



CINT2000 Result

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Advanced Micro Devices
Tyan Thunder K8W (S2885), AMD Opteron (TM) 250

SPECint_rate2000 = 34.0
SPECint_rate_base2000 = 31.6

SPEC license #: 49 | Tested by: AMD, Austin, TX | Test date: Apr-2004 | Hardware Avail: May-2004 | Software Avail: Apr-2004

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	2	113	28.6	2	109	29.8
175.vpr	2	116	28.1	2	117	27.8
176.gcc	2	66.4	38.4	2	65.4	39.0
181.mcf	2	261	16.0	2	159	26.2
186.crafty	2	47.3	49.1	2	46.6	49.8
197.parser	2	151	27.6	2	139	30.0
252.eon	2	67.2	44.9	2	61.4	49.1
253.perlbnk	2	115	36.4	2	114	36.6
254.gap	2	86.2	29.6	2	86.2	29.6
255.vortex	2	120	36.6	2	110	40.0
256.bzip2	2	118	29.6	2	132	26.3
300.twolf	2	244	28.5	2	207	33.7

Hardware

CPU: AMD Opteron (TM) 250
 CPU MHz: 2400
 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 512 MB PC3200 DDR SDRAM CL3.0
 Disk Subsystem: SCSI, Ultra 320, 15k rpm
 Other Hardware: None

Software

Operating System: SuSE Linux 8.0 SLES 64 bit (SP3)
 SuSe NUMA kernel 2.4.21-143
 Compiler: SuSE optional gcc 3.3 compiler (20030312)
 (from SLES8 SP3)
 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, 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

Approved src.alt is used.

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:

164.gzip: -O3 -funroll-all-loops -finline-limit=900 -freduce-all-givs +FDO

175.vpr: -O3 -funroll-loops -finline-limit=1000 +FDO

176.gcc: -O3 -funroll-all-loops -finline-limit=900 +FDO

181.mcf: -O3 -funroll-all-loops -m32 +FDO

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Notes/Tuning Information (Continued)

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186.crafty: -O3 -funroll-loops -fprefetch-loop-arrays
197.parser: -O3 -funroll-all-loops -m32 +FDO
252.eon: -O3 -funroll-all-loops -ffast-math -finline-limit=3000 +FDO
253.perlbnk: -O3 -funroll-all-loops -finline-limit=1800 +FDO
254.gap: basepeak=true
255.vortex: -O3 -funroll-all-loops -finline-limit=1000 +FDO
256.bzip2: -O3 -funroll-all-loops -freduce-all-givs -finline-limit=2700 +FDO
300.twolf: -O3 -funroll-all-loops -finline-limit=2000 -m32 +FDO
```

ONESTEP is used for all base and peak runs

Taskset utility used to bind processes to CPU(s)

BIOS rev.: 1.01