



SPEC[®] CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp[®]_rate2006 = 304

Acer AW2000h-AW175h F1 (AMD Opteron 6174)

SPECfp_rate_base2006 = 284

CPU2006 license: 97

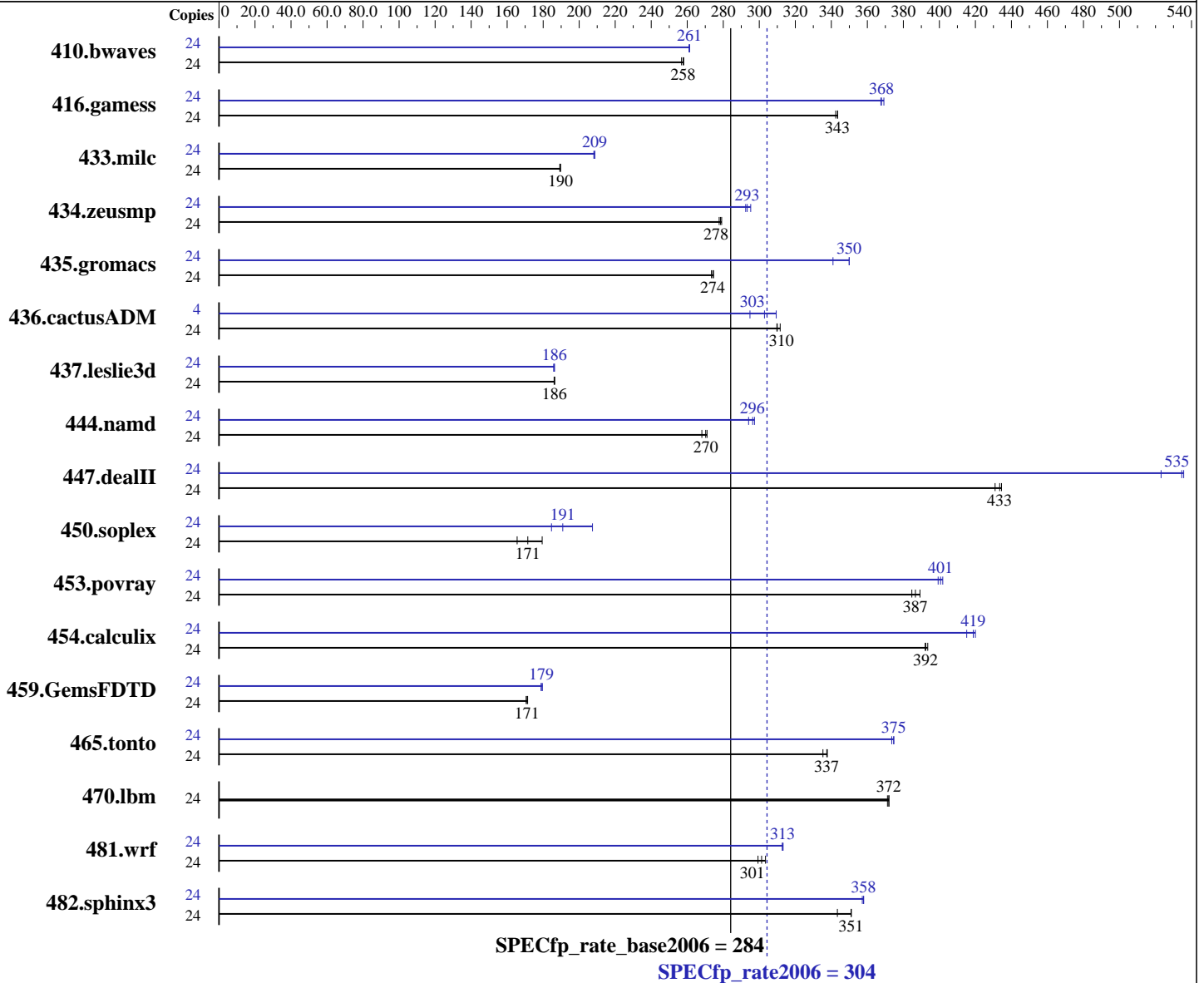
Test date: Jun-2010

Test sponsor: Acer Incorporated

Hardware Availability: Aug-2010

Tested by: Acer Incorporated

Software Availability: May-2010



Hardware

CPU Name: AMD Opteron 6174
 CPU Characteristics:
 CPU MHz: 2200
 FPU: Integrated
 CPU(s) enabled: 24 cores, 2 chips, 12 cores/chip
 CPU(s) orderable: 1,2 chips
 Primary Cache: 64 KB I + 64 KB D on chip per core
 Secondary Cache: 512 KB I+D on chip per core

