## **ACTINA SOLAR 220 S5 (Intel Xeon E5-2603)**

### CPU Details:
- **CPU Name:** Intel Xeon E5-2603
- **CPU Characteristics:**
  - **CPU MHz:** 1800
  - **FPU:** Integrated
  - **CPU(s) enabled:** 8 cores, 2 chips, 4 cores/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:** 10 MB I+D on chip per chip
  - **Other Cache:** None
- **Memory:** 256 GB (16 x 16 GB 2Rx4 PC3-12800R-11, ECC, running at 1066 MHz and CL7)
- **Disk Subsystem:** 1 x 2 TB SATA, 7200 RPM
- **Other Hardware:** None

### Software Details:
- **Operating System:** SUSE Linux Enterprise Server 11 SP2 (x86_64) 3.0.13-0.27-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

### Test Details:
- **Test date:** Jan-2013
- **Hardware Availability:** Mar-2012
- **Software Availability:** Feb-2012

### Results:
- **SPECint\_rate2006 = 173**
- **SPECint\_rate_base2006 = 166**

### Benchmark Scores:

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### Results Table

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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

Sysinfo program /cpu2006.1.2/config/sysinfo.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
running on SUT Sat Jan 19 15:04:36 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 E5-2603 0 @ 1.80GHz
- 2 "physical id"s (chips)
- 8 "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 : 4
- siblings : 4

Continued on next page
**SPEC CINT2006 Result**

**ACTION S.A.**

**ACTINA SOLAR 220 S5 (Intel Xeon E5-2603)**

<table>
<thead>
<tr>
<th>SPECint_rate2006</th>
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<td>SPECint_rate_base2006</td>
<td>166</td>
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</table>

**CPU2006 license:** 9008  
**Test sponsor:** ACTION S.A.  
**Tested by:** ACTION S.A.

**Test date:** Jan-2013  
**Hardware Availability:** Mar-2012  
**Software Availability:** Feb-2012

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**Platform Notes (Continued)**

- physical 0: cores 0 1 2 3  
- physical 1: cores 0 1 2 3  
- cache size : 10240 KB

- `/usr/bin/lsb_release -d`
  SUSE Linux Enterprise Server 11 (x86_64)

- From `/etc/*release* /etc/*version*`
  `SuSE-release:`
  - SUSE Linux Enterprise Server 11 (x86_64)  
  - `VERSION = 11`
  - `PATCHLEVEL = 2`

- `uname -a:`
  - Linux SUT 3.0.13-0.27-default #1 SMP Wed Feb 15 13:33:49 UTC 2012 (d73692b)  
  - x86_64 x86_64 x86_64 GNU/Linux

- `/run-level 3 Jan 16 08:23 last=S`

- `SPEC is set to: /cpu2006.1.2`
  - Filesystem | Type | Size | Used | Avail | Use% | Mounted on
  - /dev/sda2 | ext3 | 1.6T | 64G | 1.5T | 5% | /

- Additional information from dmidecode:

  (End of data from sysinfo program)

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**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
- Transparent Huge Pages enabled with:  
  - `echo always > /sys/kernel/mm/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>`
ACTION S.A.

ACTINA SOLAR 220 S5 (Intel Xeon E5-2603)

SPECint_rate2006 = 173
SPECint_rate_base2006 = 166

CPU2006 license: 9008
Test sponsor: ACTION S.A.
Tested by: ACTION S.A.

Test date: Jan-2013
Hardware Availability: Mar-2012
Software Availability: Feb-2012

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:
  -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3

C++ benchmarks:
  -xSSE4.2 -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.hmmer: icc -m64
  458.sjeng: icc -m64

C++ benchmarks:
  icpc -m32
ACTION S.A.

ACTINA SOLAR 220 S5 (Intel Xeon E5-2603)  

**SPEC CINT2006 Result**

| SPECint_rate2006 | 173 |
| SPECint_rate_base2006 | 166 |

**CPU2006 license:** 9008  
**Test sponsor:** ACTION S.A.  
**Tested by:** ACTION S.A.  
**Test date:** Jan-2013  
**Hardware Availability:** Mar-2012  
**Software Availability:** Feb-2012

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**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: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-auto-ilp32

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-opt-prefetch -auto-ilp32 -ansi-alias

403.gcc: -xSSE4.2 -ipo -03 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-ansi-alias -opt-mem-layout-trans=3

456.hmmer: -xSSE4.2 -ipo -03 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-unroll4 -auto-ilp32

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-unroll2 -ansi-alias

**C++ benchmarks:**

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-03(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
## SPEC CINT2006 Result

### ACTION S.A.

ACTINA SOLAR 220 S5 (Intel Xeon E5-2603)

| SPECint_rate2006 | 173 |
| SPECint_rate_base2006 | 166 |

| CPU2006 license: | 9008 |
| Test sponsor: | ACTION S.A. |
| Tested by: | ACTION S.A. |
| Test date: | Jan-2013 |
| Hardware Availability: | Mar-2012 |
| Software Availability: | Feb-2012 |

### Peak Optimization Flags (Continued)

483.xalancbmk: basepeak = yes

### 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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