



# CFP2000 Result

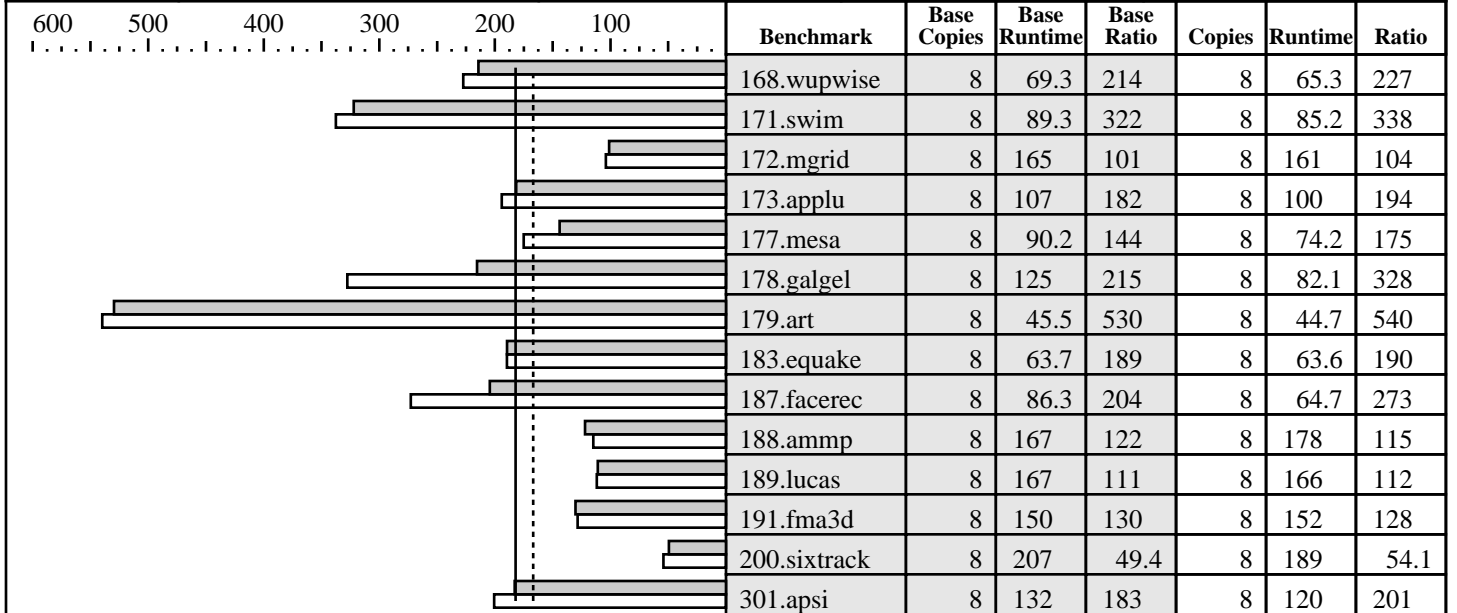
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Sun Microsystems  
Sun Blade X8400

SPECfp\_rate2000 = 182

SPECfp\_rate\_base2000 = 167

SPEC license #: 6 | Tested by: Sun Microsystems, Santa Clara | Test date: Jun-2006 | Hardware Avail: Jul-2006 | Software Avail: Jul-2006



### Hardware

CPU: AMD Opteron (TM) 885  
 CPU MHz: 2600  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 4 chips, 2 cores/chip  
 CPU(s) orderable: 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 Regd. SDRAM)  
 Disk Subsystem: SAS,73GB,10KRPM  
 Other Hardware: None

### Software

Operating System: Solaris 10 1/06  
 Compiler: Sun Studio 11 with Patches  
 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 -xipo=2 -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
```



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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 -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 -xipo=2 -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=cfft.f90 cffti.f90 cfftf.f90
              EXTRALIBS=-xlic_lib=sunperf
188.ammp:     -fast -xcache=64/32/4:1024/64/4 -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 -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"

Kernel Parameters (/etc/system):  
autoup=900  
tune\_t\_fsflushr=1

The following patches are applied to Sun Studio 11 compiler:  
120759-07 : x86/x64  
121016-03 : x86 C  
121020-03 : x86 F90  
121018-03 : x86 C++

Processes were bound to CPUs using submit=pbind  
Default BIOS setting was used