



# SPEC® CINT2006 Result

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## ACTION S.A.

ACTINA SOLAR 220 X2 (Intel Xeon E5410, 2.33 GHz)

**SPECint®\_rate2006 = 113**

**SPECint\_rate\_base2006 = 104**

CPU2006 license: 9008

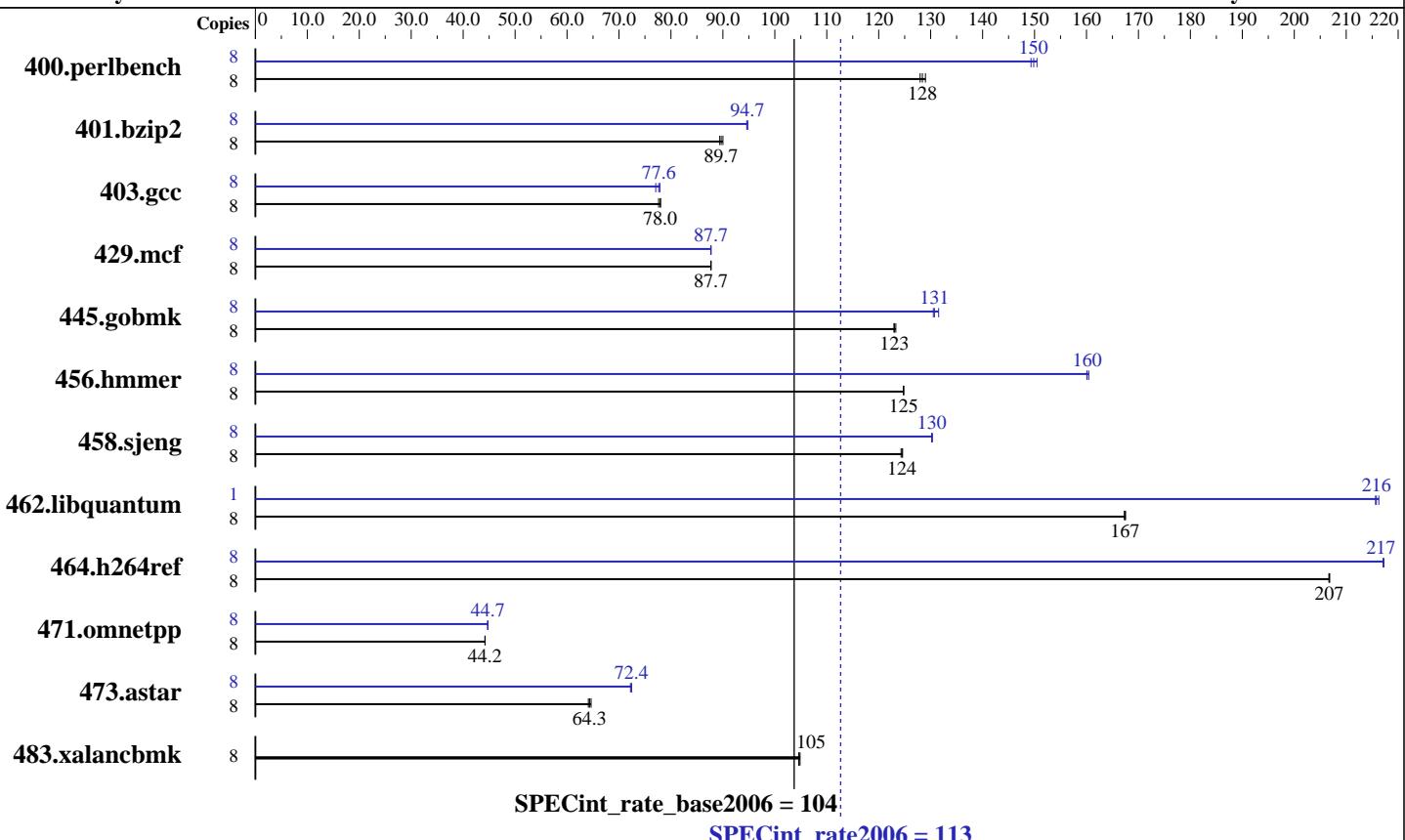
Test sponsor: ACTION S.A.

Tested by: ACTION S.A.

Test date: Dec-2008

Hardware Availability: Sep-2008

Software Availability: Nov-2008



### Hardware

CPU Name: Intel Xeon E5410  
CPU Characteristics: 1333 MHz System Bus  
CPU MHz: 2333  
FPU: Integrated  
CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip  
CPU(s) orderable: 1,2 chips  
Primary Cache: 32 KB I + 32 KB D on chip per core  
Secondary Cache: 12 MB I+D on chip per chip, 6 MB shared / 2 cores  
L3 Cache: None  
Other Cache: None  
Memory: 16 GB (8x2 GB, PC2-5300, CL 5-5-5, FB ECC)  
Disk Subsystem: 500 GB SATA, 7200 RPM  
Other Hardware: None

### Software

Operating System: SuSE Linux Enterprise Server 10 (x86\_64) with SP2, kernel 2.6.16.60-0.21-smp  
Compiler: Intel C++ Compiler 11.0 for Linux Build 20080730 Package ID: l\_cproc\_b\_11.0.042  
Auto Parallel: Yes  
File System: ReiserFS  
System State: Run level 3 (multi-user)  
Base Pointers: 32-bit  
Peak Pointers: 32/64-bit  
Other Software: Microquill SmartHeap V8.1 Binutils 2.18.50.0.7.20080502



