# CINT2000 Result

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## Advanced Micro Devices

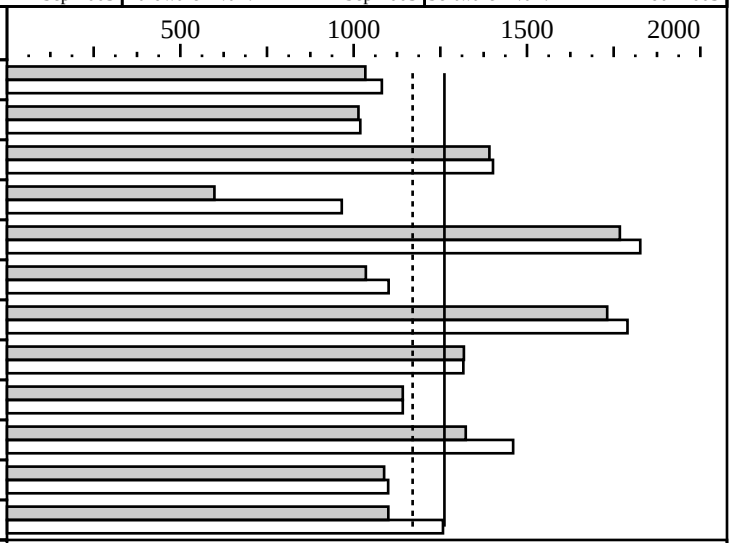
ASUS SK8N Motherboard, AMD Opteron (TM) 146

SPECint2000 = 1262

SPECint_base2000 = 1170

SPEC license #: 49 | Tested by: AMD, Austin, TX | Test date: Sep-2003 | Hardware Avail: Sep-2003 | Software Avail: Jul-2003

| Benchmark | Reference Time | Base Runtime | Base Ratio | Runtime | Ratio |
|---|---|---|---|---|---|
| 164.gzip | 1400 | 135 | 1034 | 129 | 1081 |
| 175.vpr | 1400 | 138 | 1014 | 137 | 1019 |
| 176.gcc | 1100 | 79.0 | 1392 | 78.5 | 1402 |
| 181.mcf | 1800 | 301 | 598 | 186 | 966 |
| 186.crafty | 1000 | 56.6 | 1768 | 54.7 | 1827 |
| 197.parser | 1800 | 174 | 1035 | 164 | 1101 |
| 252.eon | 1300 | 75.1 | 1731 | 72.6 | 1790 |
| 253.perlbmk | 1800 | 137 | 1318 | 137 | 1316 |
| 254.gap | 1100 | 96.4 | 1142 | 96.4 | 1142 |
| 255.vortex | 1900 | 144 | 1323 | 130 | 1460 |
| 256.bzip2 | 1500 | 138 | 1088 | 136 | 1100 |
| 300.twolf | 3000 | 273 | 1100 | 239 | 1258 |




### Hardware

| | |
|---|---|
| CPU: | AMD Opteron (TM) 146 |
| CPU MHz: | 2000 |
| 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 PC3200 DDR ECC Registered SDRAM CL2.5 |
| Disk Subsystem: | IDE, Western Digital WD1200JB, 120 GB |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | SuSE Linux Enterprise Server for AMD 64 8.0 Kernel 2.4.19-249 (SP2) |
| Compiler: | SuSE optional gcc 3.3 compiler (20030312) |
| File System: | Linux/Ext3 |
| System State: | Multi-user SuSE Run level 3 |

## Notes/Tuning Information

```
+FDO: PASS1=-fprofile-arcs PASS2=-fbranch-probabilities
Portability:
               PORTABILITY=-DSPEC_CPU2000_LP64 is applied to all benchmarks.
                 Ineffective for 181.mcf, 197.parser, 300.twolf
 186.crafty:  CPORTABILITY=-DLINUX_i386
 176.gcc:     Approved src.alt is used
 252.eon:     CXXPORTABILITY=-DHAS_ERRLIST -DFMAX_IS_DOUBLE
 253.perlbmk: CPORTABILITY=-DSPEC_CPU2000_LINUX_I386 -DSPEC_CPU2000_NEED_BOOL
                           -DSPEC_CPU2000_GLIBC22
 254.gap:     CPORTABILITY=-DSYS_IS_USG -DSYS_HAS_IOCTL_PROTO -DSYS_HAS_TIME_PROTO
                          -DSYS_HAS_SIGNAL_PROTO -DSYS_HAS_ANSI -DSYS_HAS_CALLOC_PROTO
Baseline C:      gcc -O3 -funroll-all-loops +FDO
Baseline C++:    g++ -O3 -funroll-all-loops +FDO
Peak tuning:
 gzip:    -O3 -funroll-all-loops -finline-limit=900 -freduce-all-givs +FDO
 vpr:     -O3 -funroll-loops -finline-limit=1000 +FDO
 gcc:     -O3 -funroll-all-loops -finline-limit=900 +FDO
 mcf:     -O3 -funroll-all-loops -m32 +FDO
 crafty:  -O3 -funroll-loops -fprefetch-loop-arrays
 parser:  -O3 -funroll-all-loops -m32 +FDO
```

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## Notes/Tuning Information (Continued)

```
 eon:     -O3 -funroll-all-loops -ffast-math -finline-limit=3000 +FDO
 perlbmk: -O3 -funroll-all-loops -finline-limit=1800 +FDO
 gap:     basepeak=true
 vortex:  -O3 -funroll-all-loops -finline-limit=1000 +FDO
 bzip2:   -O3 -funroll-all-loops -freduce-all-givs -finline-limit=2700 +FDO
 twolf:   -O3 -funroll-all-loops -finline-limit=2000 -m32 +FDO
ECC on, ECC scrubbing off, ACPI disabled at boot time
with kernel option "acpi=off"
```