



CINT2000 Result

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Advanced Micro Devices
ASUS SK8N Motherboard, AMD Opteron (TM) Model 248

SPECint2000 = **1452**
SPECint_base2000 = **1338**

SPEC license #: 2323 Tested by: PathScale, Inc. Test date: Apr-2004 Hardware Avail: Jan-2004 Software Avail: May-2004

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	108	1295	105	1329	
175.vpr	1400	129	1086	126	1109	
176.gcc	1100	72.3	1522	72.3	1522	
181.mcf	1800	231	779	153	1179	
186.crafty	1000	52.8	1894	52.8	1894	
197.parser	1800	173	1041	157	1148	
252.eon	1300	80.7	1610	74.3	1750	
253.perlbnk	1800	119	1511	110	1636	
254.gap	1100	87.4	1258	85.8	1282	
255.vortex	1900	86.1	2207	80.3	2367	
256.bzip2	1500	121	1244	120	1246	
300.twolf	3000	251	1195	212	1414	

Hardware

CPU: AMD Opteron 248
 CPU MHz: 2200
 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: 4x512MB, DDR400, PC3200, Corsair, CL2
 Disk Subsystem: IDE, 80 GB
 Other Hardware: None

Software

Operating System: SuSE Linux 9.0 (AMD64) 2.4.21-102-default
 Compiler: PathScale EKO Compiler Suite, Release 1.0
 File System: Linux/ext3
 System State: Multi-user, run level 3

Notes/Tuning Information

Tested by PathScale, Inc.

+FDO: PASS1= -fb_create fbdata PASS2= -fb_opt fbdata

Baseline optimization flags:

C programs: -O3 -ipa +FDO
 C++ programs: -Ofast +FDO

Portability Flags:

164.gzip: -DNO_STRING_H
 175.vpr: -DSPEC_CPU2000
 181.mcf: -DWANT_STDC_PROTO
 186.crafty: -DLINUX_i386 -DSPEC_CPU2000
 252.eon: -DHAS_ERRLIST -DFMAX_IS_DOUBLE -DSPEC_CPU2000_LP64 -DNDEBUG
 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



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Notes/Tuning Information (Continued)

300.twolf: -DSPEC_CPU2000 -DHAVE_SIGNED_CHAR

Peak Tuning:

```
164.gzip: -O3 -ipa -WOPT:val=0 -CG:p2align_freq=10000 +FDO
175.vpr: -O2 -ipa -OPT:alias=disjoint -LNO:prefetch Ahead=2 -CG:p2align_freq=500000
      -INLINE:aggressive=on -IPA:space=300:plimit=10000:callee_limit=5000:linear=on
      +FDO
186.crafty: basepeak = true
181.mcf: -O3 -static -OPT:Ofast -m32 +FDO
197.parser: -O3 -ipa -m32 -IPA:ctype=on +FDO
252.eon: -Ofast -CG:gcm=off:p2align_freq=1:prefetch=off
      -OPT:unroll_times_max=16:treeheight=on -TENV:X=4:frame_pointer=off
      -fno-exceptions +FDO
253.perlbnk: -O3 -ipa -TENV:X=3 +FDO -IPA:min_hotness=5:plimit=20000
254.gap: -O3 -ipa +FDO -IPA:min_hotness=7
255.vortex: -Ofast -LNO:opt=0 -TENV:X=4
      -OPT:goto=off:unroll_analysis=off:unroll_size=0:unroll_times_max=8
      +FDO -IPA:min_hotness=14:space=500:plimit=3600
256.bzip2: -O3 -ipa -OPT:unroll_times=8:unroll_size=256 +FDO
300.twolf: -O2 -CG:gcm=off:p2align_freq=100000 -TENV:X=4 +FDO -m32
      -OPT:unroll_times=8:unroll_size=256:alias=disjoint:Ofast
```

Notes

- Software availability date: PathScale EKO Compilers generate 64-bit code by default. The -m32 flag generates 32-bit code and is used as a peak flag for some codes above. This -m32 flag will be available and supported with PathScale EKO Compilers v1.0 in April, but will not be fully documented until May 2004.
- The tested system can be assembled using an ATX case such as the Antec KS-282, a 480W power supply, and a AGP video card.
- AMIBIOS version 08.00.09