CFP2000 Result

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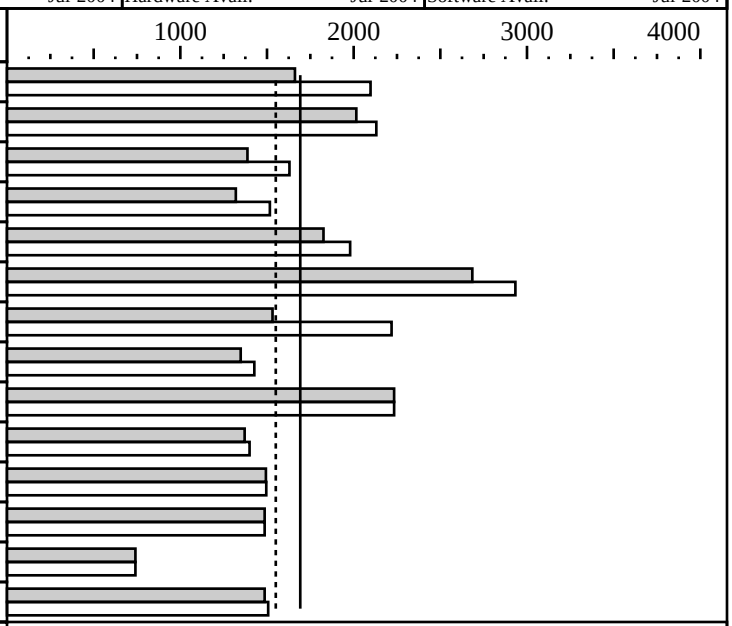
Sun Microsystems
Sun Fire V40z

SPECfp2000 = 1692

SPECfp_base2000 = 1551

SPEC license #: 6 | Tested by: Sun Microsystems, Santa Clara | Test date: Jul-2004 | Hardware Avail: Jul-2004 | Software Avail: Jul-2004

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	96.3	1661	76.3	2097
171.swim	3100	154	2015	145	2131
172.mgrid	1800	130	1387	110	1630
173.applu	2100	159	1320	138	1517
177.mesa	1400	76.7	1826	70.7	1980
178.galgel	2900	108	2685	98.9	2933
179.art	2600	170	1532	117	2219
183.equake	1300	96.4	1348	91.1	1427
187.facerec	1900	85.1	2233	85.1	2233
188.ammp	2200	160	1371	157	1399
189.lucas	2000	134	1494	134	1496
191.fma3d	2100	141	1486	141	1486
200.sixtrack	1100	148	741	148	741
301.apsi	2600	175	1486	173	1507



Hardware

CPU:	AMD Opteron (TM) 850
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 1 core/chip
CPU(s) orderable:	1,2,4
Parallel:	No
Primary Cache:	64KBI + 64KBD on chip
Secondary Cache:	1024KB (I+D) on chip
L3 Cache:	N/A
Other Cache:	N/A
Memory:	4x1GB, PC2700 CL2.5 DDR SDRAM ECC Registered
Disk Subsystem:	SCSI, 73GB, 10K RPM
Other Hardware:	None

Software

Operating System:	SuSE Linux 8.0 SLES 64 bit (SP3)
Compiler:	PathScale EKO Compiler Suite, Release 1.1 SuSE optional gcc 3.3 (from SLES8 SP3) PGI Fortran 5.2 (build 5.2-0E) AMD Core Math Library (Version 2.0) for AMD64
File System:	Linux/ext3
System State:	Multi-user, Run level 3

Notes/Tuning Information

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A two-pass compilation method is used where indicated:
  +PSFDO indicates PathScale feedback
           PASS1: -fb_create fbdata
           PASS2: -fb_opt    fbdata
  +ACML is the AMD Core Math Library V2.0

Compilers:
   C:       pathcc  (PathScale C) unless otherwise noted
   Fortran: pathf90 (PathScale f90) unless otherwise noted
If other compilers are used, they are indicated as:
   gcc:   Gnu C
   pgf90: PGI Fortran

Floating Point base tuning:
 Fortran: pgf90 -fastsse  -Mipa=fast -Msmart
 C:       pathcc -Ofast -WOPT:mem_opnds=on +PSFDO
```

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Notes/Tuning Information (Continued)

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Floating Point peak tuning:
168.wupwise:  pgf90 -fastsse -Mipa=fast,inline -Msmart
171.swim:     -Ofast -OPT:ro=3 -LNO:fusion=2:prefetch=2
172.mgrid:    -O3 -OPT:Ofast
              -LNO:fusion=2:blocking=off:ou_max=5:sclrze=off:prefetch=2
              -OPT:unroll_times=8:unroll_size=256:ro=3
              -CG:gcm=off:cflow=off
173.applu:    -O3 -ipa
              -LNO:fusion=2:interchange=OFF:blocking=OFF:ou_prod_max=10
              :ou_max=5:prefetch=2 -OPT:IEEE_arith=1:ro=3:unroll_size=0
             -TENV:X=4 -WOPT:mem_opnds=on:retype_expr=on:val=0 -CG:local_fwd_sched=on
177.mesa:     -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on +PSFDO
178.galgel:   pgf90 -fastsse -Mipa=fast -mp +ACML
              RM_SOURCES=lapak.f90 ONESTEP
179.art:      -O3 -OPT:Ofast -fno-math-errno -m32 +PSFDO
183.equake:   gcc -DSPEC_CPU2000_LP64 -O3 -funroll-all-loops -ffast-math
              -finline-limit=2000 ONESTEP
187.facerec:  basepeak=true
188.ammp:     -O3 -OPT:alias=disjoint:unroll_times=8:Ofast:ro=3
              -fno-math-errno -TENV:X=4 +PSFDO
189.lucas:  pgf90 -fastsse -Mipa=fast,inline -Msmart
191.fma3d:  basepeak=true
200.sixtrack: basepeak=true
301.apsi:     -Ofast -TENV:X=4 -LNO:fusion=2:prefetch=0:blocking=off
              -IPA:linear=on:plimit=525

Portability:
178.galgel:     -Mfixed


Notes:
     BIOS build 2.1.0.9E, default setting was used.
     Only one CPU was present in the system, other CPUs were physically removed.
```