



# CFP2000 Result

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Fujitsu Limited  
PRIMEPOWER600 (600MHz)

SPECfp\_rate2000 = 31.5  
SPECfp\_rate\_base2000 = 23.1

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	8	623	23.8	8	445	33.4
171.swim	8	1913	15.0	8	1866	15.4
172.mgrid	8	1149	14.5	8	1069	15.6
173.applu	8	1657	11.8	8	653	29.9
177.mesa	8	447	29.0	8	420	30.9
178.galgel	8	298	90.2	8	253	107
179.art	8	624	38.7	8	117	206
183.equake	8	1069	11.3	8	583	20.7
187.facerec	8	464	38.0	8	385	45.8
188.amp	8	611	33.4	8	578	35.3
189.lucas	8	1218	15.2	8	1211	15.3
191.fma3d	8	1371	14.2	8	1259	15.5
200.sixtrack	8	448	22.8	8	396	25.8
301.apsi	8	870	27.7	8	855	28.2

**Hardware**

CPU: SPARC64 GP  
CPU MHz: 600  
FPU: Integrated  
CPU(s) enabled: 8 cores, 8 chips, 1 core/chip  
CPU(s) orderable: 2 to 8  
Parallel: None  
Primary Cache: 128KBI+128KBD on chip  
Secondary Cache: 8MB(I+D) off chip, per CPU  
L3 Cache: None  
Other Cache: None  
Memory: 32GB  
Disk Subsystem: 1 x 36.4GB SCSI (10000rpm)  
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: single 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,largepage -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,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=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,V9FMADD,prefetch=4 -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\_shmmni=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.