



SPEC[®] CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp[®]_rate2006 = 606

Gateway GR585 F1 (AMD Opteron 6174)

SPECfp_rate_base2006 = 559

CPU2006 license: 97

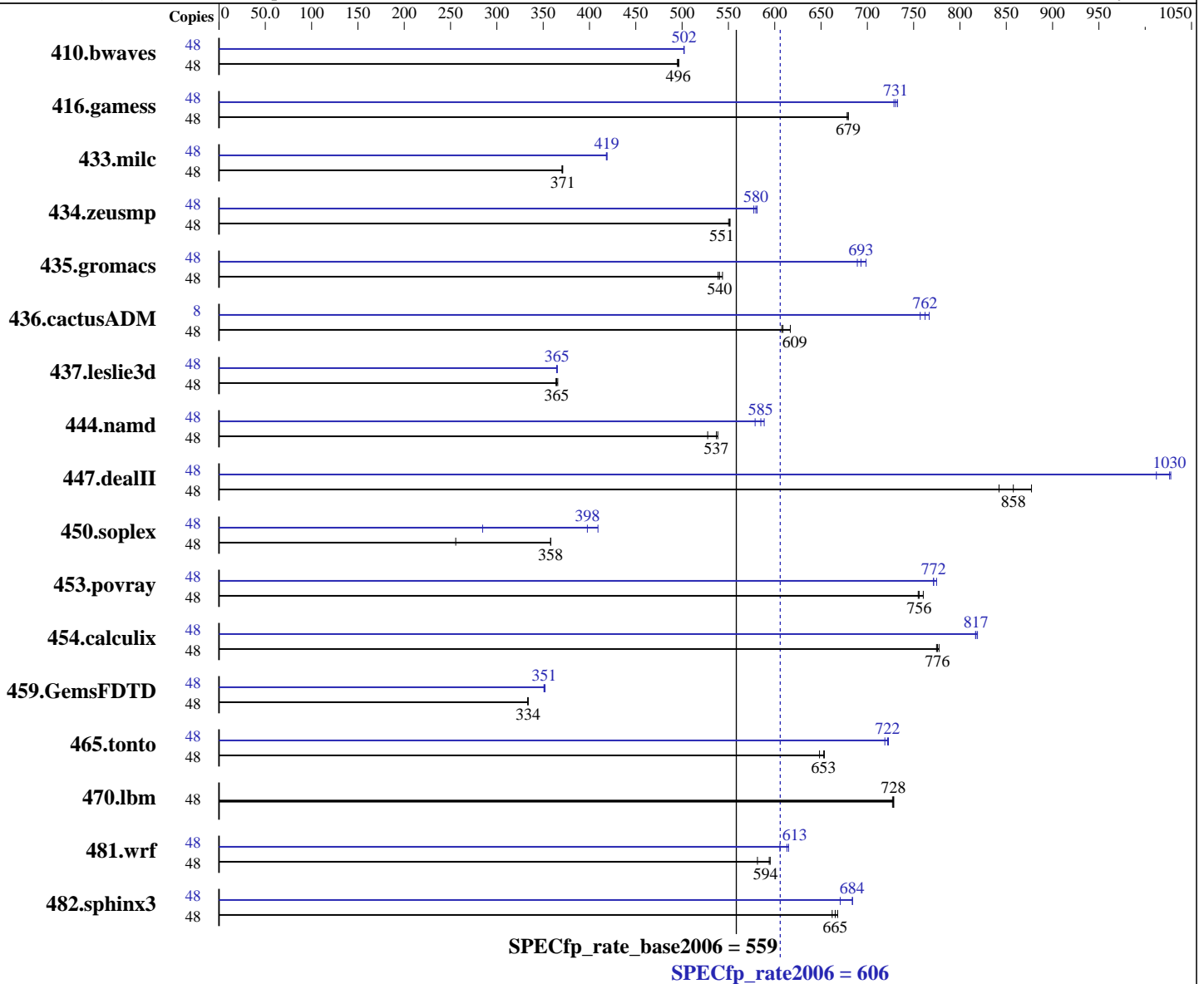
Test date: Jun-2010

Test sponsor: Acer Incorporated

Hardware Availability: Jul-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: 48 cores, 4 chips, 12 cores/chip
 CPU(s) orderable: 2,4 chips
 Primary Cache: 64 KB I + 64 KB D on chip per core
 Secondary Cache: 512 KB I+D on chip per core

Software

Operating System: Red Hat Enterprise Linux Server release 5.5, Kernel 2.6.18-194.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
 Other Software: binutils 2.18

