



# CINT2000 Result

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

SPECint2000 = 1915  
SPECint\_base2000 = 1729

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	82.1	1706	82.1	1706	
175.vpr	1400	102	1369	99.0	1414	
176.gcc	1100	56.6	1942	56.4	1951	
181.mcf	1800	228	791	145	1239	
186.crafty	1000	41.6	2404	42.0	2381	
197.parser	1800	137	1318	113	1592	
252.eon	1300	49.0	2651	44.1	2947	
253.perlbnk	1800	95.4	1886	84.0	2143	
254.gap	1100	61.0	1802	60.2	1826	
255.vortex	1900	67.3	2824	61.7	3078	
256.bzip2	1500	96.8	1549	96.8	1549	
300.twolf	3000	189	1591	150	1996	

### 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: 4x512 MB, DDR400 CL2.0  
Disk Subsystem: IDE, Hitachi HDS722516VLAT20, 164 GB 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.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\_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 case and an Antec True 550 Watt EPS12V power supply.

All memory slots were populated with Corsair CMX512-3200XL.

Memory timings manually set in BIOS: CAS=2, TRCD=2, TRAS=5, TRP=2

BIOS V2.00b