



# SPEC® CINT2006 Result

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## ACTION S.A.

**SPECint®\_rate2006 = 143**

ACTINA SOLAR 110 S5 (Intel Xeon E3-1220)

**SPECint\_rate\_base2006 = 137**

CPU2006 license: 9008

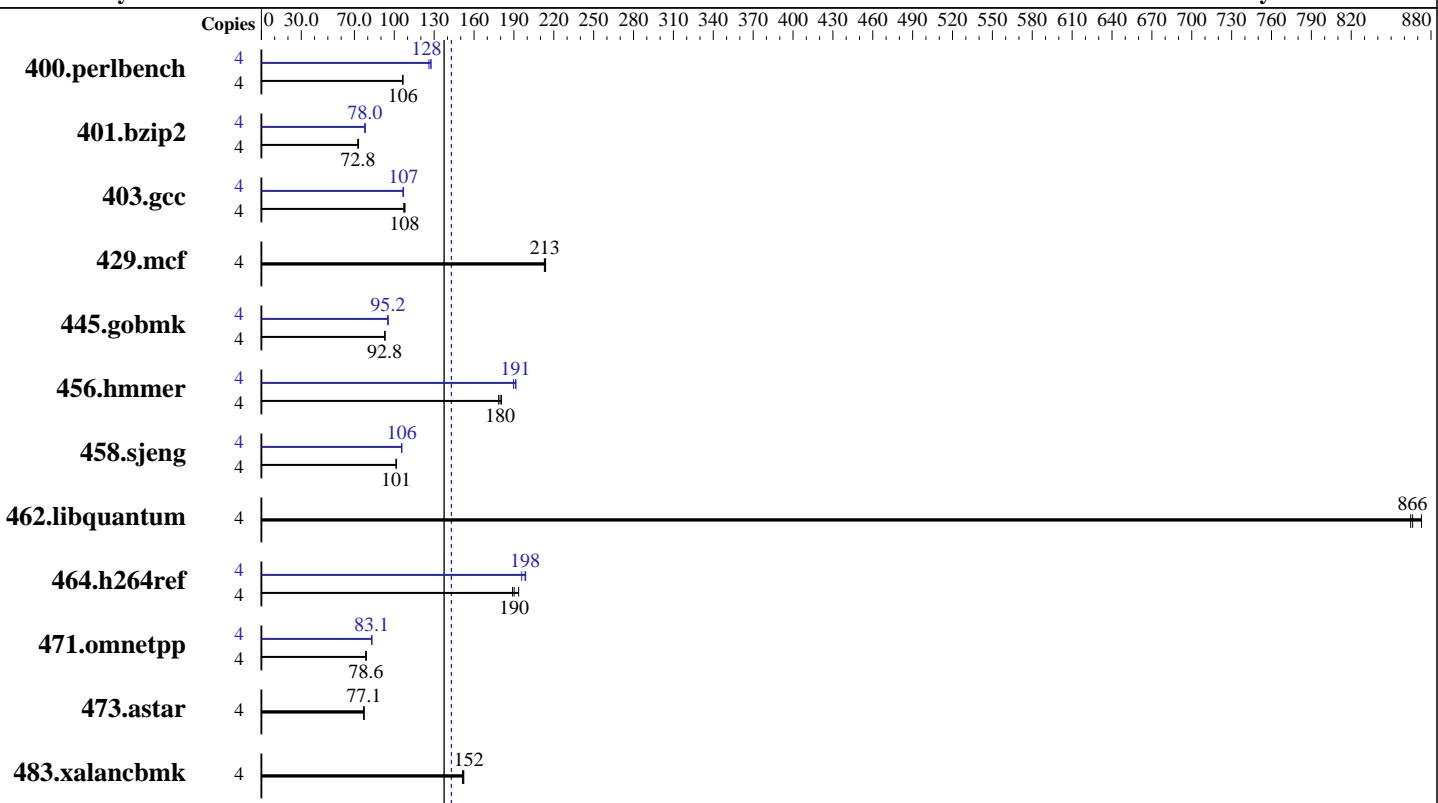
Test date: Feb-2012

Test sponsor: ACTION S.A.

