SPEC® CFP2006 Result
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Acer Incorporated

Acer Altos R520 (Intel Xeon E5320)

SPECfp®_rate2006 =   26.9

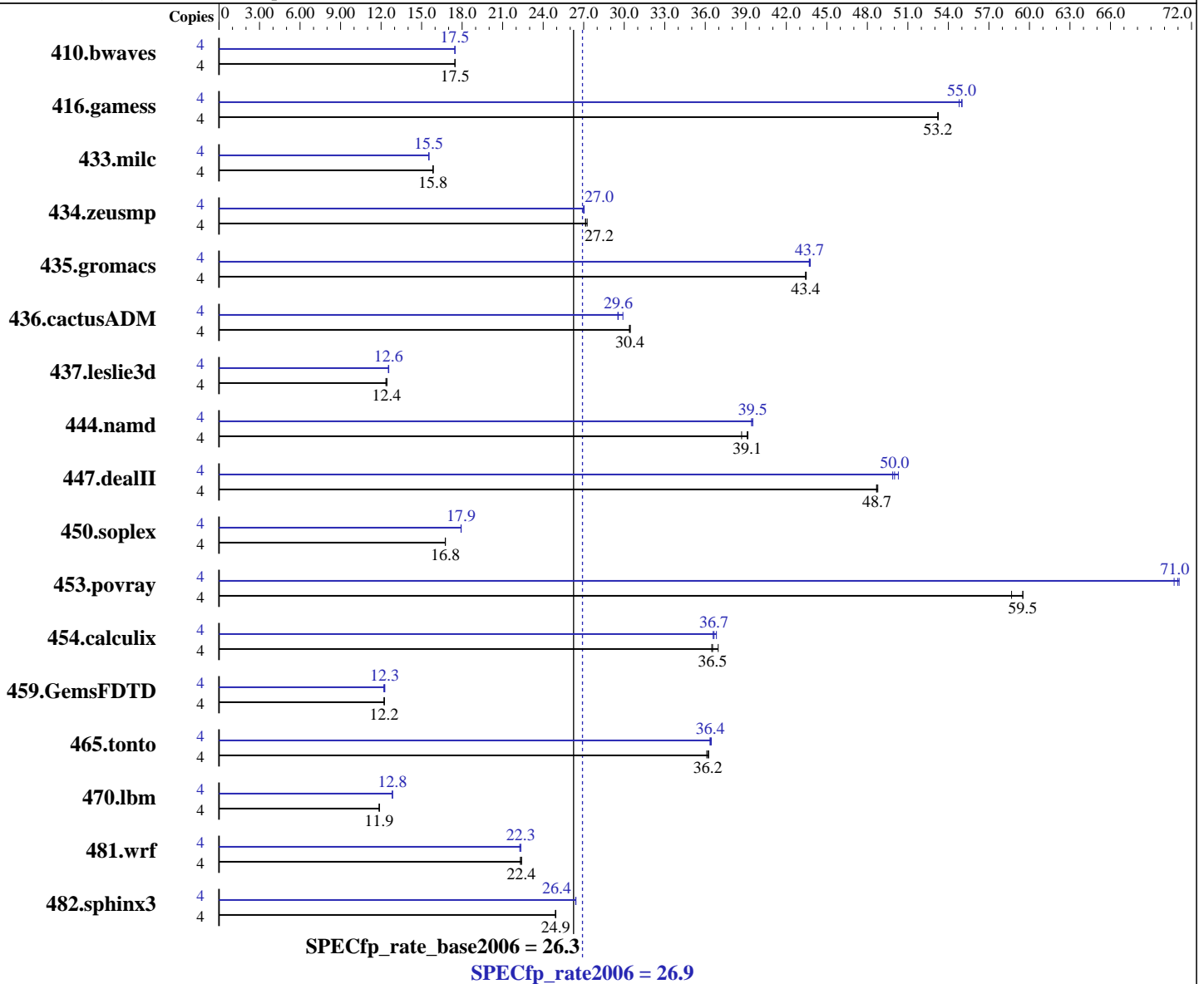SPECfp_rate_base2006 = 26.3

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Jul-2007

Hardware Availability: Nov-2006

Software Availability: Jun-2007

Benchmark	base	peak
410.bwaves	17.5	17.5
416.gamess	53.2	55.0
433.milc	15.8	15.5
434.zeusmp	27.2	27.0
435.gromacs	43.4	43.7
436.cactusADM	30.4	29.6
437.leslie3d	12.4	12.6
444.namd	39.1	39.5
447.dealII	48.7	50.0
450.soplex	16.8	17.9
453.povray	59.5	71.0
454.calculix	36.5	36.7
459.GemsFDTD	12.2	12.3
465.tonto	36.2	36.4
470.lbm	11.9	12.8
481.wrf	22.4	22.3
482.sphinx3	24.9	26.4

SPECfp_rate_base2006 = 26.3

SPECfp_rate2006 = 26.9

Hardware

CPU Name: Intel Xeon E5320
CPU Characteristics: 1066MHz system bus
CPU MHz: 1860
FPU: Integrated
CPU(s) enabled: 4 cores, 1 chip, 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++ Compiler for Linux32 version 10.0 Build 20070426 Package ID: l_cc_p_10.0.023
Intel Fortran Compiler for Linux32 version 10.0 Build 20070426 Package ID: l_fc_p_10.0.023
Auto Parallel: No
File System: ReiserFS
System State: Default

