# SPEC® CINT2006 Result



## Fujitsu Siemens Computers

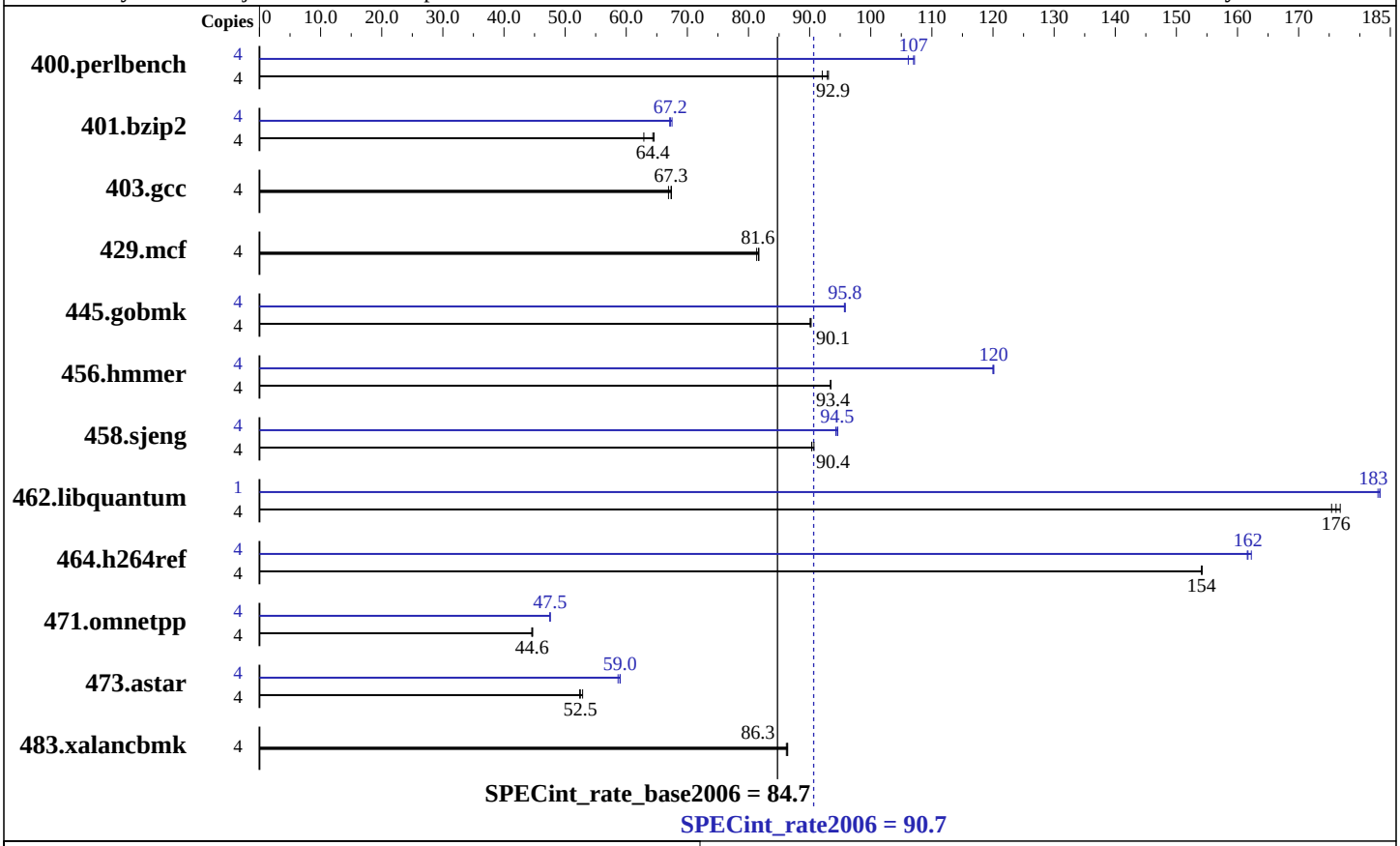
PRIMERGY TX300 S4, Intel Xeon X5270, 3.50 GHz

