



# SPEC® CINT2006 Result

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## Fujitsu Siemens Computers

### SPECint®\_rate2006 = 126

PRIMERGY RX600 S4, Intel Xeon E7310, 1.60 GHz

### SPECint\_rate\_base2006 = 115

CPU2006 license: 22

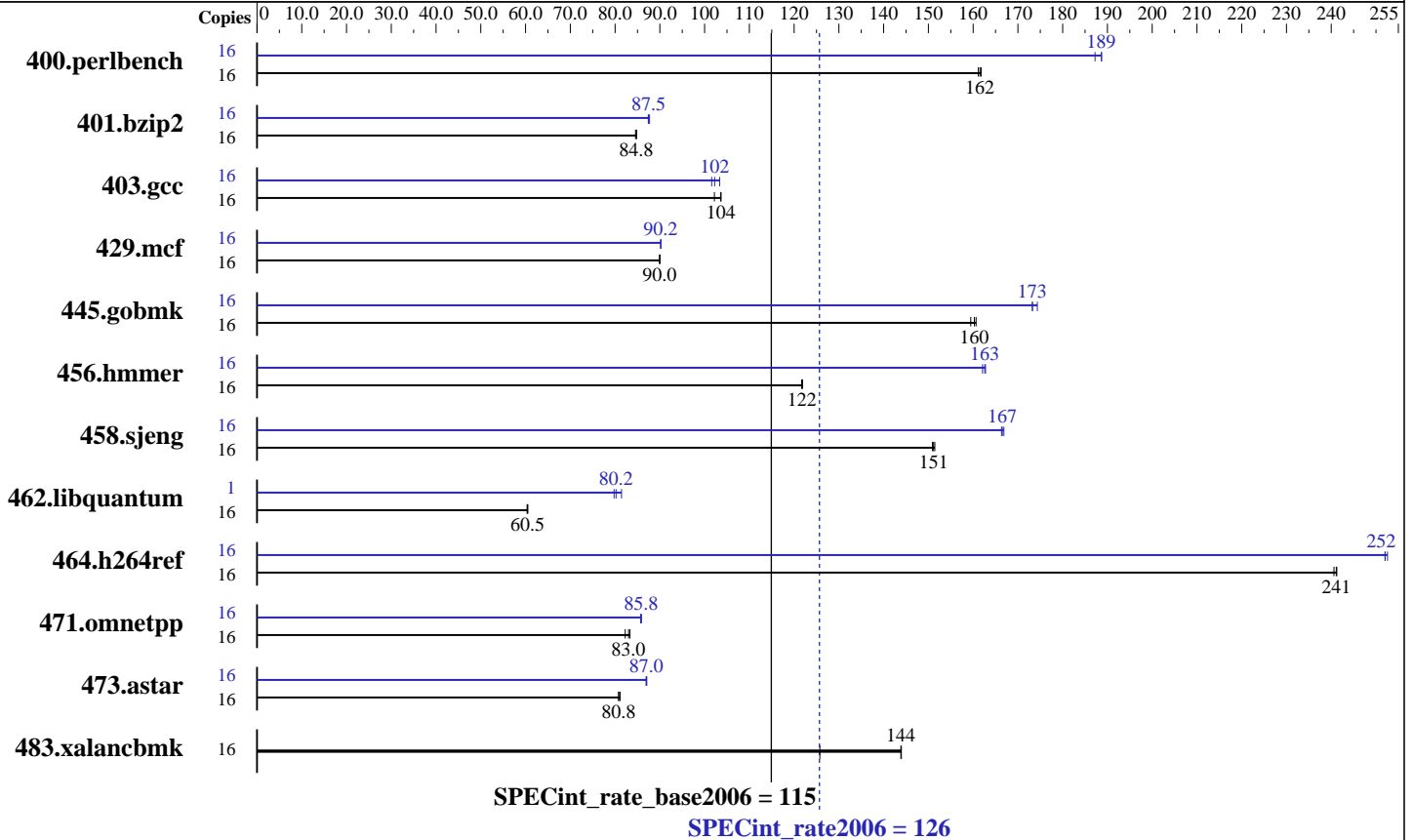
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Jan-2008

