



# SPEC® CINT2006 Result

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Acer Incorporated

**SPECint®\_rate2006 = 209**

Altos T110 F3 (Xeon E3-1230 v3)

**SPECint\_rate\_base2006 = 202**

CPU2006 license: 97

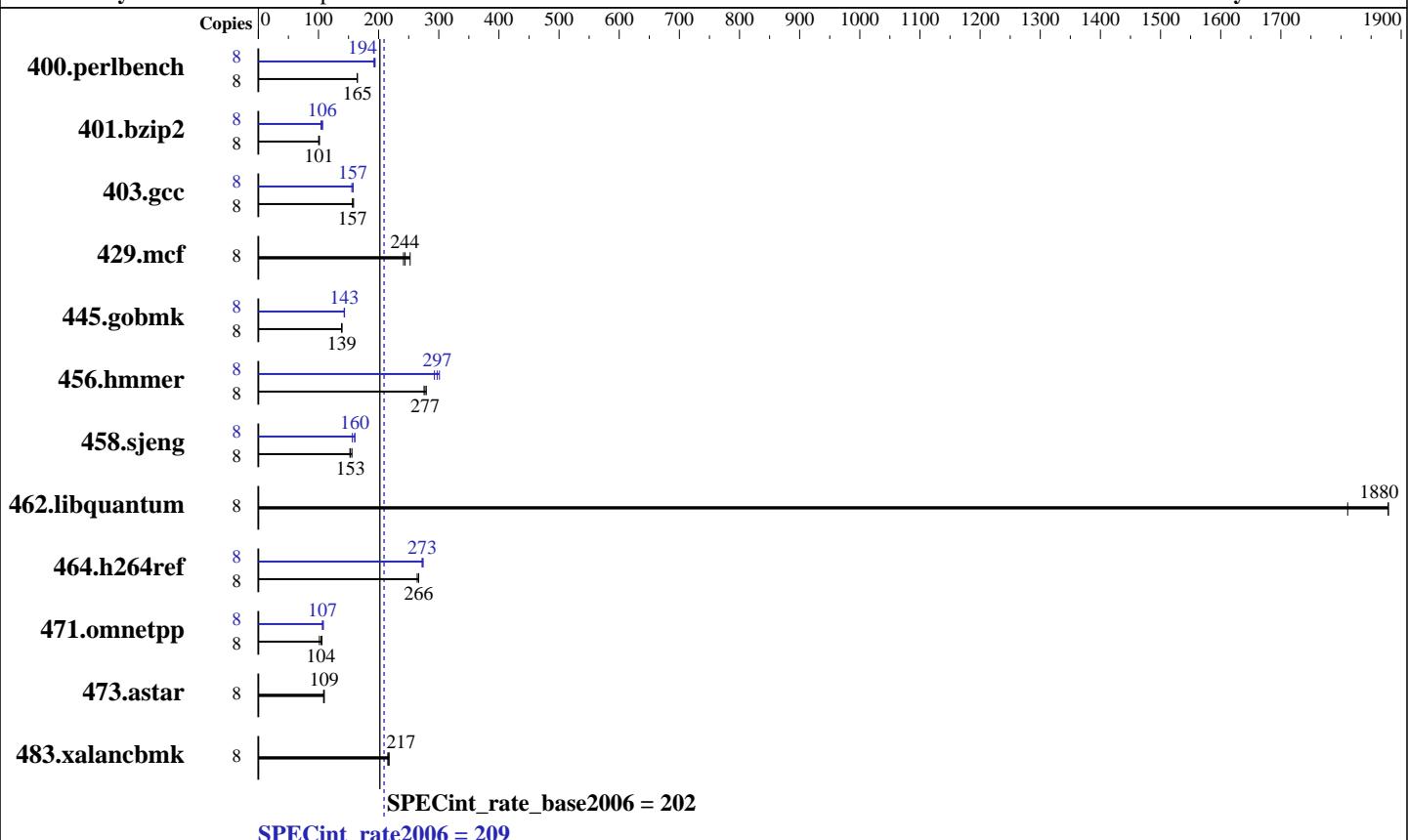
**Test date:** May-2013

**Hardware Availability:** Sep-2013

**Software Availability:** Feb-2013

**Test sponsor:** Acer Incorporated

**Tested by:** Acer Incorporated



## Hardware

CPU Name: Intel Xeon E3-1230 v3  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz  
 CPU MHz: 3300  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core  
 CPU(s) orderable: 1 chip  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 256 KB I+D on chip per core  
 L3 Cache: 8 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 16 GB (2 x 8 GB 2Rx4 PC3L-12800E-11, ECC)  
 Disk Subsystem: 1 x SATA, 500 GB, 7200 RPM  
 Other Hardware: None

## Software

Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)  
 Compiler: 2.6.32-358.el6.x86\_64  
 Auto Parallel: C/C++: Version 13.0.0.133 of Intel C++ Studio XE for Linux  
 File System: ext4  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V10.0



