CFP2000 Result

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Advanced Micro Devices

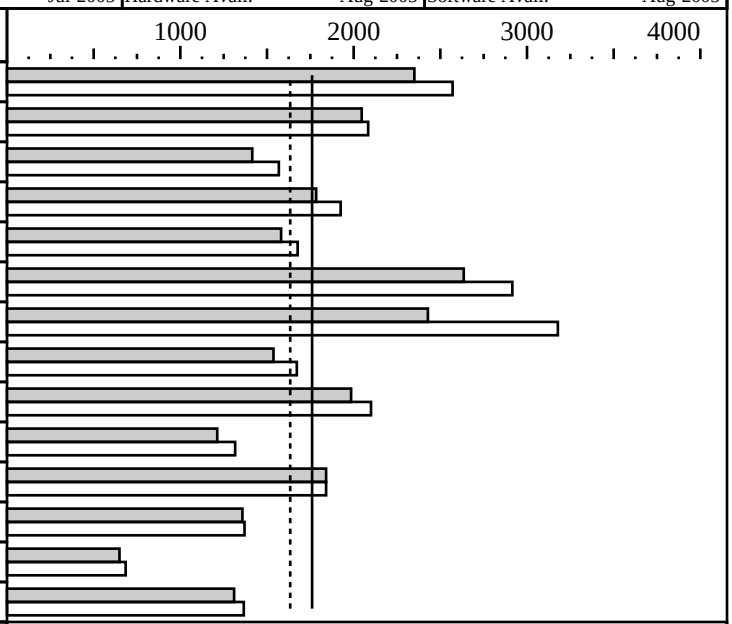
TYAN S2865 K8E Tomcat, AMD Opteron (TM) 146

SPECfp2000 = 1760

SPECfp_base2000 = 1634

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	68.1	2350	62.2	2571
171.swim	3100	151	2046	149	2084
172.mgrid	1800	127	1415	115	1568
173.applu	2100	118	1784	109	1925
177.mesa	1400	88.5	1581	83.5	1677
178.galgel	2900	110	2635	99.5	2915
179.art	2600	107	2428	81.8	3178
183.equake	1300	84.6	1537	77.8	1672
187.facerec	1900	95.7	1985	90.5	2100
188.ammp	2200	181	1213	167	1316
189.lucas	2000	109	1841	109	1841
191.fma3d	2100	155	1358	153	1370
200.sixtrack	1100	170	649	161	685
301.apsi	2600	198	1310	190	1366



Hardware

CPU:	AMD Opteron (TM) 146 (939-pin)
CPU MHz:	2000
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:	4x512 MB, DDR400 CL2.0
Disk Subsystem:	IDE, Western Digital WD2000JB, 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
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.
Memory timings manually set in BIOS: CAS=2, TRCD=2, TRAS=5, TRP=2
BIOS version 1.01
```