SPECint®_rate2006 = 90.7

SPECint_rate_base2006 = 84.7

**CPU2006 license:** 22
**Test sponsor:** Fujitsu Siemens Computers
**Tested by:** Fujitsu Siemens Computers

**Test date:** Oct-2008
**Hardware Availability:** Oct-2008
**Software Availability:** Nov-2008




## Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon X5270 |
| CPU Characteristics: | 1333 MHz system bus |
| CPU MHz: | 3500 |
| FPU: | Integrated |
| CPU(s) enabled: | 4 cores, 2 chips, 2 cores/chip |
| CPU(s) orderable: | 1,2 chips |
| Primary Cache: | 32 KB I + 32 KB D on chip per core |
| Secondary Cache: | 6 MB I+D on chip per chip |
| L3 Cache: | None |
| Other Cache: | None |
| Memory: | 16 GB (8x2 GB PC2-5300F, 2 rank, CL5-5-5, ECC) |
| Disk Subsystem: | 1x SATA, 160 GB, 7200 rpm |
| Other Hardware: | None |

## Software

| | |
|---|---|
| Operating System: | SUSE Linux Enterprise Server 10 (x86_64) 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: | ext3 |
| System State: | Multi-User Run Level 3 |
| Base Pointers: | 32-bit |
| Peak Pointers: | 32/64-bit |
| Other Software: | Microquill SmartHeap Library, Version 8.1 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 | 4 | 420 | 93.1 | **421** | **92.9** | 424 | 92.1 | 4 | 368 | 106 | **365** | **107** | 365 | 107 |
| 401.bzip2 | 4 | **600** | **64.4** | 614 | 62.9 | 598 | 64.5 | 4 | **574** | **67.2** | 572 | 67.5 | 575 | 67.1 |
| 403.gcc | 4 | **478** | **67.3** | 478 | 67.4 | 481 | 66.9 | 4 | **478** | **67.3** | 478 | 67.4 | 481 | 66.9 |
| 429.mcf | 4 | 448 | 81.3 | 447 | 81.7 | **447** | **81.6** | 4 | 448 | 81.3 | 447 | 81.7 | **447** | **81.6** |
| 445.gobmk | 4 | **466** | **90.1** | 466 | 90.1 | 465 | 90.2 | 4 | 438 | 95.8 | **438** | **95.8** | 439 | 95.7 |
| 456.hmmer | 4 | 399 | 93.4 | 399 | 93.5 | **399** | **93.4** | 4 | 311 | 120 | 311 | 120 | **311** | **120** |
| 458.sjeng | 4 | 536 | 90.3 | **536** | **90.4** | 534 | 90.7 | 4 | 513 | 94.3 | 512 | 94.6 | **512** | **94.5** |
| 462.libquantum | 4 | 473 | 175 | **471** | **176** | 469 | 177 | 1 | 113 | 183 | **113** | **183** | 113 | 183 |
| 464.h264ref | 4 | 574 | 154 | **574** | **154** | 574 | 154 | 4 | **547** | **162** | 546 | 162 | 548 | 162 |
| 471.omnetpp | 4 | **561** | **44.6** | 559 | 44.7 | 561 | 44.6 | 4 | 526 | 47.5 | 526 | 47.6 | **526** | **47.5** |
| 473.astar | 4 | 536 | 52.4 | **535** | **52.5** | 531 | 52.9 | 4 | 476 | 59.0 | **476** | **59.0** | 479 | 58.7 |
| 483.xalancbmk | 4 | 319 | 86.4 | **320** | **86.3** | 320 | 86.2 | 4 | 319 | 86.4 | **320** | **86.3** | 320 | 86.2 |

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.
 taskset has been used to bind processes to cores except
 for 462.libquantum peak
```

## Operating System Notes

```
 'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
 OMP_NUM_THREADS set to number of cores
 KMP_AFFINITY set to "physical,0"
 KMP_STACKSIZE set to 64M
```

## Platform Notes

```
 BIOS configuration:
 Adjacent Sector Prefetch = Disable
 Memory Throttling = Enable
```

## General Notes

```
 For information about Fujitsu Siemens Computers please see:
 http://www.fujitsu-siemens.com
```

## 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:
-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.hmmer: /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

Continued on next page

## Peak Compiler Invocation (Continued)

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) -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: basepeak = yes

429.mcf: basepeak = yes

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

456.hmmer: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2
-ansi-alias

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -unroll4

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 -unroll2 -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

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## Peak Optimization Flags (Continued)

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`

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.20090713.12.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.20090713.12.xml`



For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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