



# SPEC® CINT2006 Result

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Acer Incorporated

**SPECint®2006 = 63.4**

Altos T110 F3 (Intel Xeon E3-1280 v3)

**SPECint\_base2006 = 61.1**

CPU2006 license: 97

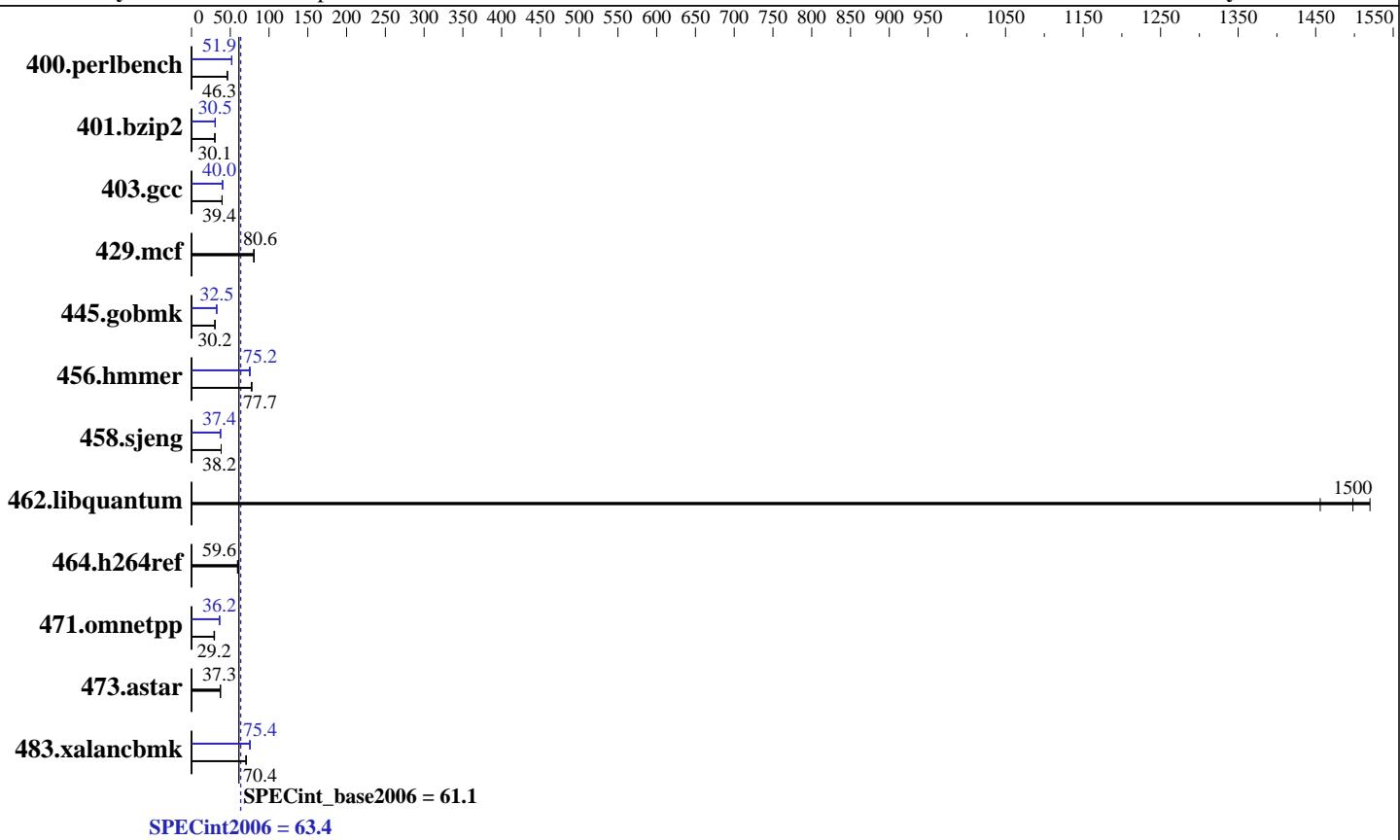
Test date: Jun-2013

Test sponsor: Acer Incorporated

Hardware Availability: Sep-2013

Tested by: Acer Incorporated

Software Availability: Feb-2013



## Hardware

CPU Name: Intel Xeon E3-1280 v3  
 CPU Characteristics: Intel Turbo Boost Technology up to 4.00 GHz  
 CPU MHz: 3600  
 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 500 GB SATA, 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: ext3  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V10.0



