



# SPEC® CINT2006 Result

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## Fujitsu Siemens Computers

### SPECint®\_rate2006 = 25.9

PRIMERGY RX330 S1, AMD Opteron 2218, 2.60 GHz

### SPECint\_rate\_base2006 = 23.3

CPU2006 license: 22

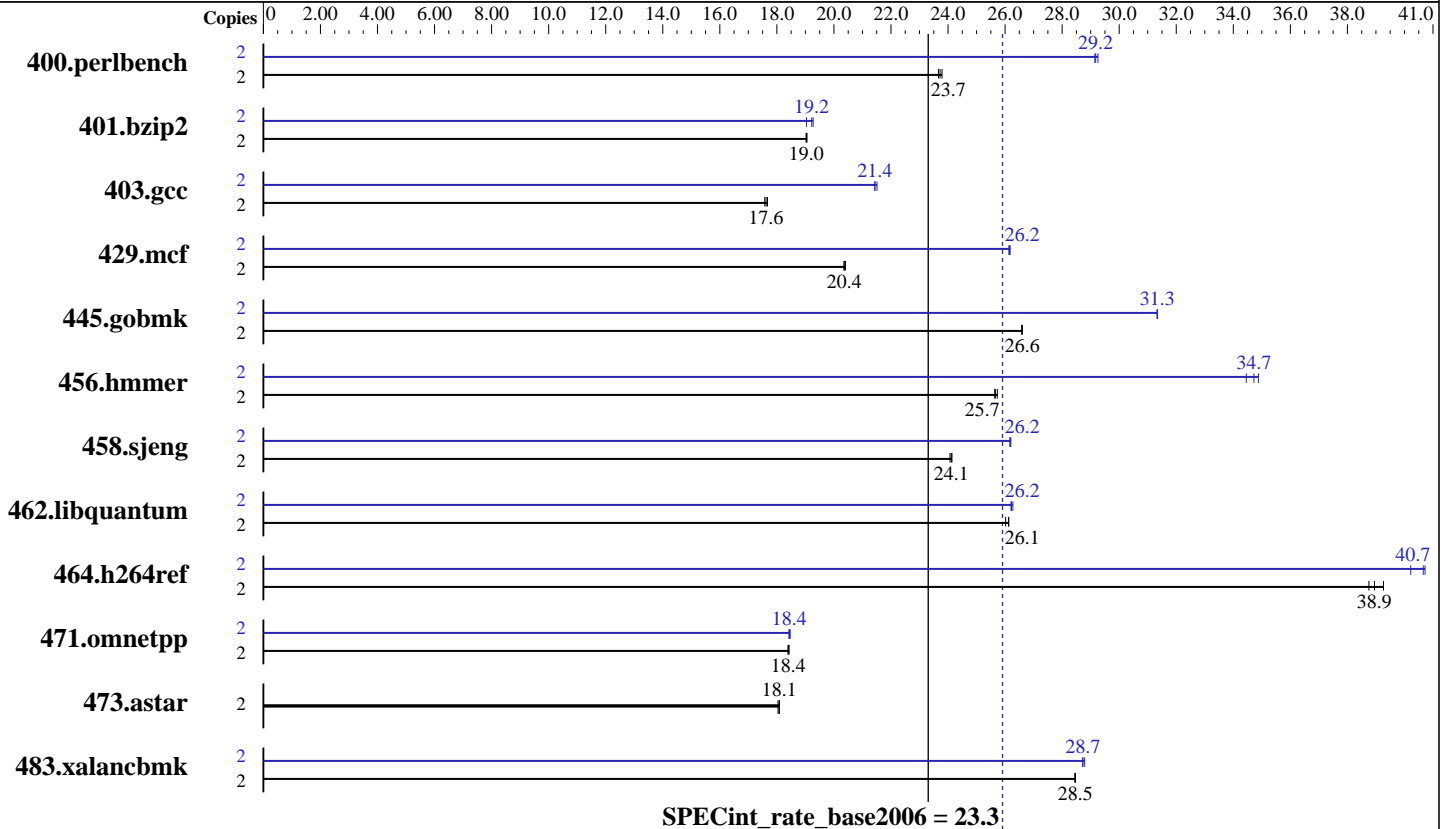
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Apr-2007

