CFP2000 Result

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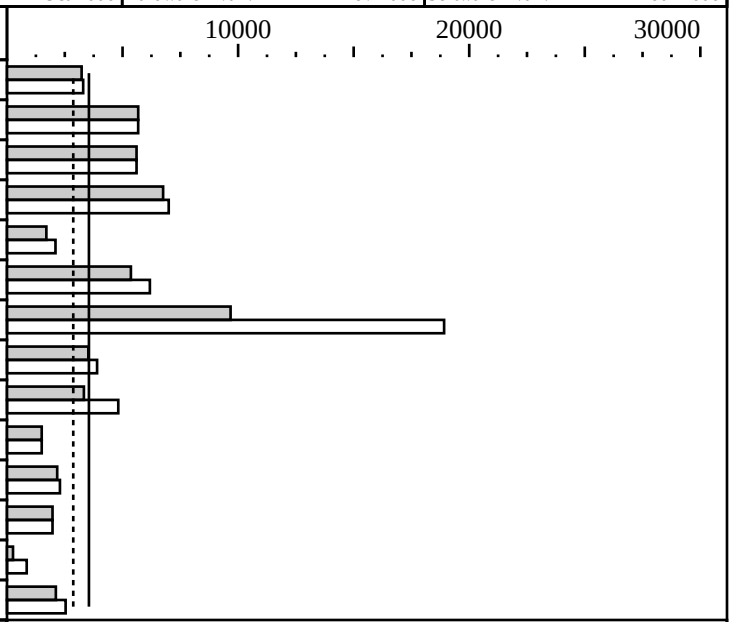
Sun Microsystems
Sun Ultra 40 M2

SPECfp2000 = 3545

SPECfp_base2000 = 2867

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	49.6	3229	48.5	3296
171.swim	3100	54.6	5678	54.6	5676
172.mgrid	1800	32.1	5605	32.1	5606
173.applu	2100	31.1	6755	30.0	6997
177.mesa	1400	82.2	1703	66.7	2098
178.galgel	2900	54.1	5361	46.9	6182
179.art	2600	26.9	9674	13.7	18913
183.equake	1300	36.9	3519	33.4	3898
187.facerec	1900	57.1	3327	39.5	4815
188.ammp	2200	146	1502	146	1502
189.lucas	2000	92.1	2172	87.3	2291
191.fma3d	2100	107	1970	107	1970
200.sixtrack	1100	423	260	129	853
301.apsi	2600	123	2114	102	2537



Hardware

CPU:	AMD Opteron 2220SE
CPU MHz:	2800
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2 chips
Parallel:	Yes
Primary Cache:	64 KB I + 64 KB D on chip per core
Secondary Cache:	1 MB I+D on chip per core
L3 Cache:	N/A
Other Cache:	N/A
Memory:	16GB (8x2GB, DDR2-667 CL5 ECC REG, Dual Rank)
Disk Subsystem:	SATA, 160 GB, 7200 RPM
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:
  F90:   -fast -xautopar -xipo=2 -xarch=amd64 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 -xautopar -xipo=2 -xarch=amd64  -lmvec
```

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Notes/Tuning Information (Continued)

```
 172.mgrid:      -fast -xautopar -xipo=2 -xarch=amd64  -lmvec
173.applu:     -fast -xprefetch=auto -xprefetch_level=3 -Qoption iropt -Rloop_dist  -xautopar -xipo=2 -xarch=amd64
177.mesa:     -fast -xautopar -xO4 -xipo=2 -Wd,-iropt-prof -xarch=amd64 -xalias_level=strong -xpagesize=2m +FDO
 178.galgel:  -fast -xautopar -stackvar -xipo=2 -xarch=amd64 -xprefetch=no%auto
              EXTRA_LIBS        = -xlic_lib=sunperf
179.art:       -fast -xvector -xipo=2 -xalias_level=strong -xprefetch -Wd,-iropt-prof -xpagesize=2m -lmvec +FDO
183.equake:    -fast -xvector -Wd,-iropt-prof -xipo=2 -xprefetch -xalias_level=strong -xpagesize=2m -lmvec
 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:       basepeak=yes
 189.lucas:      -fast -xprefetch=auto -xprefetch_level=3 -Qoption iropt -Rloop_dist
                 -xautopar -xipo=2 -xarch=amd64 -xprefetch_level=3
 191.fma3d:      basepeak=yes
 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:  -fixed

Shell Environments:
  Stack size set to unlimited via "ulimit -s unlimited"
  export PARALLEL=2

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++

Default BIOS setting was used
```