



SPEC® CINT2006 Result

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Fujitsu Siemens Computers

SPECint®_rate2006 = 49.1

CELSIUS V840, AMD Opteron 2218

SPECint_rate_base2006 = 43.8

CPU2006 license: 22

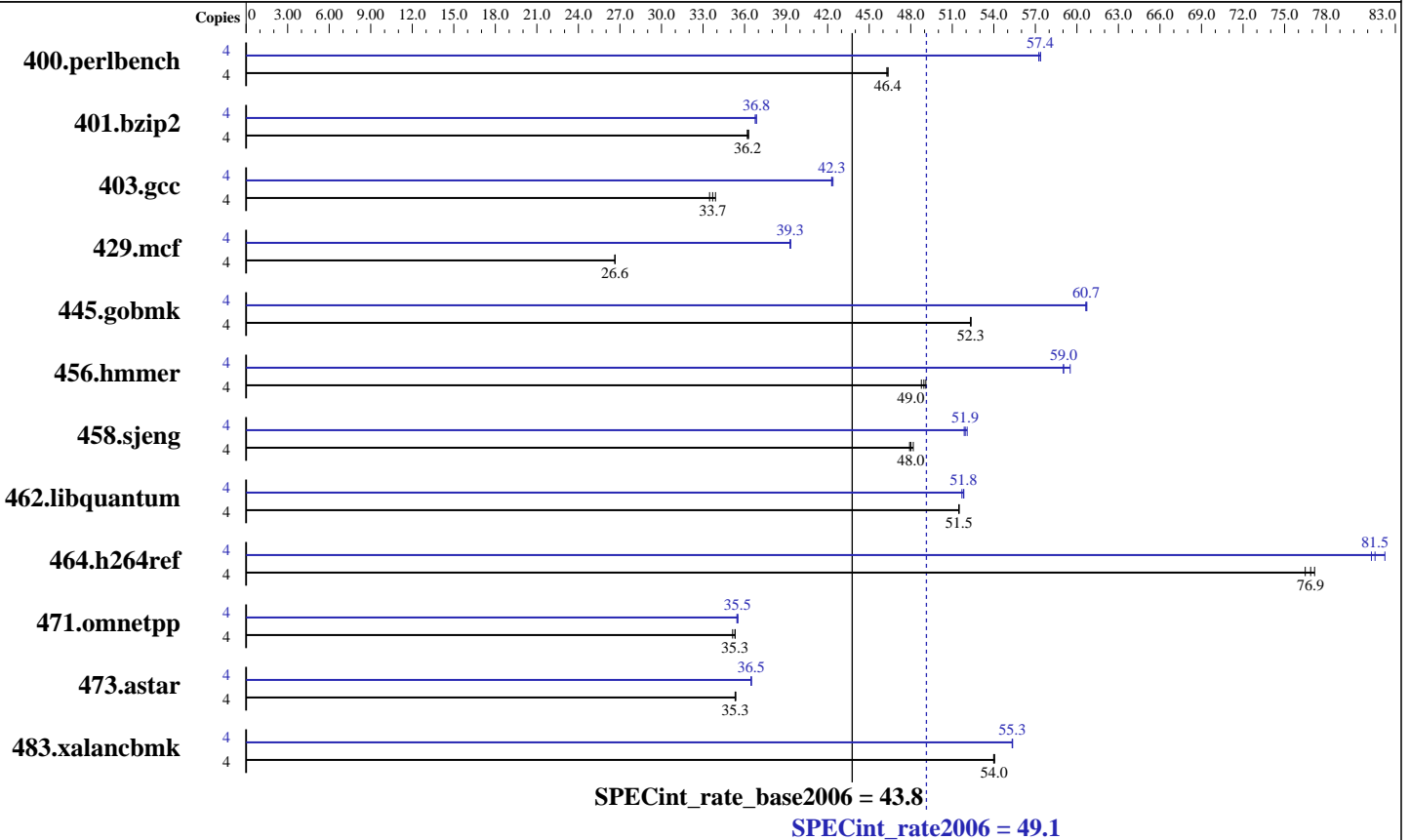
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Jan-2007

