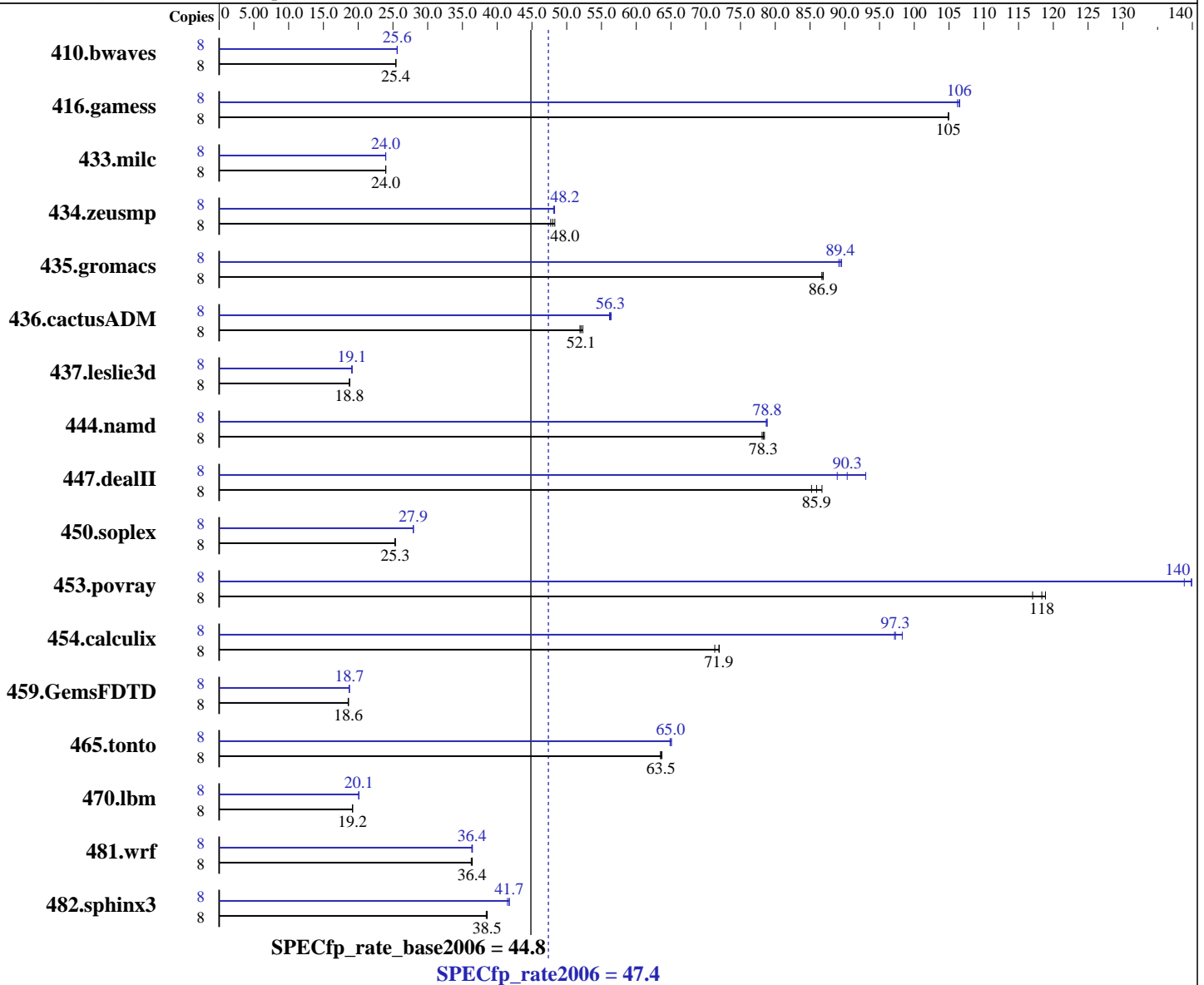SPECfp_rate_base2006 = 44.8

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Sep-2007

Hardware Availability: Nov-2006

Software Availability: Nov-2007

Benchmark	Copies	base	peak
410.bwaves	8 / 8	25.4	25.6
416.gamess	8 / 8	105	106
433.milc	8 / 8	24.0	24.0
434.zeusmp	8 / 8	48.0	48.2
435.gromacs	8 / 8	86.9	89.4
436.cactusADM	8 / 8	52.1	56.3
437.leslie3d	8 / 8	18.8	19.1
444.namd	8 / 8	78.3	78.8
447.dealII	8 / 8	85.9	90.3
450.soplex	8 / 8	25.3	27.9
453.povray	8 / 8	118	140
454.calculix	8 / 8	71.9	97.3
459.GemsFDTD	8 / 8	18.6	18.7
465.tonto	8 / 8	63.5	65.0
470.lbm	8 / 8	19.2	20.1
481.wrf	8 / 8	36.4	36.4
482.sphinx3	8 / 8	38.5	41.7

