SPEC® CINT2006 Result

Tyan

(Test Sponsor: Advanced Micro Devices)

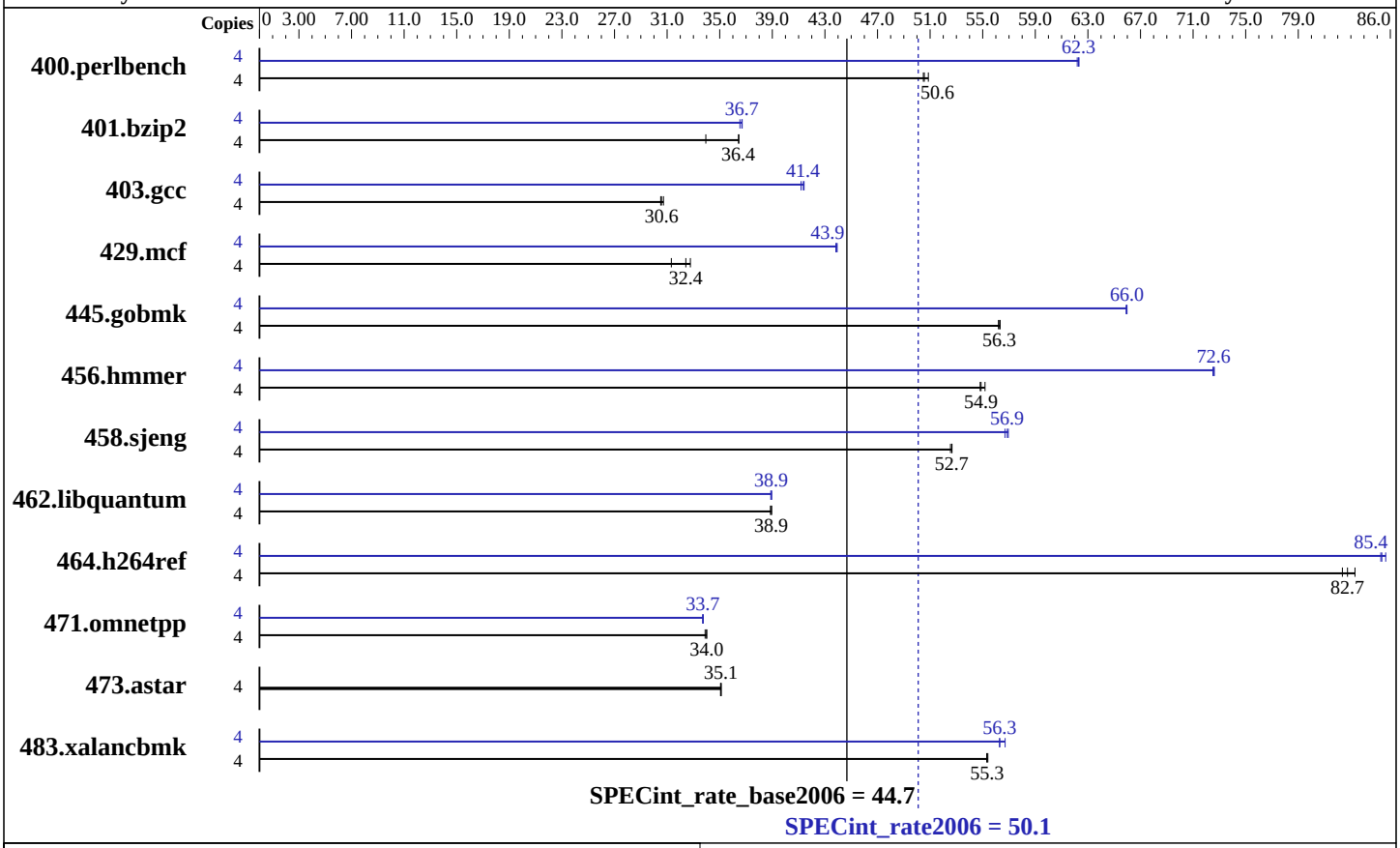
Thunder K8QW (S4881) Opteron 890

SPECint®_rate2006 = 50.1

SPECint_rate_base2006 = 44.7

CPU2006 license: 49
Test sponsor: Advanced Micro Devices
Tested by: Advanced Micro Devices

Test date: Apr-2007
Hardware Availability: Feb-2007
Software Availability: Feb-2007



Hardware

CPU Name:	AMD Opteron 890
CPU Characteristics:	
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:	8 GB (8x1GB, DDR-400 CL3 ECC Reg Dual Rank)
Disk Subsystem:	SATA, 250 GB
Other Hardware:	None

Software

Operating System:	SuSE Linux Enterprise Server 10 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	774	50.5	**773**	**50.6**	768	50.9	4	628	62.2	**627**	**62.3**	627	62.3
401.bzip2	4	1137	33.9	**1060**	**36.4**	1059	36.5	4	1056	36.5	**1052**	**36.7**	1051	36.7
403.gcc	4	1055	30.5	1048	30.7	**1053**	**30.6**	4	782	41.2	**779**	**41.4**	777	41.4
429.mcf	4	1165	31.3	**1125**	**32.4**	1113	32.8	4	**831**	**43.9**	832	43.8	830	43.9
445.gobmk	4	**746**	**56.3**	745	56.3	747	56.2	4	637	65.9	636	66.0	**636**	**66.0**
456.hmmer	4	676	55.2	681	54.8	**680**	**54.9**	4	514	72.6	**514**	**72.6**	515	72.5
458.sjeng	4	**919**	**52.7**	921	52.6	919	52.7	4	850	56.9	**851**	**56.9**	854	56.7
462.libquantum	4	2128	38.9	2133	38.9	**2129**	**38.9**	4	**2129**	**38.9**	2128	39.0	2131	38.9
464.h264ref	4	1063	83.3	1075	82.4	**1070**	**82.7**	4	**1037**	**85.4**	1038	85.3	1034	85.6
471.omnetpp	4	735	34.0	**735**	**34.0**	738	33.9	4	**741**	**33.7**	742	33.7	741	33.7
473.astar	4	800	35.1	801	35.1	**800**	**35.1**	4	800	35.1	801	35.1	**800**	**35.1**
483.xalancbmk	4	498	55.4	499	55.3	**499**	**55.3**	4	**490**	**56.3**	487	56.7	490	56.3

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.
Memory bank interleave is enabled.
The tested system can be assembled using an SSI-MEB case and
a Emacs PSL-6701P 700 watt 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`

Continued on next page

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/amd514K8.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/amd514K8.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/amd514K8.lib/32 -lsmartheap`

473.astar: `basepeak = yes`

483.xalancbmk: `-Ofast -m32 -OPT:unroll_times_max=8 -L/cpu2006/mpaton/1.0/amd514K8.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.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.xml`

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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