



# SPEC<sup>®</sup> CINT2006 Result

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## Acer Incorporated

SPECint<sup>®</sup>\_rate2006 = 309

## Gateway GT350 F1 (Intel Xeon E5645)

SPECint\_rate\_base2006 = 294

CPU2006 license: 97

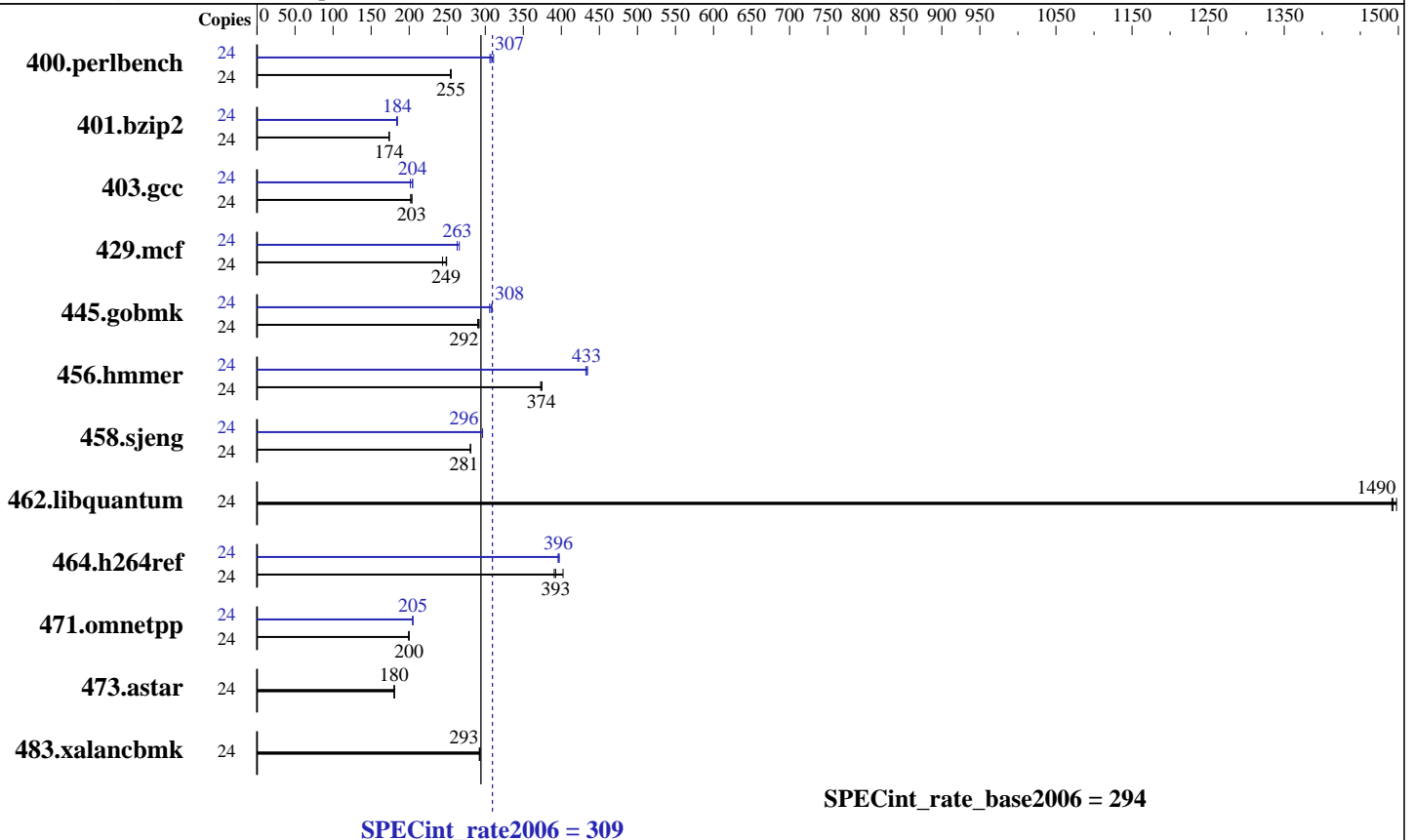
Test date: May-2011

Test sponsor: Acer Incorporated

Hardware Availability: Feb-2011

Tested by: Acer Incorporated

Software Availability: Jan-2011



### Hardware

CPU Name: Intel Xeon E5645  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz  
 CPU MHz: 2400  
 FPU: Integrated  
 CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 256 KB I+D on chip per core  
 L3 Cache: 12 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 48 GB (12 x 4 GB 2Rx8 PC3-1066R-9 ECC, running at 1066 MHz)  
 Disk Subsystem: 1 x 500 GB SATA, 7200 RPM SATA HDD  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64) SP1, Kernel 2.6.32.12-0.7-default  
 Compiler: Intel C++ Compiler XE for applications running on IA-32 Version 12.0.1.116 Build 20101116  
 Auto Parallel: No  
 File System: ext3  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V9.01



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## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	24	<b>920</b>	<b>255</b>	919	255	923	254	24	<b>763</b>	<b>307</b>	766	306	754	311
401.bzip2	24	1332	174	<b>1333</b>	<b>174</b>	1335	173	24	1256	184	1262	184	<b>1256</b>	<b>184</b>
403.gcc	24	<b>950</b>	<b>203</b>	957	202	949	204	24	<b>946</b>	<b>204</b>	959	201	944	205
429.mcf	24	897	244	<b>881</b>	<b>249</b>	878	249	24	823	266	832	263	<b>832</b>	<b>263</b>
445.gobmk	24	868	290	863	292	<b>863</b>	<b>292</b>	24	<b>818</b>	<b>308</b>	824	306	815	309
456.hammer	24	601	373	598	374	<b>599</b>	<b>374</b>	24	<b>517</b>	<b>433</b>	515	434	518	432
458.sjeng	24	<b>1035</b>	<b>281</b>	1034	281	1035	281	24	<b>980</b>	<b>296</b>	980	296	980	296
462.libquantum	24	332	1500	333	1490	<b>333</b>	<b>1490</b>	24	332	1500	333	1490	<b>333</b>	<b>1490</b>
464.h264ref	24	<b>1353</b>	<b>393</b>	1360	391	1320	402	24	<b>1341</b>	<b>396</b>	1337	397	1341	396
471.omnetpp	24	<b>751</b>	<b>200</b>	751	200	753	199	24	<b>733</b>	<b>205</b>	733	205	733	205
473.astar	24	932	181	<b>935</b>	<b>180</b>	935	180	24	932	181	<b>935</b>	<b>180</b>	935	180
483.xalancbmk	24	567	292	<b>566</b>	<b>293</b>	565	293	24	567	292	<b>566</b>	<b>293</b>	565	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

