



# CFP2000 Result

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**Fujitsu Limited**  
**PRIMEPOWER850 (675MHz)**

SPECfp2000 = 493

SPECfp\_base2000 = 359

SPEC license #: 19 | Tested by: Fujitsu Limited | Test date: Oct-2001 | Hardware Avail: Nov-2001 | Software Avail: Dec-2001

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	451	355	307	521
171.swim	3100	739	420	669	464
172.mgrid	1800	659	273	477	377
173.applu	2100	947	222	485	433
177.mesa	1400	400	350	373	375
178.galgel	2900	267	1088	228	1272
179.art	2600	546	476	105	2471
183.earthquake	1300	660	197	344	378
187.facerec	1900	377	505	300	633
188.amp	2200	542	406	527	417
189.lucas	2000	651	307	640	312
191.fma3d	2100	750	280	744	282
200.sixtrack	1100	395	278	350	315
301.apsi	2600	685	379	677	384

### Hardware

CPU: SPARC64 GP  
 CPU MHz: 675  
 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: 16GB  
 Disk Subsystem: 2 x 18GB SCSI (10025rpm)  
 Other Hardware: None

### Software

Operating System: Solaris 8 7/01  
 Compiler: Fujitsu Parallelnavi 1.0.2 with patch 911403-01  
 Sun Forte Developer 6 update 2  
 File System: ufs  
 System State: multi user

## Notes/Tuning Information

```
FDO: (Parallelnavi 1.0.2)
  fdo_pre0=rm -rf `pwd`/*.*.d
  PASS1=-Kpg    PASS2=-Kpu
FDO: (Forte Developer 6 update 2)
  fdo_pre0=rm -rf `pwd`/../feedback.profile
  PASS1=-xprofile=collect:`pwd`/../feedback
  PASS2=-xprofile=use:`pwd`/../feedback
Baseline :
(using Fortran compiler of Parallelnavi 1.0.2)
-Kfast_GP=2,largepage -O4 -fs FDO

(using C compiler of Parallelnavi 1.0.2)
-Kfast_GP=2,largepage FDO

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



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## Notes/Tuning Information (Continued)

FDO ONESTEP=yes

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

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=2,prefetch\_iteration=2,commonpad=24  
-O4 -lssl2mtfma -fs FDO

RM\_SOURCES=lapak.f90

189.lucas: -Kfast\_GP=2,GREG,preex,largepage,nounroll -O4 -fs FDO

191.fma3d: -Kfast\_GP=2,preex,GREG,nounroll,prefetch=4,largepage -O4 -fs FDO

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

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

(using C compiler of Parallelnavi 1.0.2)

188.ammp: -Kfast\_GP=2,GREG,popt,prefetch=4,preex,preload,largepage,fuse,unroll=3 -x-

(using FORTRAN77 compiler of Forte Developer 6 update 2)

173.applu: -fast -Qoption iropt -whole,-Adata\_access,-Mt6000,-Mm12000,-Mr40000,-Ma400 -xarch=v8plus -dn  
ONESTEP=yes

(using FORTRAN90 compiler of Forte Developer 6 update 2)

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

(using C compiler of Forte Developer 6 update 2)

177.mesa: -fast -xcrossfile -xrestrict -xalias\_level=std -xregs=syst -Wc,-Qgsched-trace\_late=1,-Qgsched-trace\_spec\_load=1  
-xarch=v8plus -W2,-Amemopt -dn

FDO ONESTEP=yes

179.art: -fast -xalias\_level=strong -xdepend -xregs=syst -W2,-whole,-Amemopt  
-xarch=v8plus -lmopt -lm -dn FDO ONESTEP=yes

183.quake: -fast -xalias\_level=strong -xdepend -W2,-whole,-Amemopt  
-xarch=v8plus -lmopt -lm FDO ONESTEP=yes

### Portability:

(for Parallelnavi 1.0.2)

178.galgel: -Am -Fixed

187.facerec: -Am

191.fma3d: -Am

### Note:

System Tunables: (for /etc/system)

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

shmsys:shminfo\_shmmax=8589934592, shmsys:shminfo\_shmni=1024, shmsys:shminfo\_shmseg=1024

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

TSS=512M, SHMSEGSIZE=256M

Feedback directed optimization was used for all baseline benchmarks and peak benchmarks  
except following peak benchmarks: 171.swim, 172.mgrid, 173.applu, 188.ammp, 200.sixtrack.

Only one CPU installed on the system board.

Extended Interleave Mode enabled.