



# CFP2000 Result

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Fujitsu Limited  
PRIMEPOWER850 (1890MHz)

SPECfp\_rate2000 = 252  
SPECfp\_rate\_base2000 = 184

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	16	202	147	16	136	219
171.swim	16	543	106	16	109	529
172.mgrid	16	351	95.3	16	332	101
173.applu	16	445	87.5	16	142	275
177.mesa	16	148	175	16	131	198
178.galgel	16	109	492	16	93.9	573
179.art	16	16.3	2968	16	15.8	3055
183.quake	16	121	199	16	121	199
187.facerec	16	201	176	16	141	249
188.amp	16	196	209	16	186	220
189.lucas	16	383	96.8	16	330	113
191.fma3d	16	303	129	16	303	129
200.sixtrack	16	200	102	16	188	109
301.apsi	16	282	171	16	222	217

### Hardware

CPU: SPARC64 V  
CPU MHz: 1890  
FPU: Integrated  
CPU(s) enabled: 16 cores, 16 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  
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 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:



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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  
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)

168.wupwise: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4  
-xarch=v8plusa -xipo=2 -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: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.quake: basepeak=yes  
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  
LD\_PRELOAD=mpss.so.1



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

Extended Interleave Mode enabled.

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

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