# CFP2000 Result



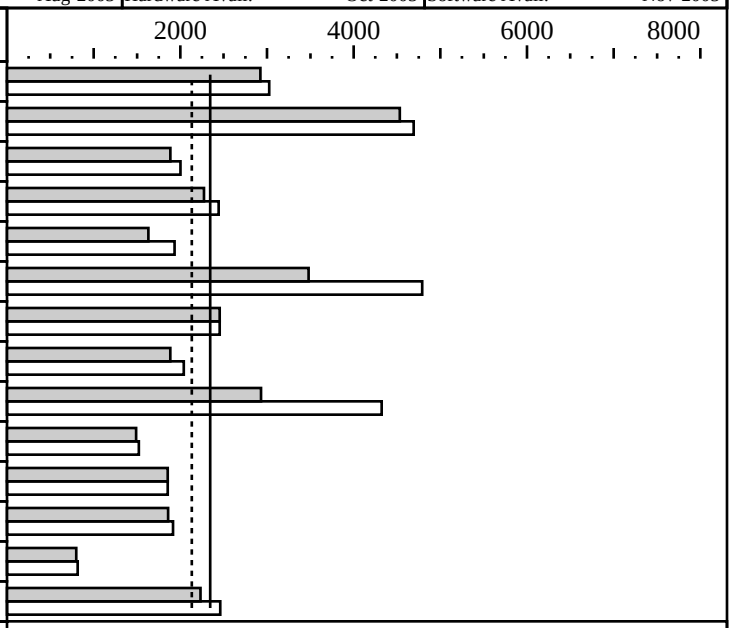
## Sun Microsystems
## Sun Fire X4200

SPECfp2000 = 2344

SPECfp_base2000 = 2132

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

| Benchmark | Reference Time | Base Runtime | Base Ratio | Runtime | Ratio |
|---|---|---|---|---|---|
| 168.wupwise | 1600 | 54.7 | 2924 | 52.9 | 3026 |
| 171.swim | 3100 | 68.4 | 4531 | 66.1 | 4693 |
| 172.mgrid | 1800 | 95.5 | 1885 | 89.9 | 2002 |
| 173.applu | 2100 | 92.4 | 2273 | 86.0 | 2442 |
| 177.mesa | 1400 | 85.8 | 1631 | 72.4 | 1934 |
| 178.galgel | 2900 | 83.3 | 3480 | 60.5 | 4791 |
| 179.art | 2600 | 106 | 2454 | 106 | 2454 |
| 183.equake | 1300 | 69.0 | 1884 | 63.7 | 2040 |
| 187.facerec | 1900 | 64.8 | 2931 | 44.0 | 4322 |
| 188.ammp | 2200 | 148 | 1490 | 145 | 1521 |
| 189.lucas | 2000 | 108 | 1855 | 108 | 1855 |
| 191.fma3d | 2100 | 113 | 1859 | 110 | 1916 |
| 200.sixtrack | 1100 | 138 | 799 | 135 | 815 |
| 301.apsi | 2600 | 116 | 2233 | 106 | 2461 |




### Hardware

| | |
|---|---|
| CPU: | AMD Opteron (TM) 254 |
| CPU MHz: | 2800 |
| 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 SDRAM ECC Registered) |
| Disk Subsystem: | SAS, 36GB, 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
```

## 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 ; Only one CPU was present on the system

This result was measured on Sun Fire X4100;
Sun Fire X4100 and Sun Fire X4200 are electronically equivalent.
```