



# SPEC® CINT2006 Result

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## ACTION S.A.

ACTINA SOLAR 210 S6 (Intel Xeon E5-2630 v3, 2.40 GHz)

**SPECint\_rate2006 = 695**

**SPECint\_rate\_base2006 = 673**

CPU2006 license: 9008

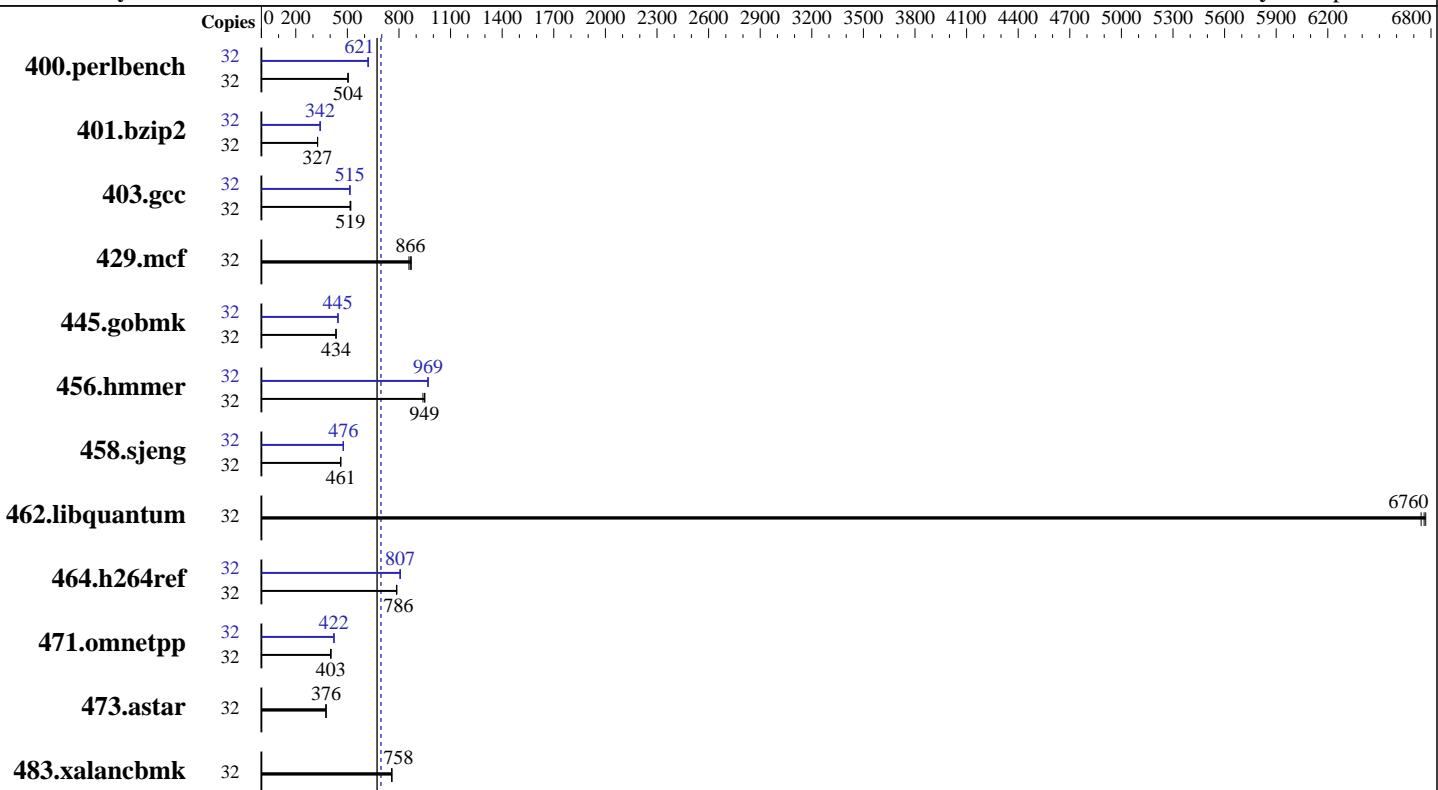
Test date: Jan-2015

Test sponsor: ACTION S.A.

Hardware Availability: Sep-2014

Tested by: ACTION S.A.

