



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Acer Incorporated

**SPECint®2006 = 50.8**

## Altos R360 F2 (Intel Xeon E5-2670)

**SPECint\_base2006 = 47.2**

CPU2006 license: 97

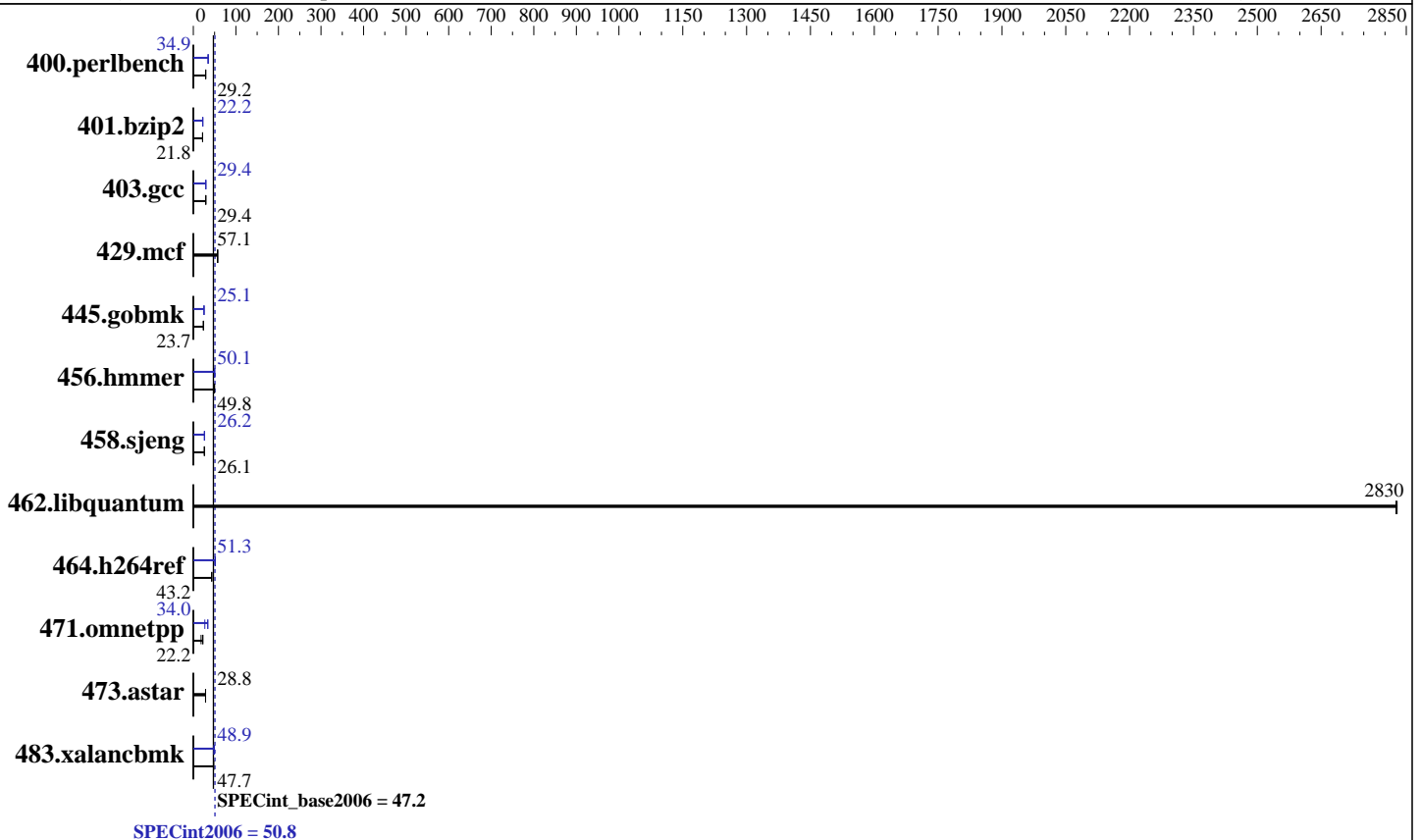
Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: May-2013

