SPEC® CINT2006 Result
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ACTION S.A.

ACTINA SOLAR 442 S3 (Intel Xeon E7210, 2.4 GHz)

$SPECint^{®}\_rate2006 =$ 67.1

$SPECint\_rate\_base2006 =$ 56.6

CPU2006 license: 3388	**Test date:** Aug-2008
Test sponsor: ACTION S.A.	**Hardware Availability:** Dec-2007
Tested by: ACTION S.A.	**Software Availability:** Nov-2007

Copies

400.perlbench — 4: 75.2 / 4: 63.0
401.bzip2 — 4: 52.7 / 4: 49.3
403.gcc — 4: 53.4 / 4: 53.5
429.mcf — 4: 58.4 / 4: 59.6
445.gobmk — 4: 69.0 / 4: 62.2
456.hmmer — 4: 87.8 / 4: 50.6
458.sjeng — 4: 62.4 / 4: 55.7
462.libquantum — 1: 123 / 4: 51.5
464.h264ref — 4: 105 / 4: 99.6
471.omnetpp — 4: 38.2 / 4: 36.5
473.astar — 4: 48.2 / 4: 44.0
483.xalancbmk — 4: 75.4

SPECint_rate_base2006 = 56.6

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Hardware

CPU Name:	Intel Xeon E7210
CPU Characteristics:	1066 MHz bus
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2,4 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per core
L3 Cache:	None
Other Cache:	None
Memory:	16 GB (8x 2 GB PC2-5300 ECC FBDIMM)
Disk Subsystem:	1x 250 GB SATA, 7200RPM
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
Compiler:	Intel C++ Compiler 10.1 for Linux Build 20070913 Package ID: l_cc_p_10.1.008
Auto Parallel:	Yes
File System:	ReiserFS
System State:	Multi-user, run level 3
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V8.1 Binutils 2.17.50.0.15

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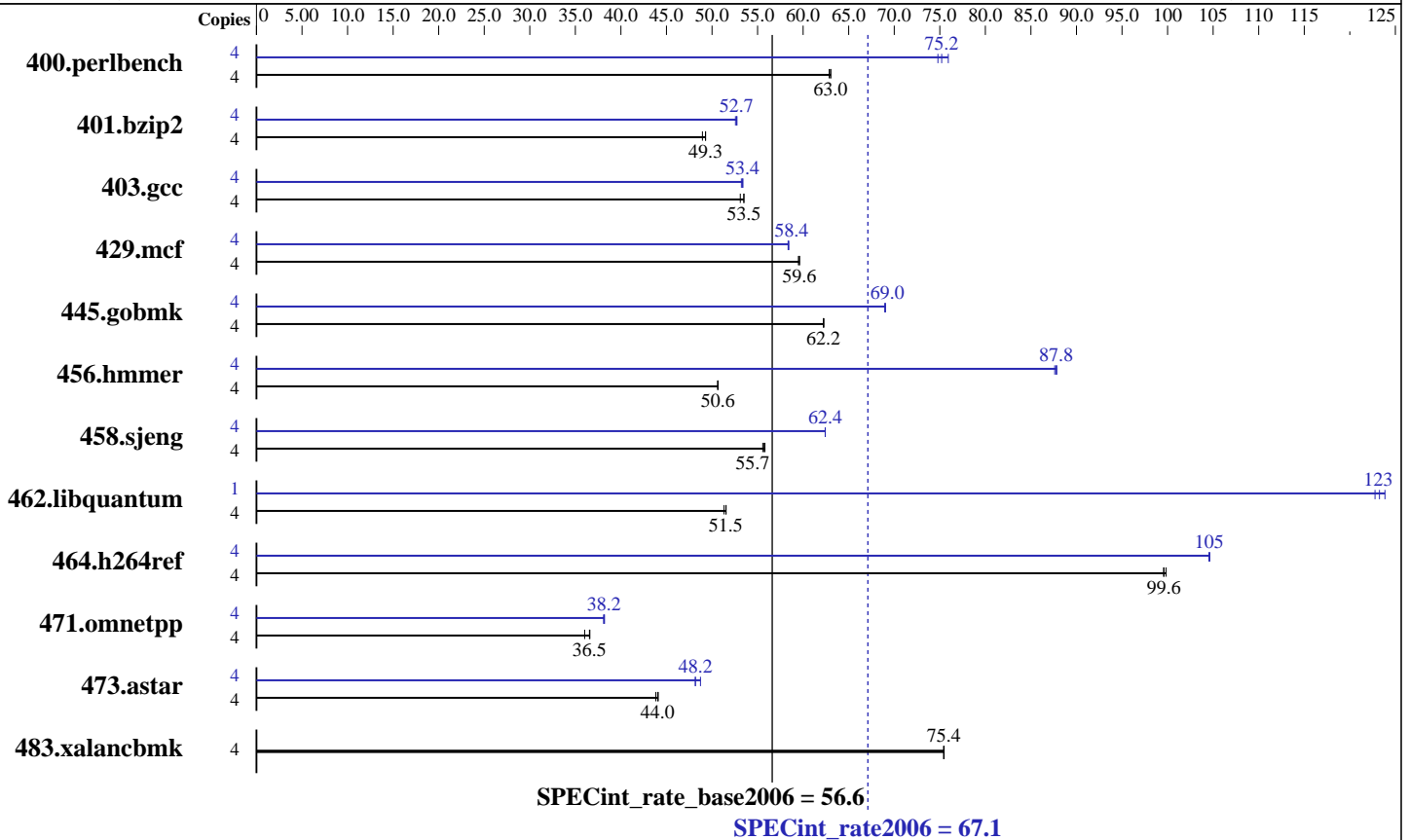SPECint_rate_base2006 = 56.6

