CFP2000 Result

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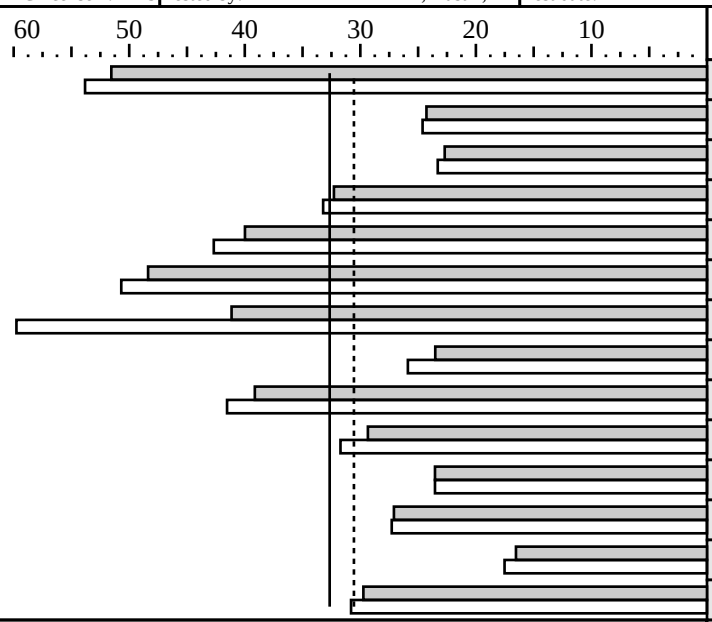
Advanced Micro Devices

TYAN S2865 K8E Tomcat, AMD Opteron (TM) 175

SPECfp_rate2000 = 32.7

SPECfp_rate_base2000 = 30.6

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	72.0	51.5	2	69.0	53.8
171.swim	2	296	24.3	2	292	24.6
172.mgrid	2	184	22.7	2	179	23.3
173.applu	2	151	32.3	2	147	33.2
177.mesa	2	81.2	40.0	2	76.1	42.7
178.galgel	2	139	48.4	2	133	50.7
179.art	2	147	41.1	2	101	59.8
183.equake	2	128	23.5	2	117	25.9
187.facerec	2	113	39.1	2	106	41.5
188.ammp	2	174	29.3	2	161	31.7
189.lucas	2	197	23.5	2	197	23.5
191.fma3d	2	180	27.1	2	179	27.3
200.sixtrack	2	154	16.5	2	146	17.5
301.apsi	2	203	29.7	2	196	30.8

Hardware

CPU:	AMD Opteron (TM) 175 (939-pin)
CPU MHz:	2200
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 CL2.0
Disk Subsystem:	IDE, Hitachi HDS722516VLAT20 165G, 7200 rpm
Other Hardware:	None

Software

Operating System:	SuSE Linux Enterprise Server 9 SP2 for AMD64
Compiler:	PathScale EKOPath(TM) Compiler Suite, Release 2.1
File System:	Linux/ext3
System State:	Multi-user, run level 3

Notes/Tuning Information

```
Tested by AMD

 +FDO: PASS1= -fb_create fbdata  PASS2= -fb_opt fbdata
 +ACML  means -L/opt/acml2.5.1/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
```

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Notes/Tuning Information (Continued)

```
171.swim:       -Ofast -LNO:fusion=2 -m3dnow
172.mgrid:      -O3 -LNO:fusion=2:blocking=off
                -OPT:Ofast:unroll_times_max=8:unroll_size=256:ro=3
                -CG:gcm=off:cflow=off -m3dnow
173.applu:      -Ofast -CG:local_fwd_sched=on
                -LNO:fusion=2:fission=2:full_unroll_size=10000:prefetch=3
                -OPT:ro=3 -TENV:X=3
177.mesa:       -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on +FDO
178.galgel:     -Ofast -OPT:fast_complex=on +ACML
179.art:        -O3 -OPT:ro=2:div_split=on:alias=typed -fno-math-errno -m32
183.equake:     -Ofast -CG:load_exe=2 -OPT:treeheight=on -WOPT:mem_opnds=on
                -m32 +FDO
187.facerec:    -Ofast -OPT:IEEE_NaN_Inf=off:ro=3 -LNO:fusion=2
                -IPA:plimit=1500 +FDO
188.ammp:       -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
                -fno-math-errno -TENV:X=4 +FDO
189.lucas:       basepeak = true
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 -fno-math-errno -CG:load_exe=1 +FDO
301.apsi:       -Ofast -TENV:X=4 -LNO:fusion=2:prefetch=0
Taskset utility used to bind CPU(s) to processes.
The tested system can be assembled using a standard ATX footprint, an Antec True 550
Watt EPS12V power supply, and a PCI or PCIe graphics card.
All memory slots were populated with Corsair CMX512-3200XL.
BIOS V2.00b
Memory timings manually set in BIOS: CAS=2, TRCD=2, TRAS=5, TRP=2
```