# CFP2000 Result

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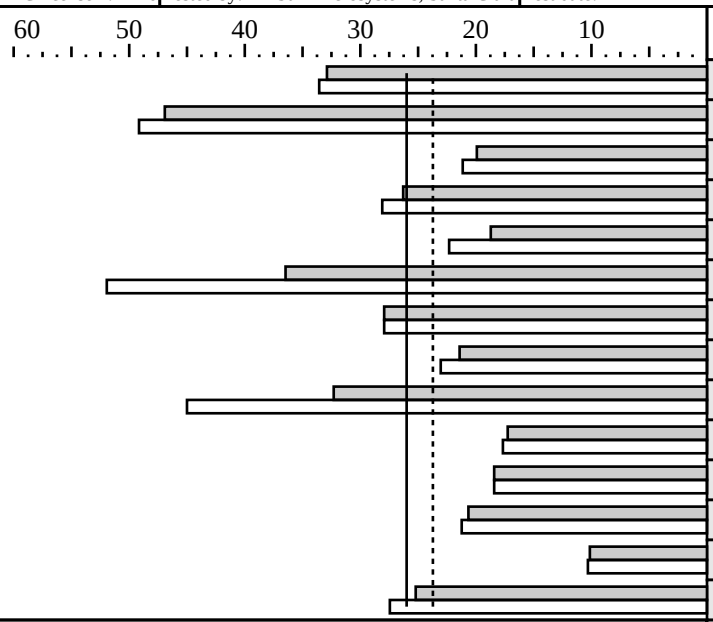
## Sun Microsystems
## Sun Fire X2100

SPECfp_rate2000 = 26.0

SPECfp_rate_base2000 = 23.7

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




| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|---|---|---|---|---|---|---|
| 168.wupwise | 1 | 56.4 | 32.9 | 1 | 55.3 | 33.6 |
| 171.swim | 1 | 76.6 | 46.9 | 1 | 73.2 | 49.2 |
| 172.mgrid | 1 | 105 | 19.9 | 1 | 98.8 | 21.1 |
| 173.applu | 1 | 92.7 | 26.3 | 1 | 86.7 | 28.1 |
| 177.mesa | 1 | 86.8 | 18.7 | 1 | 72.8 | 22.3 |
| 178.galgel | 1 | 92.2 | 36.5 | 1 | 64.8 | 51.9 |
| 179.art | 1 | 108 | 27.9 | 1 | 108 | 27.9 |
| 183.equake | 1 | 70.4 | 21.4 | 1 | 65.4 | 23.0 |
| 187.facerec | 1 | 68.2 | 32.3 | 1 | 49.0 | 45.0 |
| 188.ammp | 1 | 148 | 17.2 | 1 | 144 | 17.7 |
| 189.lucas | 1 | 126 | 18.4 | 1 | 126 | 18.4 |
| 191.fma3d | 1 | 118 | 20.6 | 1 | 115 | 21.2 |
| 200.sixtrack | 1 | 126 | 10.1 | 1 | 124 | 10.3 |
| 301.apsi | 1 | 120 | 25.2 | 1 | 110 | 27.4 |

### Hardware

| | |
|---|---|
| CPU: | AMD Opteron (TM) 154 |
| 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) per core |
| Secondary Cache: | 1024KB (I+D) (on chip) per core |
| L3 Cache: | N/A |
| Other Cache: | N/A |
| Memory: | 4GB (4x1GB, PC3200 CL3 DDR SDRAM) |
| Disk Subsystem: | SATA, 80GB, 10K RPM |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | Solaris 10 3/05 HW1 |
| 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 -xpad=common:3969 -xipo=2 -xarch=amd64 -xprefetch_level=3  -xpagesize_heap=2m
```

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## Notes/Tuning Information (Continued)

```
171.swim:      -fast -xpad=common:3969 -xipo=2 -xvector=simd -xprefetch_level=3 -Qoption iropt
                 -Atile:skewp,-Ainline:cs=700 -xarch=amd64 -Qoption ube_ipa -inl_alt
                 -xpagesize_stack=2m
172.mgrid:     -fast -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 -stackvar -xO4 -xipo=2 -xprefetch_level=3 -xarch=amd64
                 -qoption iropt -Rloop_dist -xpagesize_heap=2m
177.mesa:      -fast -xO4 -xipo=2 -Wd,-iropt-prof -xarch=amd64 -xalias_level=strong -xpagesize=2m +FDO
178.galgel:    -fast -xipo=2 -xpagesize_heap=2m -xprefetch_level=3 -xvector=simd -xarch=amd64
                 RM_SOURCES=lapak.f90
                 EXTRALIBS=-xlic_lib=sunperf
179.art:         basepeak=yes
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 -xO4 -xipo=2 -xarch=amd64 -xalias_level=std -xpagesize_heap=2m -lmopt -lm
189.lucas:       basepeak=yes
191.fma3d:      -fast -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=amd64 -xpagesize=2m

Portability:
 178.galgel:  -e -fixed -DSPEC_CPU2000_LP64

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

Kernel Parameters (/etc/system):
  autoup=900
  tune_t_fsflushr=1

Processes were bound to CPU using submit=pbind

Default BIOS setting was used
```