CFP2000 Result

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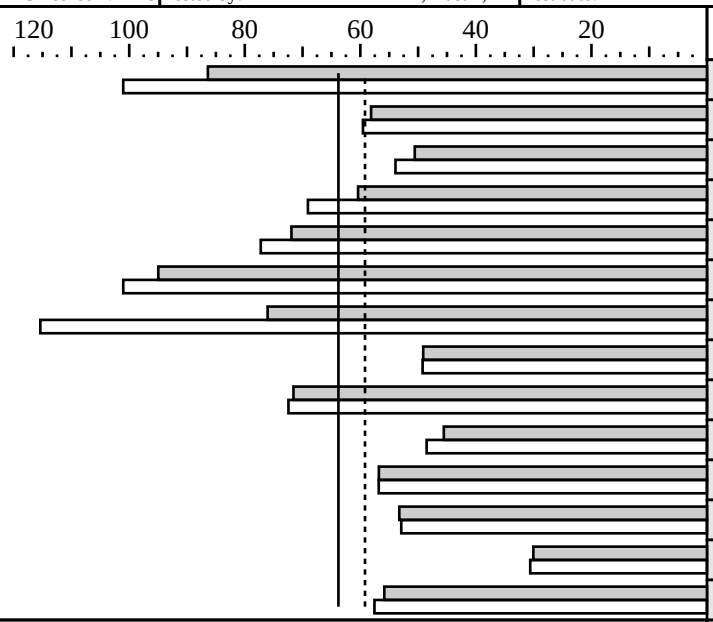
Advanced Micro Devices

Pogo Linux PerformanceWare 3566, AMD Opteron (TM) 870

SPECfp_rate2000 = 63.8

SPECfp_rate_base2000 = 59.2

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	85.9	86.4	4	73.5	101
171.swim	4	247	58.1	4	242	59.5
172.mgrid	4	165	50.6	4	155	53.9
173.applu	4	161	60.4	4	141	69.1
177.mesa	4	90.3	71.9	4	84.1	77.2
178.galgel	4	142	95.0	4	133	101
179.art	4	159	76.0	4	105	115
183.equake	4	123	49.1	4	123	49.2
187.facerec	4	123	71.6	4	122	72.4
188.ammp	4	224	45.6	4	210	48.5
189.lucas	4	163	56.8	4	163	56.8
191.fma3d	4	183	53.3	4	184	52.9
200.sixtrack	4	170	30.1	4	167	30.6
301.apsi	4	216	55.9	4	210	57.6

Hardware

CPU:	AMD Opteron (TM) 870
CPU MHz:	2000
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1-4
Parallel:	No
Primary Cache:	64KBI + 64KBD/core
Secondary Cache:	1024KB (I+D)/core
L3 Cache:	N/A
Other Cache:	N/A
Memory:	8x1024 MB PC3200 CL3.0 ECC Reg
Disk Subsystem:	SCSI, Seagate Cheetah Ultra320 ST373307LC, 10000 RPM
Other Hardware:	None

Software

Operating System:	SuSE Linux Enterprise Server 9 for AMD64 SP1, kernel-smp-2.6.5-7.151.x86_64.rpm
Compiler:	PathScale EKOPath Compiler Suite, Release 2.0
File System:	Linux/ext3
System State:	Multi-user, run level 3

Notes/Tuning Information

```
Tested by Advanced Micro Devices

 +FDO: PASS1= -fb_create fbdata  PASS2= -fb_opt fbdata
 +ACML means 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 +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 -TENV:X=4
              -IPA:space=1000: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 -WOPT:val=2
177.mesa:    -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on +FDO
178.galgel:  -Ofast -OPT:fast_complex -CG:use_movlpd=on RM_SOURCES=lapak.f90 +ACML
179.art:     -O3 -OPT:ro=2:div_split=on:alias=typed -fno-math-errno -m32
183.equake:  -Ofast -WOPT:mem_opnds=on -CG:local_fwd_sched=on
187.facerec:  -Ofast -OPT:treeheight=on:IEEE_NaN_Inf=off:ro=3 -CG:load_exe=0
              -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: -Ofast -CG:local_fwd_sched=on -LNO:fusion=2
           +FDO
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
Bios Rev 2.33.1.1
All memory slots populated on all CPU(s).
Taskset utility used to bind CPU(s) to processes.
```