CFP2000 Result

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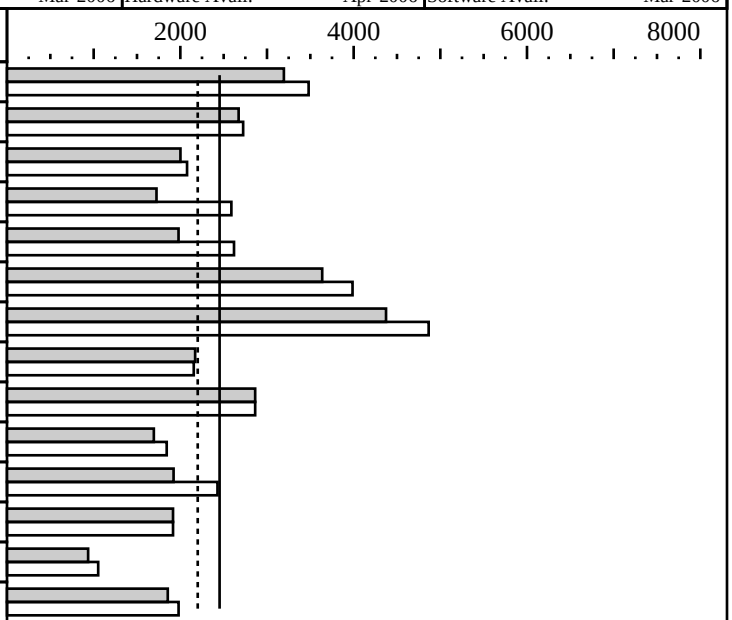
Sun Microsystems
Sun Ultra 40

SPECfp2000 = 2453

SPECfp_base2000 = 2201

SPEC license #: 6 | Tested by: Sun Microsystems, Santa Clara | Test date: Mar-2006 | Hardware Avail: Apr-2006 | Software Avail: Mar-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	50.1	3195	46.0	3480
171.swim	3100	116	2673	114	2725
172.mgrid	1800	89.9	2001	86.6	2078
173.applu	2100	122	1725	81.1	2589
177.mesa	1400	70.7	1979	53.4	2619
178.galgel	2900	79.7	3637	72.7	3987
179.art	2600	59.4	4373	53.4	4865
183.equake	1300	59.9	2171	60.3	2155
187.facerec	1900	66.4	2863	66.4	2863
188.ammp	2200	130	1694	119	1843
189.lucas	2000	104	1922	82.4	2429
191.fma3d	2100	110	1916	110	1916
200.sixtrack	1100	118	936	105	1052
301.apsi	2600	140	1855	131	1980



Hardware

CPU:	AMD Opteron (TM) 256
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 1 core/chip
CPU(s) orderable:	1,2 (order by # of chips)
Parallel:	No
Primary Cache:	64KBI + 64KBD (on chip) per core
Secondary Cache:	1024KB (I+D) (on chip) per core
L3 Cache:	N/A
Other Cache:	N/A
Memory:	8GB (4x2GB, PC3200 CL3 DDR ECC Registered SDRAM)
Disk Subsystem:	SATA,250GB,7200 RPM
Other Hardware:	None

Software

Operating System:	SUSE LINUX Enterprise Server 9 SP3 (x86_64)
Compiler:	PathScale EKOPath(TM) Compiler Suite, Version 2.3 PGI Compiler for Linux, Release 6.1-3 AMD Core Mathematical Library (ACML), Version 3.0.1
File System:	ufs
System State:	Multi-user

Notes/Tuning Information

```
Portability flags:
   178.galgel (pgf90)   : -Mfixed

Feedback Optimization +FDO:
   PGI     : PASS1=-Mpfi               PASS2=-Mpfo
   PathSale: PASS1=-fb_create fbdata   PASS2=-fb_opt fbdata

Baseline Optimization Flags:
   C programs      : pgcc  -fastsse -Mipa=fast,inline +FDO
   Fortran programs: pgf90 -fastsse -Mipa=fast,inline +FDO

Peak Tuning Flags:
 168.wupwise:  pathf95 -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
               -CG:local_fwd_sched=on -m3dnow
 171.swim:     pathf95 -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow
```

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Notes/Tuning Information (Continued)

```
 172.mgrid:    pathf95 -Ofast -CG:gcm=off -OPT:IEEE_a=3:unroll_size=200
               -LNO:fusion=2:fission=1:blocking=off:prefetch_ahead=2
               -WOPT:mem_opnds=on:aggstr=0
 173.applu:    pathf95 -Ofast -CG:local_fwd_sched=on -OPT:ro=3 -TENV:X=3
               -LNO:fusion=2:fission=2:full_unroll_size=10000:prefetch=3
               +FDO
 177.mesa:     pathf95 -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on
               -WOPT:mem_opnds=on +FDO
 178.galgel:   pgf90  -fastsse -O4 -Mipa=fast,inline ONESTEP=yes +FDO
                RM_SOURCES=lapak.f90
                EXTRALIBS=-lacml
 179.art:      pgcc -fastsse -Munroll=n:9 -Mipa=fast,inline -tp k8-32
 183.equake:   pgcc -fastsse -Mflushz -Mnovect -Mipa=fast,inline ONESTEP=yes +FDO
 187.facerec:  pgf90  basepeak=1
 188.ammp:     pathcc -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
               -fno-math-errno -TENV:X=4 +FDO
 189.lucas:    pathf95 -O3 -OPT:ro=3:fast_nint=off:unroll_size=256
               -WOPT:mem_opnds=on +FDO
 191.fma3d:    pgf90  basepeak=1
 200.sixtrack: pathf95 -O3 -OPT:Ofast:Olimit=6000:early_intrinsics=on
               -fno-math-errno -CG:load_exe=1 +FDO
 301.apsi:     pathf95 -Ofast -CG:load_exe=0 -LNO:prefetch=0:simd=2

taskset has been used to bind processes to CPUs
Default BIOS settings was used.
System was tested in 1-chip configuration.
```