SPEC® CFP2006 Result

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Acer Incorporated

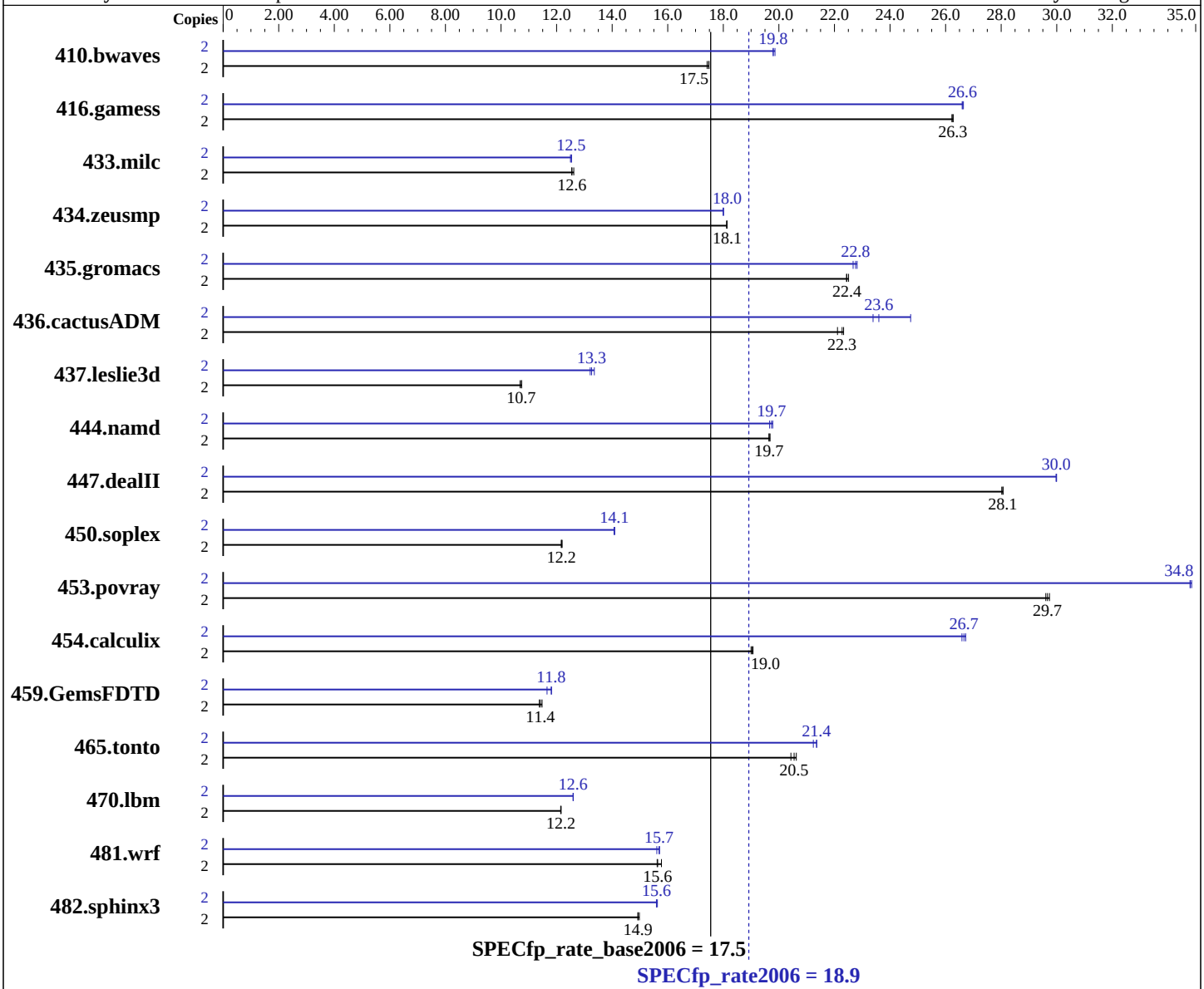
Acer Altos G540 (Intel Xeon 5120)

SPECfp®_rate2006 = 18.9

SPECfp_rate_base2006 = 17.5

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

Test date: Sep-2007
Hardware Availability: Nov-2006
Software Availability: Aug-2007



Hardware

CPU Name:	Intel Xeon 5120
CPU Characteristics:	1066MHz system bus
CPU MHz:	1860
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
CPU(s) orderable:	1, 2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per chip

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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

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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	2	1554	17.5	1561	17.4	**1556**	**17.5**	2	**1373**	**19.8**	1373	19.8	1369	19.9
416.gamess	2	**1491**	**26.3**	1490	26.3	1493	26.2	2	1470	26.6	1472	26.6	**1471**	**26.6**
433.milc	2	1455	12.6	1463	12.5	**1463**	**12.6**	2	**1466**	**12.5**	1464	12.5	1469	12.5
434.zeusmp	2	1004	18.1	**1004**	**18.1**	1004	18.1	2	1011	18.0	**1011**	**18.0**	1011	18.0
435.gromacs	2	**636**	**22.4**	634	22.5	637	22.4	2	**627**	**22.8**	626	22.8	630	22.7
436.cactusADM	2	**1073**	**22.3**	1081	22.1	1070	22.3	2	1022	23.4	966	24.7	**1013**	**23.6**
437.leslie3d	2	**1751**	**10.7**	1759	10.7	1750	10.7	2	1423	13.2	1407	13.4	**1418**	**13.3**
444.namd	2	815	19.7	817	19.6	**816**	**19.7**	2	816	19.7	811	19.8	**813**	**19.7**
447.dealII	2	815	28.1	817	28.0	**815**	**28.1**	2	763	30.0	**763**	**30.0**	763	30.0
450.soplex	2	**1369**	**12.2**	1367	12.2	1371	12.2	2	1186	14.1	**1184**	**14.1**	1184	14.1
453.povray	2	359	29.6	358	29.7	**359**	**29.7**	2	**306**	**34.8**	305	34.9	306	34.8
454.calculix	2	869	19.0	**867**	**19.0**	865	19.1	2	**619**	**26.7**	617	26.7	621	26.6
459.GemsFDTD	2	1865	11.4	**1858**	**11.4**	1849	11.5	2	1795	11.8	**1798**	**11.8**	1820	11.7
465.tonto	2	**958**	**20.5**	954	20.6	963	20.4	2	**922**	**21.4**	921	21.4	927	21.2
470.lbm	2	2259	12.2	**2261**	**12.2**	2262	12.1	2	2182	12.6	**2181**	**12.6**	2181	12.6
481.wrf	2	1430	15.6	**1429**	**15.6**	1416	15.8	2	1431	15.6	1422	15.7	**1424**	**15.7**
482.sphinx3	2	2611	14.9	2602	15.0	**2611**	**14.9**	2	2500	15.6	2494	15.6	**2499**	**15.6**

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

General Notes

```
All results used taskset to bind processes to cores
```

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Continued on next page

Base Compiler Invocation (Continued)

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

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

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Peak Compiler Invocation (Continued)

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

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

Continued on next page

Peak Optimization Flags (Continued)

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

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

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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Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 14:58:54 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 16 October 2007.