



# SPEC® CINT2006 Result

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## Fujitsu Siemens Computers

PRIMERGY RX300 S3, Intel Xeon processor E5320,  
1.86 GHz

**SPECint\_rate2006 = 68.6**

**SPECint\_rate\_base2006 = 65.2**

CPU2006 license: 22

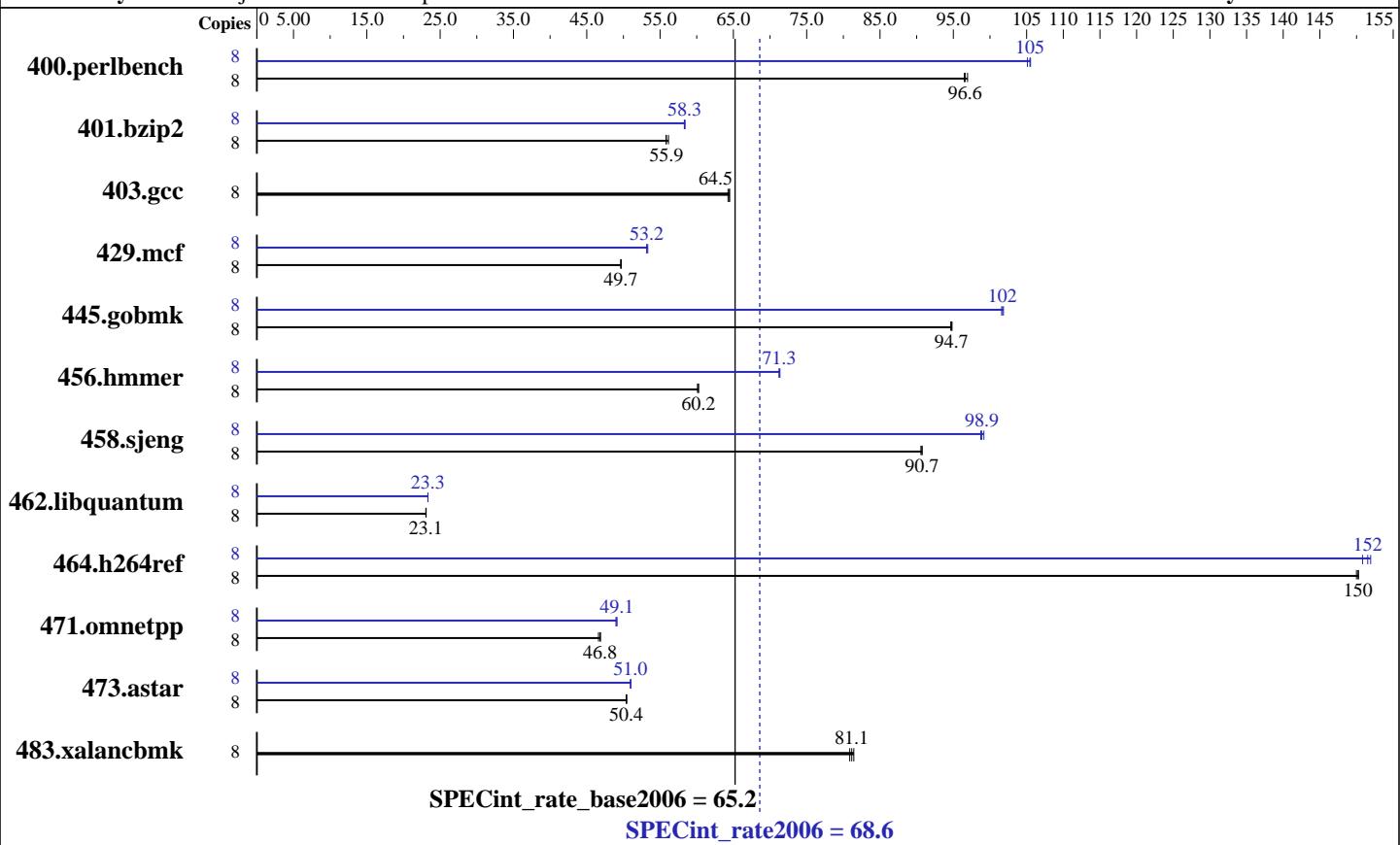
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Apr-2007

Hardware Availability: Nov-2006

Software Availability: Feb-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      | 806         | 96.9        | 810         | 96.5        | <b>809</b>  | <b>96.6</b> | 8      | 744         | 105         | <b>741</b>  | <b>105</b>  | 741        | 106        |
| 401.bzip2      | 8      | 1375        | 56.1        | 1383        | 55.8        | <b>1382</b> | <b>55.9</b> | 8      | 1322        | 58.4        | <b>1323</b> | <b>58.3</b> | 1324       | 58.3       |
| 403.gcc        | 8      | 999         | 64.5        | <b>999</b>  | <b>64.5</b> | 1002        | 64.3        | 8      | 999         | 64.5        | <b>999</b>  | <b>64.5</b> | 1002       | 64.3       |
| 429.mcf        | 8      | <b>1469</b> | <b>49.7</b> | 1470        | 49.6        | 1467        | 49.7        | 8      | 1368        | 53.3        | <b>1372</b> | <b>53.2</b> | 1372       | 53.2       |
| 445.gobmk      | 8      | 885         | 94.8        | 887         | 94.7        | <b>886</b>  | <b>94.7</b> | 8      | 826         | 102         | 824         | 102         | <b>825</b> | <b>102</b> |
| 456.hammer     | 8      | <b>1239</b> | <b>60.2</b> | 1242        | 60.1        | 1239        | 60.2        | 8      | <b>1047</b> | <b>71.3</b> | 1046        | 71.4        | 1048       | 71.2       |
| 458.sjeng      | 8      | <b>1067</b> | <b>90.7</b> | 1067        | 90.7        | 1069        | 90.6        | 8      | <b>979</b>  | <b>98.9</b> | 980         | 98.7        | 976        | 99.2       |
| 462.libquantum | 8      | 7177        | 23.1        | 7188        | 23.1        | <b>7187</b> | <b>23.1</b> | 8      | 7104        | 23.3        | <b>7103</b> | <b>23.3</b> | 7103       | 23.3       |
| 464.h264ref    | 8      | 1180        | 150         | <b>1179</b> | <b>150</b>  | 1178        | 150         | 8      | <b>1168</b> | <b>152</b>  | 1174        | 151         | 1165       | 152        |
| 471.omnetpp    | 8      | 1067        | 46.9        | <b>1068</b> | <b>46.8</b> | 1073        | 46.6        | 8      | 1018        | 49.1        | <b>1018</b> | <b>49.1</b> | 1021       | 49.0       |
| 473.astar      | 8      | <b>1114</b> | <b>50.4</b> | 1115        | 50.4        | 1113        | 50.5        | 8      | <b>1101</b> | <b>51.0</b> | 1101        | 51.0        | 1102       | 51.0       |
| 483.xalancbmk  | 8      | 678         | 81.4        | <b>680</b>  | <b>81.1</b> | 683         | 80.9        | 8      | 678         | 81.4        | <b>680</b>  | <b>81.1</b> | 683        | 80.9       |

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.hammer 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

The PRIMERGY RX300 S3 and the PRIMERGY TX300 S3 are electronically equivalent.

For information about Fujitsu Siemens Computers in your country please see:  
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## Base Compiler Invocation

C benchmarks:  
icc

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## Base Compiler Invocation (Continued)

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.hmmr: /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

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## Peak Portability Flags (Continued)

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](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](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.09.xml)



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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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