# CFP2000 Result

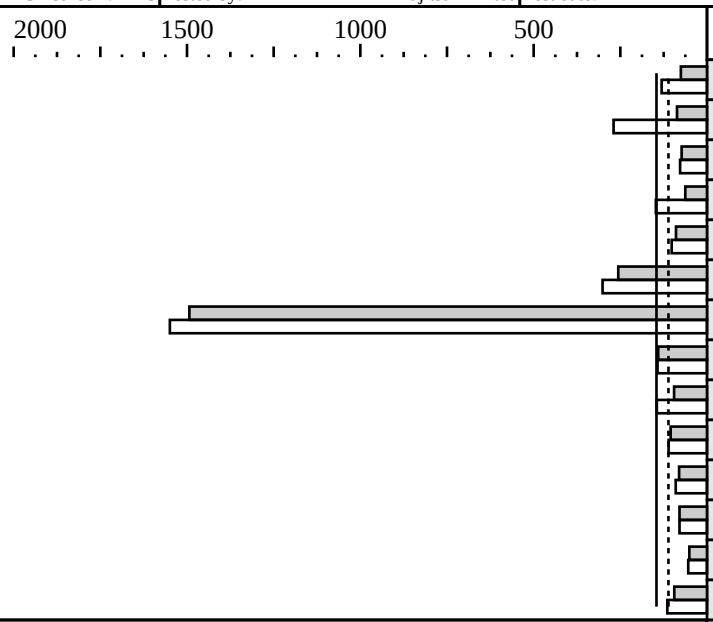
Copyright ©1999-2004, Standard Performance Evaluation Corporation

## Fujitsu Limited
## PRIMEPOWER900 (1890MHz)

SPECfp_rate2000 = 146

SPECfp_rate_base2000 = 111

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




| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|---|---|---|---|---|---|---|
| 168.wupwise | 8 | 197 | 75.4 | 8 | 113 | 131 |
| 171.swim | 8 | 332 | 86.5 | 8 | 107 | 270 |
| 172.mgrid | 8 | 228 | 73.2 | 8 | 215 | 77.6 |
| 173.applu | 8 | 311 | 62.6 | 8 | 132 | 147 |
| 177.mesa | 8 | 145 | 89.4 | 8 | 128 | 102 |
| 178.galgel | 8 | 105 | 256 | 8 | 89.3 | 301 |
| 179.art | 8 | 16.2 | 1493 | 8 | 15.6 | 1549 |
| 183.equake | 8 | 85.7 | 141 | 8 | 84.5 | 143 |
| 187.facerec | 8 | 186 | 94.9 | 8 | 122 | 145 |
| 188.ammp | 8 | 195 | 105 | 8 | 184 | 111 |
| 189.lucas | 8 | 231 | 80.5 | 8 | 206 | 90.2 |
| 191.fma3d | 8 | 246 | 79.3 | 8 | 246 | 79.3 |
| 200.sixtrack | 8 | 200 | 51.0 | 8 | 189 | 54.1 |
| 301.apsi | 8 | 256 | 94.4 | 8 | 211 | 114 |

### Hardware

| | |
|---|---|
| CPU: | SPARC64 V |
| CPU MHz: | 1890 |
| FPU: | Integrated |
| CPU(s) enabled: | 8 cores, 8 chips, 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: | 32768MB |
| 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 Parallelnavi 2.3)
   -Kfast_GP2=3,prefetch_infer,GREG_SYSTEM -O5
(using C compiler of Sun Studio 8)
   -fast -xtarget=ultra3 -xipo=2 ONESTEP=yes FDO

Floating point peak flags:
```

Copyright ©1999-2004, Standard Performance Evaluation Corporation



## 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
178.galgel:   -Kfast_GP2=2,GREG_SYSTEM,prefetch_infer,frecipro,
              commonpad=152,arraypad_const=11,alignl=64 -x dir=./ -O4 FDO
189.lucas:    -Kfast_GP2=3 -O5 -x dir=./ -Kunroll=2 FDO
191.fma3d:    basepeak=yes
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
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:     -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xipo=2 ONESTEP=yes FDO

(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(base&peak): -Am -Fixed
187.facerec(base):     -Am
191.fma3d(base):       -Am

System Tunables:
(for /etc/system)
      set consistent_coloring=1
      set tune_t_fsflushr=86400
      set autoup=86400
      set memscrub_period_sec=172800

Shell Environments:
      Stack size set to unlimited via "ulimit -s unlimited"
      MPSSHEAP=4M
      MPSSSTACK=4M
```

Copyright ©1999-2004, Standard Performance Evaluation Corporation



## Notes/Tuning Information (Continued)

```
        LD_PRELOAD=mpss.so.1

    Processes were bound to CPUs using "submit=pbind".

    Extended Interleave Mode enabled.

    4 CPUs each on 2 system board. Unused CPUs have physically removed.

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

    Model PRIMEPOWER850 and model PRIMEPOWER900 are electronically equivalent.
    This result was measured on model PRIMEPOWER900.
```