



SPEC® CINT2006 Result

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Tyan

(Test Sponsor: Advanced Micro Devices)

SPECint®_rate2006 = 56.6

n4250QE (S4985) AMD Opteron 2222 SE

SPECint_rate_base2006 = 50.8

CPU2006 license: 49

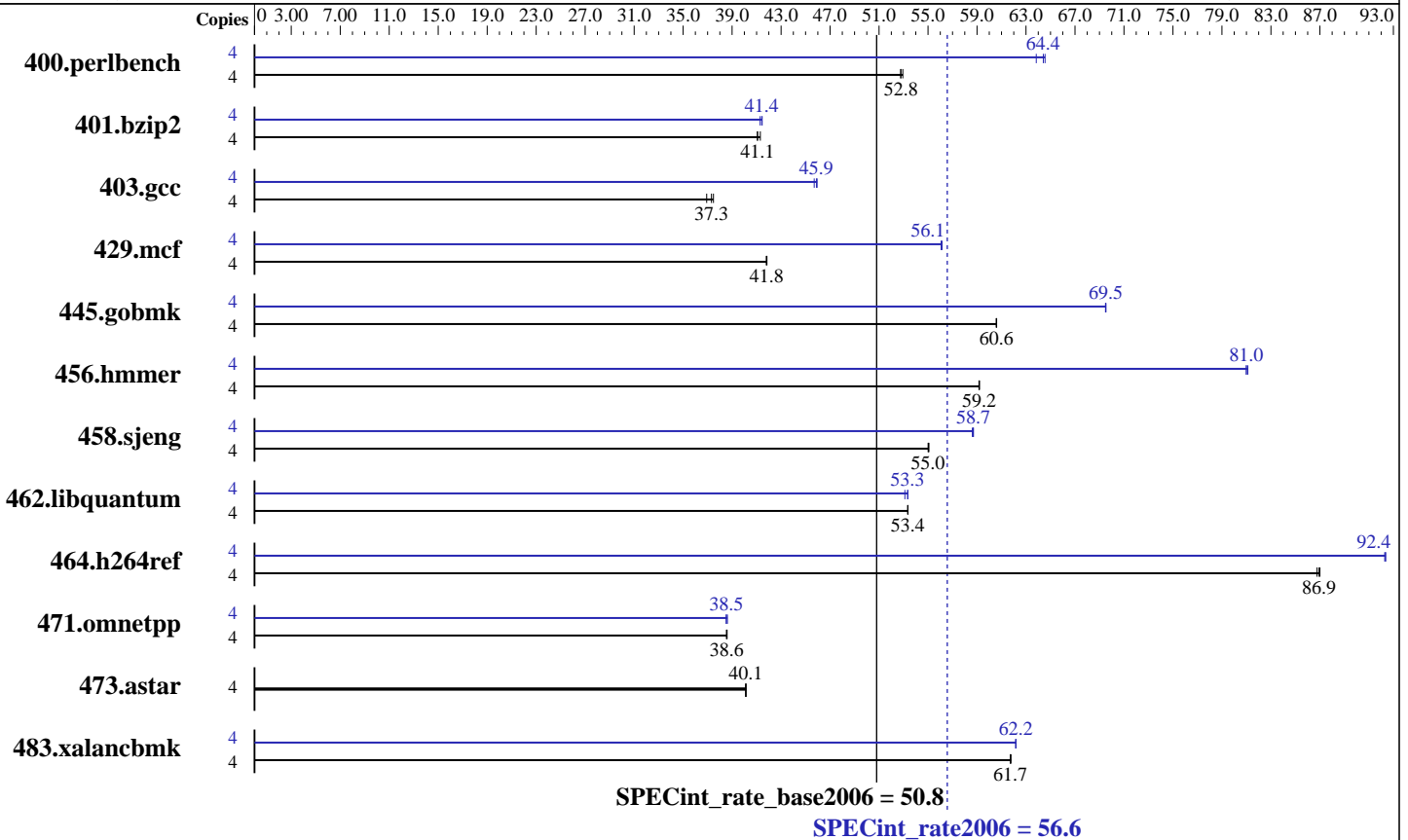
Test sponsor: Advanced Micro Devices

Tested by: Advanced Micro Devices

Test date: Feb-2007

Hardware Availability: May-2007

Software Availability: Mar-2007



Hardware

CPU Name: AMD Opteron 2222 SE
 CPU Characteristics:
 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: 8 GB (8x1GB, DDR2-667 CL4 ECC Reg Dual Rank)
 Disk Subsystem: SATA, 80 GB
 Other Hardware: None

