



SPEC® CINT2006 Result

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Tyan

SPECint®2006 = 14.9

n4250QE (S4985) AMD Opteron 2222 SE

SPECint_base2006 = 13.5

CPU2006 license: 49

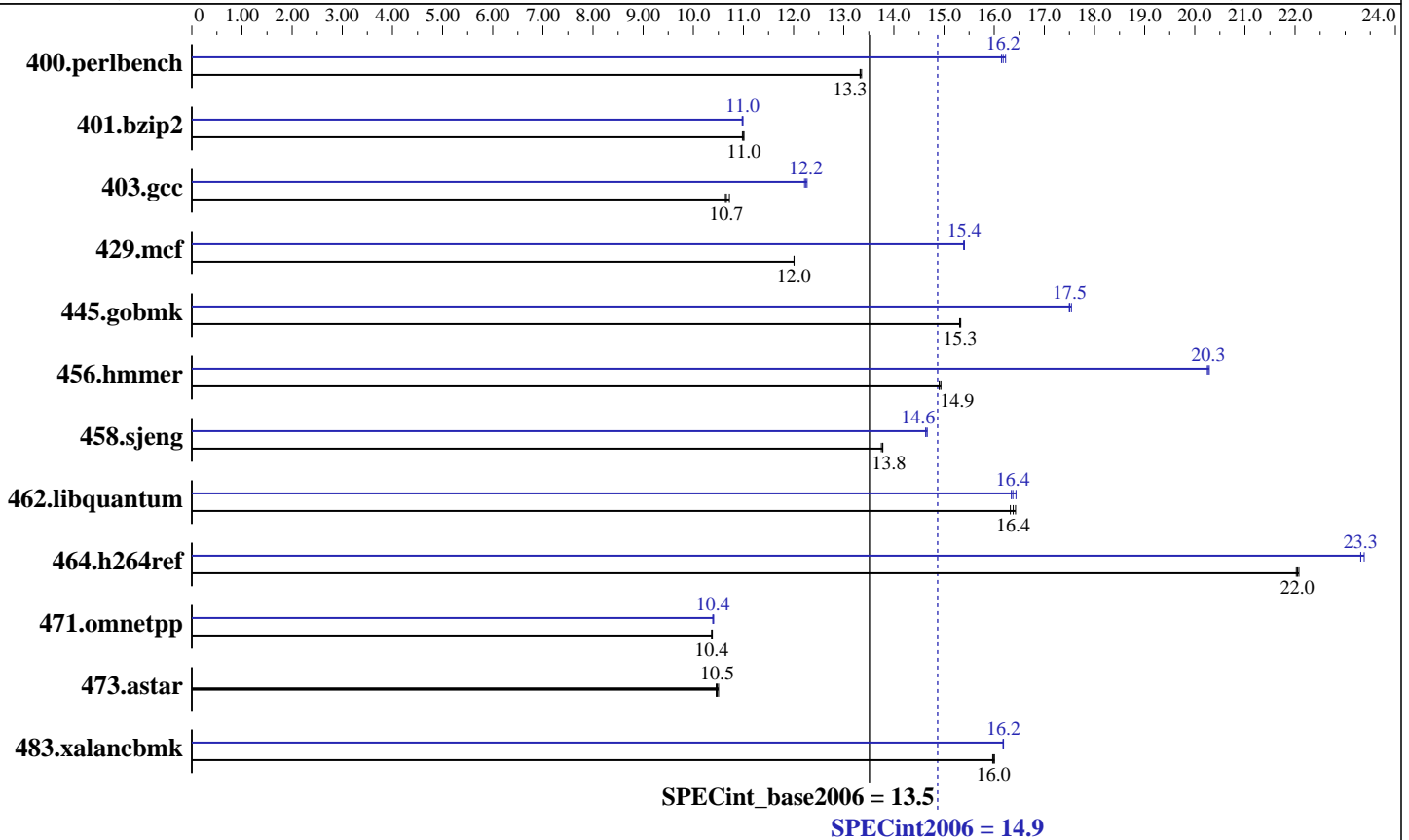
Test sponsor: Advanced Micro Devices

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: 2 cores, 1 chip, 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: 4 GB (4x1GB, 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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	732	13.4	733	13.3	<u>733</u>	<u>13.3</u>	605	16.1	602	16.2	<u>604</u>	<u>16.2</u>
401.bzip2	877	11.0	<u>877</u>	<u>11.0</u>	879	11.0	879	11.0	<u>879</u>	<u>11.0</u>	878	11.0
403.gcc	751	10.7	<u>755</u>	<u>10.7</u>	757	10.6	656	12.3	<u>657</u>	<u>12.2</u>	659	12.2
429.mcf	<u>759</u>	<u>12.0</u>	759	12.0	759	12.0	593	15.4	592	15.4	<u>592</u>	<u>15.4</u>
445.gobmk	<u>685</u>	<u>15.3</u>	684	15.3	685	15.3	598	17.5	<u>599</u>	<u>17.5</u>	600	17.5
456.hmmer	626	14.9	625	14.9	<u>626</u>	<u>14.9</u>	<u>460</u>	<u>20.3</u>	460	20.3	461	20.3
458.sjeng	880	13.8	<u>878</u>	<u>13.8</u>	878	13.8	825	14.7	827	14.6	<u>826</u>	<u>14.6</u>
462.libquantum	<u>1265</u>	<u>16.4</u>	1269	16.3	1261	16.4	1268	16.3	1261	16.4	<u>1266</u>	<u>16.4</u>
464.h264ref	<u>1004</u>	<u>22.0</u>	1002	22.1	1005	22.0	949	23.3	947	23.4	<u>949</u>	<u>23.3</u>
471.omnetpp	<u>603</u>	<u>10.4</u>	603	10.4	602	10.4	601	10.4	<u>601</u>	<u>10.4</u>	601	10.4
473.astar	<u>670</u>	<u>10.5</u>	671	10.5	668	10.5	<u>670</u>	<u>10.5</u>	671	10.5	668	10.5
483.xalancbmk	431	16.0	<u>432</u>	<u>16.0</u>	432	16.0	426	16.2	427	16.2	<u>426</u>	<u>16.2</u>

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

General Notes

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
 462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

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Base Portability Flags (Continued)

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

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

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

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Peak Optimization Flags (Continued)

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

473.astar: basepeak = yes

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

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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Tested with SPEC CPU2006 v1.0.
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