CFP2000 Result

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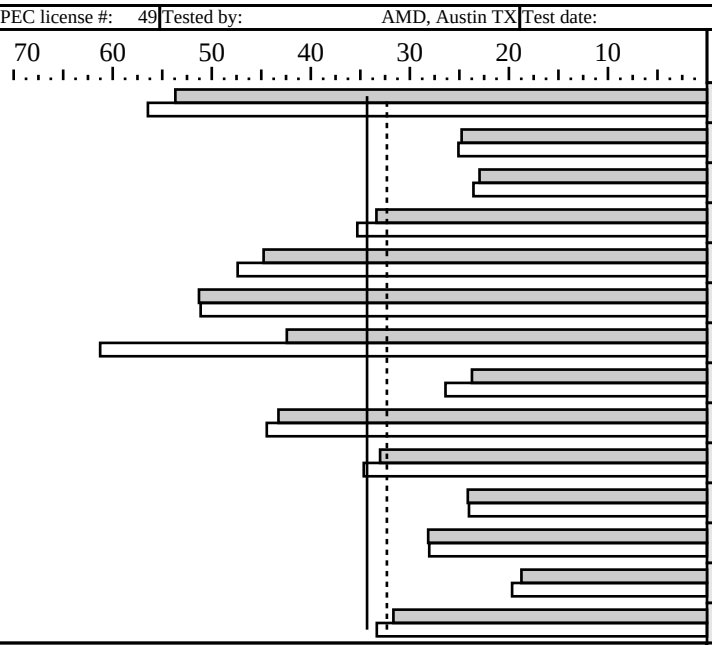
Advanced Micro Devices

TYAN Tomcat K8E (S2865), AMD Opteron (TM) 180

SPECfp_rate2000 = 34.3

SPECfp_rate_base2000 = 32.3

SPEC license #: 49 | Tested by: AMD, Austin TX | Test date: Sep-2005 | Hardware Avail: Nov-2005 | Software Avail: Aug-2005



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	69.2	53.7	2	65.8	56.4
171.swim	2	290	24.8	2	287	25.1
172.mgrid	2	182	23.0	2	177	23.6
173.applu	2	146	33.4	2	138	35.3
177.mesa	2	72.6	44.8	2	68.5	47.4
178.galgel	2	131	51.3	2	132	51.1
179.art	2	142	42.4	2	98.5	61.3
183.equake	2	127	23.7	2	114	26.4
187.facerec	2	102	43.3	2	99.2	44.4
188.ammp	2	155	33.0	2	147	34.7
189.lucas	2	192	24.2	2	193	24.0
191.fma3d	2	173	28.1	2	174	28.0
200.sixtrack	2	136	18.7	2	130	19.7
301.apsi	2	191	31.7	2	181	33.3

Hardware

CPU:	AMD Opteron (TM) 180 (939-pin)
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
CPU(s) orderable:	1
Parallel:	No
Primary Cache:	64KBI + 64KBD/core
Secondary Cache:	1024KB (I+D)/core
L3 Cache:	N/A
Other Cache:	N/A
Memory:	4x512 MB, DDR400 CL2
Disk Subsystem:	IDE, Hitachi 164 GB
Other Hardware:	None

Software

Operating System:	SuSE Linux Enterprise Server 9 (SP2) for AMD64
Compiler:	PathScale EKOPath(TM) Compiler Suite, Release 2.2.1
File System:	Linux/reiserfs
System State:	Multi-user, run level 3

Notes/Tuning Information

```
  +FDO: PASS1= -fb_create fbdata  PASS2= -fb_opt fbdata
  +ACML  means -L<acml2.5.1-install-dir>/pathscale64/lib -lacml,
         which causes linking with AMD Core Math Library V2.5.1

  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)

```
172.mgrid:    -Ofast -CG:gcm=off:cflow=on -OPT:IEEE_a=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:prefetch=3 +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.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
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

The tested system can be built using a standard ATX case and
an Antec True 550W EPS12V power supply.
All memory slots populated on all CPU(s).
BIOS Version 2.01
Taskset utility used to bind CPU(s) to processes.
```