# CFP2000 Result

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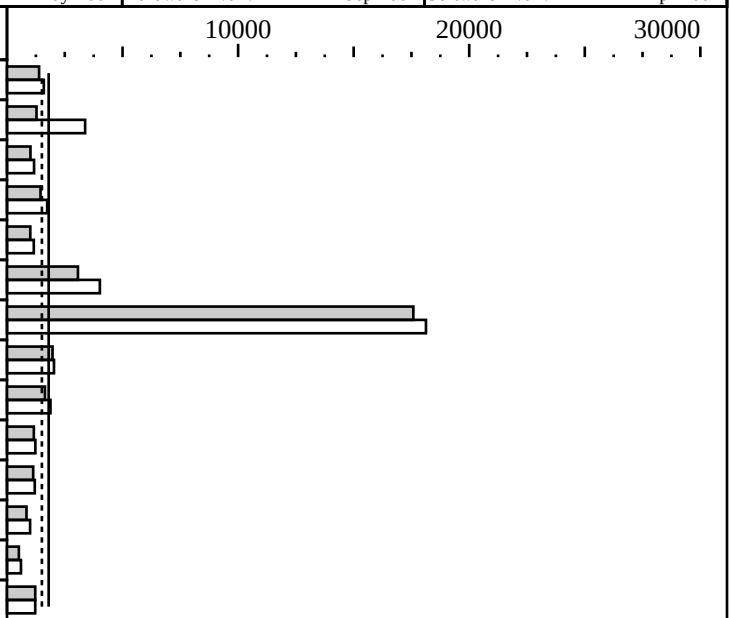
## Fujitsu Limited
## PRIMEPOWER900 (1890MHz)

SPECfp2000 = 1803

SPECfp_base2000 = 1510

SPEC license #: 19 | Tested by: Fujitsu Limited | Test date: May-2004 | Hardware Avail: Sep-2004 | Software Avail: Apr-2004

| Benchmark | Reference Time | Base Runtime | Base Ratio | Runtime | Ratio |
|---|---|---|---|---|---|
| 168.wupwise | 1600 | 115 | 1389 | 100 | 1593 |
| 171.swim | 3100 | 243 | 1276 | 91.7 | 3380 |
| 172.mgrid | 1800 | 177 | 1015 | 154 | 1171 |
| 173.applu | 2100 | 145 | 1451 | 121 | 1739 |
| 177.mesa | 1400 | 139 | 1008 | 121 | 1159 |
| 178.galgel | 2900 | 94.4 | 3071 | 72.2 | 4018 |
| 179.art | 2600 | 14.8 | 17582 | 14.3 | 18129 |
| 183.equake | 1300 | 66.0 | 1970 | 63.9 | 2033 |
| 187.facerec | 1900 | 116 | 1642 | 101 | 1881 |
| 188.ammp | 2200 | 189 | 1161 | 179 | 1228 |
| 189.lucas | 2000 | 176 | 1134 | 166 | 1202 |
| 191.fma3d | 2100 | 249 | 843 | 210 | 999 |
| 200.sixtrack | 1100 | 214 | 513 | 182 | 604 |
| 301.apsi | 2600 | 213 | 1222 | 213 | 1222 |




### Hardware

| | |
|---|---|
| CPU: | SPARC64 V |
| CPU MHz: | 1890 |
| FPU: | Integrated |
| CPU(s) enabled: | 1 core, 1 chip, 1 core/chip |
| CPU(s) orderable: | 1 to 16 (increments of 1) |
| Parallel: | None |
| Primary Cache: | 128KBI + 128KBD on chip |
| Secondary Cache: | 3MB(I+D) on chip |
| L3 Cache: | None |
| Other Cache: | None |
| Memory: | 8192MB |
| Disk Subsystem: | 1 x 36.4GB SCSI (10000rpm) |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | Solaris 9 4/04 |
| Compiler: | Fujitsu Parallelnavi 2.3 with patch 913221-03<br>Sun Studio 8<br>Sun Performance Library 8 |
| File System: | ufs |
| System State: | multi user |

