



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Acer Incorporated

SPECint®\_rate2006 = 285

Gateway GW2000h-GW175h F1 (AMD Opteron 6134)

SPECint\_rate\_base2006 = 245

CPU2006 license: 97

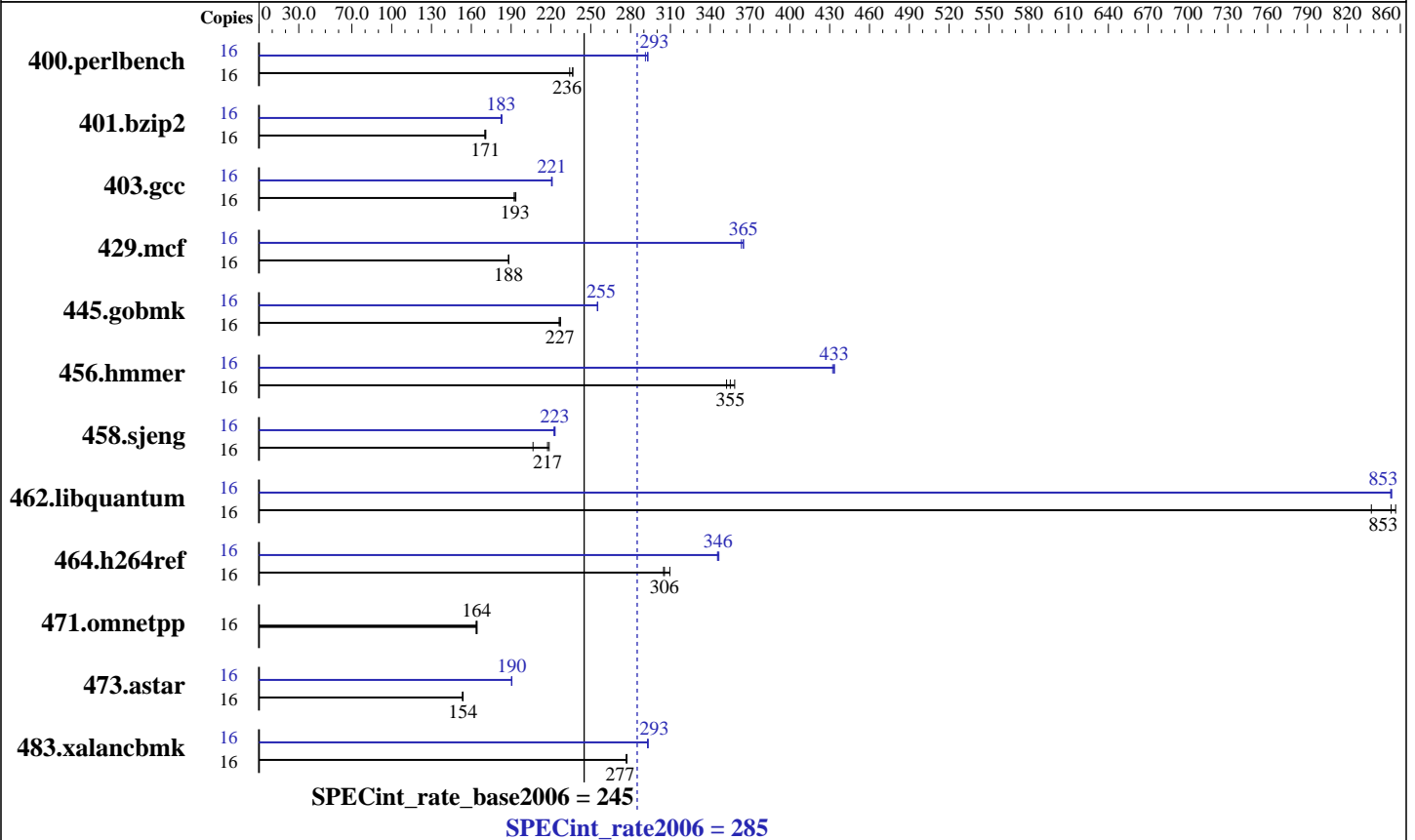
Test date: Apr-2011

Test sponsor: Acer Incorporated

Hardware Availability: Aug-2010

Tested by: Acer Incorporated

Software Availability: Jul-2010



### Hardware

CPU Name: AMD Opteron 6134  
 CPU Characteristics:  
 CPU MHz: 2300  
 FPU: Integrated  
 CPU(s) enabled: 16 cores, 2 chips, 8 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 / 4 cores  
 Other Cache: None  
 Memory: 64 GB (16 x 4 GB 2Rx8 PC3-10600R-9, ECC)  
 Disk Subsystem: 1 x 500 GB SATA, 7200 RPM  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64)  
 SPI  
 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 = 285

