



CINT2000 Result

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AMD

Rioworks HDAMA Motherboard, AMD Opteron (TM) 248

SPECint_rate2000 = 30.9

SPECint_rate_base2000 = 27.4

SPEC license #: 49 | Tested by: Advanced Micro Devices | Test date: Nov-2003 | Hardware Avail: Nov-2003 | Software Avail: Jul-2003

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	2	124	26.2	2	118	27.4
175.vpr	2	137	23.7	2	137	23.6
176.gcc	2	72.1	35.4	2	70.7	36.1
181.mcf	2	466	8.97	2	231	18.1
186.crafty	2	51.4	45.1	2	49.5	46.8
197.parser	2	162	25.9	2	150	27.8
252.eon	2	86.2	35.0	2	64.5	46.7
253.perlbnk	2	125	33.4	2	126	33.1
254.gap	2	93.1	27.4	2	93.1	27.4
255.vortex	2	133	33.1	2	120	36.6
256.bzip2	2	127	27.3	2	125	27.9
300.twolf	2	255	27.3	2	216	32.2

Hardware

CPU: AMD Opteron (TM) 248
CPU MHz: 2200
FPU: Integrated
CPU(s) enabled: 2 cores, 2 chips, 1 core/chip
CPU(s) orderable: 2
Parallel: No
Primary Cache: 64KBI + 64KBD on chip
Secondary Cache: 1024KB(I+D) on chip
L3 Cache: N/A
Other Cache: N/A
Memory: 4 x 512MB PC3200 DDR SDRAM, ECC Registered
Disk Subsystem: Seagate Cheetah ST336753LW SCSI, Ultra 320
Other Hardware: None

Software

Operating System: SuSE Linux 8.0 SLES 64 bit Kernel 2.4.19 (SP2)
Compiler: SuSE optional gcc 3.3 compiler (20030312) (from SLES8 SP2)
File System: Linux/ext3
System State: Multi-user SuSE Run level 3

Notes/Tuning Information

Tested by Advanced Micro Devices

+FDO: PASS1=-fprofile-arcs PASS2=-fbranch-probabilities

Portability:

PORTABILITY=-DSPEC_CPU2000_LP64 is applied to all benchmarks, except for peak runs of 181.mcf, 197.parser and 300.twolf, which are compiled for 32-bit in peak.

186.crafty: CPORTABILITY=-DLINUX_i386

176.gcc: Approved src.alt is used

252.eon: CXXPORTABILITY=-DHAS_ERRLIST -DFMAX_IS_DOUBLE

253.perlbnk: 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

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Notes/Tuning Information (Continued)

```
crafty: -O3 -funroll-loops -fprefetch-loop-arrays
parser: -O3 -funroll-all-loops -m32 +FDO
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
```

ONESTEP is used for all base and peak runs

The tested system can be assembled using an ATX case such as the Antec KS-282, a 480W power supply, and a PCI or AGP video card.