



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu Siemens Computers

### SPECint®\_rate2006 = 27.0

PRIMERGY RX330 S1, AMD Opteron 2220, 2.8 GHz

### SPECint\_rate\_base2006 = 24.3

CPU2006 license: 22

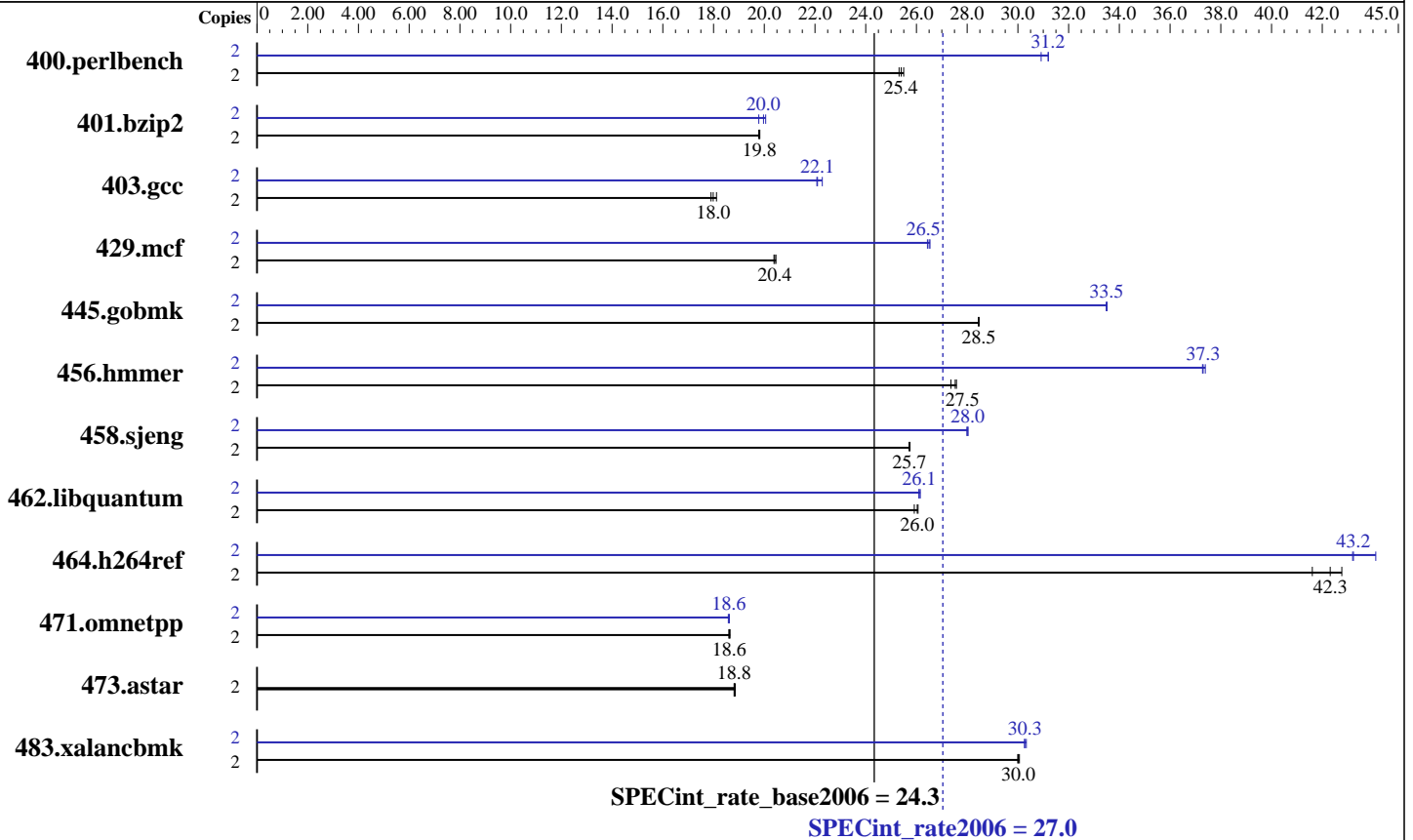
Test date: Apr-2007

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: May-2007

Tested by: Fujitsu Siemens Computers

Software Availability: Mar-2007



### Hardware

CPU Name: AMD Opteron 2220  
 CPU Characteristics: 2220  
 CPU MHz: 2800  
 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



