



SPEC® CINT2006 Result

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Acer Incorporated

SPECint®2006 = 57.4

Altos R360 F2 (Intel Xeon E5-2690)

SPECint_base2006 = 53.2

CPU2006 license: 97

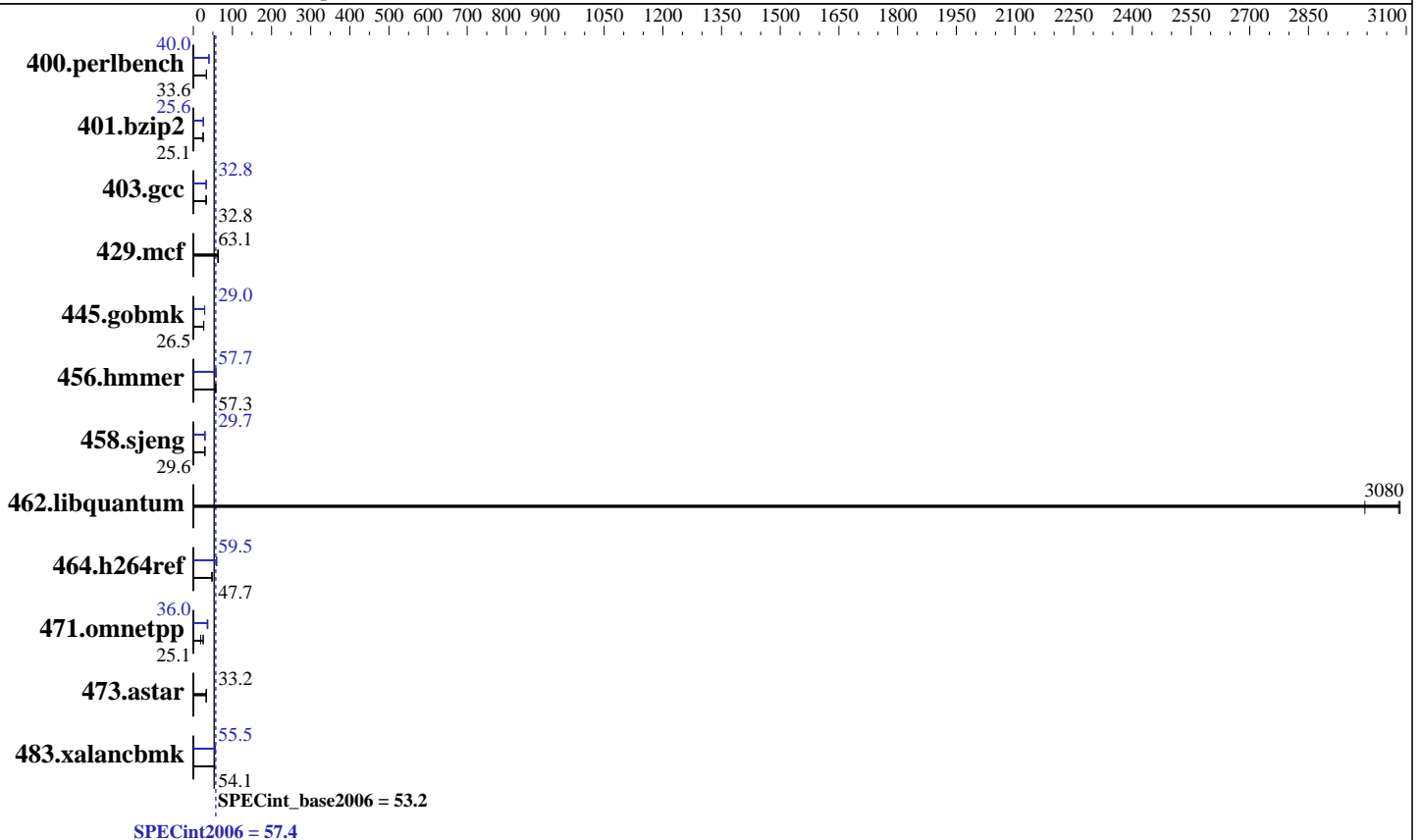
Test date: Mar-2013

Test sponsor: Acer Incorporated

Hardware Availability: Apr-2013

Tested by: Acer Incorporated

Software Availability: Jun-2012



Hardware

CPU Name: Intel Xeon E5-2690
 CPU Characteristics: Intel Turbo Boost Technology up to 3.80 GHz
 CPU MHz: 2900
 FPU: Integrated
 CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip, 2 threads/core
 CPU(s) orderable: 2 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: 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 1 TB SATA, 7200 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



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	291	33.5	<u>291</u>	<u>33.6</u>	291	33.6	244	40.1	<u>244</u>	<u>40.0</u>	244	40.0
401.bzip2	385	25.1	<u>384</u>	<u>25.1</u>	384	25.1	377	25.6	<u>377</u>	<u>25.6</u>	377	25.6
403.gcc	245	32.9	246	32.7	<u>246</u>	<u>32.8</u>	245	32.9	245	32.8	<u>245</u>	<u>32.8</u>
429.mcf	145	63.0	144	63.2	<u>144</u>	<u>63.1</u>	145	63.0	144	63.2	<u>144</u>	<u>63.1</u>
445.gobmk	395	26.5	396	26.5	<u>396</u>	<u>26.5</u>	362	29.0	362	29.0	<u>362</u>	<u>29.0</u>
456.hammer	163	57.3	163	57.3	<u>163</u>	<u>57.3</u>	162	57.6	162	57.7	<u>162</u>	<u>57.7</u>
458.sjeng	409	29.6	<u>409</u>	<u>29.6</u>	409	29.6	<u>407</u>	<u>29.7</u>	407	29.7	406	29.8
462.libquantum	6.72	3080	6.92	2990	<u>6.73</u>	<u>3080</u>	6.72	3080	6.92	2990	<u>6.73</u>	<u>3080</u>
464.h264ref	<u>464</u>	<u>47.7</u>	465	47.6	463	47.8	372	59.4	372	59.5	<u>372</u>	<u>59.5</u>
471.omnetpp	<u>249</u>	<u>25.1</u>	330	18.9	248	25.2	176	35.6	168	37.3	<u>173</u>	<u>36.0</u>
473.astar	<u>211</u>	<u>33.2</u>	213	32.9	211	33.3	<u>211</u>	<u>33.2</u>	213	32.9	211	33.3
483.xalancbmk	128	54.1	<u>128</u>	<u>54.1</u>	127	54.4	<u>124</u>	<u>55.5</u>	125	55.4	123	56.0

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 Fri Mar 22 11:24:52 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 E5-2690 0 @ 2.90GHz
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: 132114000 kB

```

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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 Mar 22 11:07
```

```
SPEC is set to: /usr/cpu2006
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/mapper/vg_altosr380f2-lv_root
                ext4      913G  73G  794G   9% /
```

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,compact,1,0"
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

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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.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.xalancbmk: -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

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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

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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>

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For other inquiries, please contact webmaster@spec.org.

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