Software Availability: Sep-2014



### Hardware

CPU Name:	Intel Xeon E5-2630 v3
CPU Characteristics:	Intel Turbo Boost Technology up to 3.20 GHz
CPU MHz:	2400
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:	256 GB (16 x 16 GB 2Rx4 PC4-2133P-R, running at 1866 MHz)
Disk Subsystem:	1 x 240 GB SATA II SSD
Other Hardware:	None

### Software

Operating System:	Red Hat Enterprise Linux Server release 6.4 (Santiago) 2.6.32-358.11.1.el6.x86_64
Compiler:	C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
Auto Parallel:	No
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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<b>ACTION S.A.</b>	<b>SPECint_rate2006 =</b>	<b>695</b>
ACTINA SOLAR 210 S6 (Intel Xeon E5-2630 v3, 2.40 GHz)	<b>SPECint_rate_base2006 =</b>	<b>673</b>
CPU2006 license: 9008	Test date:	Jan-2015
Test sponsor: ACTION S.A.	Hardware Availability:	Sep-2014
Tested by: ACTION S.A.	Software Availability:	Sep-2014

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	32	<b>620</b>	<b>504</b>	620	504	621	504	32	<b>504</b>	<b>621</b>	503	621	504	620
401.bzip2	32	944	327	946	326	<b>946</b>	<b>327</b>	32	904	342	903	342	<b>904</b>	<b>342</b>
403.gcc	32	500	515	496	520	<b>497</b>	<b>519</b>	32	501	514	<b>501</b>	<b>515</b>	500	516
429.mcf	32	335	872	340	858	<b>337</b>	<b>866</b>	32	335	872	340	858	<b>337</b>	<b>866</b>
445.gobmk	32	<b>773</b>	<b>434</b>	774	434	773	434	32	755	445	753	446	<b>754</b>	<b>445</b>
456.hammer	32	<b>315</b>	<b>949</b>	318	939	314	950	32	308	968	<b>308</b>	<b>969</b>	308	970
458.sjeng	32	<b>839</b>	<b>461</b>	840	461	839	462	32	<b>813</b>	<b>476</b>	812	477	814	476
462.libquantum	32	97.9	6770	98.3	6740	<b>98.1</b>	<b>6760</b>	32	97.9	6770	98.3	6740	<b>98.1</b>	<b>6760</b>
464.h264ref	32	900	787	<b>900</b>	<b>786</b>	902	785	32	<b>878</b>	<b>807</b>	877	808	878	806
471.omnetpp	32	496	403	<b>496</b>	<b>403</b>	494	405	32	475	421	473	423	<b>474</b>	<b>422</b>
473.astar	32	<b>598</b>	<b>376</b>	598	376	597	376	32	<b>598</b>	<b>376</b>	598	376	597	376
483.xalancbmk	32	292	757	<b>291</b>	<b>758</b>	291	759	32	292	757	<b>291</b>	<b>758</b>	291	759

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

## Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl 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

### Bios Settings

Power Technology = Energy Efficient  
Enforce POR = Disabled

### BMC Setting

Fan Mode = Full Speed

```
Sysinfo program /cpu2006.1.2/config/sysinfo.rev6818
$Rev: 6818 $ $Date::: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on localhost.localdomain Sat Jan 17 06:42:36 2015
```

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

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## Platform Notes (Continued)

```
model name : Intel(R) Xeon(R) CPU E5-2630 v3 @ 2.40GHz
  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:      264424128 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 2.6.32-358.11.1.el6.x86_64 #1 SMP Tue Nov 19
17:43:04 CET 2013 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jan 16 12:34

SPEC is set to: /cpu2006.1.2
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda1        ext4  193G   71G  112G  39%  /

Additional information from dmidecode:
BIOS American Megatrends Inc. 1.0b 10/29/2014
Memory:
 16x 16 GB
 2x Samsung (date:14/33) M393A2G40DB0-CPB 16 GB 1866 MHz 2 rank
 14x Samsung (date:14/4p) M393A2G40DB0-CPB 16 GB 1866 MHz 2 rank

(End of data from sysinfo program)
dmidecode does not properly detect memory modules
16 modules of 16 GB were used to run the test (256 GB total)
```

## General Notes

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

LD\_LIBRARY\_PATH = "/cpu2006.1.2/libs/32:/cpu2006.1.2/libs/64:/cpu2006.1.2/sh"

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## General Notes (Continued)

Transparent Huge Pages enabled with:  
echo always > /sys/kernel/mm/redhat\_transparent\_hugepage/enabled  
Filesystem page cache cleared with:  
echo 1> /proc/sys/vm/drop\_caches  
runspec command invoked through numactl i.e.:  
numactl --interleave=all runspec <etc>  
Binaries compiled on a system with 2x Xeon E5-2670 v3 chips + 128 GB memory  
using RedHat EL 6.4

## 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/cpu2006.1.2/sh -lsmartheap

## Base Other Flags

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



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## 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

## 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: -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.hmmer: -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

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## Peak Optimization Flags (Continued)

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:

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/cpu2006.1.2/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-ic14.0-official-linux64.20140128.html>  
<http://www.spec.org/cpu2006/flags/ACTION.SA-Platform-Flags-RevC-jan-2015-For-Supermicro-Platform.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml>  
<http://www.spec.org/cpu2006/flags/ACTION.SA-Platform-Flags-RevC-jan-2015-For-Supermicro-Platform.xml>

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

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