



CINT2000 Result

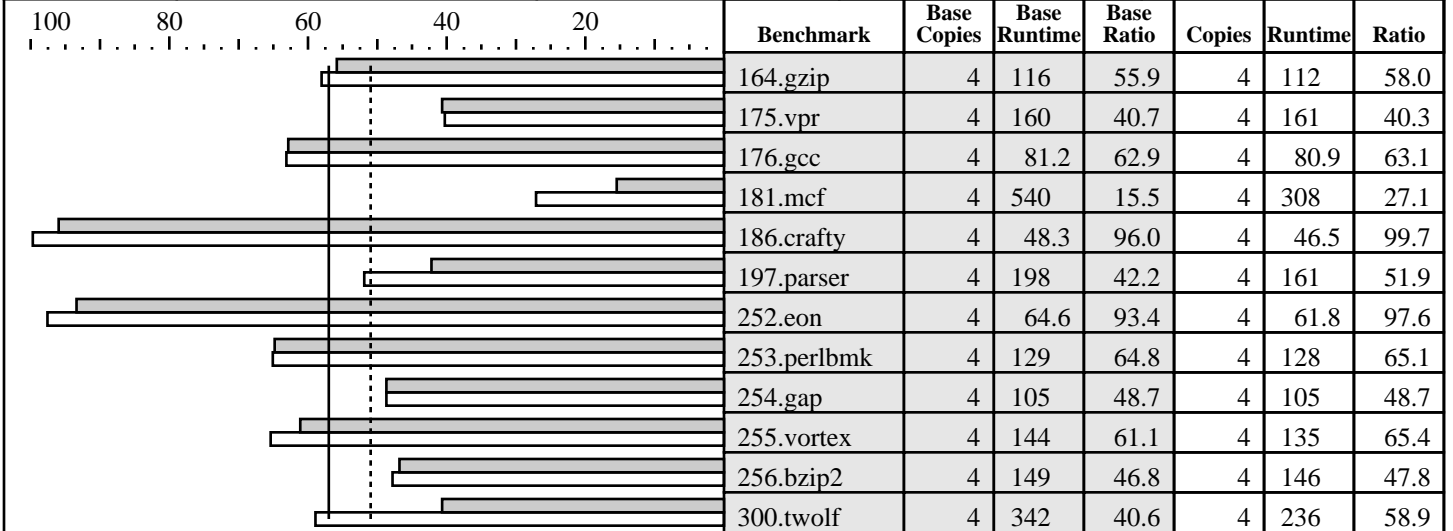
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Verari Systems
QuatreX-64 (TM), AMD Opteron (TM) 850

SPECint_rate2000 = 57.0

SPECint_rate_base2000 = 51.0

SPEC license #: 49 | Tested by: AMD, Austin, TX | Test date: Apr-2004 | Hardware Avail: Jun-2004 | Software Avail: Apr-2003



Hardware

CPU: AMD Opteron (TM) 850
 CPU MHz: 2400
 FPU: Integrated
 CPU(s) enabled: 4 cores, 4 chips, 1 core/chip
 CPU(s) orderable: 4
 Parallel: No
 Primary Cache: 64KBI + 64KBD on chip
 Secondary Cache: 1024KB(I+D) on chip
 L3 Cache: N/A
 Other Cache: N/A
 Memory: 8 x 512 MB PC3200 DDR SDRAM CL3.0
 Disk Subsystem: SCSI, Ultra-320, 10k 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

BIOS: PQTDX0-C

Taskset utility used to bind processes to CPU(s)