## Notes/Tuning Information

```
FDO: (for Parallelnavi 2.3)
fdo_pre0=rm -rf ‘pwd‘/*.f.d
PASS1=-Kpg
PASS2=-Kpu
FDO: (for Sun Studio 8)
fdo_pre0=rm -rf ./feedback.profile ./SunWS_cache
PASS1=-xprofile=collect:./feedback
PASS2=-xprofile=use:./feedback

Floating point base flags:
(using Fortran compiler of Sun Studio 8)
-fast -xtarget=ultra3cu -xipo=2 ONESTEP=yes FDO
(using C compiler of Sun Studio 8)
-fast -xtarget=ultra3 -xipo=2 ONESTEP=yes FDO

Floating point peak flags:
```

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## Notes/Tuning Information (Continued)

```
(using Fortran compiler of Parallelnavi 2.3)
168.wupwise:  -Kfast_GP2=3,prefetch_infer,alignl=64,unroll=4,
              prefetch_cache_level=3 -O5 -x dir=./ FDO
172.mgrid:    -Kfast_GP2=2,GREG_SYSTEM -O4 -Kcommonpad=180,alignc=64
189.lucas:    -Kfast_GP2=3 -O5 -x dir=./ -Kunroll=2 FDO
191.fma3d:    -Am -Kfast_GP2=3,GREG_SYSTEM -O4 -x dir=./ -x70
              -Kprefetch_infer FDO
200.sixtrack: -Kfast_GP2=3 -O4 -x dir=./ -Kunroll=3 -fs FDO

(using Fortran compiler of Sun Studio 8)
171.swim:     -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xpad=common:1660 -xprefetch=latx:2.6
              -Qoption cg -Qiselect-funcalign=64
              -Qoption iropt -Ainline:cs=700,Atile:skewp:b10
173.applu:    -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xipo=2 -xprefetch=latx:1.6
              -Qoption cg -Qlp=1-av=192-t=4-fa=1-fl=0,-Qms_pipe+prefolim=7
              -Qoption iropt -Aujam:inner=g ONESTEP=yes FDO
178.galgel:   -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xchip=ultra -xipo=2 -Qoption cg -Qiselect-funcalign=64
              -Qoption iropt -Addint:sf=9 -xlic_lib=sunperf
              RM_SOURCES=lapak.f90 ONESTEP=yes FDO
187.facerec:  -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xarch=v8plus -xprefetch=latx:1.6 ONESTEP=yes FDO
301.apsi:     basepeak=yes

(using C compiler of Sun Studio 8)
177.mesa:     -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xchip=ultra -xalias_level=strong -xipo=2 -xrestrict
              -Wc,-Qgsched-T4,-Qgsched-trace_late=1,-Qiselect-funcalign=64,
              -Qms_pipe+unoovf ONESTEP=yes FDO
179.art:      -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xalias_level=std -xarch=v8plusa -xipo=2 -xprefetch=latx:1.2
              -Wc,-Qiselect-funcalign=64 ONESTEP=yes FDO
183.equake:   -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xalias_level=strong -xarch=v8plus -W2,-Amemopt:arrayloc,-whole
              -Wc,-Qiselect-funcalign=64,-Qms_pipe-pref,
              -Qlp=1-av=512-t=6-fa=1-fl=1 -lmopt -lm ONESTEP=yes FDO
188.ammp:     -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xalias_level=std -xipo=2 -xprefetch=latx:1.2 -xrestrict
              -Wc,-Qiselect-funcalign=64 ONESTEP=yes FDO

Portability:
178.galgel:   -e -fixed

System Tunables:
(for /etc/system)
      set consistent_coloring=1
      set tune_t_fsflushr=86400
      set autoup=86400

Shell Environments:
      Stack size set to unlimited via "ulimit -s unlimited"
      MPSSHEAP=4M
      MPSSSTACK=4M
      LD_PRELOAD=mpss.so.1
```

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## Notes/Tuning Information (Continued)

System board used with only ONE CPU present.

Small configuration memory system mode used ("4cpu mode", enabled via system console).

Sun Studio 8, posted at URL http://wwws.sun.com/software/products/studio/
was used for this submission.