Hardware Availability: May-2013

Software Availability: Jun-2012



### Hardware

CPU Name: Intel Xeon E5-2670  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.30 GHz  
 CPU MHz: 2600  
 FPU: Integrated  
 CPU(s) enabled: 16 cores, 2 chips, 8 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: 20 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)  
 Disk Subsystem: 1 x 300 GB SAS, 10K RPM  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 6.3 (Santiago)  
 2.6.32-279.el6.x86\_64  
 Compiler: C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux  
 Auto Parallel: Yes  
 File System: ext4  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V9.01



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECint2006 = 50.8

Altos R360 F2 (Intel Xeon E5-2670)

SPECint\_base2006 = 47.2

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: May-2013

Hardware Availability: May-2013

Software Availability: Jun-2012

## Results Table

| Benchmark      | Base               |                    |                   |                    |                   |                    | Peak               |                    |                   |                    |                   |                    |
|----------------|--------------------|--------------------|-------------------|--------------------|-------------------|--------------------|--------------------|--------------------|-------------------|--------------------|-------------------|--------------------|
|                | Seconds            | Ratio              | Seconds           | Ratio              | Seconds           | Ratio              | Seconds            | Ratio              | Seconds           | Ratio              | Seconds           | Ratio              |
| 400.perlbench  | 339                | 28.8               | <b><u>335</u></b> | <b><u>29.2</u></b> | 334               | 29.2               | 281                | 34.8               | 280               | 34.9               | <b><u>280</u></b> | <b><u>34.9</u></b> |
| 401.bzip2      | <b><u>443</u></b>  | <b><u>21.8</u></b> | 443               | 21.8               | 443               | 21.8               | <b><u>434</u></b>  | <b><u>22.2</u></b> | 434               | 22.2               | 435               | 22.2               |
| 403.gcc        | 273                | 29.5               | <b><u>274</u></b> | <b><u>29.4</u></b> | 279               | 28.9               | <b><u>273</u></b>  | <b><u>29.4</u></b> | 276               | 29.2               | 273               | 29.5               |
| 429.mcf        | 160                | 57.1               | <b><u>160</u></b> | <b><u>57.1</u></b> | 159               | 57.2               | 160                | 57.1               | <b><u>160</u></b> | <b><u>57.1</u></b> | 159               | 57.2               |
| 445.gobmk      | <b><u>442</u></b>  | <b><u>23.7</u></b> | 442               | 23.7               | 442               | 23.7               | <b><u>417</u></b>  | <b><u>25.1</u></b> | 417               | 25.1               | 418               | 25.1               |
| 456.hammer     | 187                | 49.8               | 187               | 49.8               | <b><u>187</u></b> | <b><u>49.8</u></b> | <b><u>186</u></b>  | <b><u>50.1</u></b> | 186               | 50.1               | 186               | 50.1               |
| 458.sjeng      | 465                | 26.0               | <b><u>464</u></b> | <b><u>26.1</u></b> | 464               | 26.1               | 462                | 26.2               | 462               | 26.2               | <b><u>462</u></b> | <b><u>26.2</u></b> |
| 462.libquantum | <b><u>7.33</u></b> | <b><u>2830</u></b> | 7.33              | 2830               | 7.33              | 2830               | <b><u>7.33</u></b> | <b><u>2830</u></b> | 7.33              | 2830               | 7.33              | 2830               |
| 464.h264ref    | 512                | 43.2               | <b><u>512</u></b> | <b><u>43.2</u></b> | 512               | 43.3               | 432                | 51.3               | <b><u>431</u></b> | <b><u>51.3</u></b> | 429               | 51.6               |
| 471.omnetpp    | <b><u>281</u></b>  | <b><u>22.2</u></b> | 279               | 22.4               | 343               | 18.2               | <b><u>184</u></b>  | <b><u>34.0</u></b> | 184               | 34.0               | 231               | 27.0               |
| 473.astar      | 244                | 28.7               | <b><u>244</u></b> | <b><u>28.8</u></b> | 243               | 28.8               | 244                | 28.7               | <b><u>244</u></b> | <b><u>28.8</u></b> | 243               | 28.8               |
| 483.xalancbmk  | <b><u>145</u></b>  | <b><u>47.7</u></b> | 145               | 47.7               | 145               | 47.6               | <b><u>141</u></b>  | <b><u>48.9</u></b> | 141               | 48.8               | 141               | 49.0               |

