SPEC® CINT2006 Result

Fujitsu Siemens Computers

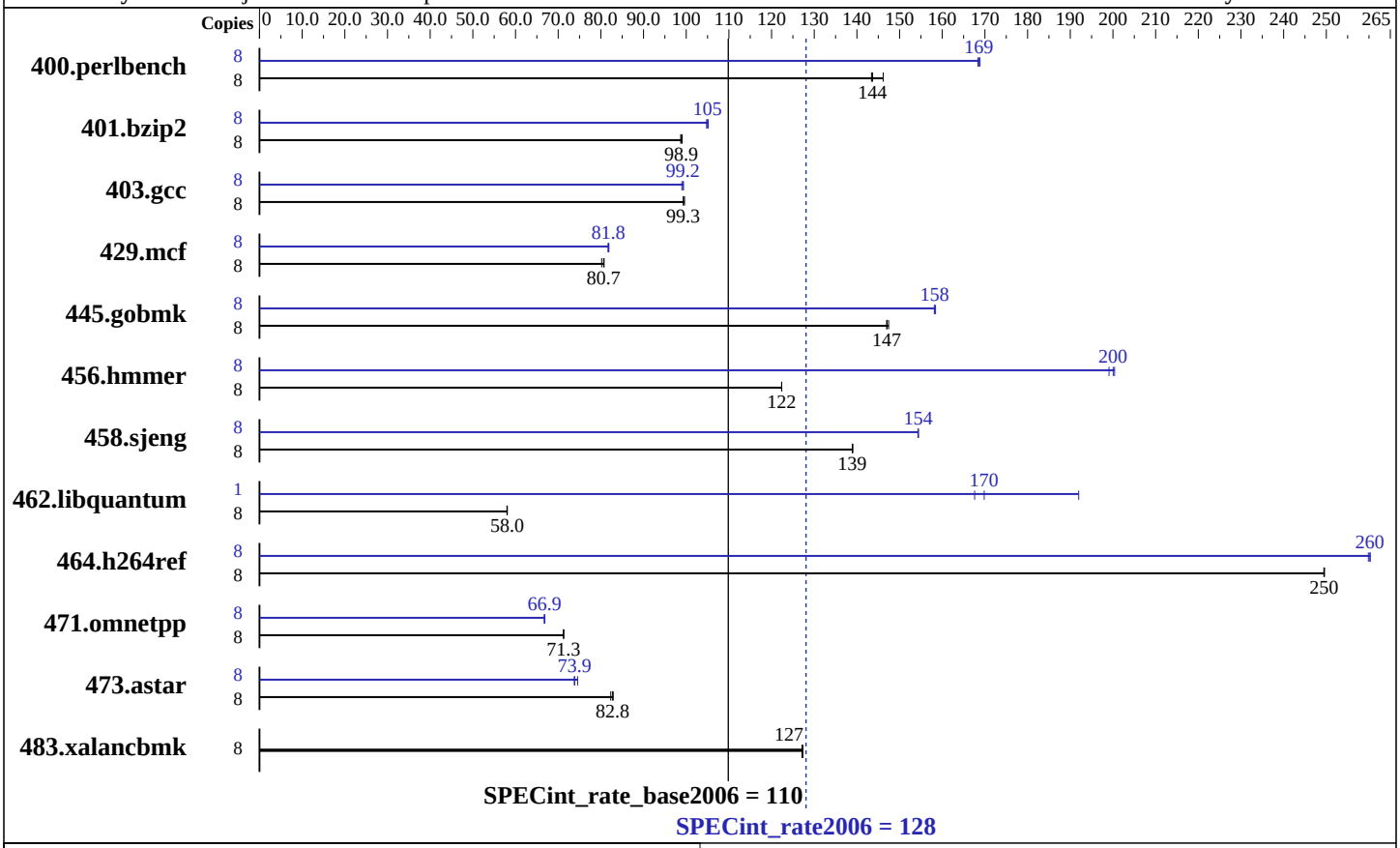
CELSIUS R650, Intel Xeon X5450 processor

SPECint®_rate2006 = 128

SPECint_rate_base2006 = 110

CPU2006 license: 22
Test sponsor: Fujitsu Siemens Computers
Tested by: Fujitsu Siemens Computers

Test date: Dec-2007
Hardware Availability: Nov-2007
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Xeon X5450
CPU Characteristics:	
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	12 MB I+D on chip per chip, 6 MB shared / 2 cores
L3 Cache:	None
Other Cache:	None
Memory:	8 GB (8x1 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem:	1 x 400 GB SATA II 7200 RPM
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 20070913
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-2.17.50.0.5-0.1.x86_64

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	535	146	545	143	**544**	**144**	8	**464**	**169**	463	169	464	168
401.bzip2	8	**781**	**98.9**	779	99.0	782	98.7	8	**735**	**105**	734	105	737	105
403.gcc	8	647	99.6	648	99.3	**648**	**99.3**	8	648	99.4	**649**	**99.2**	651	99.0
429.mcf	8	903	80.8	910	80.2	**905**	**80.7**	8	**892**	**81.8**	893	81.7	891	81.9
445.gobmk	8	571	147	**571**	**147**	569	147	8	530	158	**530**	**158**	531	158
456.hmmer	8	610	122	610	122	**610**	**122**	8	375	199	372	200	**373**	**200**
458.sjeng	8	696	139	697	139	**697**	**139**	8	627	154	**627**	**154**	627	154
462.libquantum	8	**2856**	**58.0**	2859	58.0	2854	58.1	1	**122**	**170**	124	168	108	192
464.h264ref	8	709	250	**710**	**250**	710	249	8	680	260	681	260	**680**	**260**
471.omnetpp	8	702	71.2	702	71.3	**702**	**71.3**	8	**748**	**66.9**	748	66.9	750	66.7
473.astar	8	678	82.9	682	82.3	**679**	**82.8**	8	761	73.8	**760**	**73.9**	753	74.6
483.xalancbmk	8	434	127	433	127	**434**	**127**	8	434	127	433	127	**434**	**127**

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 OMP_NUM_THREADS set to number of cores (default).

Platform Notes

BIOS configuration:
Enhanced Speedstep Technology = Disable
Hardware Prefetch = Disable, Adjacent Sector Prefetch = Disable
SnoopFilter = Enable

General Notes

All binaries were built with 32-bit Intel compiler except:
401.bzip2 and 456.hmmer 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

Continued on next page

Base Compiler Invocation (Continued)

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:
-fast -inline-calloc -opt-malloc-options=3

C++ benchmarks:
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/opt/SmartHeap_8.1/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/cce/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/include

456.hmmer: /opt/intel/cce/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/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
483.xalancbmk: -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

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo -no-prec-div -ansi-alias -opt-ra-region-strategy=routine

483.xalancbmk: basepeak = yes

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.20090714.03.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.20090714.03.xml`

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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