Software

Operating System: SuSE Linux Enterprise Server 9 SP3 64-bit kernel
 Compiler: QLogic PathScale Compiler Suite, Release 3.0
 Auto Parallel: No
 File System: ext3
 System State: Multi-user, 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 | | | | | | |
|----------------|--------|-------------|-------------|------------|-------------|-------------|-------------|--------|------------|-------------|------------|-------------|-------------|-------------|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 400.perlbench | 4 | 738 | 52.9 | 741 | 52.8 | 740 | 52.8 | 4 | 612 | 63.8 | 605 | 64.6 | 607 | 64.4 |
| 401.bzip2 | 4 | 935 | 41.3 | 940 | 41.1 | 940 | 41.1 | 4 | 935 | 41.3 | 931 | 41.5 | 932 | 41.4 |
| 403.gcc | 4 | 872 | 36.9 | 863 | 37.3 | 859 | 37.5 | 4 | 705 | 45.7 | 701 | 45.9 | 702 | 45.9 |
| 429.mcf | 4 | 872 | 41.8 | 873 | 41.8 | 873 | 41.8 | 4 | 651 | 56.1 | 650 | 56.1 | 650 | 56.1 |
| 445.gobmk | 4 | 693 | 60.6 | 692 | 60.6 | 693 | 60.6 | 4 | 604 | 69.5 | 604 | 69.5 | 603 | 69.5 |
| 456.hmmer | 4 | 631 | 59.2 | 630 | 59.2 | 631 | 59.2 | 4 | 461 | 81.0 | 460 | 81.1 | 461 | 81.0 |
| 458.sjeng | 4 | 880 | 55.0 | 880 | 55.0 | 879 | 55.1 | 4 | 826 | 58.6 | 825 | 58.7 | 824 | 58.7 |
| 462.libquantum | 4 | 1553 | 53.4 | 1554 | 53.3 | 1553 | 53.4 | 4 | 1561 | 53.1 | 1554 | 53.3 | 1554 | 53.3 |
| 464.h264ref | 4 | 1020 | 86.8 | 1017 | 87.0 | 1018 | 86.9 | 4 | 959 | 92.4 | 958 | 92.4 | 959 | 92.3 |
| 471.omnetpp | 4 | 648 | 38.6 | 649 | 38.5 | 648 | 38.6 | 4 | 647 | 38.6 | 649 | 38.5 | 649 | 38.5 |
| 473.astar | 4 | 700 | 40.1 | 700 | 40.1 | 700 | 40.1 | 4 | 700 | 40.1 | 700 | 40.1 | 700 | 40.1 |
| 483.xalancbmk | 4 | 447 | 61.8 | 447 | 61.7 | 447 | 61.7 | 4 | 444 | 62.2 | 444 | 62.2 | 444 | 62.2 |

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

General Notes

taskset utility used to bind cores to processes
All memory slots filled on all used CPU sockets

The tested system can be assembled using an SSI-MEB case and
a Silverstone Zeus 650 watt ST65ZF ATX 12V Power Supply.

Base Compiler Invocation

C benchmarks:
pathcc

C++ benchmarks:
pathCC

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

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Base Portability Flags (Continued)

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/cpu2006/mpaton/1.0/amd513K8.lib/32 -lsmartheap

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
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

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Peak Optimization Flags (Continued)

429.mcf: -m32 -O3 -ipa
-L/cpu2006/mpaton/1.0/amd513K8.lib/32 -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.hmmer: -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/cpu2006/mpaton/1.0/amd513K8.lib/32 -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -Ofast -m32 -OPT:unroll_times_max=8
-L/cpu2006/mpaton/1.0/amd513K8.lib/32 -lsmartheap

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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.26.html

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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.26.xml

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

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