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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 73GB 10000RPM SAS HDD
Other Hardware: None

Base Pointers: 32-bit
Peak Pointers: 32-bit
Other Software: None

Results Table

Benchmark	Base						Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	**3111**	**17.5**	3111	17.5	3110	17.5	4	**3112**	**17.5**	3113	17.5	3111	17.5
416.gamess	4	1472	53.2	1471	53.3	**1471**	**53.2**	4	1429	54.8	1424	55.0	**1424**	**55.0**
433.milc	4	2314	15.9	2319	15.8	**2318**	**15.8**	4	**2363**	**15.5**	2364	15.5	2362	15.5
434.zeusmp	4	1335	27.3	1342	27.1	**1340**	**27.2**	4	**1347**	**27.0**	1349	27.0	1346	27.0
435.gromacs	4	657	43.5	**658**	**43.4**	658	43.4	4	654	43.7	**653**	**43.7**	652	43.8
436.cactusADM	4	**1571**	**30.4**	1573	30.4	1570	30.4	4	1598	29.9	1619	29.5	**1617**	**29.6**
437.leslie3d	4	**3029**	**12.4**	3025	12.4	3043	12.4	4	2991	12.6	2997	12.5	**2995**	**12.6**
444.namd	4	**820**	**39.1**	829	38.7	819	39.2	4	814	39.4	812	39.5	**812**	**39.5**
447.dealII	4	**940**	**48.7**	940	48.7	938	48.8	4	**915**	**50.0**	917	49.9	910	50.3
450.soplex	4	1990	16.8	1991	16.8	**1991**	**16.8**	4	1860	17.9	1862	17.9	**1861**	**17.9**
453.povray	4	363	58.7	**358**	**59.5**	358	59.5	4	299	71.1	301	70.7	**300**	**71.0**
454.calculix	4	893	37.0	904	36.5	**903**	**36.5**	4	896	36.8	**900**	**36.7**	902	36.6
459.GemsFDTD	4	3466	12.2	3471	12.2	**3471**	**12.2**	4	**3462**	**12.3**	3478	12.2	3457	12.3
465.tonto	4	1086	36.3	**1087**	**36.2**	1090	36.1	4	1080	36.5	**1082**	**36.4**	1083	36.4
470.lbm	4	4632	11.9	4631	11.9	**4632**	**11.9**	4	4281	12.8	4281	12.8	**4281**	**12.8**
481.wrf	4	2003	22.3	1995	22.4	**1996**	**22.4**	4	**2000**	**22.3**	2006	22.3	2000	22.3
482.sphinx3	4	3126	24.9	**3128**	**24.9**	3130	24.9	4	**2951**	**26.4**	2950	26.4	2952	26.4

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

General Notes

```
    All programs compiled with the 64-bit compiler except
    437.leslie3d, 450.soplex, 470.lbm and 482.sphinx3, at peak,
    compiled with the 32-bit compiler
    This result was measured on the Acer Altos R520
    The Altos R720 and Altos R520 are electronically equivalent.

    taskset was used to bind copies to cores
```

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Test date: Jul-2007
Hardware Availability: Nov-2006
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Base Compiler Invocation

C benchmarks:
    icc

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
     436.cactusADM: -DSPEC_CPU_LP64
       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
      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 -auto-ilp32

C++ benchmarks:
    -fast -auto-ilp32

Fortran benchmarks:
    -fast

Benchmarks using both Fortran and C:

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Base Optimization Flags (Continued)

435.gromacs: `-fast -auto-ilp32 -nofor_main`(*)

436.cactusADM: `Same as 435.gromacs`

454.calculix: `Same as 435.gromacs`

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

(*) Indicates an optimization flag that was found in a portability variable.

Peak Compiler Invocation

C benchmarks (except as noted below):
```
/opt/intel/cc/10.0.023/bin/icc -L/opt/intel/cc/10.0.023/lib
-I/opt/intel/cc/10.0.023/include
```

433.milc: `icc`

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

450.soplex: `/opt/intel/cc/10.0.023/bin/icpc -L/opt/intel/cc/10.0.023/lib`
`-I/opt/intel/cc/10.0.023/include`

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

437.leslie3d: `/opt/intel/fc/10.0.023/bin/ifort -L/opt/intel/fc/10.0.023/lib`
`-I/opt/intel/fc/10.0.023/include`

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

Peak Portability Flags

```
Same as Base Portability Flags
```

Peak Optimization Flags

C benchmarks:

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

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Peak Optimization Flags (Continued)

470.lbm: `-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -scalar-rep- -prefetch`

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) -xT -ipo -O3 -no-prec-div`

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

Fortran benchmarks:

410.bwaves: `-fast`

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: `Same as 434.zeusmp`

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

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

Benchmarks using both Fortran and C:

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

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

454.calculix: `-fast -auto-ilp32 -nofor_main(*)`

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

(*) Indicates an optimization flag that was found in a portability variable.

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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-ic10-ia32-intel64-linux-flags.20090714.16.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.20090714.16.xml

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