## Operating System Notes

'ulimit -s unlimited' was used to set environment stack size  
Large pages were disabled for this run

## Platform Notes

BIOS settings:  
Fan speed = full speed (Default = Balanced)  
Data Reuse = Disabled (Default = Enabled)

## General Notes

Binaries compiled on RHEL5.5  
This result was measured on Gateway GT350 F1  
Acer AT350 F1 is electronically equivalent

## Base Compiler Invocation

C benchmarks:  
icc -m32

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## Base Compiler Invocation (Continued)

C++ benchmarks:  
icpc -m32

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch  
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/smartheap -lsmartheap  
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

## Base Other Flags

C benchmarks:  
403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):  
icc -m32

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:  
icpc -m32



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## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
 401.bzip2: -DSPEC\_CPU\_LP64  
 456.hmmer: -DSPEC\_CPU\_LP64  
 458.sjeng: -DSPEC\_CPU\_LP64  
 462.libquantum: -DSPEC\_CPU\_LINUX  
 483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
 -B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
 -opt-prefetch -auto-ilp32 -ansi-alias  
 -B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div  
 -B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

429.mcf: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
 -ansi-alias -auto-ilp32

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
 -ansi-alias -auto-ilp32

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32  
 -B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
 -unroll4 -auto-ilp32  
 -B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
 -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
 -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs

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## Peak Optimization Flags (Continued)

471.omnetpp (continued):  
-L/smartheap -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.html>

<http://www.spec.org/cpu2006/flags/Acer-Intel-Linux-Settings-flags.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml>

<http://www.spec.org/cpu2006/flags/Acer-Intel-Linux-Settings-flags.xml>

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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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