



SPEC[®] CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECint[®]_rate2006 = 403

Acer AR385 F1 (AMD Opteron 6176)

SPECint_rate_base2006 = 349

CPU2006 license: 97

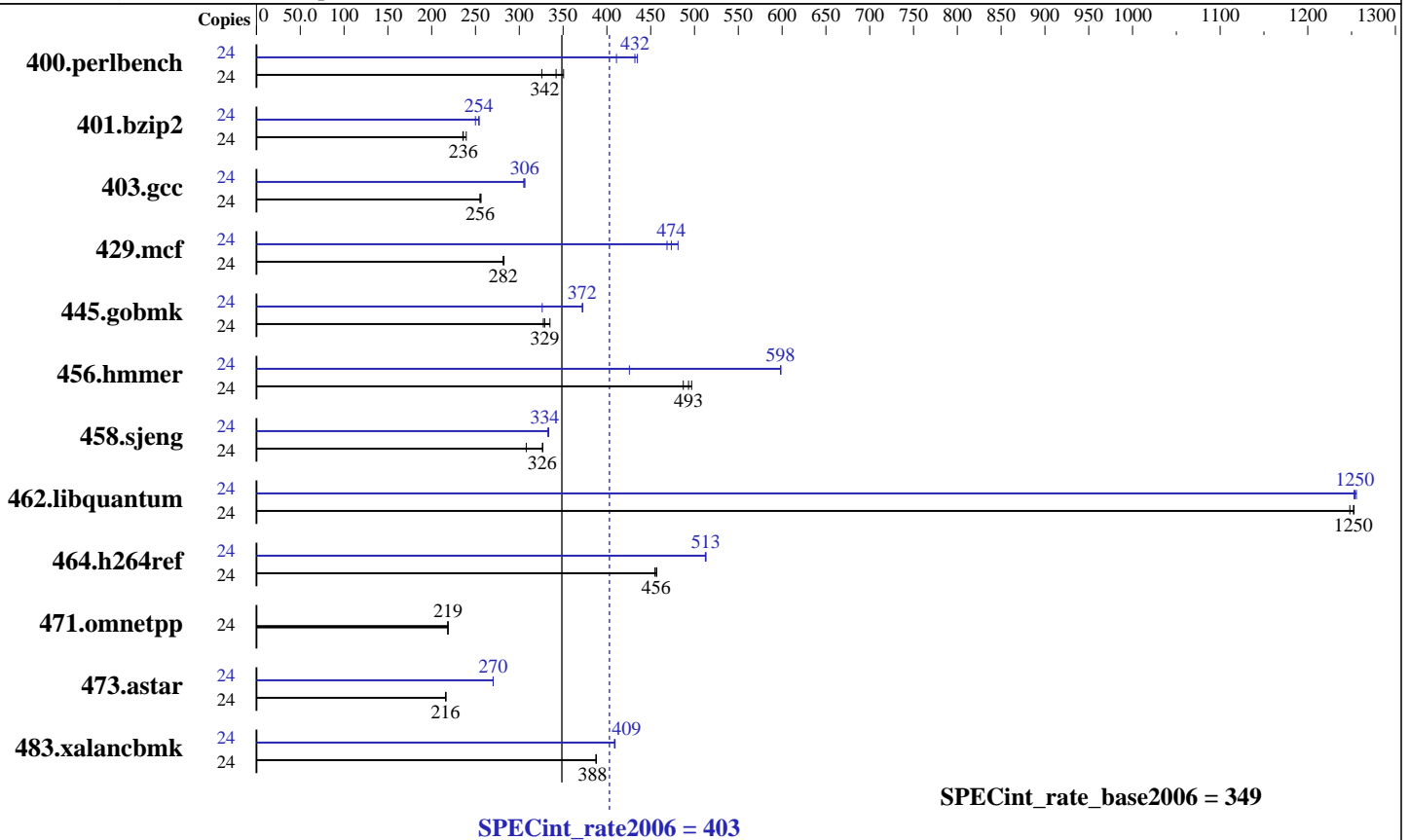
Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Apr-2011

Hardware Availability: Feb-2011

Software Availability: Jul-2010



Hardware

CPU Name: AMD Opteron 6176
 CPU Characteristics:
 CPU MHz: 2300
 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
 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 2Rx8 PC3-10600R-9, ECC)
 Disk Subsystem: 1 x 300 GB SATA, 10000 RPM
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64)
 SP1
 Kernel 2.6.32.12-0.7-default
 Compiler: x86 Open64 4.2.4 Compiler Suite (from AMD)
 Auto Parallel: No
 File System: ext3
 System State: Run level 3 (multiuser)
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: SmartHeap 8.1 32-bit Library for Linux