Hardware Availability: Apr-2011

Tested by: ACTION S.A.

Software Availability: Oct-2011



**SPECint\_rate\_base2006 = 137**

**SPECint\_rate2006 = 143**

### Hardware

CPU Name: Intel Xeon E3-1220  
CPU Characteristics: Intel Turbo Boost Technology up to 3.40 GHz  
CPU MHz: 3100  
FPU: Integrated  
CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip  
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 (4 x 4 GB 2Rx8 PC3-10600E-9, ECC)  
Disk Subsystem: 1 TB SATA II, 7200 RPM  
Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64) 3.0.13-0.9-default  
Compiler: C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux  
Auto Parallel: No  
File System: ext3  
System State: Run level 3 (multi-user)  
Base Pointers: 32-bit  
Peak Pointers: 32/64-bit  
Other Software: Microquill SmartHeap V9.01



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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	4	368	106	<b>368</b>	<b>106</b>	367	107	4	<b>306</b>	<b>128</b>	306	128	310	126
401.bzip2	4	<b>530</b>	<b>72.8</b>	528	73.1	532	72.6	4	<b>495</b>	<b>78.0</b>	496	77.8	494	78.1
403.gcc	4	298	108	<b>299</b>	<b>108</b>	301	107	4	301	107	<b>301</b>	<b>107</b>	302	106
429.mcf	4	171	213	<b>171</b>	<b>213</b>	171	214	4	171	213	<b>171</b>	<b>213</b>	171	214
445.gobmk	4	<b>452</b>	<b>92.8</b>	451	93.1	452	92.8	4	441	95.1	440	95.3	<b>441</b>	<b>95.2</b>
456.hmmer	4	<b>208</b>	<b>180</b>	209	178	207	181	4	<b>195</b>	<b>191</b>	197	190	195	192
458.sjeng	4	<b>477</b>	<b>101</b>	478	101	477	102	4	<b>458</b>	<b>106</b>	459	106	458	106
462.libquantum	4	95.8	865	95.0	873	<b>95.7</b>	<b>866</b>	4	95.8	865	95.0	873	<b>95.7</b>	<b>866</b>
464.h264ref	4	457	194	<b>466</b>	<b>190</b>	468	189	4	452	196	<b>446</b>	<b>198</b>	445	199
471.omnetpp	4	<b>318</b>	<b>78.6</b>	316	79.0	318	78.6	4	301	83.1	301	82.9	<b>301</b>	<b>83.1</b>
473.astar	4	364	77.1	363	77.3	<b>364</b>	<b>77.1</b>	4	364	77.1	363	77.3	<b>364</b>	<b>77.1</b>
483.xalancbmk	4	181	152	<b>182</b>	<b>152</b>	182	151	4	181	152	<b>182</b>	<b>152</b>	182	151

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"

## 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"

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

## Base Compiler Invocation

C benchmarks:  
icc -m32

C++ benchmarks:  
icpc -m32



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## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3

C++ benchmarks:  
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3  
-Wl,-z,muldefs -L/smartheap -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.hmmmer: 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.hmmmer: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64

Continued on next page



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## Peak Portability Flags (Continued)

462.libquantum: -DSPEC\_CPU\_LINUX  
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) -auto-ilp32  
  
401.bzip2: -xAVX(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: -xAVX -ipo -O3 -no-prec-div  
  
429.mcf: basepeak = yes  
  
445.gobmk: -xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-ansi-alias -opt-mem-layout-trans=3  
  
456.hmmer: -xAVX -ipo -O3 -no-prec-div -unroll12 -auto-ilp32  
  
458.sjeng: -xAVX(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: -xAVX(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: -xAVX(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/smartheap -lsmartheap  
  
473.astar: basepeak = yes  
  
483.xalancbmk: basepeak = yes



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## 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](mailto:webmaster@spec.org).

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