



# CFP2000 Result

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Fujitsu Siemens Computers  
PRIMEPOWER600 (600MHz)

SPECfp2000 = 416  
SPECfp\_base2000 = 304

SPEC license #: 22 Tested by: Fujitsu Limited Test date: Aug-2001 Hardware Avail: Oct-2001 Software Avail: Sep-2001

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	530	302	359	445
171.swim	3100	996	311	890	348
172.mgrid	1800	758	237	594	303
173.applu	2100	1129	186	561	375
177.mesa	1400	441	317	416	336
178.galgel	2900	292	993	248	1167
179.art	2600	620	419	117	2229
183.earth	1300	840	155	450	289
187.facerec	1900	441	431	360	527
188.amp	2200	606	363	578	381
189.lucas	2000	789	253	774	258
191.fma3d	2100	1039	202	1005	209
200.sixtrack	1100	444	248	393	280
301.apsi	2600	777	335	766	340

### Hardware

CPU: SPARC64 GP  
CPU MHz: 600  
FPU: Integrated  
CPU(s) enabled: 1 core, 1 chip, 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: 2048MB  
Disk Subsystem: 1 x 36.4GB SCSI (10000rpm)  
Other Hardware: Ethernet

### Software

Operating System: Solaris 8 4/01  
Compiler: Fujitsu Parallelnavi 1.0.2  
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:



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## Notes/Tuning Information (Continued)

(using Fortran compiler of Parallelnavi 1.0.2)

```

168.wupwise: -Kfast_GP=2,prefetch=4,nounroll -x dir=`pwd`/../../src -fs
  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
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
191.fma3d: -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.earthquake: -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. System board used with only one CPU present.

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