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu Siemens Computers

SPECint\_rate2006 = 27.0

PRIMERGY RX330 S1, AMD Opteron 2220, 2.8 GHz

SPECint\_rate\_base2006 = 24.3

CPU2006 license: 22

Test date: Apr-2007

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: May-2007

Tested by: Fujitsu Siemens Computers

Software Availability: Mar-2007

## Results Table

Benchmark	Base						Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	2	772	25.3	766	25.5	<b><u>769</u></b>	<b><u>25.4</u></b>	2	<b><u>626</u></b>	<b><u>31.2</u></b>	626	31.2	632	30.9
401.bzip2	2	976	19.8	974	19.8	<b><u>974</u></b>	<b><u>19.8</u></b>	2	976	19.8	<b><u>966</u></b>	<b><u>20.0</u></b>	962	20.1
403.gcc	2	889	18.1	899	17.9	<b><u>895</u></b>	<b><u>18.0</u></b>	2	722	22.3	<b><u>729</u></b>	<b><u>22.1</u></b>	729	22.1
429.mcf	2	892	20.5	<b><u>894</u></b>	<b><u>20.4</u></b>	895	20.4	2	690	26.4	<b><u>688</u></b>	<b><u>26.5</u></b>	687	26.5
445.gobmk	2	737	28.5	<b><u>737</u></b>	<b><u>28.5</u></b>	738	28.4	2	626	33.5	627	33.5	<b><u>626</u></b>	<b><u>33.5</u></b>
456.hammer	2	682	27.4	677	27.6	<b><u>678</u></b>	<b><u>27.5</u></b>	2	499	37.4	501	37.3	<b><u>500</u></b>	<b><u>37.3</u></b>
458.sjeng	2	<b><u>941</u></b>	<b><u>25.7</u></b>	941	25.7	940	25.7	2	863	28.0	<b><u>864</u></b>	<b><u>28.0</u></b>	865	28.0
462.libquantum	2	1599	25.9	<b><u>1592</u></b>	<b><u>26.0</u></b>	1590	26.1	2	1585	26.2	<b><u>1587</u></b>	<b><u>26.1</u></b>	1588	26.1
464.h264ref	2	1035	42.8	1064	41.6	<b><u>1046</u></b>	<b><u>42.3</u></b>	2	<b><u>1024</u></b>	<b><u>43.2</u></b>	1025	43.2	1003	44.1
471.omnetpp	2	670	18.7	672	18.6	<b><u>671</u></b>	<b><u>18.6</u></b>	2	671	18.6	<b><u>672</u></b>	<b><u>18.6</u></b>	673	18.6
473.astar	2	745	18.9	<b><u>746</u></b>	<b><u>18.8</u></b>	746	18.8	2	745	18.9	<b><u>746</u></b>	<b><u>18.8</u></b>	746	18.8
483.xalancbmk	2	459	30.1	460	30.0	<b><u>460</u></b>	<b><u>30.0</u></b>	2	455	30.3	<b><u>456</u></b>	<b><u>30.3</u></b>	456	30.3

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

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



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu Siemens Computers

SPECint\_rate2006 = 27.0

PRIMERGY RX330 S1, AMD Opteron 2220, 2.8 GHz

SPECint\_rate\_base2006 = 24.3

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

## 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

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu Siemens Computers

SPECint\_rate2006 = 27.0

PRIMERGY RX330 S1, AMD Opteron 2220, 2.8 GHz

SPECint\_rate\_base2006 = 24.3

CPU2006 license: 22

Test date: Apr-2007

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: May-2007

Tested by: Fujitsu Siemens Computers

Software Availability: Mar-2007

## 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 -lsmarheap

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 -lsmarheap

473.astar: basepeak = yes

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



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu Siemens Computers**

**SPECint\_rate2006 = 27.0**

PRIMERGY RX330 S1, AMD Opteron 2220, 2.8 GHz

**SPECint\_rate\_base2006 = 24.3**

**CPU2006 license:** 22

**Test date:** Apr-2007

**Test sponsor:** Fujitsu Siemens Computers

**Hardware Availability:** May-2007

**Tested by:** Fujitsu Siemens Computers

**Software Availability:** Mar-2007

## 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.20090714.31.html](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.31.html)

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

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090714.31.xml](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.31.xml)

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.0.  
Report generated on Tue Jul 22 11:38:26 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 2 May 2007.