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Results Table

Benchmark	Base Copies	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Peak Copies	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio
400.perlbench	4	620	63.0	**620**	**63.0**	622	62.9	4	**520**	**75.2**	515	75.9	523	74.8
401.bzip2	4	783	49.3	**783**	**49.3**	789	48.9	4	732	52.7	**733**	**52.7**	734	52.6
403.gcc	4	**602**	**53.5**	602	53.5	606	53.1	4	605	53.2	**604**	**53.4**	603	53.4
429.mcf	4	613	59.5	612	59.6	**612**	**59.6**	4	624	58.4	**625**	**58.4**	625	58.3
445.gobmk	4	674	62.3	**674**	**62.2**	674	62.2	4	**608**	**69.0**	608	69.0	608	69.0
456.hmmer	4	737	50.6	737	50.6	**737**	**50.6**	4	426	87.6	**425**	**87.8**	425	87.8
458.sjeng	4	**869**	**55.7**	867	55.8	871	55.6	4	775	62.4	775	62.4	**775**	**62.4**
462.libquantum	4	1608	51.5	1615	51.3	**1609**	**51.5**	1	169	123	**168**	**123**	167	124
464.h264ref	4	887	99.8	**889**	**99.6**	889	99.6	4	847	105	**847**	**105**	846	105
471.omnetpp	4	694	36.0	**684**	**36.5**	683	36.6	4	**655**	**38.2**	656	38.1	654	38.2
473.astar	4	641	43.8	637	44.1	**638**	**44.0**	4	583	48.2	576	48.7	**583**	**48.2**
483.xalancbmk	4	366	75.5	**366**	**75.4**	366	75.4	4	366	75.5	**366**	**75.4**	366	75.4

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

General Notes

All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmer,
for peak, are compiled in 64-bit mode.
Taskset command was used to bind processes to CPUs.

Base Compiler Invocation

C benchmarks:
    icc

C++ benchmarks:
    icpc

Base Portability Flags

    400.perlbench: -DSPEC_CPU_LINUX_IA32
    462.libquantum: -DSPEC_CPU_LINUX
    483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
    -fast -inline-calloc -opt-malloc-options=3

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Base Optimization Flags (Continued)

C++ benchmarks:
```
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/spec/users/rahul/cpu2006.1.0/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/cce/10.1.008/bin/icc
           -L/opt/intel/cce/10.1.008/lib
           -I/opt/intel/cce/10.1.008/include
```

```
456.hmmer: /opt/intel/cce/10.1.008/bin/icc
           -L/opt/intel/cce/10.1.008/lib
           -I/opt/intel/cce/10.1.008/include
```

C++ benchmarks:
```
icpc
```

Peak Portability Flags

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

Peak Optimization Flags

C benchmarks:

```
400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -fast -ansi-alias
               -prefetch
```

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Peak Optimization Flags (Continued)

401.bzip2: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -prefetch`

403.gcc: `-fast -inline-calloc -opt-malloc-options=3`

429.mcf: `-fast -prefetch`

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

456.hmmer: `-fast -unroll2 -ansi-alias -opt-multi-version-aggressive`

458.sjeng: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll4`

462.libquantum: `-fast -unroll4 -Ob0 -prefetch`
`-opt-streaming-stores always -vec-guard-write`
`-opt-malloc-options=3 -parallel -par-runtime-control`

464.h264ref: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2`
`-ansi-alias`

C++ benchmarks:

471.omnetpp: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xT -O3 -ipo`
`-no-prec-div -ansi-alias -opt-ra-region-strategy=block`
`-Wl,-z,muldefs`
`-L/spec/users/rahul/cpu2006.1.0/lib -lsmartheap`

473.astar: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xT -O3 -ipo`
`-no-prec-div -ansi-alias -opt-ra-region-strategy=routine`
`-Wl,-z,muldefs`
`-L/spec/users/rahul/cpu2006.1.0/lib -lsmartheap`

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-ic10.1-int-linux64-revC.20090714.00.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic10.1-int-linux64-revC.20090714.00.xml

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