Advanced Micro Devices
TYAN Thunder K8QW (S4881), AMD Opteron(TM) 856

SPECfp_rate2000 = 100
SPECfp_rate_base2000 = 90.6

Hardware
- CPU: AMD Opteron(TM) 856
- CPU MHz: 3000
- FPU: Integrated
- CPU(s) enabled: 4 cores, 4 chips, 1 core/chip
- CPU(s) orderable: 1,2,4
- Parallel: No
- Primary Cache: 64KBI + 64KBD on chip
- Secondary Cache: 1024KB (I+D) on chip
- L1 Cache: N/A
- L2 Cache: N/A
- Memory: 8x512MB, DDR400 CL3 ECC Reg
- Disk Subsystem: SATA, 250 GB
- Other Cache: N/A
- Other Hardware: None

Software
- Operating System: SuSE Linux Enterprise Server 9 SP3 (64bit)
- Compiler: PathScale EKOPath(TM) Compiler Suite, Release 2.3
- File System: Linux/ext3
- System State: Multi-user, run level 3

Notes/Tuning Information
- Tested by Advanced Micro Devices
  +FDO: PASS1= -fb_create fbdata PASS2= -fb_opt fbdata
  +ACML means -L<acml2.7.0-install-dir>/pathscale64/lib -lacml,
  which causes linking with AMD Core Math Library V2.7.0

Baseline optimization
- C programs: -Ofast -WOPT:mem_opnds=on +FDO
- Fortran programs: -Ofast -LNO:fusion=2 -OPT:fast_complex=on +FDO

Portability Flags:
- 178.galgel: -fixedform

Peak Tuning:
- 168.wupwise: -Ofast -LNO:prefetch_ahead=5:prefetch=3
- -OPT:unroll_times_max=8:unroll_size=128:IEEE_NaN_Inf=off:ro=3
- -IPA:linear=on:plimit=50000:callee_limit=5000
- -INLINE:aggressive=on

Standard Performance Evaluation Corporation
info@spec.org
http://www.spec.org
### CFP2000 Result

**Advanced Micro Devices**

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<thead>
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<th>SPECfp_rate2000</th>
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**Notes/Tuning Information (Continued)**

171. swim: -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow
178. galgel: -Ofast -OPT:fast_complex=on +ACML +FDO
179. art: -O3 -OPT:Ofast -fno-math-errno -mno-sse2 -m32
183. equake: -Ofast -CG:load_exe=2 -WOPT:mem_opnds=on -m32 +FDO
187. facerec: -Ofast -LNO:fusion=2 -OPT:fast_complex=on:IEEE_NaN_Inf=off:unroll_size=0 +FDO
188. ammp: -O3 -OPT:alias:disjoint:unroll_times_max=8:Ofast:ro=3 -fno-math-errno -TENV:X=4 +FDO
189. lucas: -Ofast -OPT:ro=3:fast_nint=off:unroll_size=256 -WOPT:mem_opnds=on +FDO
301. apsi: -Ofast -CG:load_exe=0 -LNO:prefetch=0:simd=2

**BIOS 1.04**

2 DIMMS/CPU in dual channel configuration

Tested system can be built with an SSI EEB case and a Zippy 700W power supply

Taskset utility used to bind CPU(s) to processes