CFP2000 Result

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Advanced Micro Devices

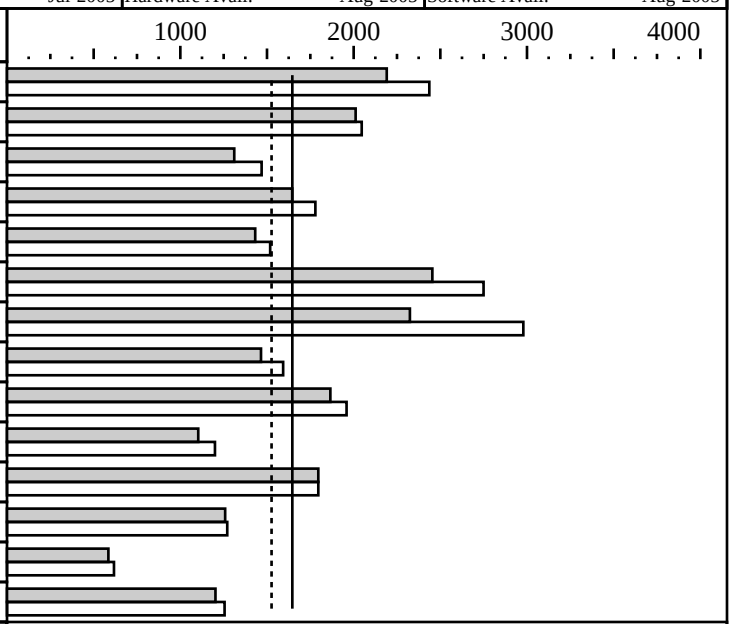
TYAN S2865 K8E Tomcat, AMD Opteron (TM) 144

SPECfp2000 = 1646

SPECfp_base2000 = 1526

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	73.0	2191	65.7	2436
171.swim	3100	154	2011	151	2046
172.mgrid	1800	137	1311	123	1469
173.applu	2100	128	1645	118	1779
177.mesa	1400	97.8	1432	92.2	1518
178.galgel	2900	118	2454	105	2749
179.art	2600	112	2324	87.3	2979
183.equake	1300	88.7	1465	81.6	1593
187.facerec	1900	102	1866	97.0	1959
188.ammp	2200	199	1103	183	1200
189.lucas	2000	111	1796	111	1796
191.fma3d	2100	167	1259	165	1271
200.sixtrack	1100	188	585	178	617
301.apsi	2600	216	1203	207	1255



Hardware

CPU:	AMD Opteron (TM) 144 (939-pin)
CPU MHz:	1800
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
```