# SPEC® CINT2006 Result



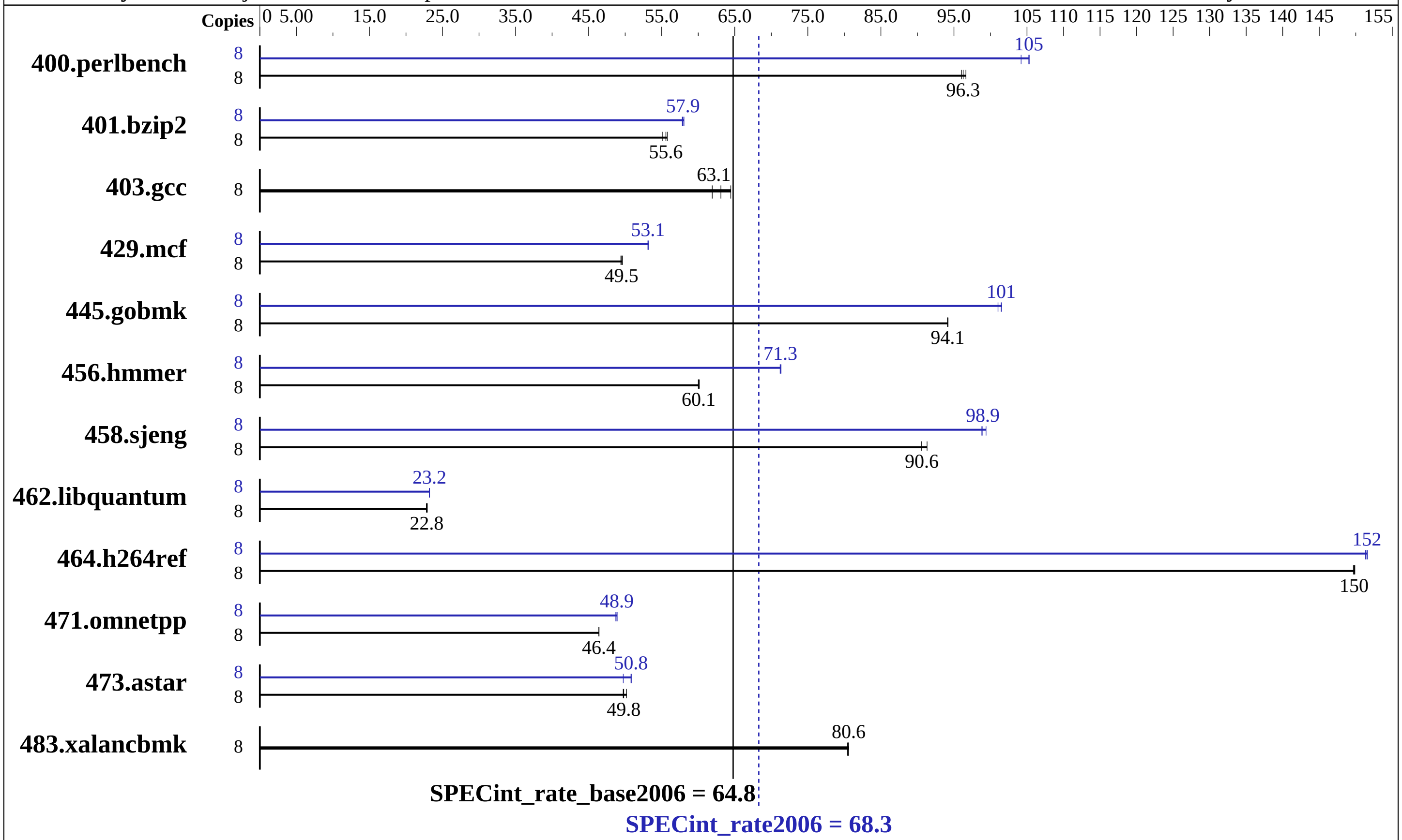
## Fujitsu Siemens Computers

PRIMERGY RX200 S3, Intel Xeon processor E5320, 1.86 GHz

SPECint®_rate2006 = 68.3

SPECint_rate_base2006 = 64.8

| | | | |
|---|---|---|---|
| **CPU2006 license:** 22 | | **Test date:** | Jun-2007 |
| **Test sponsor:** | Fujitsu Siemens Computers | **Hardware Availability:** | Nov-2006 |
| **Tested by:** | Fujitsu Siemens Computers | **Software Availability:** | Mar-2007 |




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon E5320 |
| CPU Characteristics: | 1067 MHz system bus |
| CPU MHz: | 1867 |
| 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: | 8 MB I+D on chip per chip, 4 MB shared / 2 cores |
| L3 Cache: | None |
| Other Cache: | None |
| Memory: | 16 GB (8x2 GB DDR2 PC2-5300F, 2 rank, CAS 5-5-5, with ECC) |
| Disk Subsystem: | SAS (73GB 15400 rpm) |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | 64-Bit SUSE LINUX Enterprise Server 10, Kernel 2.6.16.21-0.8-smp on an x86_64 |
| Compiler: | Intel C++ Compiler for IA32/EM64T application, Version 9.1 - Build 20070215, Package-ID: l_cc_p_9.1.047 |
| Auto Parallel: | No |
| File System: | ext2 |
| System State: | Multiuser, Runlevel 3 |
| Base Pointers: | 32-bit |
| Peak Pointers: | 32/64-bit |
| Other Software: | Smart Heap Library, Version 8.1 |