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp_rate2006 = 606

Gateway GR585 F1 (AMD Opteron 6174)

SPECfp_rate_base2006 = 559

CPU2006 license: 97

Test date: Jun-2010

Test sponsor: Acer Incorporated

Hardware Availability: Jul-2010

Tested by: Acer Incorporated

Software Availability: May-2010

L3 Cache: 12 MB I+D on chip per chip, 6 MB shared / 6 cores
Other Cache: None
Memory: 128 GB (32 x 4 GB DDR3-1333 RDIMM)
Disk Subsystem: 1 x 500 GB SATA, 7200 RPM
Other Hardware: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	48	1318	495	<u>1316</u>	<u>496</u>	1314	497	48	1299	502	1300	502	<u>1299</u>	<u>502</u>
416.gamess	48	<u>1384</u>	<u>679</u>	1386	678	1383	679	48	1283	733	1290	729	<u>1286</u>	<u>731</u>
433.milc	48	1190	370	<u>1188</u>	<u>371</u>	1188	371	48	1054	418	1052	419	<u>1052</u>	<u>419</u>
434.zeusmp	48	<u>792</u>	<u>551</u>	794	550	792	552	48	756	577	752	581	<u>754</u>	<u>580</u>
435.gromacs	48	636	539	630	544	<u>634</u>	<u>540</u>	48	497	689	<u>494</u>	<u>693</u>	491	699
436.cactusADM	48	944	608	930	617	<u>942</u>	<u>609</u>	8	<u>125</u>	<u>762</u>	126	757	125	767
437.leslie3d	48	1234	366	<u>1238</u>	<u>365</u>	1240	364	48	<u>1236</u>	<u>365</u>	1238	364	1235	365
444.namd	48	730	528	715	539	<u>717</u>	<u>537</u>	48	665	579	<u>658</u>	<u>585</u>	654	589
447.dealII	48	652	842	626	877	<u>640</u>	<u>858</u>	48	<u>535</u>	<u>1030</u>	543	1010	534	1030
450.soplex	48	1566	256	1118	358	<u>1118</u>	<u>358</u>	48	1406	285	<u>1007</u>	<u>398</u>	978	409
453.povray	48	<u>338</u>	<u>756</u>	338	755	336	760	48	330	775	<u>331</u>	<u>772</u>	331	771
454.calculix	48	509	777	511	775	<u>510</u>	<u>776</u>	48	484	819	485	817	<u>485</u>	<u>817</u>
459.GemsFDTD	48	<u>1526</u>	<u>334</u>	1528	333	1526	334	48	1452	351	<u>1450</u>	<u>351</u>	1447	352
465.tonto	48	<u>723</u>	<u>653</u>	723	654	728	648	48	653	723	657	719	<u>654</u>	<u>722</u>
470.lbm	48	<u>906</u>	<u>728</u>	905	729	907	727	48	<u>906</u>	<u>728</u>	905	729	907	727
481.wrf	48	922	581	<u>903</u>	<u>594</u>	901	595	48	885	606	872	615	<u>874</u>	<u>613</u>
482.sphinx3	48	1413	662	1401	668	<u>1406</u>	<u>665</u>	48	1395	671	1368	684	<u>1368</u>	<u>684</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=21600 in /etc/sysctl.conf
mount -t hugetlbfs nodev /mnt/hugepages



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp_rate2006 = 606

Gateway GR585 F1 (AMD Opteron 6174)

SPECfp_rate_base2006 = 559

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Jun-2010

Hardware Availability: Jul-2010

Software Availability: May-2010

General Notes

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

HUGETLB_LIMIT = "450"

LD_LIBRARY_PATH = "/spec/amd1002mc-rate-libs-revB/64:/spec/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 GR585 F1.

The Acer AR585 F1 and Gateway GR585 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.lelie3d: -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 = 606

Gateway GR585 F1 (AMD Opteron 6174)

SPECfp_rate_base2006 = 559

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Jun-2010

Hardware Availability: Jul-2010

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 = 606

Gateway GR585 F1 (AMD Opteron 6174)

SPECfp_rate_base2006 = 559

CPU2006 license: 97

Test date: Jun-2010

Test sponsor: Acer Incorporated

Hardware Availability: Jul-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.deallI: -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 = 606

Gateway GR585 F1 (AMD Opteron 6174)

SPECfp_rate_base2006 = 559

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Jun-2010

Hardware Availability: Jul-2010

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 12:27:53 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 18 August 2010.