CFP2000 Result

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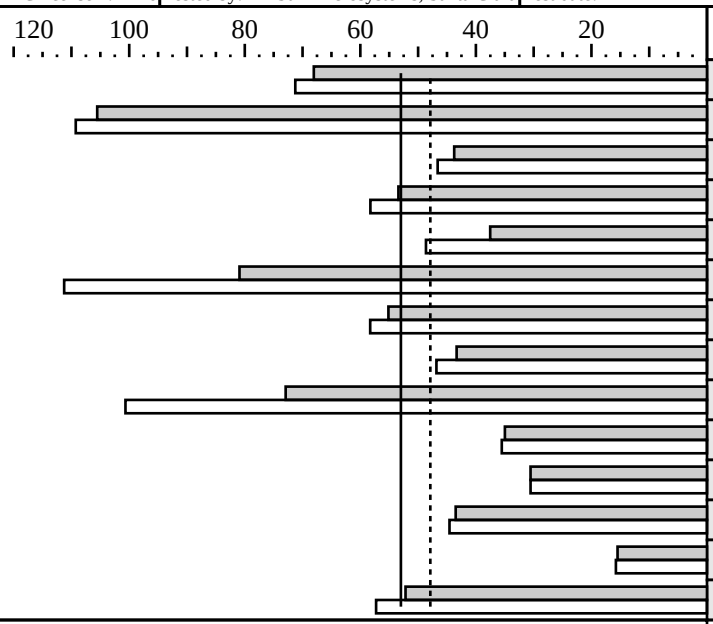
Sun Microsystems
Sun Ultra 40

SPECfp_rate2000 = 53.0

SPECfp_rate_base2000 = 47.9

SPEC license #: 6 | Tested by: Sun Microsystems, Santa Clara | Test date: Feb-2006 | Hardware Avail: Jan-2006 | Software Avail: Nov-2005



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	54.5	68.1	2	52.1	71.3
171.swim	2	68.1	106	2	65.8	109
172.mgrid	2	95.4	43.8	2	89.6	46.6
173.applu	2	91.2	53.4	2	83.6	58.3
177.mesa	2	86.6	37.5	2	66.8	48.6
178.galgel	2	83.1	80.9	2	60.5	111
179.art	2	109	55.1	2	103	58.3
183.equake	2	69.6	43.3	2	64.4	46.8
187.facerec	2	60.4	72.9	2	43.8	101
188.ammp	2	146	35.0	2	144	35.5
189.lucas	2	152	30.5	2	152	30.5
191.fma3d	2	112	43.5	2	109	44.6
200.sixtrack	2	165	15.5	2	162	15.8
301.apsi	2	116	52.2	2	105	57.3

Hardware

CPU:	AMD Opteron (TM) 254
CPU MHz:	2800
FPU:	Integrated
CPU(s) enabled:	2 cores, 2 chips, 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:	16GB (8x2GB, PC3200 CL3 DDR ECC Registered SDRAM)
Disk Subsystem:	SATA,250GB,7200 RPM
Other Hardware:	None

Software

Operating System:	Solaris 10 3/05 HW2
Compiler:	Sun Studio 11
File System:	ufs
System State:	Multi-user

Notes/Tuning Information

```
Compiler invocation:
  C: cc
  F90: f90
  F77: f90

FDO:  PASS1= -xprofile=collect:./feedback PASS2= -xprofile=use:./feedback
      fdo_pre0:  rm -rf ./feedback.profile

Floating point base flags:
  F90:   -fast -xipo=2 -xarch=amd64 -xprefetch_level=3 ONESTEP=yes
    C:   -fast -xcrossfile -xalias_level=std -xpagesize=2m ONESTEP=yes

Floating point peak flags:
 ONESTEP=yes for all benchmarks

 168.wupwise:   -fast -xautopar -xpad=common:3969 -xipo=2 -xarch=amd64 -xprefetch_level=3  -xpagesize_heap=2m
 171.swim:      -fast -xpad=common:3969 -xipo=2 -xvector=simd -xprefetch_level=3 -Qoption iropt
```

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Notes/Tuning Information (Continued)

```
                  -Atile:skewp,-Ainline:cs=700 -xarch=amd64 -Qoption ube_ipa -inl_alt
                  -xpagesize_stack=2m
 172.mgrid:     -fast -xautopar -stackvar -xpad=common:900 -xipo=2 -xarch=amd64 -xprefetch_level=3
                  -xvector -xpagesize=2m -Qoption ld -M,/usr/lib/ld/map.bssalign
 173.applu:     -fast -xautopar -unroll=5 -stackvar -xO4 -xipo=2 -xprefetch_level=3 -xarch=amd64a
                  -qoption iropt -Rloop_dist -xpagesize_heap=2m
 177.mesa:      -fast -xautopar -xO4 -xipo=2 -Wd,-iropt-prof -xarch=amd64 -xalias_level=strong -xpagesize=2m +FDO
 178.galgel:   -fast -xcache=64/32/4:1024/64/4 -xarch=sse2a -xcrossfile -xpagesize_heap=2m -xprefetch_level=3 -xvector=simd -xarch=amd64
                  RM_SOURCES=lapak.f90
                  EXTRALIBS=-xlic_lib=sunperf
 179.art:         -fast  -xipo=2 -xprefetch  -xalias_level=strong -xpagesize=2m
 183.equake:    -fast -xipo=2 -xprefetch -xalias_level=strong -xpagesize=2m -lmopt -lm +FDO
 187.facerec:    -fast -xO4 -xipo=2 -xprefetch_level=3 -xpagesize=2m
                  RM_SOURCES=cfftb.f90 cffti.f90 cfftf.f90
                  EXTRALIBS=-xlic_lib=sunperf
 188.ammp:      -fast -xcache=64/32/4:1024/64/4 -xarch=sse2a -xO4 -xipo=2 -xarch=amd64a -xalias_level=std -xpagesize_heap=2m -lmopt -lm
 189.lucas:      -fast -Qoption ube_ipa -inl_alt -xipo=2 -xarch=amd64 -xprefetch_level=3
 191.fma3d:     -fast -xcache=64/32/4:1024/64/4 -xarch=sse2a -unroll=5 -fsimple=1 -xipo=2
                  -xprefetch_level=3 -xarch=amd64 -xpagesize_heap=2m +FDO
 200.sixtrack:  -fast -xipo=2 -O -xprefetch_level=3 -xarch=amd64
                  -xpagesize_heap=2m -Qoption ld -M,/usr/lib/ld/map.bssalign +FDO
 301.apsi:       -fast -xO4 -xipo=2 -xprefetch_level=3 -xarch=amd64a -xpagesize=2m

Portability:
 178.galgel:  -fixed

Shell Environments:
  Stack size set to unlimited via "ulimit -s unlimited"

Processes were bound to CPUs using submit=pbind

Default BIOS setting was used
```