



# CINT2000 Result

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## Advanced Micro Devices

Tyan Thunder K9HM (S3992), AMD Opteron (TM) 2210

SPECint2000 = 1326

SPECint\_base2000 = 1202

SPEC license #: 49 Tested by: AMD Austin, TX Test date: Jul-2006 Hardware Avail: Sep-2006 Software Avail: Jan-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	128	1095	127	1099	
175.vpr	1400	143	978	142	987	
176.gcc	1100	86.6	1271	87.7	1255	
181.mcf	1800	260	693	169	1063	
186.crafty	1000	62.9	1590	61.4	1628	
197.parser	1800	200	900	165	1088	
252.eon	1300	70.4	1846	60.5	2149	
253.perlbmk	1800	147	1225	128	1404	
254.gap	1100	86.2	1276	86.2	1276	
255.vortex	1900	99.4	1911	92.8	2047	
256.bzip2	1500	136	1100	136	1100	
300.twolf	3000	270	1110	226	1325	

### Hardware

CPU: AMD Opteron (TM) 2210  
 CPU MHz: 1800  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 1 chip, 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: 4x512MB, DDR2-667 CL4 ECC Reg  
 Disk Subsystem: IDE, 120 GB  
 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

+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\_GLIBC22 -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  
 176.gcc: -O3 -IPA:plimit=10000 -LNO:opt=0 -OPT:goto=off +FDO



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## Notes/Tuning Information (Continued)

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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 using a standard ATX case and a Zippy 700W PSL-6701P power supply  
Half memory slots populated on CPU in dual channel configuration