CFP2000 Result

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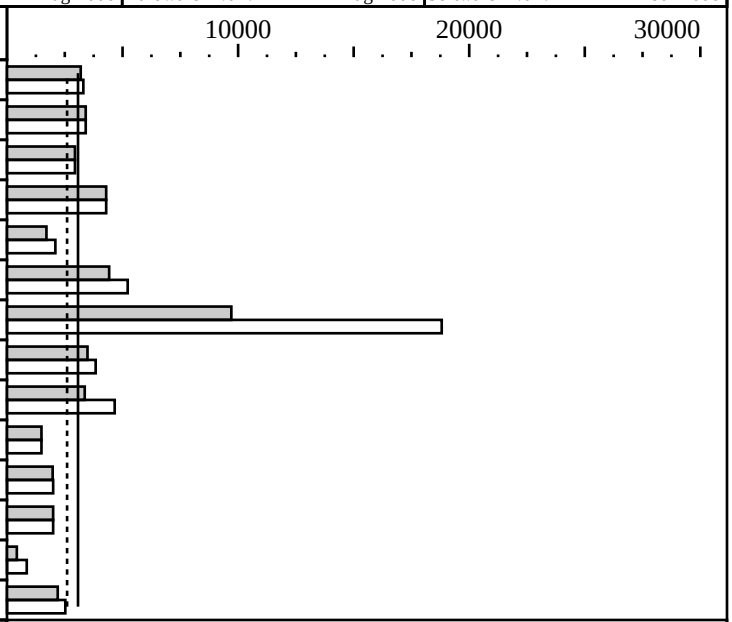
Sun Microsystems
Sun Ultra 20 M2

SPECfp2000 = 3073

SPECfp_base2000 = 2601

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	50.2	3190	48.4	3303
171.swim	3100	91.0	3406	91.0	3406
172.mgrid	1800	61.2	2941	61.2	2941
173.applu	2100	48.9	4291	48.9	4291
177.mesa	1400	82.0	1707	66.9	2093
178.galgel	2900	65.6	4420	55.5	5222
179.art	2600	26.8	9707	13.8	18810
183.equake	1300	37.3	3483	33.9	3837
187.facerec	1900	56.5	3363	40.8	4660
188.ammp	2200	148	1491	148	1491
189.lucas	2000	101	1976	100	1997
191.fma3d	2100	105	1997	105	1997
200.sixtrack	1100	258	426	129	855
301.apsi	2600	118	2195	103	2523



Hardware

CPU:	AMD Opteron (TM) 1220
CPU MHz:	2800
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
CPU(s) orderable:	1
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:	4GB (2x2GB, 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 -xautopar -xipo=2 -xarch=amd64
        C: -fast  -xipo=2 -xalias_level=std -xpagesize=2m

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:       basepeak=yes
```

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Notes/Tuning Information (Continued)

```
 172.mgrid:     basepeak=yes
 173.applu:     basepeak=yes
 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
                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
 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 -xautopar -Qoption ube_ipa -inl_alt -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
```