CFP2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

Advanced Micro Devices

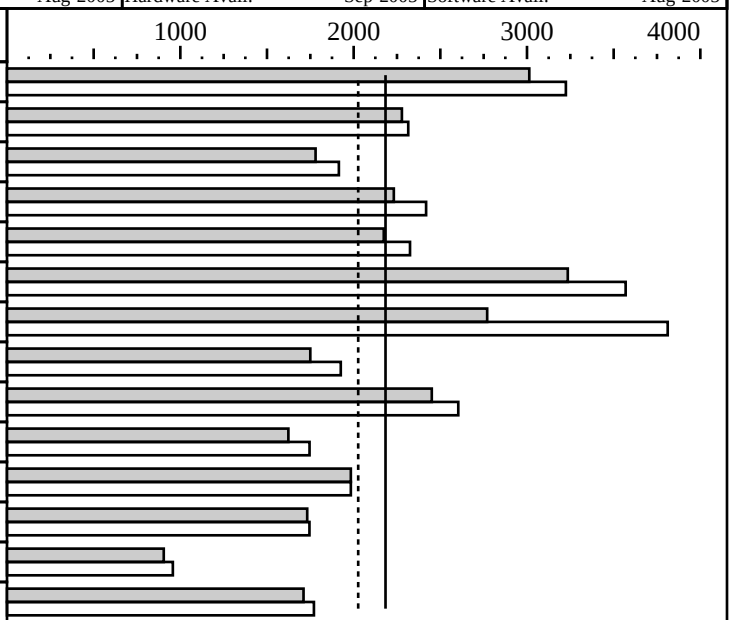
TYAN Tomcat K8E (S2865), AMD Opteron (TM) 154

SPECfp2000 = 2184

SPECfp_base2000 = 2026

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	53.1	3013	49.6	3224
171.swim	3100	136	2278	134	2315
172.mgrid	1800	101	1780	94.0	1915
173.applu	2100	94.1	2232	86.9	2418
177.mesa	1400	64.4	2174	60.2	2325
178.galgel	2900	89.6	3235	81.3	3569
179.art	2600	93.9	2770	68.2	3812
183.equake	1300	74.3	1750	67.5	1926
187.facerec	1900	77.5	2451	73.0	2604
188.ammp	2200	136	1623	126	1745
189.lucas	2000	101	1984	101	1984
191.fma3d	2100	121	1732	120	1745
200.sixtrack	1100	122	904	115	957
301.apsi	2600	152	1711	147	1771



Hardware

CPU:	AMD Opteron (TM) 154 (939-pin)
CPU MHz:	2800
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, Hitachi HDS722516VLAT20, 164 GB 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
```

Copyright ©1999-2005, Standard Performance Evaluation Corporation

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 case and an Antec True 550
Watt EPS12V power supply.
All memory slots were populated with Corsair CMX512-3200XL.
Memory timings manually set in BIOS: CAS=2, TRCD=2, TRAS=5, TRP=2
BIOS V2.00b
```