



SPEC® CINT2006 Result

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Fujitsu Siemens Computers

SPECint®_rate2006 = 56.4

CELSIUS V840, Opteron 2222, 64-bit Linux

SPECint_rate_base2006 = 50.5

CPU2006 license: 22

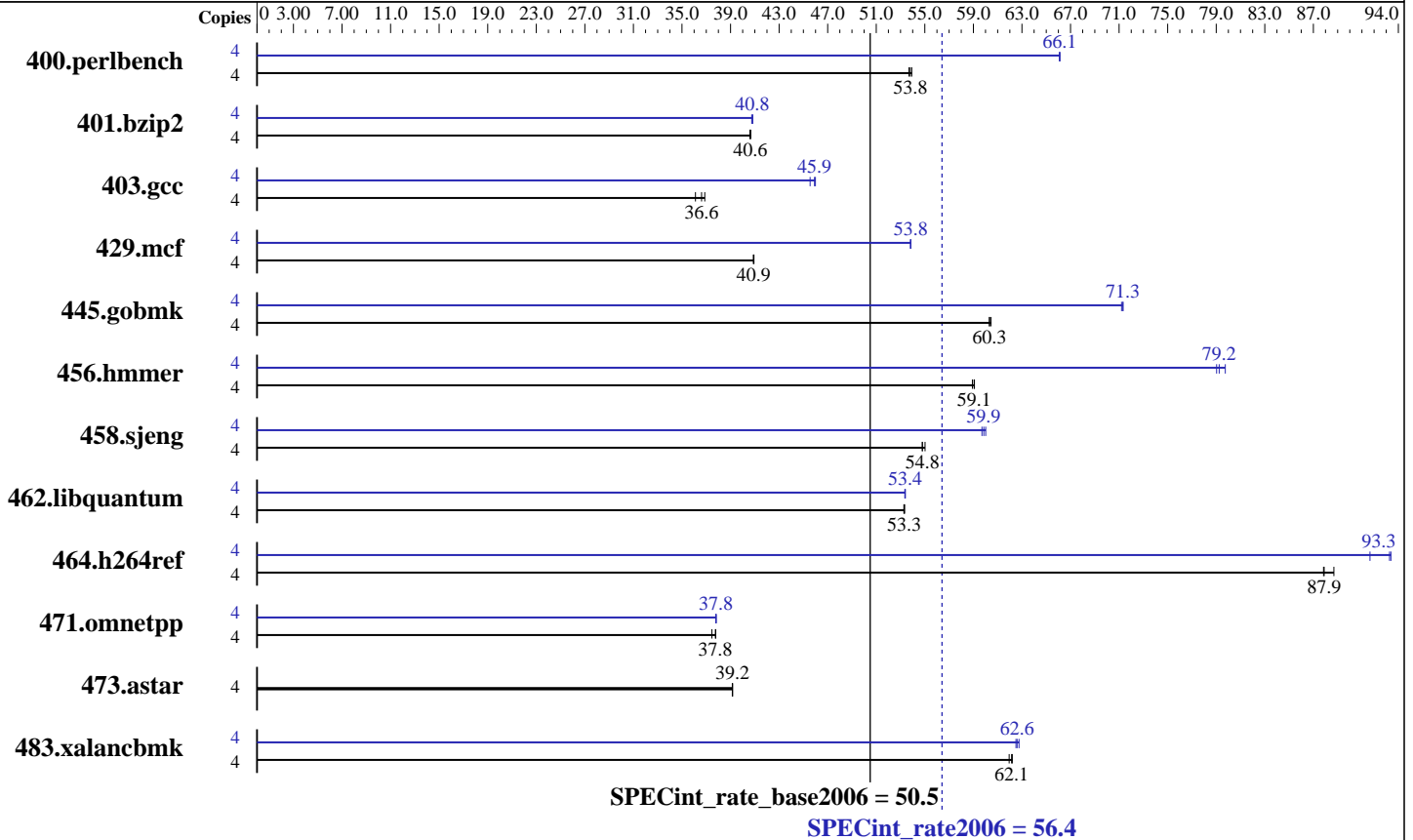
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Jul-2007

