



# SPEC® CINT2006 Result

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## Fujitsu Siemens Computers

### SPECint®\_rate2006 = 40.0

PRIMERGY RX220, AMD Opteron 280 processor,  
2.40 GHz

### SPECint\_rate\_base2006 = 35.7

CPU2006 license: 22

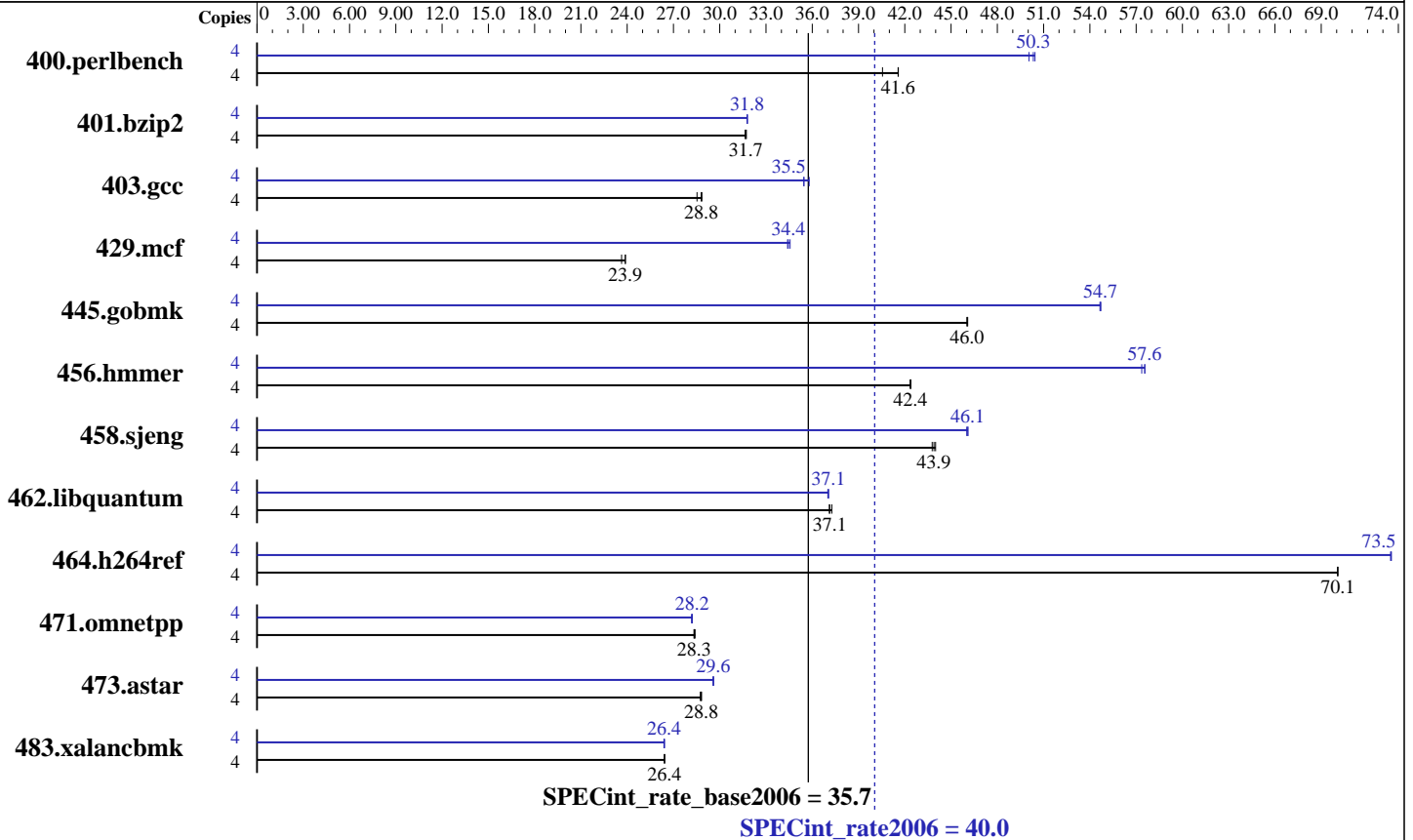
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Apr-2006

Hardware Availability: Dec-2005

Software Availability: Mar-2006



**Hardware**

CPU Name: AMD Opteron 280  
 CPU Characteristics: Opteron 280  
 CPU MHz: 2400  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 64 KB I + 64 KB D on chip per core  
 Secondary Cache: 1 MB I+D on chip per core  
 L3 Cache: None  
 Other Cache: None  
 Memory: 16 GB (8x2 GB DDR PC-3200R 2-rank CAS 3-3-3)  
 Disk Subsystem: Western Digital WD2500 (SATA, 7.2krpm)  
 Other Hardware: None

