



CFP2000 Result

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Fujitsu Limited
PRIMEPOWER200 (600MHz)

SPECfp_rate2000 = 8.95
SPECfp_rate_base2000 = 6.54

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	2	542	6.85	2	370	10.0
171.swim	2	1085	6.63	2	1012	7.11
172.mgrid	2	912	4.58	2	734	5.69
173.applu	2	1209	4.03	2	584	8.34
177.mesa	2	466	6.96	2	438	7.42
178.galgel	2	299	22.5	2	255	26.4
179.art	2	612	9.85	2	116	52.0
183.quake	2	900	3.35	2	497	6.07
187.facerec	2	541	8.14	2	423	10.4
188.amp	2	633	8.07	2	602	8.47
189.lucas	2	858	5.41	2	844	5.49
191.fma3d	2	1204	4.05	2	1117	4.36
200.sixtrack	2	448	5.69	2	396	6.45
301.apsi	2	823	7.33	2	808	7.46

Hardware

CPU: SPARC64 GP
 CPU MHz: 600
 FPU: Integrated
 CPU(s) enabled: 2 cores, 2 chips, 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: 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:



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Notes/Tuning Information (Continued)

(using Fortran compiler of Parallelnavi 1.0.2)

```

168.wupwise: -Kfast_GP=2,prefetch=4,nounroll,largepage -x dir=`pwd`/../../src -fs
  FDO ONESTEP=yes
171.swim: -Kfast_GP=2,GREG,preex,ilfunc,prefetch=3,commonpad=152,prefetch_iteration=3,unroll=2,nogs,frecipro
  -O4 -dn -fs
172.mgrid: -Kfast_GP=2,preex,GREG,commonpad=144,unroll=3,prefetch=3
  -O4 -dn -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)

```

177.mesa: -Kfast_GP=2,GREG,popt,cfunc,prefetch=2,preload,largepage,fuse -x-
  FDO ONESTEP=yes
188.ammp: -Kfast_GP=2,GREG,popt,prefetch=4,preex,preload,largepage,fuse,unroll=3 -x-

```

(using Fortran90 compiler of Forte Developer 6 update 2)

```

187.facerec: -fast -xarch=v9
  FDO ONESTEP=yes

```

(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 C compiler of Forte Developer 6 update 2)

```

179.art: -fast -xalias_level=strong -xdepend -xregs=syst -W2,-whole,-Amemopt
  -xarch=v8plus -dn -lmopt -lm
  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/FJSVpnrmlpg.conf)
TSS=512M, SHMSEG=256M

```

Feedback directed optimization was used for all baseline benchmarks and peak benchmarks except following peak benchmarks: 171.swim, 172.mgrid, 173.applu, 200.sixtrack.