# CFP2000 Result

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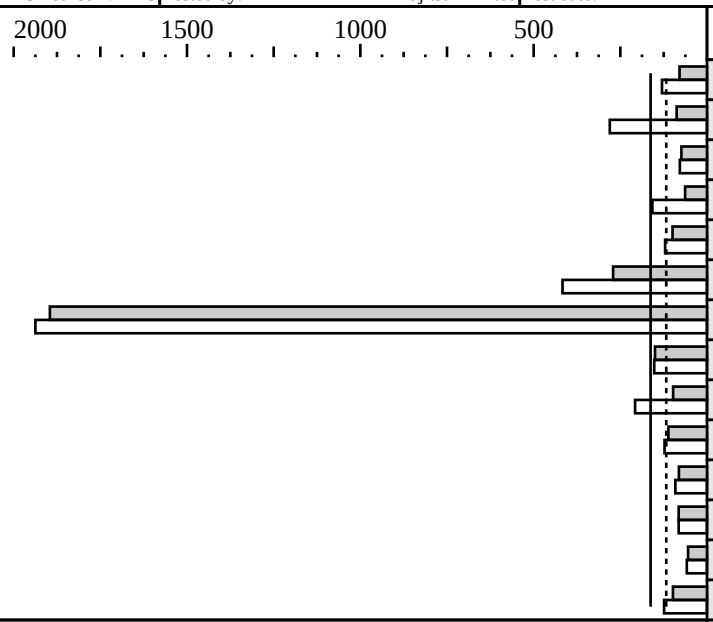
## Fujitsu Limited
## PRIMEPOWER850 (2025MHz)

SPECfp_rate2000 = 163

SPECfp_rate_base2000 = 118

SPEC license #: 19 | Tested by: Fujitsu Limited | Test date: Apr-2005 | Hardware Avail: Jun-2005 | Software Avail: Apr-2004




| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|---|---|---|---|---|---|---|
| 168.wupwise | 8 | 187 | 79.2 | 8 | 114 | 130 |
| 171.swim | 8 | 329 | 87.6 | 8 | 103 | 280 |
| 172.mgrid | 8 | 226 | 73.9 | 8 | 213 | 78.4 |
| 173.applu | 8 | 309 | 63.1 | 8 | 124 | 158 |
| 177.mesa | 8 | 131 | 99.4 | 8 | 108 | 121 |
| 178.galgel | 8 | 99.4 | 271 | 8 | 64.6 | 417 |
| 179.art | 8 | 12.7 | 1896 | 8 | 12.5 | 1937 |
| 183.equake | 8 | 80.4 | 150 | 8 | 79.3 | 152 |
| 187.facerec | 8 | 180 | 97.8 | 8 | 85.0 | 207 |
| 188.ammp | 8 | 183 | 111 | 8 | 167 | 122 |
| 189.lucas | 8 | 229 | 81.1 | 8 | 203 | 91.2 |
| 191.fma3d | 8 | 238 | 81.7 | 8 | 238 | 81.7 |
| 200.sixtrack | 8 | 187 | 54.6 | 8 | 175 | 58.2 |
| 301.apsi | 8 | 246 | 98.3 | 8 | 195 | 124 |

### Hardware

| | |
|---|---|
| CPU: | SPARC64 V |
| CPU MHz: | 2025 |
| 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: | (Fortran)<br>Fujitsu Parallelnavi 2.3 with patch 913221-03<br>Sun Studio 9<br>Sun Performance Library 9<br>(C)<br>Sun Studio 9 |
| 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 9)
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 9)
-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)
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:    basepeak = yes
200.sixtrack: -Kfast_GP2=3 -O4 -x dir=./ -Kunroll=3 -fs FDO

(using Fortran compiler of Sun Studio 9)
168.wupwise:  -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xipo=1 -Qoption iropt -Ainline:inc=800:cp=1
              ONESTEP=yes FDO
171.swim:     -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xpad=common:1700 -Qoption iropt -Ainline:cs=700,Atile:skewp:b10
173.applu:    -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xipo=2 -Qoption cg -Qlp=1-av=192-t=4-fa=1-fl=0
              -Qoption iropt -Aujam:inner=g ONESTEP=yes FDO
178.galgel:   -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xipo=2 -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
              -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 9)
177.mesa:     -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xchip=ultra2 -xalias_level=strong -xipo=2 -xrestrict
              ONESTEP=yes FDO
179.art:      -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xipo=2 ONESTEP=yes FDO
183.equake:   -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xalias_level=strong -W2,-whole -Wc,-Qms_pipe-pref,
              -Qlp=1-av=512-t=6-fa=1-fl=1 ONESTEP=yes FDO
188.ammp:     -fast -xalias_level=std -xipo=2 ONESTEP=yes FDO

Portability:
178.galgel(base):   -Am -Fixed
178.galgel(peak):   -e -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

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

Processes were bound to CPUs using "submit=pbind"

Extended Interleave Mode enabled.
```

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## Notes/Tuning Information (Continued)

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

Sun Studio 9, posted at URL http://www.sun.com/software/products/studio/previous/9/index.xml was used for this submission.