



# CFP2000 Result

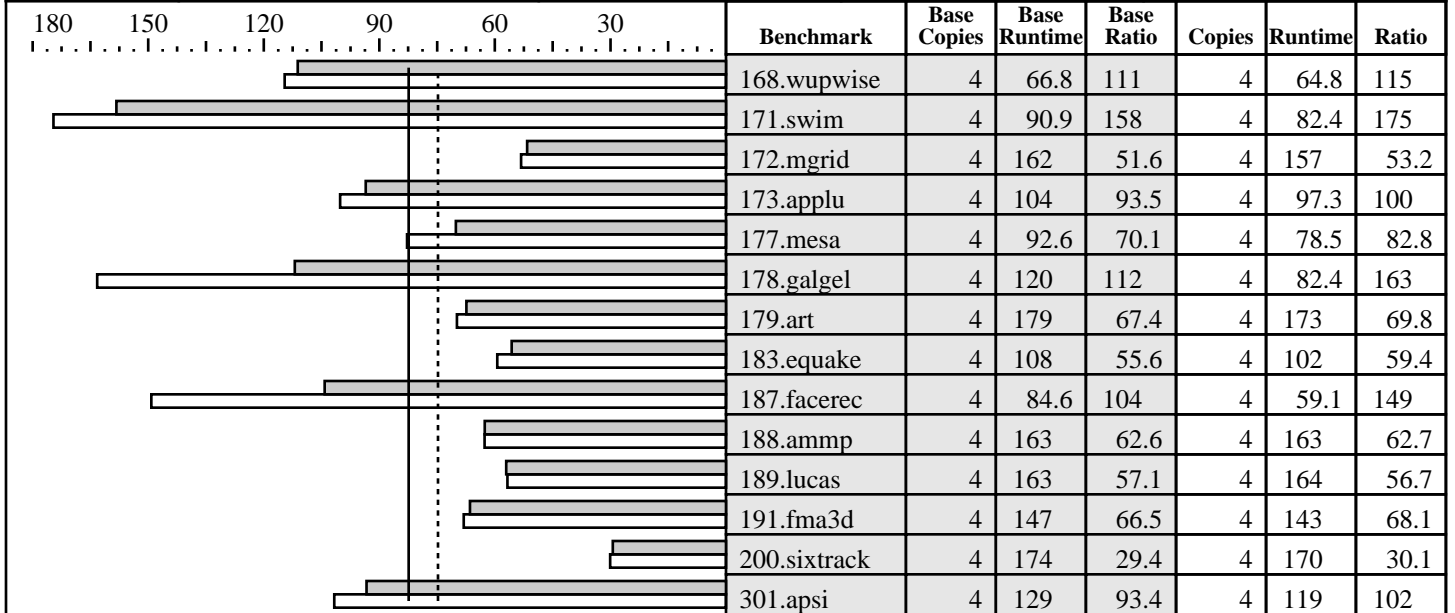
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Sun Microsystems  
Sun Fire X4100

SPECfp\_rate2000 = 82.4

SPECfp\_rate\_base2000 = 74.7

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



### Hardware

CPU: AMD Opteron (TM) 285 SE  
 CPU MHz: 2600  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/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: 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



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## Notes/Tuning Information (Continued)

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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 -unroll=5 -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 -unroll=5 -stackvar -xO4 -xipo=2 -xprefetch_level=3 -xarch=amd64a
               -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 -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.earthquake: -fast -xipo=2 -xprefetch -xalias_level=strong -xpagesize=2m -lmopt -lm +FDO
187.facerec: -fast -xcache=64/64/2:512/64/16 -xO4 -xipo=2 -xprefetch_level=3 -xpagesize=2m
               RM_SOURCES=cfft.f90 cfft.f90 cfft.f90
               EXTRALIBS=-xlic_lib=sunperf
188.ammp:    -fast -xO4 -xipo=2 -xarch=amd64 -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 -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: -e -fixed -DSPEC\_CPU2000\_LP64

### Shell Environments:

Stack size set to unlimited via "ulimit -s unlimited"

Processes were bound to CPUs using submit=pbind

Default BIOS setting was used

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