



CFP2000 Result

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Fujitsu Siemens Computers
PRIMEPOWER850 (675MHz)

SPECfp2000 = 493
SPECfp_base2000 = 359

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