



# CINT2000 Result

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Advanced Micro Devices  
TYAN Tomcat K8E (S2865), AMD Opteron (TM) 154

SPECint2000 = 1945  
SPECint\_base2000 = 1743

SPEC license #: 49 Tested by: Michael Paton Test date: Dec-2005 Hardware Avail: Jul-2005 Software Avail: Nov-2005

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	83.1	1685	82.8	1691	
175.vpr	1400	102	1373	98.5	1421	
176.gcc	1100	55.9	1969	57.2	1923	
181.mcf	1800	236	764	148	1214	
186.crafty	1000	40.1	2492	39.2	2553	
197.parser	1800	140	1285	110	1632	
252.eon	1300	44.8	2905	38.8	3352	
253.perlbnk	1800	95.6	1883	83.3	2162	
254.gap	1100	60.7	1813	60.7	1813	
255.vortex	1900	66.0	2877	62.0	3065	
256.bzip2	1500	96.4	1556	96.4	1556	
300.twolf	3000	189	1587	149	2008	

### Hardware

CPU: AMD Opteron (TM) 154 (939 pin)  
 CPU MHz: 2800  
 FPU: Integrated  
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip  
 CPU(s) orderable: 1  
 Parallel: No  
 Primary Cache: 64KBI + 64KBD on chip  
 Secondary Cache: 1024KB (I+D) on chip  
 L3 Cache: N/A  
 Other Cache: N/A  
 Memory: 2x512MB, DDR400 CL2  
 Disk Subsystem: IDE, 160 GB  
 Other Hardware: None

### Software

Operating System: SuSE Linux Enterprise Server 9 for AMD64  
 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\_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



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## Notes/Tuning Information (Continued)

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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
254.gap:      basepeak = true
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

```

Corsair CMX512-3200XL memory used in Dual Channel configuration  
Memory timings manually set in BIOS: CAS=2, Trcd=2, Tras=5, Trp=2  
BIOS rev 3.01  
The tested system can be assembled using a standard ATX case and an Antec True 550 watt EPS12V Power Supply