Hardware Availability: Jul-2007

Software Availability: Mar-2007



Hardware

CPU Name: AMD Opteron 2222
 CPU Characteristics: Dual Core, 3.0 GHz, 2 MB L2-cache
 CPU MHz: 3000
 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 3.0
 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 8.1



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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	728	53.7	<u>726</u>	<u>53.8</u>	725	53.9	4	591	66.1	<u>591</u>	<u>66.1</u>	591	66.1
401.bzip2	4	949	40.7	<u>950</u>	<u>40.6</u>	951	40.6	4	<u>946</u>	<u>40.8</u>	947	40.7	946	40.8
403.gcc	4	873	36.9	<u>879</u>	<u>36.6</u>	892	36.1	4	<u>701</u>	<u>45.9</u>	700	46.0	707	45.6
429.mcf	4	891	40.9	<u>892</u>	<u>40.9</u>	892	40.9	4	678	53.8	<u>678</u>	<u>53.8</u>	678	53.8
445.gobmk	4	694	60.5	696	60.3	<u>695</u>	<u>60.3</u>	4	588	71.3	<u>588</u>	<u>71.3</u>	589	71.2
456.hammer	4	<u>632</u>	<u>59.1</u>	632	59.1	633	58.9	4	<u>471</u>	<u>79.2</u>	468	79.7	472	79.0
458.sjeng	4	<u>883</u>	<u>54.8</u>	883	54.8	880	55.0	4	806	60.0	811	59.7	<u>809</u>	<u>59.9</u>
462.libquantum	4	1554	53.3	1556	53.3	<u>1555</u>	<u>53.3</u>	4	1553	53.4	<u>1553</u>	<u>53.4</u>	1552	53.4
464.h264ref	4	1008	87.8	998	88.7	<u>1007</u>	<u>87.9</u>	4	966	91.7	<u>949</u>	<u>93.3</u>	948	93.4
471.omnetpp	4	662	37.8	<u>662</u>	<u>37.8</u>	667	37.5	4	<u>662</u>	<u>37.8</u>	662	37.8	661	37.8
473.astar	4	<u>717</u>	<u>39.2</u>	717	39.2	717	39.1	4	<u>717</u>	<u>39.2</u>	717	39.2	717	39.1
483.xalancbmk	4	444	62.2	<u>444</u>	<u>62.1</u>	446	61.9	4	440	62.8	442	62.5	<u>441</u>	<u>62.6</u>

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

BIOS default settings with
Node memory interleave disabled, SRAT enabled
'taskset \$MYMASK \$command' has been used to bind processes to CPUs
The Linux command 'taskset \$MYMASK \$command' executes the specified command;
only the processors specified in \$MYMASK are allowed to execute the application.
See the Linux documentation for detailed description of taskset.

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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 -OPT:malloc_alg=1
```

C++ benchmarks:

```
-Ofast -m32 -L/opt/SmartHeap_8.1/lib -lsmarheap
```

Base Other Flags

C benchmarks:

```
-IPA:max_jobs=4
```

C++ benchmarks:

```
-IPA:max_jobs=4
```

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
483.xalancbmk: -DSPEC_CPU_LINUX
```



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Peak Optimization Flags

C benchmarks:

```

400.perlbench: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -Ofast
               -LNO:opt=0

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 -O3 -ipa -L/opt/SmartHeap_8.1/lib -lsmarheap

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 -OPT:malloc_alg=1 -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 -CG:gcm=off -m32
            -L/opt/SmartHeap_8.1/lib -lsmarheap

473.astar: basepeak = yes

483.xalancbmk: -Ofast -m32 -OPT:unroll_times_max=8
              -L/opt/SmartHeap_8.1/lib -lsmarheap

```

Peak Other Flags

Same as Base Other Flags

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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.28.html

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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.28.xml



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For other inquiries, please contact webmaster@spec.org.

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