



SPEC® CINT2006 Result

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Tyan

(Test Sponsor: Advanced Micro Devices)

SPECint®_rate2006 - NA

Tyan Thunder n4250QE (S4985E), AMD Opteron 8350

SPECint_rate_base2006 - NA

CPU2006 license: 49

Test sponsor: Advanced Micro Devices

Tested by: Advanced Micro Devices

Test date: Aug-2007

Hardware Availability: Oct-2007

Software Availability: Oct-2007

SPEC has determined that this result was not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter reported that the result would not meet the SPEC OSG requirements for continued availability.

- Copies
- 400.perlbench
- 401.bzip2
- 403.gcc
- 429.mcf
- 445.gobmk
- 456.hmmer
- 458.sjeng
- 462.libquantum
- 464.h264ref
- 471.omnetpp
- 473.ast
- 483.xalancbmk

Not Available

Hardware

CPU Name: AMD Opteron 8350
 CPU Characteristic: 2000
 CPU MHz: Integrated
 FPU: Integrated
 CPU(s) enabled: 16 cores, 4 chips, 4 cores/chip
 CPU(s) orderable: 1 to 4 chips
 Primary Cache: 64 KB I + 64 KB D on chip per core
 Secondary Cache: 512 KB I+D on chip per core
 L3 Cache: 2 MB I+D on chip per chip
 Other Cache: None

Continued on next page

Software

Operating System: SuSE Linux Enterprise Server 10 SP1 64-bit kernel
 Compiler: The Portland Group (PGI)
 PGI gcc 7.1-0 C Compiler
 PGI pgCC 7.1-0 C++ Compiler
 QLogic PathScale Compiler Suite
 PathScale pathcc 3.0 C Compiler
 PathScale pathCC 3.0 C++ Compiler
 Auto Parallel: No
 File System: ReiserFS
 System State: Multi-user, run level 3

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Memory: 32 GB (16x2GB, DDR2-667 CL5 Reg Dual Rank)
Disk Subsystem: SATA, 250 GB, 7200 RPM
Other Hardware: None

Base Processor: 32-bit
Peak Pointers: 32/64-bit
Other Software: SmartHeap 8.0 32-bit Library for Linux

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	16	NA	NA	NA	NA	NA	NA	16	NA	NA	NA	NA	NA	NA
401.bzip2	16	NA	NA	NA	NA	NA	NA	16	NA	NA	NA	NA	NA	NA
403.gcc	16	NA	NA	NA	NA	NA	NA	16	NA	NA	NA	NA	NA	NA
429.mcf	16	NA	NA	NA	NA	NA	NA	16	NA	NA	NA	NA	NA	NA
445.gobmk	16	NA	NA	NA	NA	NA	NA	16	NA	NA	NA	NA	NA	NA
456.hmmer	16	NA	NA	NA	NA	NA	NA	16	NA	NA	NA	NA	NA	NA
458.sjeng	16	NA	NA	NA	NA	NA	NA	16	NA	NA	NA	NA	NA	NA
462.libquantum	16	NA	NA	NA	NA	NA	NA	16	NA	NA	NA	NA	NA	NA
464.h264ref	16	NA	NA	NA	NA	NA	NA	16	NA	NA	NA	NA	NA	NA
471.omnetpp	16	NA	NA	NA	NA	NA	NA	16	NA	NA	NA	NA	NA	NA
473.astar	16	NA	NA	NA	NA	NA	NA	16	NA	NA	NA	NA	NA	NA
483.xalancbmk	16	NA	NA	NA	NA	NA	NA	16	NA	NA	NA	NA	NA	NA

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

Operating System Notes

'ulimit -l 4915200' was used to set environment stack size
'ulimit -l 4915200' was used to set environment locked pages in memory quantity
'numactl' was used to bind copies to the cores
Set vi/nr_hugepages=2400 in /etc/sysctl.conf
mount -t hugetlbfs nodev /mnt/hugepages
Environment variable PGI_HUGE_PAGES set to 150

General Notes

The tested system can be assembled using an EMACS PSL-6701P-SATA 700-Watt 12V power supply.



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Base Compiler Invocation

C benchmarks:

pgcc

C++ benchmarks:

pgcpp

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.hmmmer: -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:

-fast -Mipa=fast -Mipa=inline -Mipa=noarg -Mfprelaxed
-mchuge:840 -tp barcelona-64 -Bstatic_pgi

C++ benchmarks:

-fastsse -Mipa=fast -Mipa=inline -Mfprelaxed -Msmartalloc=huge:448
--zsh -tp barcelona -Bstatic_pgi

Base Other Flags

C benchmarks:

-w

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Base Other Flags (Continued)

C++ benchmarks:
-w

Peak Compiler Invocation

C benchmarks (except as noted below):

pgcc

400.perlbench: pathcc

403.gcc: pathcc

445.gobmk: pathcc

464.h264ref: pathcc

C++ benchmarks (except as noted below):

pgcpp

483.xalancbmk: 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
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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.bzp2: -Mpfi(pass 1) -Mpfo(pass 2) -fast
-Msmartalloc=huge:448 -tp barcelona-64 -Bstatic_pgi

403.gcc: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -m32 -O3
-OPT:Ofast

429.mcf: -fastsse -Mipa=fast -Mipa=inline:1 -Msmartalloc=huge:420
-tp barcelona -Bstatic_pgi

445.gobmk: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -O3
-OPT:alias=disjoint -LNO:simd=0 -LNO:minvariant=off
-WOPT:alias_type_expr=on

456.hmmer: -fast -Msmartalloc=huge:448 -Mfpelaxed -Msafeptr
-Mipconservative -Mipa=ptr -Mipa=arg -tp barcelona-64
-Bstatic_pgi

458.sjeng: -Mpfi(pass 1) -Mipa=fast(pass 2) -Mipa=inline:1(pass 2)
-Mipa=noarg(pass 2) -Mpfo(pass 2) -fast
-Msmartalloc=huge:448 -Mfpelaxed -tp barcelona-64
-Bstatic_pgi

459.sjeng: -fast -Mfpelaxed -Msmartalloc=huge:448 -Munroll=m:4
-Mipa=fast -Mipa=inline -Mipa=noarg -Bstatic_pgi

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: basepeak = yes

473.astar: basepeak = yes

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Peak Optimization Flags (Continued)

483.xalancbmk: -Ofast -m32 -OPT:unroll_times_max=8
-L/cpu2006/work/cpu2006/SmartHeap -lsmatcheap

Peak Other Flags

C benchmarks (except as noted below):

-w

400.perlbench: No flags used

403.gcc: No flags used

445.gobmk: No flags used

464.h264ref: No flags used

C++ benchmarks (except as noted below):

-w

483.xalancbmk: No flags used

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

<http://www.spec.org/cpu2006/flags/amd814GH-flags.20090714.html>

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

<http://www.spec.org/cpu2006/flags/amd814GH-flags.20090714.xml>



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

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