



CINT2000 Result

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AMD

Tyan Thunder n4250QE (S4985), Opteron (TM) 2220

SPECint_rate2000 = 87.5

SPECint_rate_base2000 = 77.9

SPEC license #: 49 | Tested by: AMD, Austin, TX | Test date: Jan-2007 | Hardware Avail: Feb-2007 | Software Avail: Aug-2005

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	4	82.3	79.0	4	81.9	79.3
175.vpr	4	109	59.5	4	103	62.8
176.gcc	4	58.1	87.8	4	58.9	86.7
181.mcf	4	275	30.4	4	164	50.8
186.crafty	4	40.1	116	4	39.1	119
197.parser	4	142	59.0	4	112	74.7
252.eon	4	45.0	134	4	38.9	155
253.perlbnk	4	96.1	86.9	4	86.8	96.2
254.gap	4	61.9	82.5	4	61.9	82.5
255.vortex	4	69.6	127	4	64.9	136
256.bzip2	4	98.1	70.9	4	98.1	70.9
300.twolf	4	206	67.7	4	160	86.9

Hardware

CPU: AMD Opteron (TM) 2220
 CPU MHz: 2800
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
 CPU(s) orderable: 1,2
 Parallel: No
 Primary Cache: 64KBI + 64KBD on chip per core
 Secondary Cache: 1024KB (I+D) on chip per core
 L3 Cache: N/A
 Other Cache: N/A
 Memory: 8x1GB, DDR2-667 CL4 ECC Reg Dual Rank
 Disk Subsystem: SATA, 74GB
 Other Hardware: None

Software

Operating System: SuSE Linux Enterprise Server 9 SP3 (64-bit)
 Compiler: PathScale EKOPath(TM) Compiler Suite, Release 2.3
 File System: Linux/ext3
 System State: Multi-user, run level 3

Notes/Tuning Information

Tested by Advanced Micro Devices

+FDO: PASS1= -fb_create fbdata PASS2= -fb_opt fbdata

Baseline optimization flags:

C programs: -Ofast +FDO
 C++ programs: -Ofast +FDO

Portability Flags:

186.crafty: -DLINUX_i386
 252.eon: -DHAS_ERRLIST -DSPEC_CPU2000_LP64
 253.perlbnk: -DSPEC_CPU2000_LINUX_I386 -DSPEC_CPU2000_NEED_BOOL
 -DSPEC_CPU2000_LP64
 254.gap: -DSYS_IS_USG -DSYS_HAS_IOCTL_PROTO -DSYS_HAS_TIME_PROTO
 -DSYS_HAS_CALLOC_PROTO -DSPEC_CPU2000_LP64
 255.vortex: -DSPEC_CPU2000_LP64

Peak Tuning:

164.gzip: -O3 -ipa -WOPT:val=0 -OPT:unroll_size=0 +FDO
 175.vpr: -O3 -ipa -m32 +FDO



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Notes/Tuning Information (Continued)

```
176.gcc:      -O3 -IPA:plimit=10000 -LNO:opt=0 -OPT:goto=off +FDO
181.mcf:      -O3 -ipa -IPA:field_reorder=on -m32 +FDO
186.crafty:   -Ofast -CG:local_fwd_sched=on -LNO:opt=0 -WOPT:val=0 +FDO
197.parser:   -O3 -ipa -m32 -IPA:ctype=on +FDO
252.eon:      -Ofast -CG:gcm=off:p2align_freq=1:prefetch=off -IPA:plimit=4000
              -OPT:treeheight=on -TENV:X=4:frame_pointer=off -fno-exceptions
              -LNO:fu=10:full_unroll_outer=on -GRA:optimize_boundary=on +FDO
253.perlbnk:  -O2 -ipa -OPT:Ofast:transform_to_memlib=off
              -fno-math-errno -IPA:plimit=10000 +FDO
255.vortex:   -Ofast -OPT:goto=off -CG:p2align=on
              -GRA:optimize_boundary=on -IPA:min_hotness=120 +FDO
256.bzip2:    basepeak = true
300.twolf:    -O2 -CG:gcm=off:p2align_freq=100000
              -OPT:Ofast:unroll_times_max=8:unroll_size=256:alias=disjoint
              -WOPT:mem_opnds=on -m32 +FDO
```

System can be built with a 700W Zippy Power Supply
All memory slots populated on all CPU(s)
taskset utility used to bind CPU(s) to processes.