Continued on next page

Software

Operating System: Red Hat Enterprise Linux Server release 5.4, Advanced Platform with patch RHSA-2009:1670, Kernel 2.6.18-164.9.1.el5
 Compiler: x86 Open64 4.2.3.2 Compiler Suite (from AMD)
 Auto Parallel: Yes
 File System: ext3
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: 32/64-bit

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp_rate2006 = 304

Acer AW2000h-AW175h F1 (AMD Opteron 6174)

SPECfp_rate_base2006 = 284

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

Test date: Jun-2010
Hardware Availability: Aug-2010
Software Availability: May-2010

L3 Cache: 12 MB I+D on chip per chip, 6 MB shared / 6 cores
Other Cache: None
Memory: 64 GB (16 x 4 GB DDR3-1333 RDIMM)
Disk Subsystem: 1 x 320 GB SATA, 7200 RPM
Other Hardware: None

Other Software: binutils 2.18

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	24	1264	258	1270	257	<u>1266</u>	<u>258</u>	24	1250	261	<u>1249</u>	<u>261</u>	1248	261
416.gamess	24	<u>1368</u>	<u>343</u>	1372	342	1368	344	24	<u>1277</u>	<u>368</u>	1279	368	1273	369
433.milc	24	1164	189	<u>1162</u>	<u>190</u>	1162	190	24	1056	209	<u>1056</u>	<u>209</u>	1059	208
434.zeusmp	24	786	278	783	279	<u>784</u>	<u>278</u>	24	<u>745</u>	<u>293</u>	747	292	740	295
435.gromacs	24	627	273	<u>625</u>	<u>274</u>	624	275	24	490	350	503	341	<u>490</u>	<u>350</u>
436.cactusADM	24	<u>925</u>	<u>310</u>	920	312	926	310	4	<u>158</u>	<u>303</u>	154	309	162	295
437.leslie3d	24	1211	186	1212	186	<u>1211</u>	<u>186</u>	24	<u>1212</u>	<u>186</u>	1214	186	1211	186
444.namd	24	718	268	710	271	<u>712</u>	<u>270</u>	24	655	294	<u>650</u>	<u>296</u>	647	297
447.dealII	24	632	435	<u>633</u>	<u>433</u>	637	431	24	<u>514</u>	<u>535</u>	525	523	513	536
450.soplex	24	1209	166	<u>1167</u>	<u>171</u>	1115	179	24	1084	185	<u>1049</u>	<u>191</u>	965	207
453.povray	24	332	385	<u>330</u>	<u>387</u>	328	389	24	<u>319</u>	<u>401</u>	320	399	318	402
454.calculix	24	503	394	<u>505</u>	<u>392</u>	505	392	24	<u>473</u>	<u>419</u>	471	420	477	415
459.GemsFDTD	24	1486	171	1493	171	<u>1489</u>	<u>171</u>	24	1424	179	1418	180	<u>1423</u>	<u>179</u>
465.tonto	24	699	338	<u>700</u>	<u>337</u>	704	335	24	630	375	632	374	<u>630</u>	<u>375</u>
470.lbm	24	887	372	888	371	<u>887</u>	<u>372</u>	24	887	372	888	371	<u>887</u>	<u>372</u>
481.wrf	24	896	299	<u>890</u>	<u>301</u>	883	303	24	<u>857</u>	<u>313</u>	857	313	856	313
482.sphinx3	24	1332	351	1362	343	<u>1333</u>	<u>351</u>	24	1307	358	1309	357	<u>1307</u>	<u>358</u>

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

Submit Notes

The config file option 'submit' was used.
'numactl' was used to bind copies to the cores.
See the configuration file for details.

