CINT2000 Result

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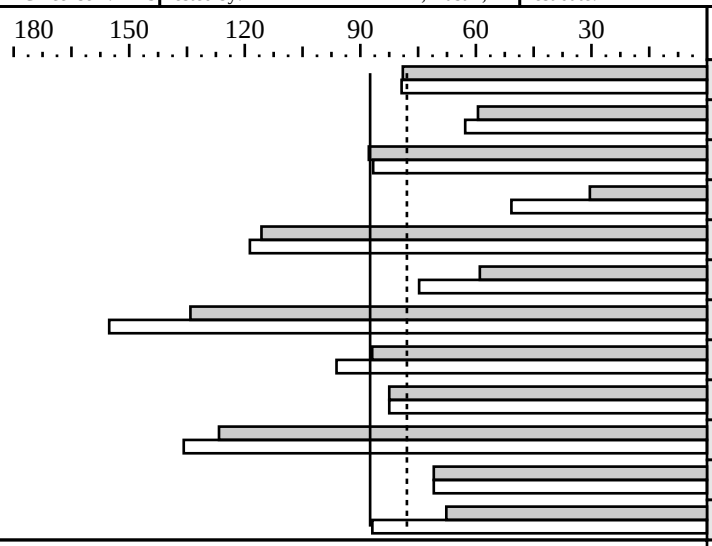
AMD

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.perlbmk	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

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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.perlbmk: -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.perlbmk: -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.
```