



# SPEC<sup>®</sup> CINT2006 Result

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## Fujitsu Siemens Computers

## SPECint<sup>®</sup>\_rate2006 = 194

### PRIMERGY RX600 S4, Intel Xeon E7430, 2.13 GHz

## SPECint\_rate\_base2006 = 180

CPU2006 license: 22

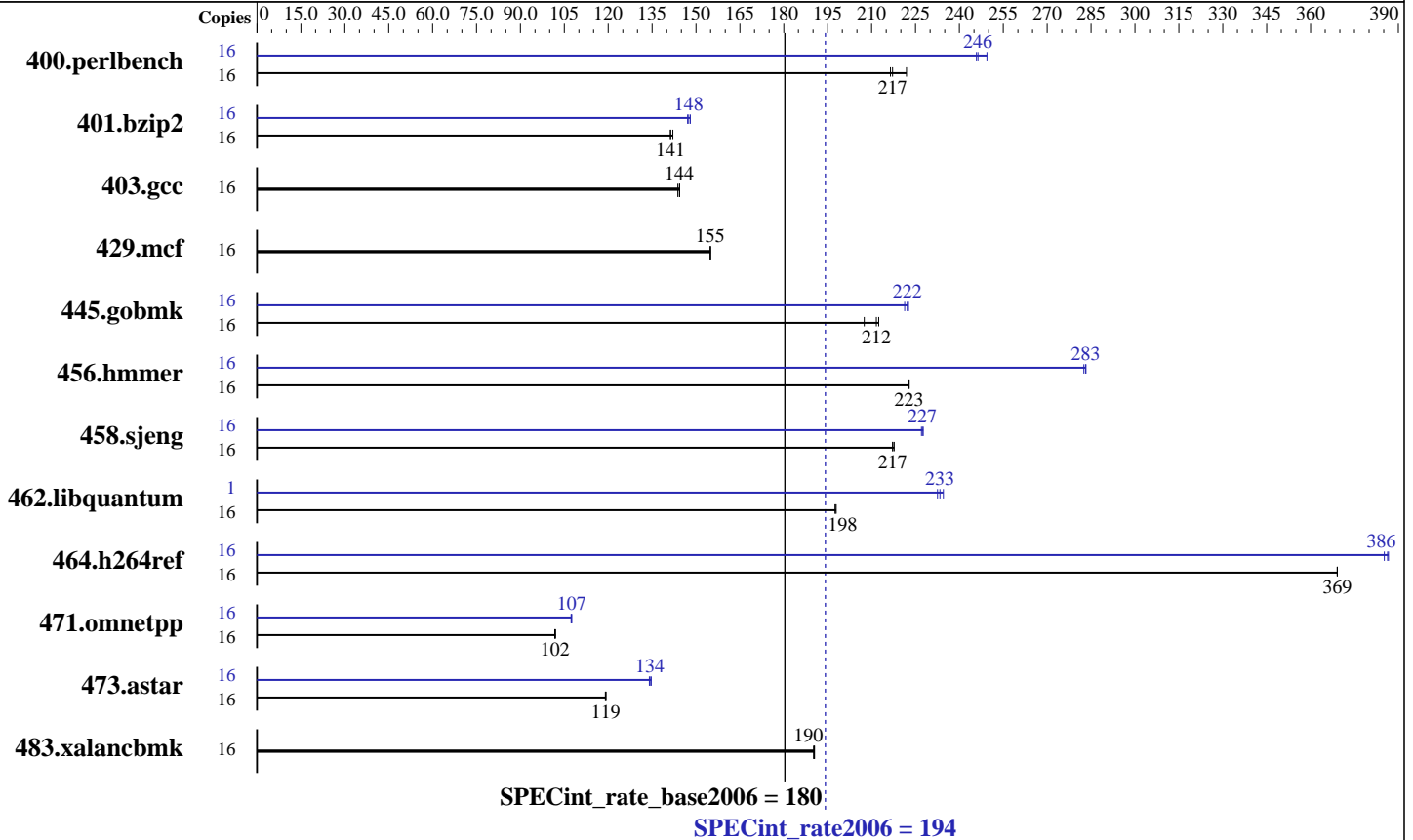
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Sep-2008