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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 | 814 | 96.0 | **812** | **96.3** | 809 | 96.6 | 8 | 750 | 104 | 742 | 105 | **743** | **105** |
| 401.bzip2 | 8 | 1400 | 55.1 | **1389** | **55.6** | 1385 | 55.8 | 8 | 1330 | 58.1 | **1333** | **57.9** | 1335 | 57.8 |
| 403.gcc | 8 | 999 | 64.5 | 1040 | 61.9 | **1021** | **63.1** | 8 | 999 | 64.5 | 1040 | 61.9 | **1021** | **63.1** |
| 429.mcf | 8 | 1477 | 49.4 | **1474** | **49.5** | 1470 | 49.6 | 8 | **1373** | **53.1** | 1374 | 53.1 | 1371 | 53.2 |
| 445.gobmk | 8 | 892 | 94.1 | **891** | **94.1** | 891 | 94.2 | 8 | **827** | **101** | 831 | 101 | 826 | 102 |
| 456.hmmer | 8 | **1243** | **60.1** | 1244 | 60.0 | 1241 | 60.1 | 8 | 1046 | 71.3 | 1048 | 71.2 | **1047** | **71.3** |
| 458.sjeng | 8 | **1068** | **90.6** | 1069 | 90.6 | 1060 | 91.3 | 8 | 974 | 99.4 | **978** | **98.9** | 980 | 98.7 |
| 462.libquantum | 8 | **7255** | **22.8** | 7272 | 22.8 | 7232 | 22.9 | 8 | **7139** | **23.2** | 7135 | 23.2 | 7148 | 23.2 |
| 464.h264ref | 8 | 1183 | 150 | **1182** | **150** | 1181 | 150 | 8 | 1170 | 151 | 1168 | 152 | **1168** | **152** |
| 471.omnetpp | 8 | 1078 | 46.4 | 1077 | 46.4 | **1077** | **46.4** | 8 | 1022 | 48.9 | **1023** | **48.9** | 1028 | 48.6 |
| 473.astar | 8 | **1128** | **49.8** | 1129 | 49.7 | 1119 | 50.2 | 8 | 1129 | 49.7 | 1104 | 50.8 | **1106** | **50.8** |
| 483.xalancbmk | 8 | 686 | 80.4 | **685** | **80.6** | 685 | 80.6 | 8 | 686 | 80.4 | **685** | **80.6** | 685 | 80.6 |

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

## Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
'/usr/bin/taskset' used to bind processes to CPUs
```

## General Notes

```
The system bus runs at 1067 MHz

All binaries were built with 32-bit Intel compiler except:
401.bzip2, 456.hmmer and 462.libquantum in peak were built with
64-bit Intel compiler by changing the path for include and library files.

BIOS configuration:
Hardware Prefetch = Disable, Adjacent Sector Prefetch = Disable

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http://www.fujitsu-siemens.com/countries
```

## Base Compiler Invocation

C benchmarks:
```
icc
```

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

# Base Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_X64`
462.libquantum: `-DSPEC_CPU_LINUX`
483.xalancbmk: `-DSPEC_CPU_LINUX`

# Base Optimization Flags

C benchmarks:
`-fast`

C++ benchmarks:
`-xP -O3 -ipo -no-prec-div -L/opt/SmartHeap_8_1/lib -lsmartheap`

# Peak Compiler Invocation

C benchmarks (except as noted below):
`icc`

401.bzip2: `/opt/intel/cce/9.1.047/bin/icc -I/opt/intel/cce/9.1.047/include -L/opt/intel/cce/9.1.047/lib`

456.hmmer: `/opt/intel/cce/9.1.047/bin/icc -I/opt/intel/cce/9.1.047/include -L/opt/intel/cce/9.1.047/lib`

462.libquantum: `/opt/intel/cce/9.1.047/bin/icc -I/opt/intel/cce/9.1.047/include -L/opt/intel/cce/9.1.047/lib`

C++ benchmarks:
`icpc`

# Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_X64`
401.bzip2: `-DSPEC_CPU_LP64`
456.hmmer: `-DSPEC_CPU_LP64`
462.libquantum: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`
483.xalancbmk: `-DSPEC_CPU_LINUX`

## Peak Optimization Flags

C benchmarks:

400.perlbench: -prof_gen(pass 1) -prof_use(pass 2) -fast

401.bzip2: -fast

403.gcc: basepeak = yes

429.mcf: -prof_gen(pass 1) -prof_use(pass 2) -fast -L/opt/SmartHeap_8_1/lib -lsmartheap

445.gobmk: Same as 429.mcf

456.hmmer: Same as 400.perlbench

458.sjeng: Same as 429.mcf

462.libquantum: Same as 400.perlbench

464.h264ref: Same as 429.mcf

C++ benchmarks:

471.omnetpp: -prof_gen(pass 1) -prof_use(pass 2) -xP -O3 -ipo -no-prec-div -L/opt/SmartHeap_8_1/lib -lsmartheap

473.astar: -prof_gen(pass 1) -prof_use(pass 2) -fast -L/opt/SmartHeap_8_1/lib -lsmartheap

483.xalancbmk: basepeak = yes

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.09.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.09.xml



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

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