



# CFP2000 Result

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Fujitsu Siemens Computers  
PRIMEPOWER850 (675MHz)

SPECfp\_rate2000 = 87.0  
SPECfp\_rate\_base2000 = 63.7

SPEC license #: 22 Tested by: Fujitsu Limited Test date: Oct-2001 Hardware Avail: Feb-2002 Software Avail: Dec-2001

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	16	472	62.9	16	328	90.5
171.swim	16	883	65.2	16	842	68.4
172.mgrid	16	728	45.9	16	563	59.3
173.applu	16	1024	38.0	16	499	78.1
177.mesa	16	399	65.1	16	376	69.1
178.galgel	16	268	201	16	229	235
179.art	16	556	86.7	16	107	453
183.quake	16	691	34.9	16	362	66.6
187.facerec	16	379	93.0	16	302	117
188.amp	16	531	76.9	16	503	81.2
189.lucas	16	714	52.0	16	702	52.9
191.fma3d	16	798	48.8	16	786	49.6
200.sixtrack	16	398	51.3	16	351	58.1
301.apsi	16	701	68.8	16	689	70.1

### Hardware

CPU: SPARC64 GP  
CPU MHz: 675  
FPU: Integrated  
CPU(s) enabled: 16 cores, 16 chips, 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: 32GB  
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,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,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\_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.  
Extended Interleave Mode enabled.