CFP2000 Result

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Advanced Micro Devices

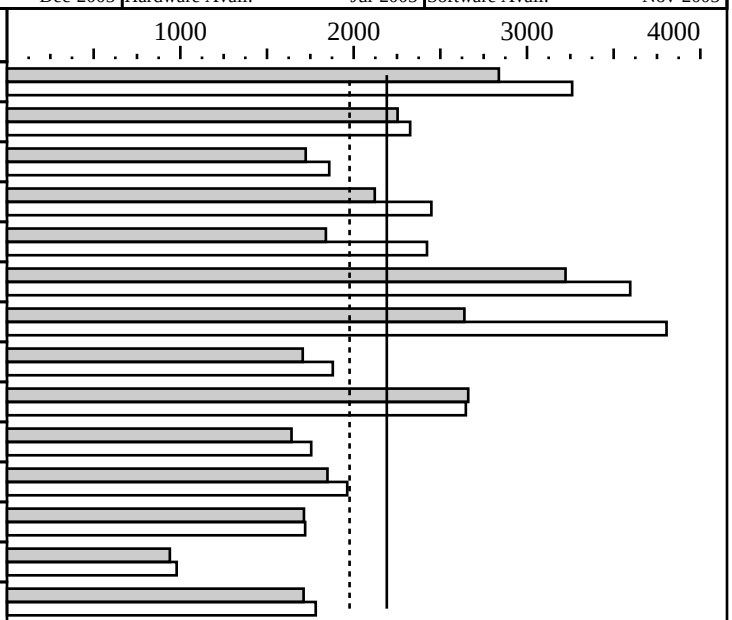
TYAN Tomcat K8E (S2865), AMD Opteron (TM) 154

SPECfp2000 = 2191

SPECfp_base2000 = 1976

SPEC license #: 49 | Tested by: Michael Paton | Test date: Dec-2005 | Hardware Avail: Jul-2005 | Software Avail: Nov-2005

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	56.4	2838	49.1	3261
171.swim	3100	138	2253	133	2326
172.mgrid	1800	104	1723	96.8	1859
173.applu	2100	99.0	2122	85.8	2448
177.mesa	1400	76.1	1840	57.8	2423
178.galgel	2900	90.0	3222	80.7	3596
179.art	2600	98.5	2639	68.3	3805
183.equake	1300	76.2	1706	69.2	1880
187.facerec	1900	71.4	2661	71.8	2647
188.ammp	2200	134	1641	125	1755
189.lucas	2000	108	1849	102	1963
191.fma3d	2100	123	1713	122	1720
200.sixtrack	1100	117	939	112	979
301.apsi	2600	152	1711	146	1781



Hardware

CPU:	AMD Opteron (TM) 154 (939 pin)
CPU MHz:	2800
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 1 core/chip
CPU(s) orderable:	1
Parallel:	No
Primary Cache:	64KBI + 64KBD on chip
Secondary Cache:	1024KB (I+D) on chip
L3 Cache:	N/A
Other Cache:	N/A
Memory:	2x512MB, DDR400 CL2
Disk Subsystem:	IDE, 160 GB
Other Hardware:	None

Software

Operating System:	SuSE Linux Enterprise Server 9 for AMD64
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
```

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Notes/Tuning Information (Continued)

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

Corsair CMX512-3200XL memory used in Dual Channel configuration
Memory timings manually set in BIOS: CAS=2, Trcd=2, Tras=5, Trp=2
BIOS rev 3.01
The tested system can be assembled using a standard ATX case and an Antec True 550
watt EPS12V Power Supply
```