CFP2000 Result

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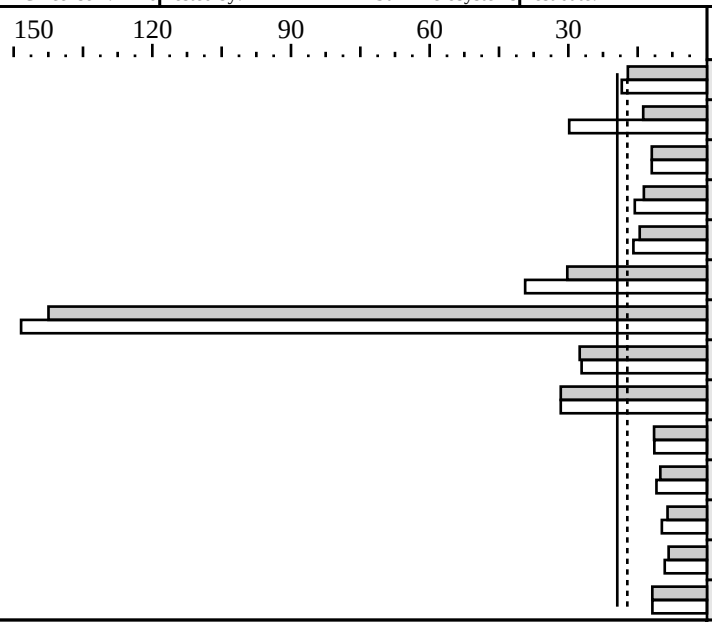
Sun Microsystems
Sun Fire V490 (1 processor)

SPECfp_rate2000 = 19.4

SPECfp_rate_base2000 = 17.2

SPEC license #: 6 | Tested by: Sun Microsystems | Test date: Sep-2004 | Hardware Avail: Sep-2004 | Software Avail: Jul-2004



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	217	17.1	2	201	18.4
171.swim	2	521	13.8	2	241	29.8
172.mgrid	2	350	11.9	2	349	12.0
173.applu	2	357	13.7	2	312	15.6
177.mesa	2	223	14.6	2	204	15.9
178.galgel	2	223	30.2	2	171	39.3
179.art	2	42.3	142	2	40.6	148
183.equake	2	110	27.5	2	111	27.1
187.facerec	2	139	31.6	2	139	31.6
188.ammp	2	446	11.5	2	448	11.4
189.lucas	2	459	10.1	2	424	10.9
191.fma3d	2	571	8.54	2	499	9.77
200.sixtrack	2	307	8.30	2	279	9.14
301.apsi	2	510	11.8	2	511	11.8

Hardware

CPU:	UltraSPARC IV
CPU MHz:	1050
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
CPU(s) orderable:	2,4 (order by # of chips)
Parallel:	No
Primary Cache:	32KBI+64KBD per core on chip (64KBI+128KBD on chip)
Secondary Cache:	8MB(I+D) per core off chip (16MB(I+D) off chip)
L3 Cache:	None
Other Cache:	None
Memory:	8GB 4-way interleaved
Disk Subsystem:	1 x 73GB
Other Hardware:	None

Software

Operating System:	Solaris 9 4/04 with patch 116561-03, 112233-12
Compiler:	Sun Studio 9
File System:	ufs with ufs logging
System State:	Multi-User

Notes/Tuning Information

```
Compiler invocation:
  C: cc
  CXX: CC
  F90: f90
  F77: f90

Floating point base flags:
    C:  -fast -xipo=2 -xalias_level=std with ONESTEP=yes and feedback
  F90:  -fast -xipo=2 with ONESTEP=yes and feedback

Floating point peak flags:
 ONESTEP=yes and feedback for all benchmarks, unless otherwise noted

 168.wupwise: -fast -xipo=2 -Qoption iropt -Ainline:inc=800:cp=1
 171.swim:    -fast -xpad=common:3969 -xpagesize=64K -xprefetch=latx:1.6
              -Qoption iropt -Atile:skewp,-Ainline:cs=700
              (no feedback)
```

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Notes/Tuning Information (Continued)

```
 172.mgrid:   -fast -xipo=2
 173.applu:   -fast -xipo=2
              -Qoption cg -Qlp=1-av=192-fa=1,-Qms_pipe+prefolim=7
              -Qoption iropt -Aujam:inner=g
 177.mesa:    -fast -xipo=2 -xalias_level=strong -xrestrict
              -Wc,-Qms_pipe+unoovf
 178.galgel:  -fast -xipo=2 -Qoption iropt -Addint:sf=9 -xlic_lib=sunperf
              RM_SOURCES=lapak.f90
 179.art:     -fast -xipo=2 -xalias_level=std
              -Wc,-Qms_pipe-prefst,-Qms_pipe+prefolim=11
 183.equake:  -fast -xipo=2 -xalias_level=strong -xprefetch_level=2
 187.facerec: basepeak= yes
 188.ammp:    -fast -xipo=2 -xalias_level=std -xpagesize=512K -lmopt -lm
 189.lucas:   -fast -xipo=2 -xprefetch_level=3 -Qoption iropt -Apf:pdl=1
              -Qoption f90comp -array_pad_rows,1977
 191.fma3d:   -fast -xipo=2 -stackvar -xprefetch_level=3
              -Qoption iropt -Apf:pdl=1
 200.sixtrack:-xO4 -dalign -xchip=ultra3 -xarch=v8plusb
              -fsimple=2 -xprefetch=no
 301.apsi:    -fast -xipo=2

Feedback is done as follows, unless otherwise noted:
 fdo_pre0:  rm -rf ./feedback.profile ./SunWS_cache
 PASS1:     -xprofile=collect:./feedback
 PASS2:     -xprofile=use:./feedback

Portability:
 178.galgel:  -e -fixed

Shell Environments:
  Stack size set to unlimited via "ulimit -s unlimited"
  MPSSHEAP=512K
  MPSSSTACK=512K
  LD_PRELOAD=mpss.so.1

Kernel Parameters (/etc/system):
 autoup=900
 tune_t_fsflushr=1
2nd chip disabled at boot time by using /etc/system
parameter "cpu_bringup_set"
```