CFP2000 Result

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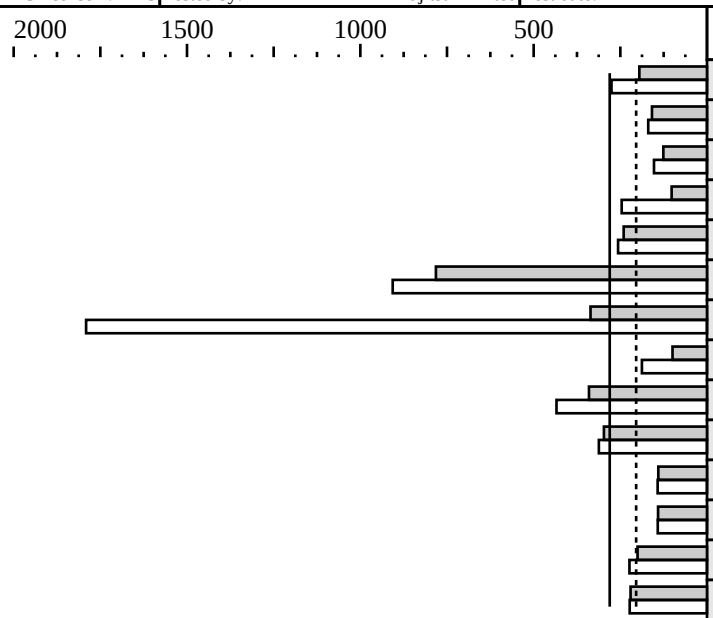
Fujitsu Limited
PRIMEPOWER2000 (675MHz)

SPECfp_rate2000 = 281

SPECfp_rate_base2000 = 204

SPEC license #: 19 | Tested by: Fujitsu Limited | Test date: Sep-2001 | Hardware Avail: Sep-2001 | Software Avail: Dec-2001



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	64	609	195	64	431	276
171.swim	64	1450	159	64	1358	170
172.mgrid	64	1061	126	64	874	153
173.applu	64	1528	102	64	634	246
177.mesa	64	432	240	64	405	257
178.galgel	64	275	782	64	237	907
179.art	64	574	336	64	108	1791
183.equake	64	970	99.5	64	514	188
187.facerec	64	414	340	64	325	434
188.ammp	64	549	297	64	524	312
189.lucas	64	1057	140	64	1043	142
191.fma3d	64	1104	141	64	1098	142
200.sixtrack	64	408	200	64	365	224
301.apsi	64	875	220	64	866	223

Hardware

CPU:	SPARC64 GP
CPU MHz:	675
FPU:	Integrated
CPU(s) enabled:	64 cores, 64 chips, 1 core/chip
CPU(s) orderable:	8 to 128
Parallel:	None
Primary Cache:	128KBI+128KBD on chip
Secondary Cache:	8MB(I+D) off chip, per CPU
L3 Cache:	None
Other Cache:	None
Memory:	64GB
Disk Subsystem:	1 x 36GB, 1 x 18GB 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:	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,largepage -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,frecipro -dn -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.equake: -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/FJSVpnrm/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.
```