Hardware Availability: Dec-2007

Software Availability: Nov-2007



### Hardware

CPU Name: Intel Xeon E7310  
 CPU Characteristics: 1067 MHz system bus  
 CPU MHz: 1600  
 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: 4 MB I+D on chip per chip, 2 MB shared / 2 cores  
 L3 Cache: None  
 Other Cache: None  
 Memory: 64 GB (16x4 GB PC2-5300F, 2 rank, CAS 5-5-5, with ECC)  
 Disk Subsystem: Seagate ST973451SS (SAS, 73GB, 15000rpm)  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 10 (x86\_64) SP1, Kernel 2.6.16.46-0.12-smp  
 Compiler: Intel C++ Compiler for Linux32 and Linux64 Version 10.1 - Build 20070725  
 Auto Parallel: Yes  
 File System: ext2  
 System State: Multiuser, Runlevel 3  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: MicroQuill SmartHeap Library, Version 8.1  
 binutils-2.17.tar.gz, Version 2.17



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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	966	162	<b>968</b>	<b>162</b>	970	161	16	828	189	835	187	<b>829</b>	<b>189</b>
401.bzip2	16	<b>1822</b>	<b>84.8</b>	1826	84.6	1821	84.8	16	1761	87.7	<b>1765</b>	<b>87.5</b>	1766	87.4
403.gcc	16	<b>1243</b>	<b>104</b>	1243	104	1260	102	16	1268	102	<b>1260</b>	<b>102</b>	1246	103
429.mcf	16	1621	90.0	1622	90.0	<b>1622</b>	<b>90.0</b>	16	1618	90.2	1617	90.2	<b>1618</b>	<b>90.2</b>
445.gobmk	16	1053	159	1045	161	<b>1047</b>	<b>160</b>	16	963	174	<b>969</b>	<b>173</b>	969	173
456.hammer	16	1225	122	<b>1226</b>	<b>122</b>	1227	122	16	917	163	921	162	<b>918</b>	<b>163</b>
458.sjeng	16	<b>1281</b>	<b>151</b>	1283	151	1278	151	16	<b>1163</b>	<b>167</b>	1160	167	1164	166
462.libquantum	16	5494	60.3	<b>5484</b>	<b>60.5</b>	5480	60.5	1	260	79.8	254	81.4	<b>258</b>	<b>80.2</b>
464.h264ref	16	1472	241	1468	241	<b>1468</b>	<b>241</b>	16	<b>1405</b>	<b>252</b>	1402	253	1405	252
471.omnetpp	16	<b>1205</b>	<b>83.0</b>	1216	82.3	1200	83.3	16	<b>1166</b>	<b>85.8</b>	1166	85.7	1164	85.9
473.astar	16	<b>1390</b>	<b>80.8</b>	1391	80.8	1385	81.1	16	<b>1291</b>	<b>87.0</b>	1292	86.9	1290	87.1
483.xalancbmk	16	878	126	<b>767</b>	<b>144</b>	767	144	16	878	126	<b>767</b>	<b>144</b>	767	144

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

## Operating System Notes

'OMP\_NUM\_THREADS' set to number of cores (default)

## General Notes

This result has been produced with binaries provided and compiled by Intel.

All binaries were built with 32-bit Intel compiler except:  
401.bzip2 and 456.hammer in peak were built with 64-bit Intel compiler by changing the path for include and library files.

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

## Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc



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## Base Portability Flags

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

## Base Optimization Flags

C benchmarks:  
-fast -inline-calloc -opt-malloc-options=3  
  
C++ benchmarks:  
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

## Base Other Flags

C benchmarks:  
403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):  
icc  
401.bzip2: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/bin/icc  
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/lib  
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/include  
456.hmmer: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/bin/icc  
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/lib  
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/include  
  
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

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## Peak Portability Flags (Continued)

483.xalanbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -fast -ansi-alias  
-prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch

403.gcc: -fast -inline-calloc -opt-malloc-options=3

429.mcf: -fast -prefetch

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xT -O2 -ipo  
-no-prec-div -ansi-alias

456.hmmer: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4

462.libquantum: -fast -unroll4 -Ob0 -prefetch  
-opt-streaming-stores always -vec-guard-write  
-opt-malloc-options=3 -parallel -par-runtime-control

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo  
-no-prec-div -ansi-alias -opt-ra-region-strategy=block  
-Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo  
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine  
-Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

483.xalanbmk: basepeak = yes



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## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

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

<http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.01.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.01.xml>

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

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