# SPEC® CINT2006 Result

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## Fujitsu Siemens Computers

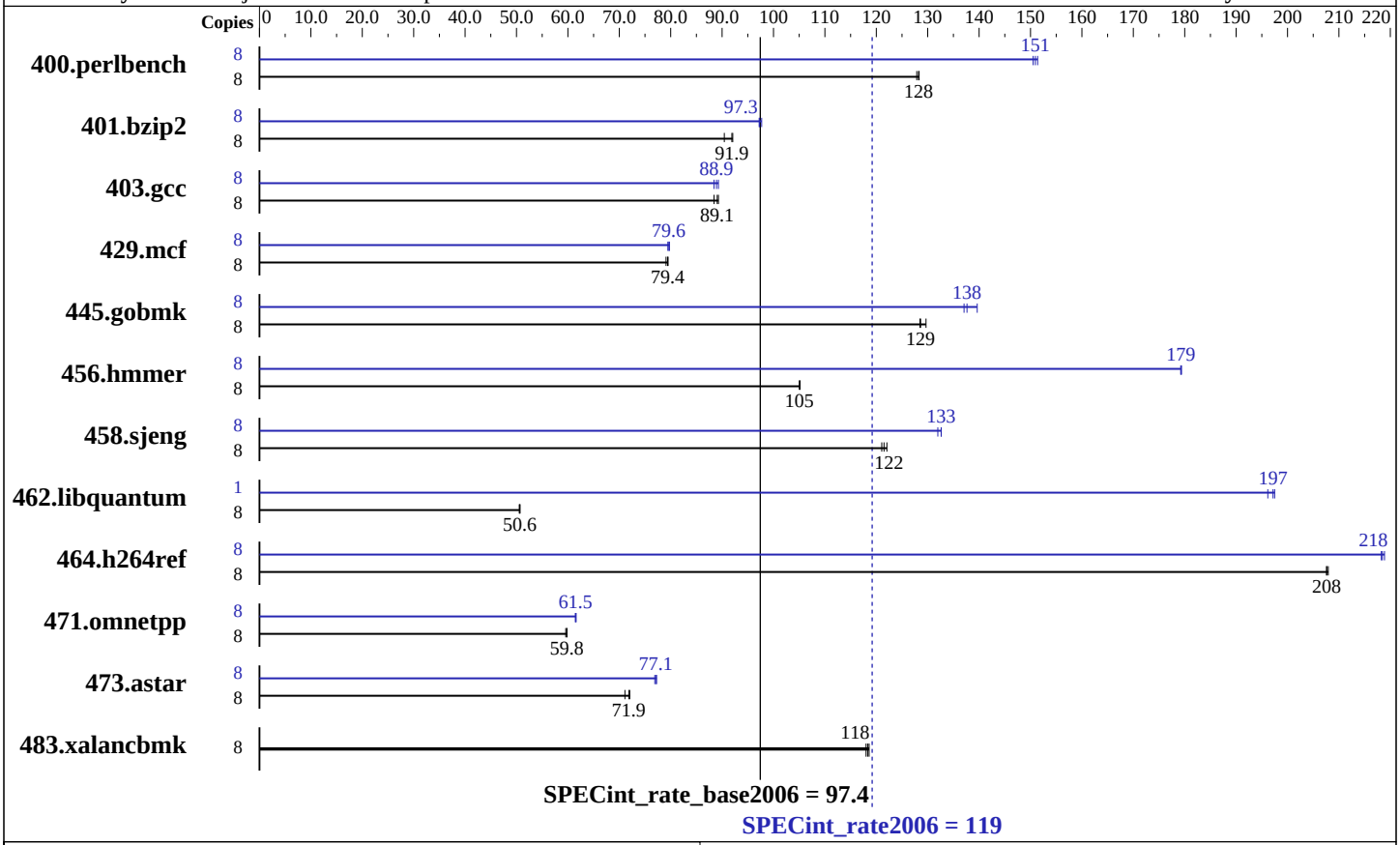
PRIMERGY TX300 S4, Intel Xeon L5420, 2.50 GHz

