



# CFP2000 Result

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Fujitsu Limited  
PRIMEPOWER850 (810MHz)

SPECfp2000 = 613  
SPECfp\_base2000 = 458

SPEC license #: 19 | Tested by: Fujitsu Limited | Test date: Jun-2002 | Hardware Avail: Aug-2002 | Software Avail: May-2002

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	492	325	272	589
171.swim	3100	677	458	663	467
172.mgrid	1800	505	356	458	393
173.applu	2100	868	242	403	521
177.mesa	1400	468	299	298	470
178.galgel	2900	259	1120	191	1522
179.art	2600	116	2232	73.2	3554
183.earthquake	1300	293	444	155	841
187.facerec	1900	292	652	267	712
188.amp	2200	527	418	391	562
189.lucas	2000	498	402	498	402
191.fma3d	2100	644	326	634	331
200.sixtrack	1100	400	275	291	378
301.apsi	2600	614	424	595	437

### Hardware

CPU: SPARC64 GP  
 CPU MHz: 810  
 FPU: Integrated  
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip  
 CPU(s) orderable: 4 to 16  
 Parallel: None  
 Primary Cache: 128KBI+128KBD on chip  
 Secondary Cache: 8MB(I+D) off chip, per CPU  
 L3 Cache: None  
 Other Cache: None  
 Memory: 8192MB  
 Disk Subsystem: 36GB SCSI  
 Other Hardware: Ethernet

### Software

Operating System: Solaris 8 2/02 with patches 108434-07 and 108435-07.  
 Compiler: Fujitsu Parallelnavi 1.0.2 with patches 911403-01 and 911746-01, Sun ONE Studio 7 with patches 111704-01, 111705-01, 111706-01, 111708-01, 111709-01, 111715-01 and 111716-01, Sun Performance Library 7  
 File System: ufs  
 System State: single user

## Notes/Tuning Information

```
FDO: (Parallelnavi 1.0.2)
  fdo_pre0=rm -rf `pwd`/*.*.d
  PASS1=-Kpg    PASS2=-Kpu
FDO: (Sun ONE Studio 7)
  fdo_pre0=rm -rf `pwd`/../feedback.profile
  PASS1=-xprofile=collect:`pwd`/../feedback
  PASS2=-xprofile=use:`pwd`/../feedback
Baseline :
(using Fortran compiler of Sun ONE Studio 7)
-fast -xtarget=ultra3 -lprism32 FDO

(using C compiler of Sun ONE Studio 7)
-fast -xipo=2 -xdepend FDO

Peak:
(using Fortran compiler of Parallelnavi 1.0.2)
168.wupwise: -Kfast_GP=2,prefetch=4,nounroll -x dir=`pwd`/../../src
```



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## Notes/Tuning Information (Continued)

-fs -lssl2mtfma FDO ONESTEP=yes

171.swim: -Kfast\_GP=2,GREG,preex,ilfunc,prefetch=3,largepage,commonpad=152,prefetch\_iteration=3,unroll=2,nogs,frecipro  
-O4 -fs

172.mgrid: -Kfast\_GP=2,preex,GREG,commonpad=144,unroll=3,largepage,prefetch=3  
-O4 -fs

178.galgel: -Kfast\_GP=2,GREG,largepage,preex,unroll=3,prefetch\_iteration=2,commonpad=24  
-O4 -lssl2mtfma -fs FDO

RM\_SOURCES=lapak.f90

200.sixtrack: -Kfast\_GP=2,GREG,noprefetch,unroll=4,largepage,frecipro -fs

301.apsi: -Kfast\_GP=2,GREG,preex,ilfunc,largepage,unroll=2 -O4 -fs

(using FORTRAN77 compiler of Sun ONE Studio 7)

173.applu: -fast -xtarget=ultra3 -Qoption iropt -Adata\_access,-Mt7000,-Mm14000,-Mr40000,-Ma400,-whole  
-xregs=syst -Qoption iropt -Rscalarrep,-MR -Qoption cg  
-Qlp=1-av=192-fa=1 -Qoption f90comp -O3 -stackvar ONESTEP=yes

(using FORTRAN90 compiler of Sun ONE Studio 7)

187.facerec: -fast -xarch=v9 FDO ONESTEP=yes

189.lucas: basepeak=1

191.fma3d: -fast -xarch=v8plusb -xcrossfile -stackvar -xdepend  
-xprefetch -Qoption cg -Qlp=1-av=256-t=3-fa=1 FDO ONESTEP=yes

(using C compiler of Sun ONE Studio 7)

177.mesa: -fast -xtarget=ultra2 -xcrossfile -xrestrict -xalias\_level=strong  
-xregs=syst -Wc,-Qgsched-trace\_late=1,-Qgsched-trace\_spec\_load=1  
-xarch=v8plus -W2,-Amemopt -xsafe=mem -dn  
FDO ONESTEP=yes

179.art: -fast -xtarget=ultra3 -xipo=2 -xalias\_level=strong -xregs=syst -dn  
FDO ONESTEP=yes

183.earthquake: -fast -xtarget=ultra3 -xalias\_level=std -xdepend  
-W2,-whole,-Amemopt:arrayloc,-crit -xprefetch -Wc,-Qms\_pipe-pref,-Qlp=1-av=256-t=4-fa=1-fl=1 -lprism32 -lmopt -lm  
FDO ONESTEP=yes

188.ammp: -fast -xtarget=ultra3 -xcrossfile -xrestrict  
-xalias\_level=strong -xdepend -xprefetch  
-Wc,-Qiselect-funcalign=64 -lprism32 FDO ONESTEP=yes

Portability:

(for Sun ONE Studio 7)

178.galgel: -e -fixed

(for Parallelnavi 1.0.2)

178.galgel: -Am -Fixed

Note:

System Tunables: (for /etc/system)

consistent\_coloring=1, tune\_t\_fsflushr=86400, autoup=86400,

shmsys:shminfo\_shmmax=1477846784, shmsys:shminfo\_shmnni=1024, shmsys:shminfo\_shmseg=1024,shminfo\_shmmin=1

(for /etc/opt/FJSVpnm/lpg.conf)

TSS=512M, SHMSEGSIZE=256M

Shell Environments:

LD\_LIBRARY\_PATH="/usr/lib:/opt/FD7/SUNWspro/lib/v8plusb:/opt/FD7/SUNWspro/prod/lib/v8plusb:/opt/FSUNf90/lib"

LD\_LIBRARY\_PATH\_64="/usr/lib/64:/opt/FD7/SUNWspro/lib/v9:/opt/FD7/SUNWspro/prod/lib/v9"

PRISM\_HEAP=268435456

PRISM\_MODE=2

Feedback directed optimization was used for all baseline benchmarks and peak benchmarks except following peak benchmarks: 171.swim, 172.mgrid, 173.applu, 200.sixtrack.

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## Notes/Tuning Information (Continued)

System board used with only one CPU present.