Hardware Availability: Nov-2006

Software Availability: Aug-2006



Hardware

CPU Name: AMD Opteron 2218
 CPU Characteristics: Dual Core, 2.6 GHz, 2 MB L2-cache
 CPU MHz: 2600
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 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: 16 GB (8x2GB DDR2-667 CL5 dual rank ECC DIMMs registered)
 Disk Subsystem: SATA II, 80 GB
 Other Hardware: None

Software

Operating System: SLES 10 for AMD64/EM64T
 Compiler: QLogic PathScale Compiler Suite, Release 2.5
 SmartHeap 8.0 32 bit Library for Linux
 Auto Parallel: No
 File System: ext3
 System State: Multi-User SuSE Run Level 3
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: None



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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	4	845	46.3	843	46.4	843	46.4	4	683	57.2	681	57.4	681	57.4
401.bzip2	4	1063	36.3	1066	36.2	1065	36.2	4	1048	36.8	1050	36.8	1047	36.8
403.gcc	4	950	33.9	956	33.7	962	33.5	4	761	42.3	761	42.3	760	42.4
429.mcf	4	1369	26.6	1369	26.7	1370	26.6	4	928	39.3	928	39.3	928	39.3
445.gobmk	4	802	52.3	802	52.3	802	52.3	4	691	60.7	692	60.6	691	60.7
456.hammer	4	765	48.8	760	49.1	762	49.0	4	627	59.5	632	59.0	632	59.0
458.sjeng	4	1008	48.0	1004	48.2	1010	47.9	4	929	52.1	932	51.9	933	51.9
462.libquantum	4	1610	51.5	1610	51.5	1610	51.5	4	1599	51.8	1600	51.8	1603	51.7
464.h264ref	4	1157	76.5	1147	77.2	1151	76.9	4	1086	81.5	1076	82.2	1089	81.3
471.omnetpp	4	708	35.3	712	35.1	708	35.3	4	705	35.4	705	35.5	704	35.5
473.astar	4	795	35.3	794	35.4	795	35.3	4	770	36.5	770	36.5	770	36.5
483.xalancbmk	4	511	54.1	511	54.0	511	54.0	4	499	55.4	499	55.3	499	55.3

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

Operating System Notes

powersave -f is applied to set CPU to maximum frequency prior to run
 stacksize is set to unlimited prior to run
 taskset utility used to bind CPU(s) to processes
 numactl utility used to assign to each chip its local memory

General Notes

Binaries supplied by AMD
 Compilation done on an Opteron-based system
 running SuSE 9.3 (Kernel 2.6.5.7)

BIOS default settings with
 Node memory interleave disabled, SRAT enabled

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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

C++ benchmarks:

-Ofast -m32

-L/spec/mpaton/6v1.0/amd512K8.lib/microquill/lib -lsmarheap

Base Other Flags

C benchmarks:

-IPA:max_jobs=2

C++ benchmarks:

-IPA:max_jobs=2

Peak Compiler Invocation

Same as Base Compiler Invocation

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
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64

```

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Peak Portability Flags (Continued)

483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -Ofast

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 -O2 -ipa
-L/spec/mpaton/6v1.0/amd512K8.lib/microquill/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.hmmcr: -O2 -OPT:alias=disjoint -WOPT:aggstr=0 -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 -IPA:pu_reorder=2 -CG:gcm=off -m32
-L/spec/mpaton/6v1.0/amd512K8.lib/microquill/lib -lsmartheap

473.astar: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -Ofast
-m32
-L/spec/mpaton/6v1.0/amd512K8.lib/microquill/lib -lsmartheap

483.xalancbmk: -Ofast -m32 -OPT:unroll_times_max=8
-L/spec/mpaton/6v1.0/amd512K8.lib/microquill/lib -lsmartheap

Peak Other Flags

Same as Base Other Flags



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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20070110.html

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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20070110.xml

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