



CFP2000 Result

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Advanced Micro Devices

TYAN Thunder K8SD Pro (S2882-D), AMD Opteron(TM) 285

SPECfp_rate2000 = 77.0

SPECfp_rate_base2000 = 67.8

SPEC license #: 49 | Tested by: AMD, Austin, Texas | Test date: Feb-2006 | Hardware Avail: Mar-2006 | Software Avail: Jan-2006

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	67.8	109	4	61.3	121
171.swim	4	245	58.8	4	243	59.2
172.mgrid	4	155	53.8	4	152	55.0
173.applu	4	136	71.5	4	120	80.9
177.mesa	4	71.9	90.3	4	62.6	104
178.galgel	4	116	116	4	113	119
179.art	4	135	89.4	4	92.1	131
183.equake	4	127	47.4	4	103	58.4
187.facerec	4	90.6	97.3	4	91.4	96.5
188.amp	4	149	68.4	4	141	72.5
189.lucas	4	243	38.2	4	149	62.4
191.fma3d	4	181	53.8	4	156	62.3
200.sixtrack	4	126	40.4	4	121	42.2
301.apsi	4	169	71.4	4	162	74.7

Hardware

CPU: AMD Opteron(TM) 285
 CPU MHz: 2600
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
 CPU(s) orderable: 1,2
 Parallel: No
 Primary Cache: 64KBI + 64KBD (on chip) per core
 Secondary Cache: 1024KB (I+D) (on chip) per core
 L3 Cache: N/A
 Other Cache: N/A
 Memory: 4x512MB, DDR400 CL2 ECC Reg
 Disk Subsystem: SATA, 250 GB
 Other Hardware: None

Software

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

Notes/Tuning Information

+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
 171.swim: -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow



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Notes/Tuning Information (Continued)

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172.mgrid: -Ofast -CG:gcm=off -OPT:IEEE_arith=3:unroll_size=200
           -LNO:fusion=2:fission=1:blocking=off:prefetch_ahead=2
           -WOPT:mem_opnds=on:aggstr=0
173.applu: -Ofast -CG:local_fwd_sched=on -OPT:ro=3 -TENV:X=3
           -LNO:fusion=2:fission=2:full_unroll_size=10000 +FDO
177.mesa:  -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on -WOPT:mem_opnds=on +FDO
178.galgel: -Ofast -OPT:fast_complex=on +ACML +FDO
           RM_SOURCES=lapak.f90
179.art:   -O3 -OPT:Ofast -fno-math-errno -mno-sse2 -m32
183.quake: -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
191.fma3d: -O2 -ipa -CG:load_exe=1 -OPT:Ofast:IEEE_arith=3:ro=3
            -WOPT:mem_opnds=on:retype_expr=on -IPA:pu_reorder=1 +FDO
200.sixtrack: -O3 -OPT:Ofast:Olimit=6000:early_intrinsics=on
              -fno-math-errno -CG:load_exe=1 +FDO
301.apsi:   -Ofast -CG:load_exe=0 -LNO:prefetch=0:simd=2

```

Corsair CMX512RE-3200LL (XMS3200REv2.1) memory used in Dual Channel configuration. CMOS cleared, default BIOS settings used.

BIOS rev 3.05

The tested system can be assembled using a standard ATX case and an Antec True 550 watt EPS12V Power Supply.