SPECint®_rate2006 = 119

SPECint_rate_base2006 = 97.4

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

**Test date:** Jan-2008
**Hardware Availability:** Mar-2008
**Software Availability:** Nov-2007




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon L5420 |
| CPU Characteristics: | 1333 MHz system bus |
| CPU MHz: | 2500 |
| 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 PC2-5300F, 2 rank, CAS 5-5-5, with ECC) |
| Disk Subsystem: | Seagate ST973451SS (SAS, 73GB, 15000rpm) |
| 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 for Linux32 and Linux64 Version 10.1 - Build 20070725 |
| Auto Parallel: | Yes |
| File System: | ext2 |
| System State: | Multiuser, Runlevel 3 |
| Base Pointers: | 32-bit |
| Peak Pointers: | 32/64-bit |
| Other Software: | MicroQuill SmartHeap Library, Version 8.1<br>binutils-2.17.tar.gz, Version 2.17 |

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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 | **610** | **128** | 611 | 128 | 609 | 128 | 8 | 516 | 151 | **518** | **151** | 519 | 151 |
| 401.bzip2 | 8 | **840** | **91.9** | 838 | 92.1 | 854 | 90.4 | 8 | **793** | **97.3** | 790 | 97.7 | 794 | 97.2 |
| 403.gcc | 8 | 721 | 89.3 | 728 | 88.4 | **723** | **89.1** | 8 | 721 | 89.3 | **724** | **88.9** | 728 | 88.4 |
| 429.mcf | 8 | 922 | 79.1 | 918 | 79.5 | **919** | **79.4** | 8 | 915 | 79.8 | **916** | **79.6** | 918 | 79.4 |
| 445.gobmk | 8 | 653 | 128 | **652** | **129** | 647 | 130 | 8 | **610** | **138** | 612 | 137 | 601 | 140 |
| 456.hmmer | 8 | **710** | **105** | 710 | 105 | 711 | 105 | 8 | 416 | 179 | 416 | 179 | **416** | **179** |
| 458.sjeng | 8 | 793 | 122 | **797** | **122** | 800 | 121 | 8 | 734 | 132 | **730** | **133** | 730 | 133 |
| 462.libquantum | 8 | 3280 | 50.5 | 3270 | 50.7 | **3273** | **50.6** | 1 | **105** | **197** | 106 | 196 | 105 | 197 |
| 464.h264ref | 8 | **853** | **208** | 851 | 208 | 853 | 208 | 8 | 809 | 219 | 811 | 218 | **810** | **218** |
| 471.omnetpp | 8 | 836 | 59.8 | **836** | **59.8** | 839 | 59.6 | 8 | **813** | **61.5** | 812 | 61.6 | 814 | 61.5 |
| 473.astar | 8 | 790 | 71.1 | 780 | 72.0 | **782** | **71.9** | 8 | 727 | 77.3 | 730 | 76.9 | **728** | **77.1** |
| 483.xalancbmk | 8 | 468 | 118 | **467** | **118** | 465 | 119 | 8 | 468 | 118 | **467** | **118** | 465 | 119 |

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

## Operating System Notes

'OMP_NUM_THREADS' set to number of cores (default)

## General Notes

This result has been produced with binaries provided and compiled by Intel.

All binaries were built with 32-bit Intel compiler except:
401.bzip2 and 456.hmmer in peak were built with 64-bit Intel
compiler by changing the path for include and library files.

BIOS configuration:
Adjacent Sector Prefetch = Disable

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

C++ benchmarks:
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/home/cmplr/usr3/alrahate/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: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/include

456.hmmer: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/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

Continued on next page

## Peak Portability Flags (Continued)

483.xalancbmk: -DSPEC_CPU_LINUX

## Peak Optimization Flags

C benchmarks:

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

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/home/cmplr/usr3/alrahate/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/home/cmplr/usr3/alrahate/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-ia32-intel64-linux-flags.20090714.01.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.01.xml`


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For other inquiries, please contact webmaster@spec.org.

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