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.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
running on altosr380f2 Thu May 30 11:31:12 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 E5-2670 0 @ 2.60GHz
 2 "physical id"s (chips)
 32 "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 : 8
siblings : 16
physical 0: cores 0 1 2 3 4 5 6 7
physical 1: cores 0 1 2 3 4 5 6 7
cache size : 20480 KB
```

```
From /proc/meminfo
MemTotal: 132113952 kB
```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Acer Incorporated**

**SPECint2006 = 50.8**

**Altos R360 F2 (Intel Xeon E5-2670)**

**SPECint\_base2006 = 47.2**

**CPU2006 license:** 97

**Test sponsor:** Acer Incorporated

**Tested by:** Acer Incorporated

**Test date:** May-2013

**Hardware Availability:** May-2013

**Software Availability:** Jun-2012

## Platform Notes (Continued)

HugePages\_Total: 0  
Hugepagesize: 2048 kB

```
/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.3 (Santiago)
```

```
From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.3 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.3 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

```
uname -a:
Linux altosr380f2 2.6.32-279.el6.x86_64 #1 SMP Wed Jun 13 18:24:36 EDT 2012
x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 May 30 10:55
```

```
SPEC is set to: /usr/cpu2006
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/mapper/vg_altosr380f2-lv_root
                ext4      270G  170G   86G  67% /
```

Additional information from dmidecode:

```
Memory:
16x Hynix HMT31GR7CFR4C-PB 8 GB 1600 MHz 2 rank
```

(End of data from sysinfo program)

## General Notes

Environment variables set by runspec before the start of the run:  
KMP\_AFFINITY = "granularity=fine,scatter"  
LD\_LIBRARY\_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64"  
OMP\_NUM\_THREADS = "16"

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>  
Altos R360 F2 and Altos R380 F2 are electronically equivalent.  
This result was measured on Altos R380 F2.

## Base Compiler Invocation

C benchmarks:  
icc -m64

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

|                                    |                    |      |
|------------------------------------|--------------------|------|
| Acer Incorporated                  | SPECint2006 =      | 50.8 |
| Altos R360 F2 (Intel Xeon E5-2670) | SPECint_base2006 = | 47.2 |

|                                 |                        |          |
|---------------------------------|------------------------|----------|
| CPU2006 license: 97             | Test date:             | May-2013 |
| Test sponsor: Acer Incorporated | Hardware Availability: | May-2013 |
| Tested by: Acer Incorporated    | Software Availability: | Jun-2012 |

## 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.hmmer: -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.xalanbmk: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:  
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -Wl,-z,muldefs  
-L/smartheap -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



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECint2006 = 50.8

Altos R360 F2 (Intel Xeon E5-2670)

SPECint\_base2006 = 47.2

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: May-2013

Hardware Availability: May-2013

Software Availability: Jun-2012

## Peak Compiler Invocation (Continued)

464.h264ref: icc -m32

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

473.astar: -DSPEC\_CPU\_LP64

483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -xAVX(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: -xAVX(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: -xAVX -ipo -O3 -no-prec-div -inline-calloc  
-opt-malloc-options=3 -auto-ilp32

429.mcf: basepeak = yes

445.gobmk: -xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-ansi-alias

456.hmmer: -xAVX -ipo -O3 -no-prec-div -unroll2 -auto-ilp32  
-ansi-alias

458.sjeng: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

|                                    |                    |      |
|------------------------------------|--------------------|------|
| Acer Incorporated                  | SPECint2006 =      | 50.8 |
| Altos R360 F2 (Intel Xeon E5-2670) | SPECint_base2006 = | 47.2 |

|  |  |
|--|--|
| <b>CPU2006 license:</b> 97             | <b>Test date:</b> May-2013             |
| <b>Test sponsor:</b> Acer Incorporated | <b>Hardware Availability:</b> May-2013 |
| <b>Tested by:</b> Acer Incorporated    | <b>Software Availability:</b> Jun-2012 |

## Peak Optimization Flags (Continued)

462.libquantum: basepeak = yes

464.h264ref: -xAVX(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: -xAVX(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/smartheap -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias  
-Wl,-z,muldefs -L/smartheap -lsmartheap

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Thu Jul 24 15:51:03 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 18 June 2013.