



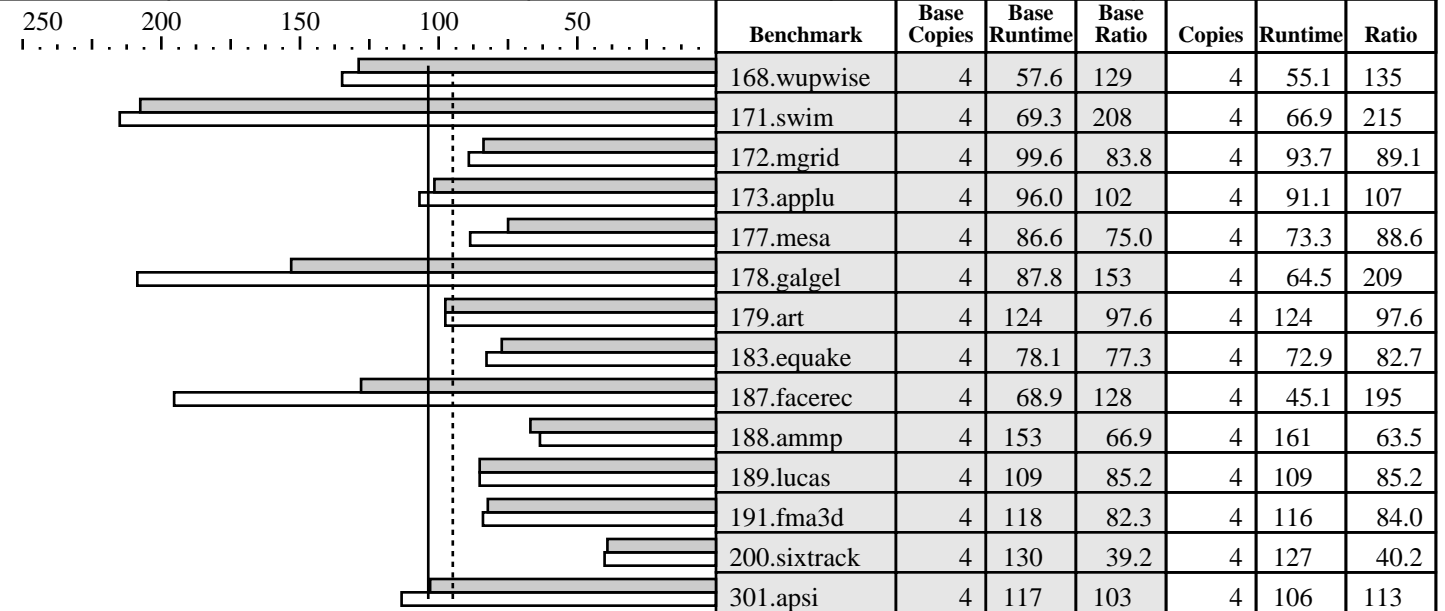
# CFP2000 Result

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Sun Microsystems  
Sun Fire V40z

SPECfp\_rate2000 = 104  
SPECfp\_rate\_base2000 = 94.9

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



### Hardware

CPU: AMD Opteron (TM) 854  
 CPU MHz: 2800  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 4 chips, 1 core/chip  
 CPU(s) orderable: 2,4 (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: 32GB (16x2GB, PC3200 CL3 DDR ECC Registered SDRAM)  
 Disk Subsystem: SCSI, 72GB, 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 -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=cfft.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 CPUs using submit=pbind

Default BIOS setting was used