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECint_rate2006 = 403

Acer AR385 F1 (AMD Opteron 6176)

SPECint_rate_base2006 = 349

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Apr-2011

Hardware Availability: Feb-2011

Software Availability: Jul-2010

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	24	669	351	<u>686</u>	<u>342</u>	720	326	24	571	411	539	435	<u>543</u>	<u>432</u>
401.bzip2	24	967	239	983	236	<u>981</u>	<u>236</u>	24	927	250	<u>913</u>	<u>254</u>	911	254
403.gcc	24	<u>756</u>	<u>256</u>	754	256	757	255	24	<u>631</u>	<u>306</u>	631	306	633	305
429.mcf	24	775	283	<u>776</u>	<u>282</u>	777	282	24	<u>462</u>	<u>474</u>	455	481	467	469
445.gobmk	24	769	327	752	335	<u>765</u>	<u>329</u>	24	<u>677</u>	<u>372</u>	676	372	772	326
456.hammer	24	451	497	460	487	<u>454</u>	<u>493</u>	24	<u>374</u>	<u>598</u>	374	599	526	426
458.sjeng	24	943	308	888	327	<u>890</u>	<u>326</u>	24	873	333	870	334	<u>871</u>	<u>334</u>
462.libquantum	24	398	1250	<u>397</u>	<u>1250</u>	397	1250	24	396	1260	397	1250	<u>397</u>	<u>1250</u>
464.h264ref	24	1168	455	1162	457	<u>1164</u>	<u>456</u>	24	1035	513	1037	512	<u>1036</u>	<u>513</u>
471.omnetpp	24	687	218	686	219	<u>686</u>	<u>219</u>	24	687	218	686	219	<u>686</u>	<u>219</u>
473.astar	24	780	216	779	216	<u>780</u>	<u>216</u>	24	<u>624</u>	<u>270</u>	624	270	623	270
483.xalancbmk	24	<u>427</u>	<u>388</u>	427	388	427	388	24	<u>405</u>	<u>409</u>	405	409	405	409

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

General Notes

Environment variables set by runspec before the start of the run:
HUGETLB_LIMIT = "450"
LD_LIBRARY_PATH = "/usr/cpu2006/amd1002-rate-libs-revC/64:/usr/cpu2006/amd1002-rate-libs-revC/32"

The x86 Open64 Compiler Suite is only available from (and supported by) AMD at
<http://developer.amd.com/cpu/open64>
Binaries were compiled on SLES10 SP2 with binutils 2.18
This result was measured on the Gateway GR385 F1.
The Acer AR385 F1 and Gateway GR385 F1 are electronically equivalent.



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECint_rate2006 = 403

Acer AR385 F1 (AMD Opteron 6176)

SPECint_rate_base2006 = 349

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Apr-2011

Hardware Availability: Feb-2011

Software Availability: Jul-2010

Base Compiler Invocation

C benchmarks:
opencc

C++ benchmarks:
openCC

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-march=barcelona -mso -Ofast -CG:local_sched_alg=1
-INLINE:aggressive=on -IPA:plimit=8000 -IPA:small_pu=100
-HP:bdt=2m:heap=2m

C++ benchmarks:
-march=barcelona -mso -Ofast -m32 -INLINE:aggressive=on
-CG:cmp_peep=on -L/root/work/libraries/SmartHeap-8.1/lib -lsmartheap

Peak Compiler Invocation

C benchmarks:
opencc

C++ benchmarks:
openCC

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECint_rate2006 = 403

Acer AR385 F1 (AMD Opteron 6176)

SPECint_rate_base2006 = 349

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Apr-2011

Hardware Availability: Feb-2011

Software Availability: Jul-2010

Peak Portability Flags (Continued)

401.bzip2: -DSPEC_CPU_LP64
 445.gobmk: -DSPEC_CPU_LP64
 456.hmmer: -DSPEC_CPU_LP64
 458.sjeng: -DSPEC_CPU_LP64
 462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
 464.h264ref: -DSPEC_CPU_LP64
 483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -march=barcelona -mso -fb_create fbdata(pass 1)
 -fb_opt fbdata(pass 2) -Ofast -IPA:plimit=20000 -LNO:opt=0
 -OPT:unroll_times_max=8 -OPT:unroll_size=256
 -OPT:unroll_level=2 -OPT:keep_ext=on -WOPT:if_conv=0
 -CG:local_sched_alg=1 -CG:unroll_fb_req=on
 -HP:bdt=2m:heap=2m

401.bzip2: -march=barcelona -mso -fb_create fbdata(pass 1)
 -fb_opt fbdata(pass 2) -O3 -OPT:alias=disjoint
 -OPT:goto=off -CG:local_sched_alg=1 -HP:bdt=2m:heap=2m