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## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	212	46.1	<b>211</b>	<b>46.3</b>	211	46.4	189	51.8	188	51.9	<b>188</b>	<b>51.9</b>
401.bzip2	321	30.1	<b>321</b>	<b>30.1</b>	320	30.1	317	30.5	316	30.5	<b>316</b>	<b>30.5</b>
403.gcc	204	39.5	205	39.3	<b>204</b>	<b>39.4</b>	<b>201</b>	<b>40.0</b>	201	40.0	201	40.1
429.mcf	113	80.9	114	80.1	<b>113</b>	<b>80.6</b>	113	80.9	114	80.1	<b>113</b>	<b>80.6</b>
445.gobmk	347	30.2	346	30.3	<b>347</b>	<b>30.2</b>	323	32.5	<b>323</b>	<b>32.5</b>	323	32.4
456.hmmer	120	77.8	<b>120</b>	<b>77.7</b>	121	77.1	<b>124</b>	<b>75.2</b>	125	74.7	123	75.6
458.sjeng	317	38.2	<b>316</b>	<b>38.2</b>	316	38.3	<b>323</b>	<b>37.4</b>	323	37.4	323	37.4
462.libquantum	14.2	1460	<b>13.8</b>	<b>1500</b>	13.6	1520	14.2	1460	<b>13.8</b>	<b>1500</b>	13.6	1520
464.h264ref	371	59.7	<b>372</b>	<b>59.6</b>	374	59.2	371	59.7	<b>372</b>	<b>59.6</b>	374	59.2
471.omnetpp	211	29.7	214	29.2	<b>214</b>	<b>29.2</b>	<b>173</b>	<b>36.2</b>	172	36.3	173	36.1
473.astar	188	37.4	<b>188</b>	<b>37.3</b>	190	37.0	188	37.4	<b>188</b>	<b>37.3</b>	190	37.0
483.xalancbmk	<b>98.0</b>	<b>70.4</b>	98.4	70.1	97.6	70.7	<b>91.5</b>	<b>75.4</b>	91.8	75.1	91.4	75.5

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

## 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 Jun  7 17:32:37 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 E3-1280 v3 @ 3.60GHz
        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
        physical 0: cores 0 1 2 3
cache size : 8192 KB
```

```
From /proc/meminfo
MemTotal:      16332452 kB
HugePages_Total: 0
```

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## Platform Notes (Continued)

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 Jun 7 17:30

```
SPEC is set to: /usr/cpu2006
Filesystem      Type   Size  Used Avail Use% Mounted on
/dev/mapper/VolGroup-lv_root
                  ext3   50G   9.5G   38G   21%  /
```

```
Additional information from dmidecode:
BIOS Acer          P02 05/13/2013
Memory:
 2x 8 GB
 2x Hynix/Hyundai HMT41GU7AFR8A-PB 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"  
OMP\_NUM\_THREADS = "4"

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/enabled
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
```

## Base Compiler Invocation

C benchmarks:

```
icc -m64
```

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<b>CPU2006 license:</b> 97	<b>Test date:</b>	Jun-2013
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## Base Compiler Invocation (Continued)

C++ benchmarks:

icpc -m64

## 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.hammer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
```

## Base Optimization Flags

C benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh -lsmartheap64

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

400.perlbench: icc -m32

445.gobmk: icc -m32

Continued on next page



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## Peak Compiler Invocation (Continued)

C++ benchmarks (except as noted below):

icpc -m32

473.astar: icpc -m64

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
401.bzip2: -DSPEC\_CPU\_LP64  
403.gcc: -DSPEC\_CPU\_LP64  
429.mcf: -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  
473.astar: -DSPEC\_CPU\_LP64  
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)  
-opt-prefetch -ansi-alias  
  
401.bzip2: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div -prof-use(pass 2) -auto-ilp32  
-opt-prefetch -ansi-alias  
  
403.gcc: -xCORE-AVX2 -ipo -O3 -no-prec-div -inline-calloc  
-opt-malloc-options=3 -auto-ilp32  
  
429.mcf: basepeak = yes  
  
445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-ansi-alias  
  
456.hmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll12 -auto-ilp32  
-ansi-alias  
  
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

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## Peak Optimization Flags (Continued)

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

```
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)
              -opt-ra-region-strategy=block           -ansi-alias
              -Wl,-z,muldefs -L/sh -lsmartheap
```

473.astar: basepeak = yes

```
483.xalancbmk: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
                -ansi-alias -Wl,-z,muldefs -L/sh -lsmartheap
```

## 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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