



CFP2000 Result

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Advanced Micro Devices
TYAN Tomcat K8E (S2865), AMD Opteron(TM) 185

SPECfp2000 = 2208
SPECfp_base2000 = 1978

SPEC license #: 49 Tested by: AMD Austin, Texas Test date: Feb-2006 Hardware Avail: Mar-2006 Software Avail: Nov-2005

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	1000 2000 3000 4000			
168.wupwise	1600	57.9	2763	51.0	3135	[Bar chart showing ratio 3135]			
171.swim	3100	120	2585	114	2724	[Bar chart showing ratio 2724]			
172.mgrid	1800	103	1754	93.2	1932	[Bar chart showing ratio 1932]			
173.applu	2100	101	2088	88.3	2379	[Bar chart showing ratio 2379]			
177.mesa	1400	82.2	1702	62.1	2253	[Bar chart showing ratio 2253]			
178.galgel	2900	88.0	3297	77.5	3741	[Bar chart showing ratio 3741]			
179.art	2600	98.8	2632	68.6	3788	[Bar chart showing ratio 3788]			
183.earth	1300	75.5	1722	68.8	1889	[Bar chart showing ratio 1889]			
187.facerec	1900	72.2	2632	72.9	2606	[Bar chart showing ratio 2606]			
188.amp	2200	143	1541	133	1651	[Bar chart showing ratio 1651]			
189.lucas	2000	93.7	2135	84.0	2380	[Bar chart showing ratio 2380]			
191.fma3d	2100	125	1674	125	1680	[Bar chart showing ratio 1680]			
200.sixtrack	1100	127	868	121	907	[Bar chart showing ratio 907]			
301.apsi	2600	156	1671	147	1768	[Bar chart showing ratio 1768]			

Hardware

CPU: AMD Opteron(TM) 185 (939-pin)
CPU MHz: 2600
FPU: Integrated
CPU(s) enabled: 1 core, 1 chip, 2 cores/chip
CPU(s) orderable: 1
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: 2x512MB, DDR400 CL2
Disk Subsystem: SATA, 250 GB
Other Hardware: None

Software

Operating System: SuSE Linux Enterprise Server 9 SP3 (64-bit) Uniprocessor Kernel
Compiler: PathScale EKOPath(TM) Compiler Suite, Release 2.3
File System: Linux/ext3
System State: Multi-user, run level 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 CMX512-3200XL memory used in Dual Channel configuration.

Memory timings manually set in BIOS: Command Rate=1T

BIOS rev 3.01

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