CFP2000 Result

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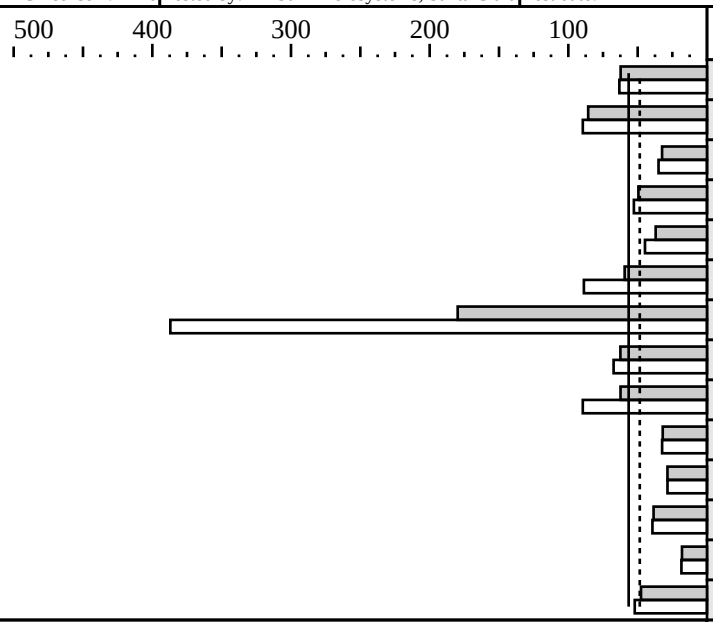
Sun Microsystems
Sun Fire X2100 M2

SPECfp_rate2000 = 56.5

SPECfp_rate_base2000 = 48.5

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	59.6	62.3	2	58.7	63.2
171.swim	2	83.9	85.7	2	80.3	89.6
172.mgrid	2	129	32.4	2	119	34.9
173.applu	2	98.5	49.5	2	92.4	52.7
177.mesa	2	87.7	37.0	2	72.6	44.7
178.galgel	2	113	59.4	2	75.8	88.8
179.art	2	33.5	180	2	15.6	387
183.equake	2	48.3	62.5	2	44.8	67.4
187.facerec	2	70.7	62.4	2	49.2	89.6
188.ammp	2	160	31.9	2	158	32.4
189.lucas	2	163	28.5	2	163	28.5
191.fma3d	2	126	38.5	2	124	39.3
200.sixtrack	2	141	18.0	2	138	18.4
301.apsi	2	127	47.6	2	116	52.1

Hardware

CPU:	AMD Opteron (TM) 1218
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
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, DDR2-667 CL5 ECC)
Disk Subsystem:	SATA,500GB,7200RPM
Other Hardware:	None

Software

Operating System:	Solaris 10 6/06
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:
  Fortran: -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
 171.swim:       -fast -xpad=common:3969 -xipo=2 -xvector=simd -xprefetch_level=3 -Qoption iropt
```

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Notes/Tuning Information (Continued)

```
                -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
                EXTRA_LIBS=-xlic_lib=sunperf
 179.art:       -fast -xipo=2 -xalias_level=strong -xprefetch -Wd,-iropt-prof -xpagesize=2m +FDO
 183.equake:    -fast -Wd,-iropt-prof -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
                EXTRA_LIBS=-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"

  PARALLEL was not set, therefore each copy of the benchmark
  ran single-threaded using only one core.

The following patches were 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
```