



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

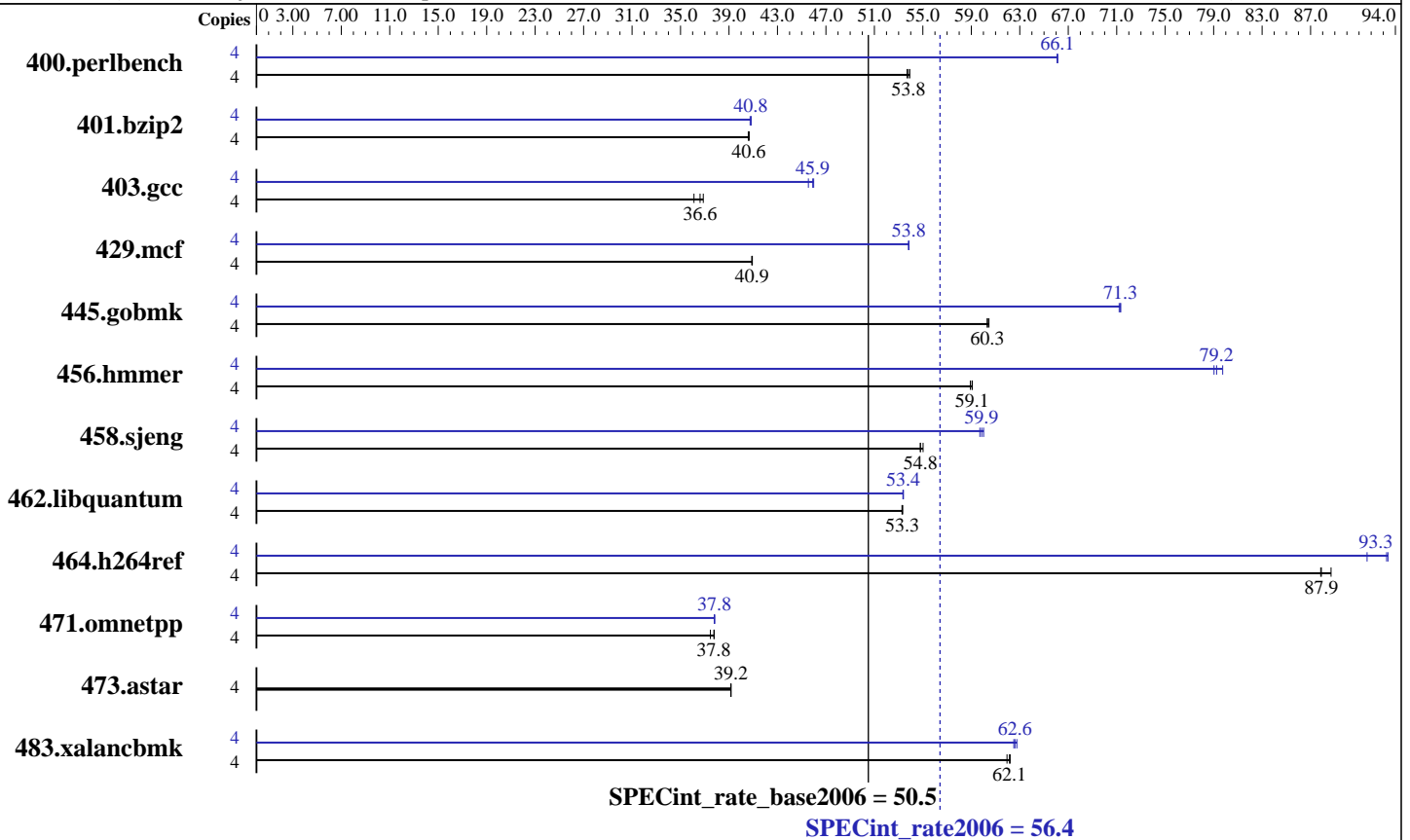
Test sponsor: Fujitsu Siemens Computers

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 -lsmartheap

Base Other Flags

C benchmarks:

-IPA:max_jobs=4

C++ benchmarks:

-IPA:max_jobs=4

Peak Compiler Invocation

C benchmarks:

pathcc

C++ benchmarks:

pathCC

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

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Peak Portability Flags (Continued)

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

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 -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.hmmr: -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 -lsmartheap

473.astar: basepeak = yes

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



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Peak Other Flags

C benchmarks:

-IPA:max_jobs=4

C++ benchmarks:

-IPA:max_jobs=4

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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