Gateway GW2000h-GW175h F1 (AMD Opteron 6134)

SPECint\_rate\_base2006 = 245

CPU2006 license: 97

Test date: Apr-2011

Test sponsor: Acer Incorporated

Hardware Availability: Aug-2010

Tested by: Acer Incorporated

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	16	661	236	668	234	<b>661</b>	<b>236</b>	16	537	291	533	293	<b>534</b>	<b>293</b>
401.bzip2	16	<b>904</b>	<b>171</b>	904	171	908	170	16	843	183	<b>846</b>	<b>183</b>	846	183
403.gcc	16	665	194	670	192	<b>667</b>	<b>193</b>	16	<b>584</b>	<b>221</b>	584	221	583	221
429.mcf	16	<b>776</b>	<b>188</b>	776	188	775	188	16	<b>400</b>	<b>365</b>	400	365	401	363
445.gobmk	16	742	226	739	227	<b>740</b>	<b>227</b>	16	658	255	658	255	<b>658</b>	<b>255</b>
456.hmmer	16	<b>420</b>	<b>355</b>	416	358	424	352	16	344	434	345	432	<b>344</b>	<b>433</b>
458.sjeng	16	<b>890</b>	<b>217</b>	938	206	885	219	16	871	222	868	223	<b>868</b>	<b>223</b>
462.libquantum	16	<b>389</b>	<b>853</b>	396	838	387	856	16	388	853	<b>389</b>	<b>853</b>	389	853
464.h264ref	16	1161	305	<b>1159</b>	<b>306</b>	1144	310	16	1025	345	<b>1024</b>	<b>346</b>	1022	347
471.omnetpp	16	<b>609</b>	<b>164</b>	611	164	609	164	16	<b>609</b>	<b>164</b>	611	164	609	164
473.astar	16	730	154	<b>730</b>	<b>154</b>	733	153	16	590	190	<b>590</b>	<b>190</b>	589	191
483.xalancbmk	16	<b>398</b>	<b>277</b>	399	277	398	277	16	377	293	<b>377</b>	<b>293</b>	377	293

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=14336 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>  
Binaries were compiled on SLES10 SP2 with binutils 2.18  
This result was measured on the Gateway GW2000h-GW175h F1.  
The Acer AW2000h-AW175h F1 and Gateway GW2000h-GW175h F1 are electronically equivalent.



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECint\_rate2006 = 285

Gateway GW2000h-GW175h F1 (AMD Opteron 6134)

SPECint\_rate\_base2006 = 245

CPU2006 license: 97

Test date: Apr-2011

Test sponsor: Acer Incorporated

Hardware Availability: Aug-2010

Tested by: Acer Incorporated

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 = 285

Gateway GW2000h-GW175h F1 (AMD Opteron 6134)

SPECint\_rate\_base2006 = 245

CPU2006 license: 97

Test date: Apr-2011

Test sponsor: Acer Incorporated

Hardware Availability: Aug-2010

Tested by: Acer Incorporated

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 = 285

Gateway GW2000h-GW175h F1 (AMD Opteron 6134)

SPECint\_rate\_base2006 = 245

CPU2006 license: 97

Test date: Apr-2011

Test sponsor: Acer Incorporated

Hardware Availability: Aug-2010

Tested by: Acer Incorporated

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 = 285**

Gateway GW2000h-GW175h F1 (AMD Opteron 6134)

**SPECint\_rate\_base2006 = 245**

**CPU2006 license:** 97

**Test sponsor:** Acer Incorporated

**Tested by:** Acer Incorporated

**Test date:** Apr-2011

**Hardware Availability:** Aug-2010

**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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.1.  
Report generated on Wed Jul 23 20:15:43 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 24 May 2011.