



# 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.earth	1300	66.0	1970	63.9	2033
187.facerec	1900	116	1642	101	1881
188.amp	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  
Sun Studio 8  
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.earthquake: -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://www.sun.com/software/products/studio/> was used for this submission.