CFP2000 Result

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Advanced Micro Devices

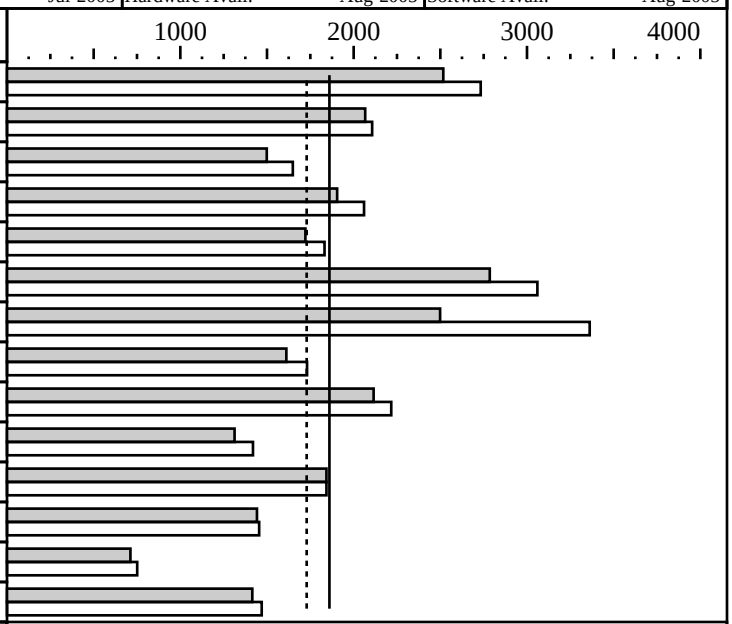
TYAN S2865 K8E Tomcat, AMD Opteron (TM) 148

SPECfp2000 = 1860

SPECfp_base2000 = 1729

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	63.6	2517	58.5	2733
171.swim	3100	150	2067	147	2107
172.mgrid	1800	120	1499	109	1649
173.applu	2100	110	1905	102	2060
177.mesa	1400	81.3	1722	76.4	1832
178.galgel	2900	104	2785	94.8	3060
179.art	2600	104	2499	77.3	3362
183.equake	1300	80.7	1612	75.1	1731
187.facerec	1900	89.8	2115	85.7	2217
188.ammp	2200	168	1313	155	1419
189.lucas	2000	109	1843	109	1843
191.fma3d	2100	146	1442	144	1455
200.sixtrack	1100	154	712	146	751
301.apsi	2600	184	1415	177	1469



Hardware

CPU:	AMD Opteron (TM) 148 (939-pin)
CPU MHz:	2200
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
```