Hardware Availability: Sep-2008

Software Availability: Nov-2008



### Hardware

CPU Name: Intel Xeon E7430  
 CPU Characteristics: 1067 MHz system bus  
 CPU MHz: 2133  
 FPU: Integrated  
 CPU(s) enabled: 16 cores, 4 chips, 4 cores/chip  
 CPU(s) orderable: 1,2,4 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 6 MB I+D on chip per chip, 3 MB shared / 2 cores  
 L3 Cache: 12 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 64 GB (16x4 GB PC2-5300F, 2 rank, CL5-5-5, ECC)  
 Disk Subsystem: 1x SAS, 73 GB, 15000 rpm  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 10 (x86\_64) SP2, Kernel 2.6.16.60-0.21-smp  
 Compiler: Intel C++ Compiler 11.0 for Linux Build 20080730  
 Auto Parallel: Yes  
 File System: ext3  
 System State: Multi-User Run Level 3  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap Library, Version 8.1  
 Binutils 2.18.50.0.7.20080502



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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	16	704	222	<u>720</u>	<u>217</u>	722	216	16	636	246	627	249	<u>635</u>	<u>246</u>
401.bzip2	16	1087	142	1093	141	<u>1092</u>	<u>141</u>	16	1049	147	1043	148	<u>1047</u>	<u>148</u>
403.gcc	16	896	144	<u>892</u>	<u>144</u>	892	144	16	896	144	<u>892</u>	<u>144</u>	892	144
429.mcf	16	942	155	<u>942</u>	<u>155</u>	942	155	16	942	155	<u>942</u>	<u>155</u>	942	155
445.gobmk	16	<u>793</u>	<u>212</u>	809	208	790	212	16	<u>755</u>	<u>222</u>	754	223	758	221
456.hmmmer	16	<u>670</u>	<u>223</u>	670	223	671	223	16	527	283	<u>527</u>	<u>283</u>	528	283
458.sjeng	16	889	218	891	217	<u>891</u>	<u>217</u>	16	<u>851</u>	<u>227</u>	850	228	853	227
462.libquantum	16	1678	198	<u>1678</u>	<u>198</u>	1675	198	1	88.3	235	89.1	233	<u>88.8</u>	<u>233</u>
464.h264ref	16	959	369	959	369	<u>959</u>	<u>369</u>	16	<u>917</u>	<u>386</u>	916	387	919	385
471.omnetpp	16	<u>982</u>	<u>102</u>	983	102	980	102	16	932	107	<u>930</u>	<u>107</u>	930	108
473.astar	16	<u>942</u>	<u>119</u>	944	119	942	119	16	838	134	834	135	<u>836</u>	<u>134</u>
483.xalancbmk	16	581	190	<u>580</u>	<u>190</u>	580	190	16	581	190	<u>580</u>	<u>190</u>	580	190

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

## Compiler Invocation Notes

All binaries were built with 32-bit mode except:  
401.bzip2 and 456.hmmmer in peak were built with 64-bit mode.

## Submit Notes

The config file option 'submit' was used.  
taskset has been used to bind processes to cores except  
for 462.libquantum peak

## Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run  
OMP\_NUM\_THREADS set to number of cores (default)  
KMP\_AFFINITY set to "physical,0"  
KMP\_STACKSIZE set to 64M

## General Notes

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

C benchmarks:

icc

C++ benchmarks:

icpc

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -inline-calloc  
-opt-malloc-options=3 -opt-prefetch

C++ benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/spec/cpu2006.1.1/lib -lsmartheap

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc

401.bzip2: /opt/intel/Compiler/11.0/042/bin/intel64/icc  
-L/opt/intel/Compiler/11.0/042/ipp/em64t/lib  
-I/opt/intel/Compiler/11.0/042/ipp/em64t/include

456.hmmer: /opt/intel/Compiler/11.0/042/bin/intel64/icc  
-L/opt/intel/Compiler/11.0/042/ipp/em64t/lib  
-I/opt/intel/Compiler/11.0/042/ipp/em64t/include

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## Peak Compiler Invocation (Continued)

C++ benchmarks:  
icpc

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
401.bzip2: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -ansi-alias -opt-prefetch  
401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -opt-prefetch -ansi-alias  
403.gcc: basepeak = yes  
429.mcf: basepeak = yes  
445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -O2 -ipo  
-no-prec-div -ansi-alias  
456.hmmer: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2  
-ansi-alias  
458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -unroll4  
462.libquantum: -xSSE4.1 -ipo -O3 -no-prec-div -static  
-opt-malloc-options=3 -parallel -par-runtime-control  
-opt-prefetch  
464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -ansi-alias -opt-ra-region-strategy=block  
-Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap

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## Peak Optimization Flags (Continued)

```
473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
          -no-prec-div -ansi-alias -opt-ra-region-strategy=routine
          -Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmarthearp
```

```
483.xalancbmk: basepeak = yes
```

## Peak Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090713.08.html>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.08.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090713.08.xml>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.08.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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