



SPEC® CINT2006 Result

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Fujitsu Siemens Computers

SPECint®2006 = 13.6

CELSIUS V840, AMD Opteron 2220

SPECint_base2006 = 12.2

CPU2006 license: 22

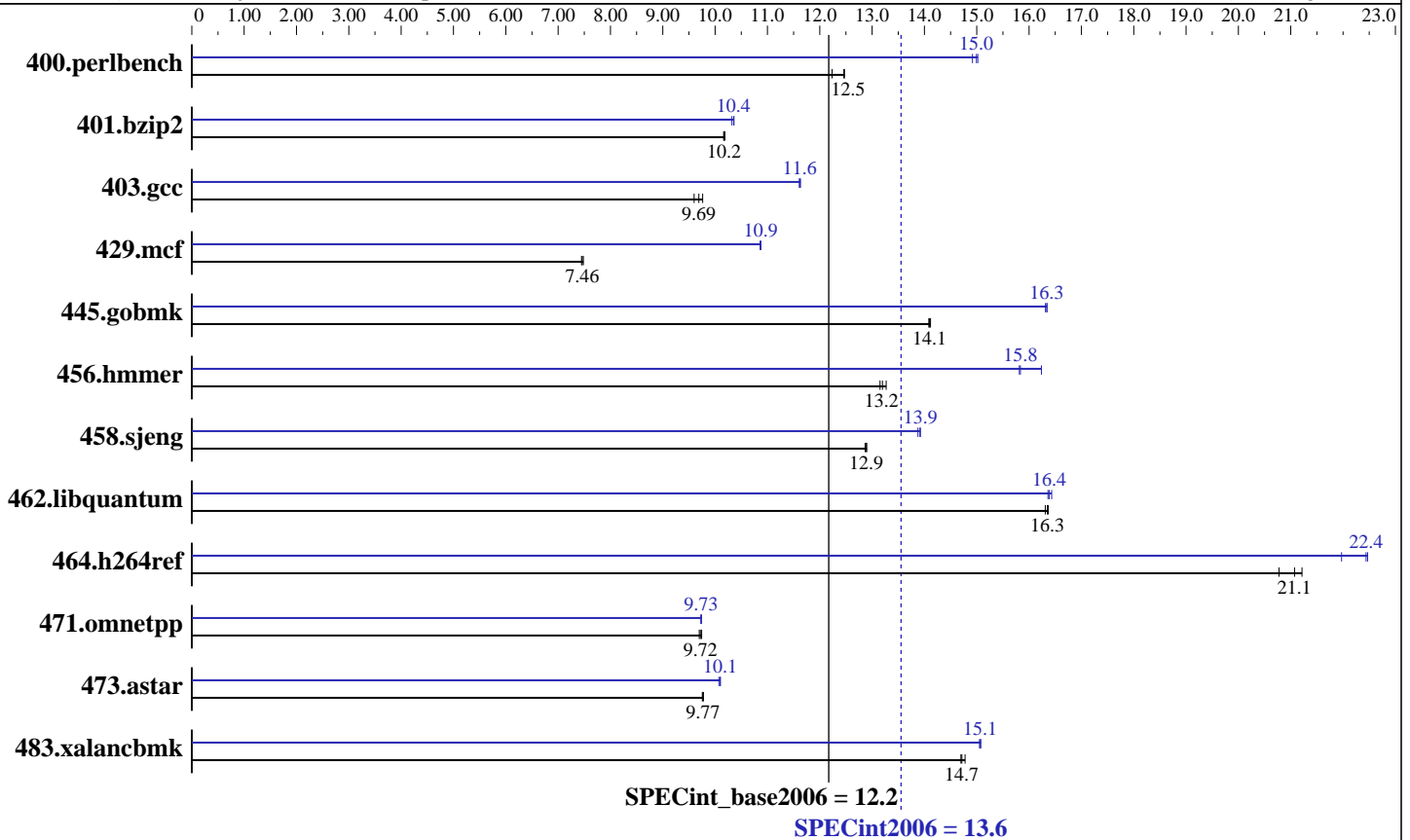
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Feb-2007

Hardware Availability: Feb-2007

Software Availability: Aug-2006



Hardware

CPU Name: AMD Opteron 2220
 CPU Characteristics: Dual Core, 2.8 GHz, 2 MB L2-cache
 CPU MHz: 2800
 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 2.5
 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: SmartHeap 8.0 32 bit Library for Linux



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	784	12.5	783	12.5	799	12.2	652	15.0	650	15.0	655	14.9
401.bzip2	947	10.2	949	10.2	950	10.2	935	10.3	931	10.4	932	10.4
403.gcc	825	9.76	831	9.69	839	9.60	692	11.6	693	11.6	693	11.6
429.mcf	1219	7.48	1225	7.45	1222	7.46	839	10.9	839	10.9	840	10.9
445.gobmk	745	14.1	743	14.1	744	14.1	642	16.3	643	16.3	642	16.3
456.hammer	707	13.2	709	13.2	703	13.3	589	15.8	590	15.8	575	16.2
458.sjeng	939	12.9	940	12.9	938	12.9	869	13.9	872	13.9	870	13.9
462.libquantum	1270	16.3	1266	16.4	1267	16.3	1261	16.4	1265	16.4	1266	16.4
464.h264ref	1050	21.1	1065	20.8	1043	21.2	986	22.4	1007	22.0	985	22.5
471.omnetpp	643	9.72	641	9.74	645	9.70	642	9.74	642	9.73	642	9.73
473.astar	720	9.76	718	9.78	719	9.77	697	10.1	695	10.1	695	10.1
483.xalancbmk	467	14.8	469	14.7	469	14.7	458	15.1	458	15.1	458	15.1

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

General Notes

Binaries are generated 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

```

Continued on next page

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Page 3



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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.hmmmer: -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.20090714.25.html

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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.25.xml

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