CFP2000 Result

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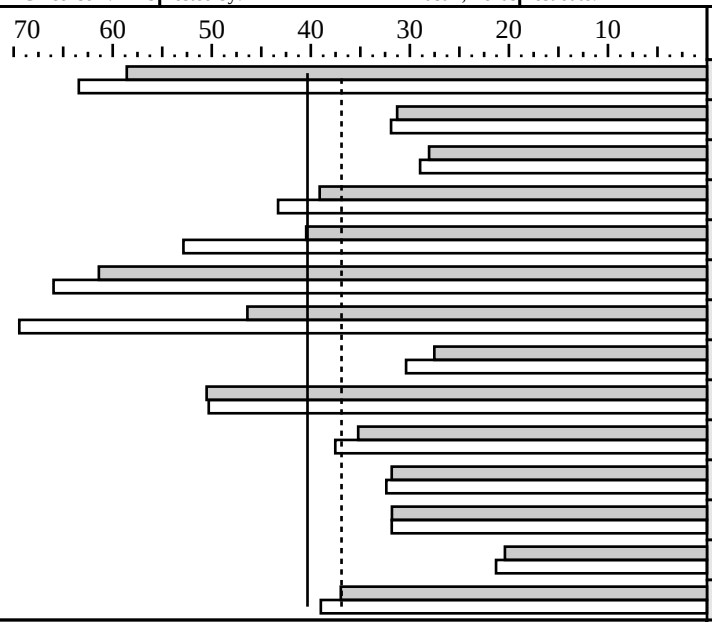
Advanced Micro Devices

TYAN Tomcat K8E (S2865), AMD Opteron(TM) 185

SPECfp_rate2000 = 40.3

SPECfp_rate_base2000 = 36.9

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	63.4	58.6	2	58.5	63.4
171.swim	2	230	31.3	2	225	31.9
172.mgrid	2	149	28.1	2	144	29.0
173.applu	2	125	39.1	2	113	43.3
177.mesa	2	80.3	40.5	2	61.4	52.9
178.galgel	2	110	61.4	2	102	66.0
179.art	2	130	46.4	2	86.9	69.4
183.equake	2	110	27.5	2	99.3	30.4
187.facerec	2	87.3	50.5	2	87.6	50.3
188.ammp	2	145	35.2	2	136	37.5
189.lucas	2	146	31.8	2	143	32.4
191.fma3d	2	153	31.8	2	153	31.8
200.sixtrack	2	125	20.4	2	120	21.3
301.apsi	2	163	37.0	2	155	39.0

Hardware

CPU:	AMD Opteron(TM) 185 (939-pin)
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	2 cores, 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)
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)

```
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.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: Command Rate=1T
BIOS rev 3.00
The tested system can be assembled using a standard ATX case and an Antec True 550
watt EPS12V Power Supply.
```