



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.quake	1	70.4	21.4	1	65.4	23.0
187.facerec	1	68.2	32.3	1	49.0	45.0
188.amp	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	Software
CPU: AMD Opteron (TM) 154	Operating System: Solaris 10 3/05 HW1
CPU MHz: 2800	Compiler: Sun Studio 11
FPU: Integrated	File System: ufs
CPU(s) enabled: 1 core, 1 chip, 1 core/chip	System State: Multi-user
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	

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=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 CPU using submit=pbind

Default BIOS setting was used