SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

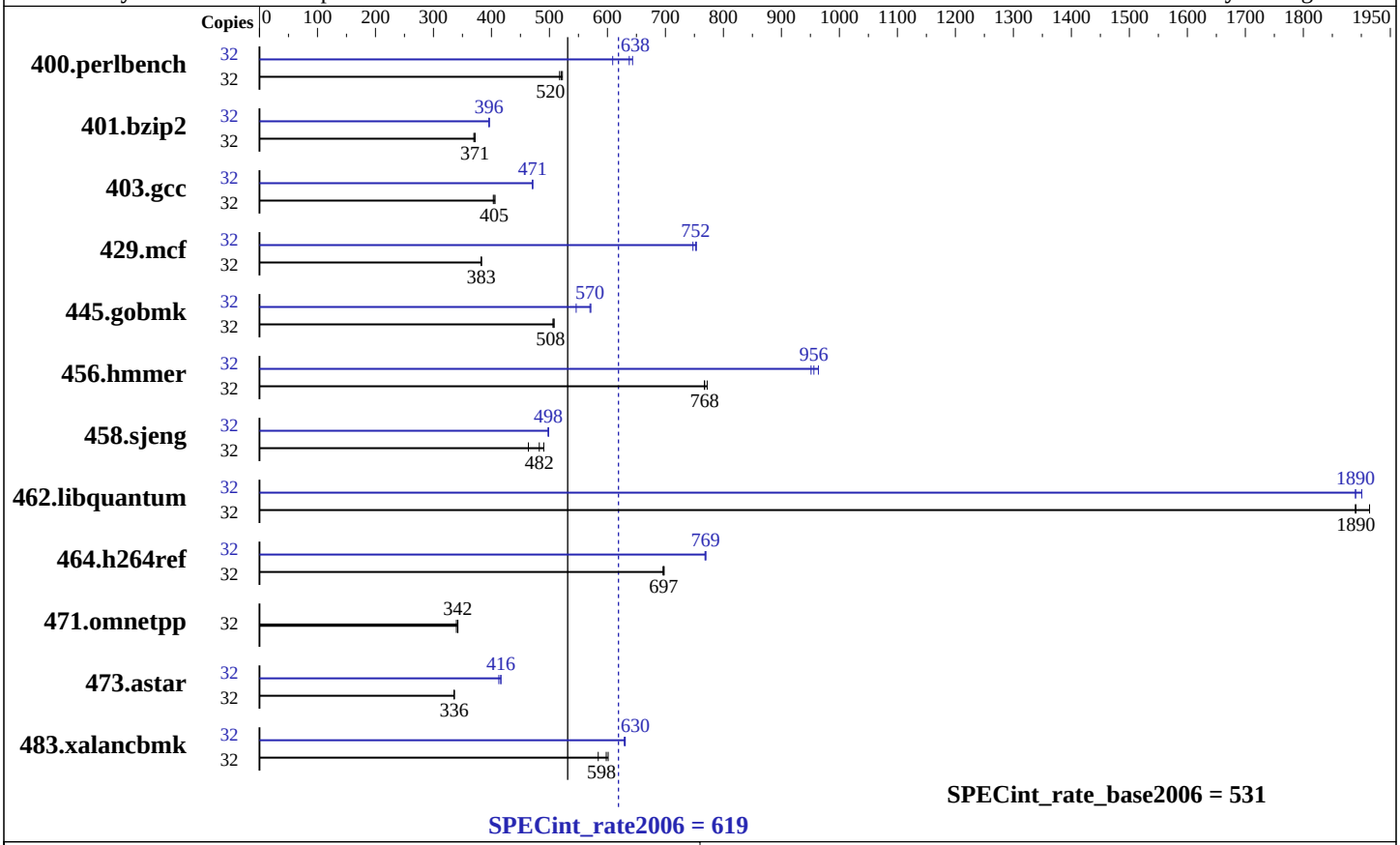
Gateway GR585 F1 (AMD Opteron 6140)

SPECint®_rate2006 = 619

SPECint_rate_base2006 = 531

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

Test date: Jan-2011
Hardware Availability: Feb-2011
Software Availability: Aug-2010



Hardware

CPU Name:	AMD Opteron 6140
CPU Characteristics:	
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	32 cores, 4 chips, 8 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
L3 Cache:	12 MB I+D on chip per chip, 6 MB shared / 4 cores
Other Cache:	None
Memory:	128 GB (32 x 4 GB 2Rx8 PC3-10600R-9, ECC)
Disk Subsystem:	1 x 500 GB SATA, 7200 RPM
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 5.5, Kernel 2.6.18-194.el5
Compiler:	x86 Open64 4.2.4 Compiler Suite (from AMD)
Auto Parallel:	No
File System:	ext3
System State:	Run level 3 (multi-user)
Base Pointers:	32/64-bit
Peak Pointers:	32/64-bit
Other Software:	binutils 2.18 SmartHeap 8.1 32-bit Library for Linux

SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

Gateway GR585 F1 (AMD Opteron 6140)

SPECint_rate2006 = 619

SPECint_rate_base2006 = 531

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

Test date: Jan-2011
Hardware Availability: Feb-2011
Software Availability: Aug-2010

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	32	598	522	**601**	**520**	604	517	32	513	609	486	643	**490**	**638**
401.bzip2	32	835	370	831	372	**832**	**371**	32	779	396	**780**	**396**	780	396
403.gcc	32	**637**	**405**	634	406	639	403	32	547	471	547	471	**547**	**471**
429.mcf	32	763	383	**763**	**383**	763	382	32	390	747	387	753	**388**	**752**
445.gobmk	32	661	508	**661**	**508**	663	506	32	615	546	**589**	**570**	587	571
456.hmmer	32	**389**	**768**	389	767	387	772	32	310	964	314	951	**312**	**956**
458.sjeng	32	790	490	**802**	**482**	835	464	32	778	498	**777**	**498**	777	499
462.libquantum	32	346	1910	351	1890	**351**	**1890**	32	351	1890	349	1900	**351**	**1890**
464.h264ref	32	**1016**	**697**	1015	698	1018	696	32	922	768	920	770	**920**	**769**
471.omnetpp	32	585	342	**585**	**342**	589	340	32	585	342	**585**	**342**	589	340
473.astar	32	669	336	669	336	**669**	**336**	32	544	413	**540**	**416**	540	416
483.xalancbmk	32	378	584	**369**	**598**	367	601	32	350	631	**350**	**630**	351	629

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=28672 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 = "896"
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
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

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

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

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 -lsmartheap

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 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 15:08:36 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 16 February 2011.