



# CINT2000 Result

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**Advanced Micro Devices**  
TYAN S2865 K8E Tomcat, AMD Opteron (TM) 144

SPECint2000 = **1319**  
SPECint\_base2000 = **1202**

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	127	1099	127	1099	
175.vpr	1400	141	994	136	1031	
176.gcc	1100	84.4	1303	83.8	1313	
181.mcf	1800	255	705	167	1081	
186.crafty	1000	64.9	1541	65.1	1537	
197.parser	1800	197	914	169	1064	
252.eon	1300	75.5	1721	69.0	1885	
253.perlbmk	1800	144	1253	127	1417	
254.gap	1100	88.4	1245	87.0	1264	
255.vortex	1900	98.7	1926	90.1	2110	
256.bzip2	1500	138	1086	138	1086	
300.twolf	3000	261	1149	221	1359	

### Hardware

CPU: AMD Opteron (TM) 144 (939-pin)  
 CPU MHz: 1800  
 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: 4x512 MB, DDR400 CL2.0  
 Disk Subsystem: IDE, Western Digital WD2000JB, 7200 rpm  
 Other Hardware: None

### Software

Operating System: SuSE Linux Enterprise Server 9 (SP2) for AMD64  
 Compiler: PathScale EKOPath(TM) Compiler Suite, Release 2.1  
 File System: Linux/ext3  
 System State: Multi-user, run level 3

## Notes/Tuning Information

Tested by AMD

+FDO: PASS1= -fb\_create fbdata PASS2= -fb\_opt fbdata

Baseline optimization flags:

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

Portability Flags:

176.gcc: srcalt 64bitgcc  
 186.crafty: -DLINUX\_i386  
 252.eon: -DHAS\_ERRLIST -DSPEC\_CPU2000\_LP64 srcalt fmax\_errno  
 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\_SIGNAL\_PROTO -DSYS\_HAS\_ANSI -DSYS\_HAS\_CALLOC\_PROTO  
 -DSPEC\_CPU2000\_LP64  
 255.vortex: -DSPEC\_CPU2000\_LP64 srcalt closed\_files

Peak Tuning:



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## Notes/Tuning Information (Continued)

```

164.gzip:      basepeak = true
175.vpr:      -O2 -ipa -OPT:alias=disjoint -CG:p2align_freq=500000
              -INLINE:aggressive=on -IPA:plimit=10000:callee_limit=5000
              +FDO
176.gcc:      -O3 -ipa -OPT:goto=off +FDO
181.mcf:      -O3 -ipa -IPA:field_reorder=on -m32 +FDO
186.crafty:   -O3 -OPT:goto=off +FDO
197.parser:   -O3 -ipa -m32 -IPA:ctype=on +FDO
252.eon:      -Ofast -CG:gcm=off:p2align_freq=1:prefetch=off -OPT:treeheight=on
              -TENV:X=4:frame_pointer=off -fno-exceptions
              -LNO:fu=10:full_unroll_outer=on -IPA:plimit=4000 +FDO
253.perlbnk:  -O2 -ipa -OPT:Ofast:transform_to_memlib=off
              -fno-math-errno -IPA:plimit=10000 +FDO
254.gap:      -Ofast -WOPT:aggstr=off +FDO
255.vortex:   -Ofast -OPT:goto=off -IPA:plimit=1800 -CG:p2align=on
              +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

```

The tested system can be assembled using a standard ATX footprint, an Antec True 550 Watt EPS12V power supply, and a PCI or PCIe graphics card.  
 All memory slots were populated with Corsair CMX512-3200XL.  
 Memory timings manually set in BIOS: CAS=2, TRCD=2, TRAS=5, TRP=2  
 BIOS version 1.01