Operating System Notes

'ulimit -s unlimited' was used to set environment stack size
'ulimit -l 2097152' was used to set environment locked pages in memory limit

Set vm/nr_hugepages=10800 in /etc/sysctl.conf
mount -t hugetlbfs nodev /mnt/hugepages



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp_rate2006 = 304

Acer AW2000h-AW175h F1 (AMD Opteron 6174)

SPECfp_rate_base2006 = 284

CPU2006 license: 97

Test date: Jun-2010

Test sponsor: Acer Incorporated

Hardware Availability: Aug-2010

Tested by: Acer Incorporated

Software Availability: May-2010

General Notes

Environment variables set by runspec before the start of the run:

HUGETLB_LIMIT = "450"

LD_LIBRARY_PATH = "/usr/cpu2006/amd1002mc-rate-libs-revB/64:/usr/cpu2006/amd1002mc-rate-libs-revB/32"

OMP_NUM_THREADS = "6"

The x86 Open64 Compiler Suite is only available from (and supported by) AMD at <http://developer.amd.com/cpu/open64>

This result was measured on the Gateway GW2000h-GW175h F1.

The Acer AW2000h-AW175h F1 and Gateway GW2000h-GW175h F1 are electronically equivalent.

Base Compiler Invocation

C benchmarks:
opencc

C++ benchmarks:
openCC

Fortran benchmarks:
openf95

Benchmarks using both Fortran and C:
opencc openf95

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 -fno-second-underscore
 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_LINUX -DSPEC_CPU_CASE_FLAG
 -fno-second-underscore
 482.sphinx3: -DSPEC_CPU_LP64



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp_rate2006 = 304

Acer AW2000h-AW175h F1 (AMD Opteron 6174)

SPECfp_rate_base2006 = 284

CPU2006 license: 97

Test date: Jun-2010

Test sponsor: Acer Incorporated

Hardware Availability: Aug-2010

Tested by: Acer Incorporated

Software Availability: May-2010

Base Optimization Flags

C benchmarks:

`-march=barcelona -mso -Ofast -OPT:malloc_alg=1 -HP:bdt=2m`

C++ benchmarks:

`-march=barcelona -mso -Ofast -static -INLINE:aggressive=on
-OPT:malloc_alg=1 -HP:bdt=2m`

Fortran benchmarks:

`-march=barcelona -mso -Ofast -HP`

Benchmarks using both Fortran and C:

`-march=barcelona -mso -Ofast -OPT:malloc_alg=1 -HP:bdt=2m -HP`

Peak Compiler Invocation

C benchmarks:

`opencc`

C++ benchmarks:

`openCC`

Fortran benchmarks:

`openf95`

Benchmarks using both Fortran and C:

`opencc openf95`

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`
436.cactusADM: `-DSPEC_CPU_LP64 -fno-second-underscore`
437.leslie3d: `-DSPEC_CPU_LP64`
444.namd: `-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_LINUX -DSPEC_CPU_CASE_FLAG
-fno-second-underscore`
482.sphinx3: `-DSPEC_CPU_LP64`



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp_rate2006 = 304

Acer AW2000h-AW175h F1 (AMD Opteron 6174)

SPECfp_rate_base2006 = 284

CPU2006 license: 97

Test date: Jun-2010

Test sponsor: Acer Incorporated

Hardware Availability: Aug-2010

Tested by: Acer Incorporated

Software Availability: May-2010

Peak Optimization Flags

C benchmarks:

433.milc: -march=barcelona -mso -Ofast -CG:movnti=1
-CG:local_sched_alg=1 -CG:locs_shallow_depth=1
-HP:bdt=2m:heap=2m -LNO:prefetch=3

470.lbm: basepeak = yes

482.sphinx3: -march=barcelona -mso -fb_create fbdata(pass 1)
-fb_opt fbdata(pass 2) -Ofast -OPT:malloc_alg=2
-CG:sse_cse_regs=0 -CG:locs_shallow_depth=1 -CG:cmp_peep=on
-CG:local_sched_alg=1 -INLINE:aggressive=on

C++ benchmarks:

444.namd: -march=barcelona -mso -fb_create fbdata(pass 1)
-fb_opt fbdata(pass 2) -Ofast -LNO:ignore_feedback=off
-CG:local_sched_alg=2 -CG:load_exe=0 -CG:compute_to=on
-OPT:unroll_size=256 -fno-exceptions -HP:bdt=2m:heap=2m

