SPEC® CFP2006 Result

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Acer Incorporated

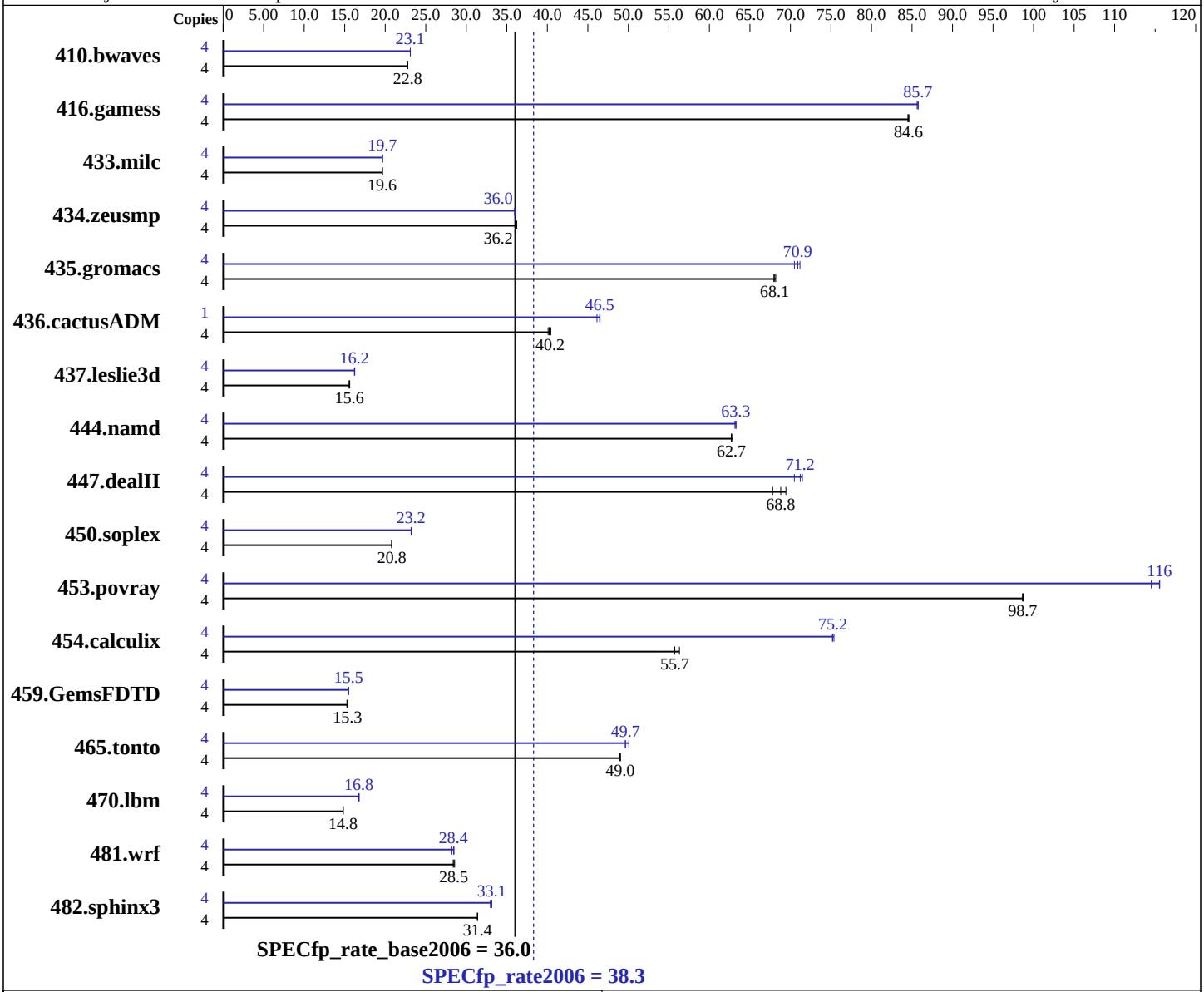
Acer Altos R520 (Intel Xeon X5365)

SPECfp®_rate2006 = 38.3

SPECfp_rate_base2006 = 36.0

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

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



Hardware

CPU Name:	Intel Xeon X5365
CPU Characteristics:	1333MHz system bus
CPU MHz:	3000
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

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Software

Operating System:	SuSE Linux Enterprise Server 10 SP1 EM64T (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

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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 10000PRM SAS HDD
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: Binutils 2.17.50.0.15

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	**2386**	**22.8**	2386	22.8	2389	22.8	4	2354	23.1	**2354**	**23.1**	2353	23.1
416.gamess	4	926	84.6	**926**	**84.6**	927	84.5	4	915	85.6	**914**	**85.7**	913	85.8
433.milc	4	1871	19.6	1869	19.6	**1869**	**19.6**	4	1871	19.6	1867	19.7	**1869**	**19.7**
434.zeusmp	4	**1006**	**36.2**	1005	36.2	1009	36.1	4	**1012**	**36.0**	1008	36.1	1012	36.0
435.gromacs	4	420	68.0	419	68.2	**420**	**68.1**	4	**403**	**70.9**	401	71.2	405	70.5
436.cactusADM	4	1182	40.4	**1188**	**40.2**	1192	40.1	1	257	46.5	**257**	**46.5**	259	46.1
437.leslie3d	4	2407	15.6	2420	15.5	**2413**	**15.6**	4	**2320**	**16.2**	2320	16.2	2315	16.2
444.namd	4	**512**	**62.7**	510	62.8	512	62.7	4	507	63.3	508	63.2	**507**	**63.3**
447.dealII	4	659	69.4	**665**	**68.8**	675	67.8	4	**643**	**71.2**	649	70.5	640	71.5
450.soplex	4	**1603**	**20.8**	1604	20.8	1603	20.8	4	**1438**	**23.2**	1439	23.2	1437	23.2
453.povray	4	216	98.6	216	98.7	**216**	**98.7**	4	184	116	**184**	**116**	186	115
454.calculix	4	**592**	**55.7**	586	56.3	593	55.7	4	438	75.4	439	75.2	**439**	**75.2**
459.GemsFDTD	4	**2767**	**15.3**	2779	15.3	2762	15.4	4	2746	15.5	**2743**	**15.5**	2742	15.5
465.tonto	4	804	48.9	**803**	**49.0**	803	49.0	4	793	49.6	**793**	**49.7**	786	50.1
470.lbm	4	3713	14.8	3712	14.8	**3712**	**14.8**	4	**3280**	**16.8**	3279	16.8	3280	16.8
481.wrf	4	1574	28.4	**1570**	**28.5**	1564	28.6	4	**1572**	**28.4**	1568	28.5	1583	28.2
482.sphinx3	4	**2485**	**31.4**	2482	31.4	2486	31.4	4	**2354**	**33.1**	2351	33.2	2364	33.0

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

General Notes

```
This result was measured on the Acer Altos R520.
The Altos R720 and Altos R520 are electronically equivalent.

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

BIOS Setting
  Hardware Prefetcher set to OFF
  Adjacent Cache Line Prefetch set to OFF
  Optimization for high-frequency FSB applications set to ON

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

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 -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):
`/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`

Continued on next page

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.20090714.06.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.20090714.06.xml

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For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 15:05:35 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 26 December 2007.