**Software**

Operating System: SuSE Linux Enterprise Server 9 (x86\_64) + SP3  
 Compiler: QLogic Pathscale Compiler Suite 2.4  
 Auto Parallel: No  
 File System: ext3  
 System State: Multi-user run level 3  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: None



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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	964	40.6	<b>940</b>	<b>41.6</b>	940	41.6	4	781	50.0	<b>776</b>	<b>50.3</b>	775	50.4
401.bzip2	4	1220	31.6	1217	31.7	<b>1218</b>	<b>31.7</b>	4	1214	31.8	<b>1214</b>	<b>31.8</b>	1215	31.8
403.gcc	4	1129	28.5	<b>1118</b>	<b>28.8</b>	1116	28.8	4	899	35.8	908	35.5	<b>908</b>	<b>35.5</b>
429.mcf	4	1543	23.6	<b>1528</b>	<b>23.9</b>	1527	23.9	4	1055	34.6	<b>1059</b>	<b>34.4</b>	1060	34.4
445.gobmk	4	<b>911</b>	<b>46.0</b>	911	46.1	911	46.0	4	768	54.7	767	54.7	<b>767</b>	<b>54.7</b>
456.hmmer	4	880	42.4	881	42.3	<b>881</b>	<b>42.4</b>	4	651	57.4	<b>648</b>	<b>57.6</b>	648	57.6
458.sjeng	4	<b>1103</b>	<b>43.9</b>	1100	44.0	1106	43.8	4	1052	46.0	<b>1050</b>	<b>46.1</b>	1050	46.1
462.libquantum	4	2224	37.3	2234	37.1	<b>2232</b>	<b>37.1</b>	4	2239	37.0	2237	37.1	<b>2237</b>	<b>37.1</b>
464.h264ref	4	1263	70.1	1263	70.1	<b>1263</b>	<b>70.1</b>	4	1204	73.5	1204	73.5	<b>1204</b>	<b>73.5</b>
471.omnetpp	4	880	28.4	882	28.3	<b>882</b>	<b>28.3</b>	4	<b>886</b>	<b>28.2</b>	887	28.2	886	28.2
473.astar	4	977	28.7	974	28.8	<b>975</b>	<b>28.8</b>	4	<b>949</b>	<b>29.6</b>	949	29.6	950	29.6
483.xalancbmk	4	<b>1045</b>	<b>26.4</b>	1044	26.4	1045	26.4	4	1044	26.4	<b>1046</b>	<b>26.4</b>	1046	26.4

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

## General Notes

taskset has been used to bind processes to CPUs

For information about Fujitsu Siemens Computers in your country please see:  
<http://www.fujitsu-siemens.com/countries>

## Base Compiler Invocation

C benchmarks:  
pathcc

C++ benchmarks:  
pathCC

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
 401.bzip2: -DSPEC\_CPU\_LP64  
 403.gcc: -DSPEC\_CPU\_LP64  
 429.mcf: -DSPEC\_CPU\_LP64  
 445.gobmk: -DSPEC\_CPU\_LP64  
 456.hmmer: -DSPEC\_CPU\_LP64

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## Base Portability Flags (Continued)

458.sjeng: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX  
464.h264ref: -DSPEC\_CPU\_LP64  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-Ofast  
  
C++ benchmarks:  
-Ofast -m32

## Peak Compiler Invocation

C benchmarks:  
pathcc  
  
C++ benchmarks:  
pathCC

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
401.bzip2: -DSPEC\_CPU\_LP64  
429.mcf: -DSPEC\_CPU\_LP64  
445.gobmk: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX  
464.h264ref: -DSPEC\_CPU\_LP64  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:  
  
400.perlbench: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -Ofast  
-IPA:plimit=525 -IPA:pu\_reorder=1  
  
401.bzip2: -O3 -LNO:ou\_prod\_max=10

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## Peak Optimization Flags (Continued)

403.gcc: -m32 -O3 -OPT:Ofast

429.mcf: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -m32 -O2  
-ipa

445.gobmk: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-OPT:alias=disjoint -LNO:simd=0 -LNO:minvariant=off

456.hmmmer: -O2 -OPT:alias=disjoint -WOPT:aggstr=0 -CG:cflow=0

458.sjeng: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-IPA:callee\_limit=5000 -IPA:linear=on

462.libquantum: -O3 -ipa -CG:local\_fwd\_sched=on -IPA:space=1000

464.h264ref: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-IPA:plimit=20000 -OPT:alias=disjoint -LNO:prefetch=0

C++ benchmarks:

471.omnetpp: -Ofast -IPA:pu\_reorder=2 -CG:gcm=off -m32

473.astar: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -Ofast

483.xalancbmk: -Ofast -m32

The flags file that was used to format this result can be browsed at

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090715.02.html](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090715.02.html)

You can also download the XML flags source by saving the following link:

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090715.02.xml](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090715.02.xml)

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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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