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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	8	611	128	<b>609</b>	<b>128</b>	606	129	8	519	150	<b>522</b>	<b>150</b>	523	149
401.bzip2	8	864	89.4	<b>861</b>	<b>89.7</b>	858	90.0	8	<b>815</b>	<b>94.7</b>	815	94.8	816	94.6
403.gcc	8	826	78.0	830	77.6	<b>826</b>	<b>78.0</b>	8	827	77.9	836	77.1	<b>829</b>	<b>77.6</b>
429.mcf	8	832	87.7	832	87.7	<b>832</b>	<b>87.7</b>	8	832	87.7	<b>832</b>	<b>87.7</b>	832	87.7
445.gobmk	8	683	123	681	123	<b>682</b>	<b>123</b>	8	638	132	643	131	<b>642</b>	<b>131</b>
456.hmmer	8	<b>598</b>	<b>125</b>	598	125	598	125	8	466	160	<b>466</b>	<b>160</b>	465	160
458.sjeng	8	<b>778</b>	<b>124</b>	777	125	779	124	8	<b>743</b>	<b>130</b>	743	130	744	130
462.libquantum	8	<b>990</b>	<b>167</b>	989	168	991	167	1	<b>96.0</b>	<b>216</b>	96.1	216	95.8	216
464.h264ref	8	<b>856</b>	<b>207</b>	857	207	856	207	8	815	217	<b>815</b>	<b>217</b>	815	217
471.omnetpp	8	1132	44.2	<b>1131</b>	<b>44.2</b>	1130	44.2	8	<b>1118</b>	<b>44.7</b>	1117	44.7	1118	44.7
473.astar	8	876	64.1	<b>873</b>	<b>64.3</b>	869	64.6	8	775	72.4	<b>776</b>	<b>72.4</b>	778	72.2
483.xalancbmk	8	<b>527</b>	<b>105</b>	528	105	526	105	8	<b>527</b>	<b>105</b>	528	105	526	105

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

## Submit Notes

The config file option 'submit' was used.

## General Notes

Taskset was used to bind processes to cores except for 462.libquantum peak  
 OMP\_NUM\_THREADS set to number of processors  
 KMP\_AFFINITY set to "physical,0"  
 KMP\_STACKSIZE set to 64M

## Base Compiler Invocation

C benchmarks:  
 icc

C++ benchmarks:  
 icpc

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32

462.libquantum: -DSPEC\_CPU\_LINUX

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CPU2006 license: 9008	Test date: Dec-2008
Test sponsor: ACTION S.A.	Hardware Availability: Sep-2008
Tested by: ACTION S.A.	Software Availability: Nov-2008

## Base Portability Flags (Continued)

483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

```
-xSSE4.1 -ipo -O3 -no-prec-div -static -inline-calloc  
-opt-malloc-options=3 -opt-prefetch
```

C++ benchmarks:

```
-xSSE4.1 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/spec/cpu2006.1.1/lib -lsmartheap
```

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc

```
401.bzip2: /opt/intel/Compiler/11.0/042/bin/intel64/icc  
          -L/opt/intel/Compiler/11.0/042/ipp/em64t/lib  
          -I/opt/intel/Compiler/11.0/042/ipp/em64t/include
```

```
456.hmmr: /opt/intel/Compiler/11.0/042/bin/intel64/icc  
          -L/opt/intel/Compiler/11.0/042/ipp/em64t/lib  
          -I/opt/intel/Compiler/11.0/042/ipp/em64t/include
```

C++ benchmarks:

icpc

## Peak Portability Flags

```
400.perlbench: -DSPEC_CPU_LINUX_IA32  
401.bzip2: -DSPEC_CPU_LP64  
456.hmmr: -DSPEC_CPU_LP64  
462.libquantum: -DSPEC_CPU_LINUX  
483.xalancbmk: -DSPEC_CPU_LINUX
```



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**Software Availability:** Nov-2008

## Peak Optimization Flags

C benchmarks:

```
400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
                -no-prec-div -static -ansi-alias -opt-prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
                -no-prec-div -static -opt-prefetch -ansi-alias

403.gcc: -xSSE4.1 -ipo -O3 -no-prec-div -static -inline-calloc
                -opt-malloc-options=3

429.mcf: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
                -no-prec-div -static -opt-prefetch

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -O2 -ipo
                -no-prec-div -ansi-alias

456.hmmr: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll12
                -ansi-alias

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
                -no-prec-div -static -unroll14

462.libquantum: -xSSE4.1 -ipo -O3 -no-prec-div -static
                -opt-malloc-options=3 -parallel -par-runtime-control
                -opt-prefetch

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
                -no-prec-div -static -unroll12 -ansi-alias
```

C++ benchmarks:

```
471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
                -no-prec-div -ansi-alias -opt-ra-region-strategy=block
                -Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
                -no-prec-div -ansi-alias -opt-ra-region-strategy=routine
                -Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap

483.xalancbmk: basepeak = yes
```

## Peak Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```



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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090713.00.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090713.00.xml>

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

Tested with SPEC CPU2006 v1.1.

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