



# CFP2000 Result

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**Fujitsu Limited**  
**PRIMEPOWER200 (700MHz)**

SPECfp2000 = **476**  
SPECfp\_base2000 = **374**

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	473	338	353	453
171.swim	3100	853	364	844	367
172.mgrid	1800	691	260	631	285
173.applu	2100	1058	199	501	419
177.mesa	1400	562	249	374	375
178.galgel	2900	320	907	225	1286
179.art	2600	94.5	2751	69.3	3750
183.earthquake	1300	418	311	266	489
187.facerec	1900	421	451	391	486
188.amp	2200	674	327	509	432
189.lucas	2000	621	322	621	322
191.fma3d	2100	940	223	929	226
200.sixtrack	1100	476	231	343	321
301.apsi	2600	749	347	737	353

### Hardware

CPU: SPARC64 GP  
CPU MHz: 700  
FPU: Integrated  
CPU(s) enabled: 1 core, 1 chip, 1 core/chip  
CPU(s) orderable: 1 to 2  
Parallel: None  
Primary Cache: 128KBI+128KBD on chip  
Secondary Cache: 4MB(I+D) off chip, per CPU  
L3 Cache: None  
Other Cache: None  
Memory: 4096MB  
Disk Subsystem: 1 x 36.4GB SCSI (10000rpm)  
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,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=yes

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.equake: -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,

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

TSS=2G, SHMSEGSIZE=256M

Shell Environments:

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

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

System board used with only one CPU present.

Standard Performance Evaluation Corporation

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