Hardware Availability: May-2007

Software Availability: Mar-2007



SPECint\_rate\_base2006 = 23.3

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### Hardware

CPU Name: AMD Opteron 2218  
 CPU Characteristics: 2218  
 CPU MHz: 2600  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 1 chip, 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: 32 GB (8x4 GB DDR2 PC2-5300P, 2 rank, CAS 5-5-5, with ECC)  
 Disk Subsystem: SAS (36GB 15.4 krpm)  
 Other Hardware: None

### Software

Operating System: SLES 10 for AMD64/EM64T  
 Compiler: QLogic PathScale Compiler Suite, - Release 3.0  
 Auto Parallel: No  
 File System: ReiserFS  
 System State: Multi-user run level 3  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: SmartHeap 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	2	826	23.7	<b>824</b>	<b>23.7</b>	821	23.8	2	668	29.3	670	29.1	<b>670</b>	<b>29.2</b>
401.bzip2	2	1013	19.1	<b>1014</b>	<b>19.0</b>	1014	19.0	2	1014	19.0	1001	19.3	<b>1004</b>	<b>19.2</b>
403.gcc	2	<b>914</b>	<b>17.6</b>	911	17.7	916	17.6	2	748	21.5	751	21.4	<b>751</b>	<b>21.4</b>
429.mcf	2	894	20.4	896	20.4	<b>896</b>	<b>20.4</b>	2	697	26.2	698	26.1	<b>697</b>	<b>26.2</b>
445.gobmk	2	789	26.6	<b>789</b>	<b>26.6</b>	789	26.6	2	670	31.3	<b>670</b>	<b>31.3</b>	669	31.3
456.hammer	2	<b>727</b>	<b>25.7</b>	728	25.6	725	25.7	2	542	34.5	535	34.9	<b>537</b>	<b>34.7</b>
458.sjeng	2	1003	24.1	<b>1004</b>	<b>24.1</b>	1005	24.1	2	925	26.2	<b>925</b>	<b>26.2</b>	924	26.2
462.libquantum	2	1593	26.0	<b>1586</b>	<b>26.1</b>	1586	26.1	2	1581	26.2	1577	26.3	<b>1580</b>	<b>26.2</b>
464.h264ref	2	<b>1136</b>	<b>38.9</b>	1127	39.3	1142	38.8	2	1087	40.7	1100	40.2	<b>1089</b>	<b>40.7</b>
471.omnetpp	2	678	18.4	<b>679</b>	<b>18.4</b>	680	18.4	2	677	18.5	<b>678</b>	<b>18.4</b>	679	18.4
473.astar	2	776	18.1	<b>776</b>	<b>18.1</b>	778	18.0	2	776	18.1	<b>776</b>	<b>18.1</b>	778	18.0
483.xalancbmk	2	485	28.5	485	28.4	<b>485</b>	<b>28.5</b>	2	479	28.8	<b>480</b>	<b>28.7</b>	481	28.7

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' has been used to bind processes to CPUs

## General Notes

BIOS settings:  
Node Interleave = disabled

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## Base Compiler Invocation

C benchmarks:  
pathcc

C++ benchmarks:  
pathCC



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## 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  
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 -OPT:malloc\_alg=1

C++ benchmarks:

-Ofast -m32 -L/opt/SmartHeap\_8.1/lib -lsmarheap

## Base Other Flags

C benchmarks:

-IPA:max\_jobs=4

C++ benchmarks:

-IPA:max\_jobs=4

## 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  
445.gobmk: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64

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## Peak 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

## Peak Optimization Flags

C benchmarks:

400.perlbench: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -Ofast  
 -LNO:opt=0

401.bzip2: -O3 -LNO:ou\_prod\_max=10 -OPT:Ofast -OPT:alias=disjoint

403.gcc: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -m32 -O3  
 -OPT:Ofast

429.mcf: -m32 -O3 -ipa -L/opt/SmartHeap\_8.1/lib -lsmartheap

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

456.hmmer: -O2 -OPT:alias=disjoint -OPT:malloc\_alg=1 -CG:cflow=0

458.sjeng: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
 -IPA:plimit=50000 -IPA:pu\_reorder=2

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 -CG:gcm=off -m32  
 -L/opt/SmartHeap\_8.1/lib -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -Ofast -m32 -OPT:unroll\_times\_max=8  
 -L/opt/SmartHeap\_8.1/lib -lsmartheap



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## Peak Other Flags

C benchmarks:

-IPA:max\_jobs=4

C++ benchmarks:

-IPA:max\_jobs=4

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

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090714.10.html](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.10.html)

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

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090714.10.xml](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.10.xml)

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

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