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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	8	475	165	476	164	<b>475</b>	<b>165</b>	8	407	192	<b>404</b>	<b>194</b>	403	194
401.bzip2	8	770	100	<b>764</b>	<b>101</b>	759	102	8	<b>728</b>	<b>106</b>	741	104	722	107
403.gcc	8	411	157	<b>410</b>	<b>157</b>	407	158	8	414	156	409	158	<b>410</b>	<b>157</b>
429.mcf	8	<b>299</b>	<b>244</b>	302	241	289	252	8	<b>299</b>	<b>244</b>	302	241	289	252
445.gobmk	8	606	139	604	139	<b>605</b>	<b>139</b>	8	588	143	<b>586</b>	<b>143</b>	586	143
456.hammer	8	<b>269</b>	<b>277</b>	271	276	267	279	8	255	293	248	301	<b>251</b>	<b>297</b>
458.sjeng	8	<b>632</b>	<b>153</b>	635	152	622	156	8	<b>604</b>	<b>160</b>	604	160	619	156
462.libquantum	8	<b>88.2</b>	<b>1880</b>	91.5	1810	88.2	1880	8	<b>88.2</b>	<b>1880</b>	91.5	1810	88.2	1880
464.h264ref	8	664	267	670	264	<b>665</b>	<b>266</b>	8	646	274	650	272	<b>649</b>	<b>273</b>
471.omnetpp	8	472	106	492	102	<b>479</b>	<b>104</b>	8	<b>468</b>	<b>107</b>	468	107	462	108
473.astar	8	513	110	<b>514</b>	<b>109</b>	518	108	8	513	110	<b>514</b>	<b>109</b>	518	108
483.xalancbmk	8	254	217	<b>255</b>	<b>217</b>	256	215	8	254	217	<b>255</b>	<b>217</b>	256	215

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## Submit Notes

The taskset mechanism was used to bind copies to processors. The config file option 'submit' was used to generate taskset commands to bind each copy to a specific processor. For details, please see the config file.

## Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

## Platform Notes

```
Sysinfo program /usr/cpu2006/config/sysinfo.rev6818
$Rev: 6818 $ $Date::: 2012-07-17 #$
running on localhost.localdomain Fri May 31 17:47:39 2013
```

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:

<http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

```
From /proc/cpuinfo
model name : Intel(R) Xeon(R) CPU E3-1230 v3 @ 3.30GHz
  1 "physical id"s (chips)
  8 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
caution.)
  cpu cores : 4
  siblings  : 8
```

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## Platform Notes (Continued)

```
physical 0: cores 0 1 2 3
cache size : 8192 KB

From /proc/meminfo
MemTotal:       16288740 kB
HugePages_Total:      0
Hugepagesize:     2048 kB

/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.4 (Santiago)

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a:
Linux localhost.localdomain 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41
EST 2013 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 May 31 17:46

SPEC is set to: /usr/cpu2006
Filesystem      Type   Size  Used Avail Use% Mounted on
/dev/mapper/VolGroup-lv_root
                  ext4   444G   20G  402G    5%  /

Additional information from dmidecode:
BIOS Acer           D05 05/27/2013
Memory:
 2x 8 GB
 2x Kingston ACR16D3LE1EFG/8G 8 GB 1600 MHz 2 rank
 2x [Empty] [Empty]

(End of data from sysinfo program)
```

## General Notes

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

LD\_LIBRARY\_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64:/usr/cpu2006/sh"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB  
memory using RHEL5.5

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/redhat\_transparent\_hugepage/enable



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## Base Compiler Invocation

C benchmarks:

icc -m32

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:

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch  
-opt-mem-layout-trans=3

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch  
-opt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh -lsmartheap

## 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

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## Peak Compiler Invocation (Continued)

C++ benchmarks:

icpc -m32

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
401.bzip2: -DSPEC\_CPU\_LP64  
456.hmmmer: -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: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-auto-ilp32  
401.bzip2: -xCORE-AVX2(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  
403.gcc: -xCORE-AVX2 -ipo -O3 -no-prec-div  
429.mcf: basepeak = yes  
445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-ansi-alias -opt-mem-layout-trans=3  
456.hmmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll12 -auto-ilp32  
458.sjeng: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-unroll14 -auto-ilp32  
462.libquantum: basepeak = yes  
464.h264ref: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-unroll12 -ansi-alias

C++ benchmarks:

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## Peak Optimization Flags (Continued)

```
471.omnetpp: -xCORE-AVX2(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
             -L/sh -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-ic13-official-linux64.20130716.html>  
<http://www.spec.org/cpu2006/flags/Acer-Platform-Settings-V1.2-revA.20130423.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.20130716.xml>  
<http://www.spec.org/cpu2006/flags/Acer-Platform-Settings-V1.2-revA.20130423.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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