403.gcc: -march=barcelona -mso -fb_create fbdata(pass 1)
 -fb_opt fbdata(pass 2) -Ofast -LNO:trip_count=256
 -LNO:prefetch_ahead=10 -CG:cmp_peep=on -m32
 -HP:bdt=2m:heap=2m -GRA:unspill=on -IPA:small_pu=200

429.mcf: -march=barcelona -mso -O3 -ipa -INLINE:aggressive=on
 -CG:gcm=off -GRA:prioritize_by_density=on -m32
 -HP:bdt=2m:heap=2m

445.gobmk: -march=barcelona -mso -fb_create fbdata(pass 1)
 -fb_opt fbdata(pass 2) -O3 -OPT:alias=restrict
 -OPT:unroll_times_max=8 -OPT:unroll_size=256
 -OPT:unroll_level=2 -OPT:keep_ext=on -ipa -IPA:plimit=750
 -IPA:min_hotness=300 -IPA:pu_reorder=1 -LNO:prefetch=1
 -LNO:ignore_feedback=off -CG:p2align=on
 -CG:unroll_fb_req=on -HP:bdt=2m:heap=2m

456.hmmer: -march=barcelona -mso -fb_create fbdata(pass 1)
 -fb_opt fbdata(pass 2) -Ofast -LNO:prefetch=0
 -OPT:alias=disjoint -OPT:unroll_times_max=8
 -OPT:unroll_size=256 -OPT:unroll_level=2 -OPT:keep_ext=on
 -CG:local_sched_alg=1 -CG:cflow=0
 -CG:push_pop_int_saved_regs=off -CG:cmp_peep=on
 -HP:bdt=2m:heap=2m

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECint_rate2006 = 403

Acer AR385 F1 (AMD Opteron 6176)

SPECint_rate_base2006 = 349

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Apr-2011

Hardware Availability: Feb-2011

Software Availability: Jul-2010

Peak Optimization Flags (Continued)

458.sjeng: -march=barcelona -mso -fb_create fbdata(pass 1)
 -fb_opt fbdata(pass 2) -O3 -ipa -LNO:ignore_feedback=off
 -LNO:full_unroll=10 -LNO:fusion=0 -LNO:fission=2
 -IPA:pu_reorder=2 -CG:ptr_load_use=0
 -OPT:unroll_times_max=8 -INLINE:aggressive=on

462.libquantum: -march=barcelona -mso -Ofast -LNO:pf2=0 -CG:gcm=off
 -CG:use_prefetchnta=on -CG:cmp_peep=on -WOPT:aggstr=0
 -HP:bdt=2m:heap=2m -OPT:alias=disjoint
 -INLINE:aggressive=on -IPA:space=1000 -IPA:plimit=20000

464.h264ref: -march=barcelona -mso -fb_create fbdata(pass 1)
 -fb_opt fbdata(pass 2) -O3 -IPA:plimit=20000
 -OPT:alias=disjoint -LNO:prefetch=0 -CG:ptr_load_use=0
 -CG:push_pop_int_saved_regs=off

C++ benchmarks:

471.omnetpp: basepeak = yes

473.astar: -march=barcelona -mso -fb_create fbdata(pass 1)
 -fb_opt fbdata(pass 2) -Ofast -TENV:frame_pointer=off
 -WOPT:if_conv=0 -GRA:optimize_boundary=on
 -OPT:alias=disjoint -INLINE:aggressive=on
 -IPA:small_pu=3000 -IPA:plimit=3000 -m32
 -HP:bdt=2m:heap=2m

483.xalancbmk: -march=barcelona -mso -Ofast -INLINE:aggressive=on -m32
 -CG:cmp_peep=on -GRA:unspill=on -TENV:frame_pointer=off
 -fno-emit-exceptions
 -L/root/work/libraries/SmartHeap-8.1/lib -lsmarheap

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

<http://www.spec.org/cpu2006/flags/x86-open64-424-flags-rate-revC.20100901.html>

<http://www.spec.org/cpu2006/flags/amd-platform-rate-revC.html>

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

<http://www.spec.org/cpu2006/flags/x86-open64-424-flags-rate-revC.20100901.xml>

<http://www.spec.org/cpu2006/flags/amd-platform-rate-revC.xml>



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECint_rate2006 = 403

Acer AR385 F1 (AMD Opteron 6176)

SPECint_rate_base2006 = 349

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Apr-2011

Hardware Availability: Feb-2011

Software Availability: Jul-2010

SPEC and SPECint 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 18:41:25 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 26 April 2011.