CFP2000 Result

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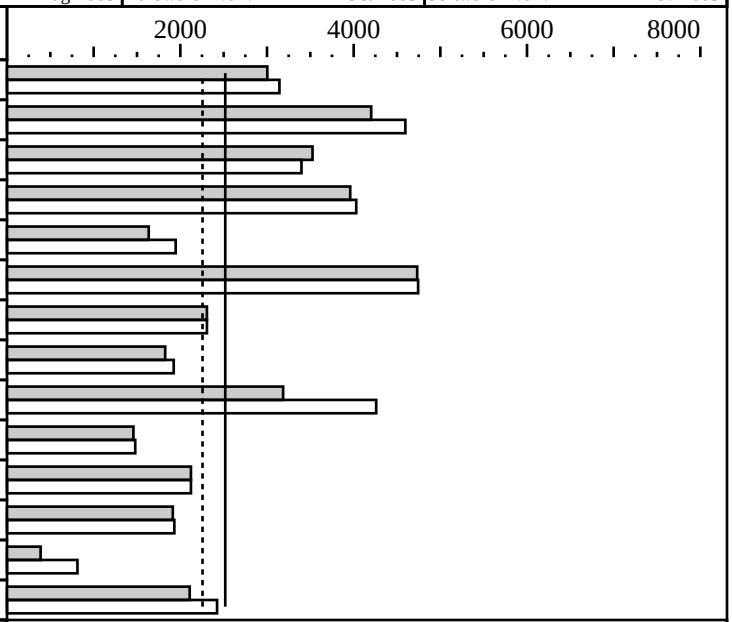
Sun Microsystems
Sun Fire X4200

SPECfp2000 = 2518

SPECfp_base2000 = 2256

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	53.3	3004	50.9	3143
171.swim	3100	73.8	4202	67.4	4597
172.mgrid	1800	51.1	3525	53.0	3398
173.applu	2100	53.0	3960	52.1	4030
177.mesa	1400	85.6	1635	71.9	1946
178.galgel	2900	61.3	4733	61.1	4744
179.art	2600	113	2307	113	2307
183.equake	1300	71.2	1825	67.6	1924
187.facerec	1900	59.6	3186	44.6	4260
188.ammp	2200	151	1459	149	1480
189.lucas	2000	94.2	2123	94.2	2123
191.fma3d	2100	110	1913	109	1931
200.sixtrack	1100	284	388	135	813
301.apsi	2600	123	2108	107	2424



Hardware

CPU:	AMD Opteron (TM) 254
CPU MHz:	2800
FPU:	Integrated
CPU(s) enabled:	2 cores, 2 chips, 1 core/chip
CPU(s) orderable:	1,2 (order by # of chips)
Parallel:	Yes
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 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 -xautopar -xipo=2 -xarch=amd64 ONESTEP=yes
    C:   -fast  -xcrossfile -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 -stackvar -xO4 -xipo=2 -xprefetch_level=3 -xarch=amd64 -Qoption iropt
                 -Aujam:inner=g -xpagesize_heap=2m
177.mesa:      -fast -xautopar -xO4 -xipo=2 -Wd,-iropt-prof -xarch=amd64 -xalias_level=strong -xpagesize=2m +FDO
178.galgel:  -fast -xipo=2 -xarch=amd64  -xprefetch_level=3
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 -xautopar -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"
  export PARALLEL=2

Kernel Parameters (/etc/system):
  autoup=900
  tune_t_fsflushr=1

Processes were bound to CPUs using submit=pbind

Default BIOS setting was used

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