447.dealll: -march=barcelona -mso -Ofast -static -INLINE:aggressive=on
-LNO:opt=0 -fno-emit-exceptions -m32
-OPT:unroll_times_max=8 -OPT:unroll_size=256
-OPT:unroll_level=2 -HP:bdt=2m:heap=2m -GRA:unspill=on
-CG:cmp_peep=on -TENV:frame_pointer=off

450.soplex: -march=barcelona -mso -fb_create fbdata(pass 1)
-fb_opt fbdata(pass 2) -O3 -INLINE:aggressive=on
-OPT:IEEE_arith=3 -OPT:IEEE_NaN_Inf=off
-OPT:fold_unsigned_relops=on -OPT:malloc_alg=1
-CG:load_exe=0 -fno-exceptions -m32 -HP:bdt=2m

453.povray: -march=barcelona -mso -fb_create fbdata(pass 1)
-fb_opt fbdata(pass 2) -Ofast -INLINE:aggressive=on

Fortran benchmarks:

410.bwaves: -march=barcelona -mso -O3 -OPT:Ofast -OPT:treeheight=on
-LNO:blocking=off -LNO:prefetch_ahead=5
-LNO:ignore_feedback=off -WOPT:aggstr=0 -HP:bdt=2m:heap=2m
-CG:cmp_peep=on

416.gamess: -march=barcelona -mso -fb_create fbdata(pass 1)
-fb_opt fbdata(pass 2) -O3 -LNO:fu=6 -LNO:blocking=0
-LNO:prefetch=0 -OPT:Ofast -OPT:ro=3 -OPT:unroll_size=256
-HP:bdt=2m:heap=2m

434.zeusmp: -march=barcelona -mso -Ofast -LNO:blocking=off
-LNO:interchange=off -OPT:treeheight=on -OPT:unroll_size=256
-CG:cmp_peep=on -GRA:prioritize_by_density=on -HP

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp_rate2006 = 304

Acer AW2000h-AW175h F1 (AMD Opteron 6174)

SPECfp_rate_base2006 = 284

CPU2006 license: 97

Test date: Jun-2010

Test sponsor: Acer Incorporated

Hardware Availability: Aug-2010

Tested by: Acer Incorporated

Software Availability: May-2010

Peak Optimization Flags (Continued)

437.leslie3d: -march=barcelona -mso -Ofast -HP:bdt=2m:heap=2m

459.GemsFDTD: -march=barcelona -mso -Ofast -LNO:fission=2
-LNO:prefetch_ahead=1 -CG:load_exe=0 -CG:local_sched_alg=1
-HP

465.tonto: -march=barcelona -mso -Ofast
-OPT:alias=no_f90_pointer_alias -LNO:blocking=off
-CG:load_exe=1 -IPA:plimit=525 -HP

Benchmarks using both Fortran and C:

435.gromacs: -march=barcelona -mso -Ofast -OPT:rsqrt=2
-HP:bdt=2m:heap=2m

436.cactusADM: -march=barcelona -mso -fb_create fbdata(pass 1)
-fb_opt fbdata(pass 2) -Ofast -apo -LNO:prefetch_ahead=1
-HP:bdt=2m:heap=2m -LANG:heap_allocation_threshold=100

454.calculix: -march=barcelona -mso -Ofast -CG:load_exe=0
-CG:ptr_load_use=0 -CG:local_sched_alg=2 -CG:compute_to=on
-LNO:prefetch_ahead=30 -WOPT:unroll=2
-GRA:optimize_boundary=on -HP:bdt=2m:heap=2m

481.wrf: -march=barcelona -mso -Ofast -LNO:blocking=off
-LNO:prefetch_ahead=10 -LANG:copyinout=off
-IPA:callee_limit=5000 -GRA:prioritize_by_density=on -m3dnow
-HP

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/x86-open64-4.2.3-flags-revA.20100721.html>
<http://www.spec.org/cpu2006/flags/amd-platform-revA.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/x86-open64-4.2.3-flags-revA.20100721.xml>
<http://www.spec.org/cpu2006/flags/amd-platform-revA.xml>

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 11:58:34 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 17 August 2010.