SPECfp_rate_base2006 = 44.8

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Hardware

CPU Name: Intel Xeon E5320

CPU Characteristics: 1066MHz system bus

CPU MHz: 1860

FPU: Integrated

CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip

CPU(s) orderable: 1, 2 chips

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 EM64T (kernel 2.6.16.21-0.8-smp)

Compiler: Intel C++ and Fortran Compiler for Linux32 and Linux64 version 10.1 Build 20070725

Auto Parallel: No

File System: ReiserFS

System State: Multi-user, run level 3

Base Pointers: 64-bit

Continued on next page

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L3 Cache:	None
Other Cache:	None
Memory:	16 GB (8 x 2048MB ECC FB-DIMM DDR2-667 CL5-5-5)
Disk Subsystem:	1 x 73 GB 10000RPM SAS HDD
Other Hardware:	None

Peak Pointers:	32/64-bit
Other Software:	MicroQuill SmartHeap Library 8.1

Results Table

Benchmark	Base						Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	4276	25.4	**4278**	**25.4**	4278	25.4	8	**4244**	**25.6**	4243	25.6	4247	25.6
416.gamess	8	1493	105	1493	105	**1493**	**105**	8	1475	106	**1471**	**106**	1470	107
433.milc	8	3065	24.0	3064	24.0	**3064**	**24.0**	8	3067	23.9	**3066**	**24.0**	3063	24.0
434.zeusmp	8	**1517**	**48.0**	1507	48.3	1526	47.7	8	1513	48.1	**1510**	**48.2**	1508	48.3
435.gromacs	8	**657**	**86.9**	657	86.9	659	86.7	8	638	89.5	**639**	**89.4**	641	89.1
436.cactusADM	8	**1836**	**52.1**	1827	52.3	1842	51.9	8	1702	56.2	1695	56.4	**1699**	**56.3**
437.leslie3d	8	4001	18.8	4013	18.7	**4010**	**18.8**	8	3939	19.1	**3937**	**19.1**	3931	19.1
444.namd	8	**820**	**78.3**	818	78.5	821	78.1	8	815	78.7	814	78.8	**814**	**78.8**
447.dealII	8	1055	86.7	**1065**	**85.9**	1074	85.2	8	984	93.0	**1013**	**90.3**	1029	88.9
450.soplex	8	2638	25.3	**2633**	**25.3**	2633	25.3	8	2389	27.9	2387	27.9	**2389**	**27.9**
453.povray	8	**360**	**118**	364	117	358	119	8	307	139	304	140	**304**	**140**
454.calculix	8	926	71.3	**918**	**71.9**	917	71.9	8	**678**	**97.3**	679	97.2	672	98.3
459.GemsFDTD	8	4574	18.6	**4565**	**18.6**	4562	18.6	8	4539	18.7	**4531**	**18.7**	4529	18.7
465.tonto	8	1236	63.7	**1239**	**63.5**	1240	63.5	8	1214	64.9	**1212**	**65.0**	1210	65.1
470.lbm	8	5729	19.2	**5729**	**19.2**	5727	19.2	8	5470	20.1	**5470**	**20.1**	5470	20.1
481.wrf	8	**2456**	**36.4**	2464	36.3	2454	36.4	8	2459	36.3	**2455**	**36.4**	2452	36.4
482.sphinx3	8	4058	38.4	4042	38.6	**4047**	**38.5**	8	3759	41.5	**3737**	**41.7**	3736	41.7

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

General Notes

    taskset was used to bind copies to cores

Base Compiler Invocation

C benchmarks:
    icc

C++ benchmarks:
    icpc

Fortran benchmarks:
    ifort

Continued on next page

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Base Compiler Invocation (Continued)

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
```

Peak Compiler Invocation

C benchmarks (except as noted below):
```
/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include
```

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Peak Compiler Invocation (Continued)

433.milc: `icc`

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

```
450.soplex: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icpc
            -L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
            -I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include
```

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

```
437.leslie3d: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/ifort
              -L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
              -I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/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 -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.20090714.17.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.20090714.17.xml

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