CFP2000 Result

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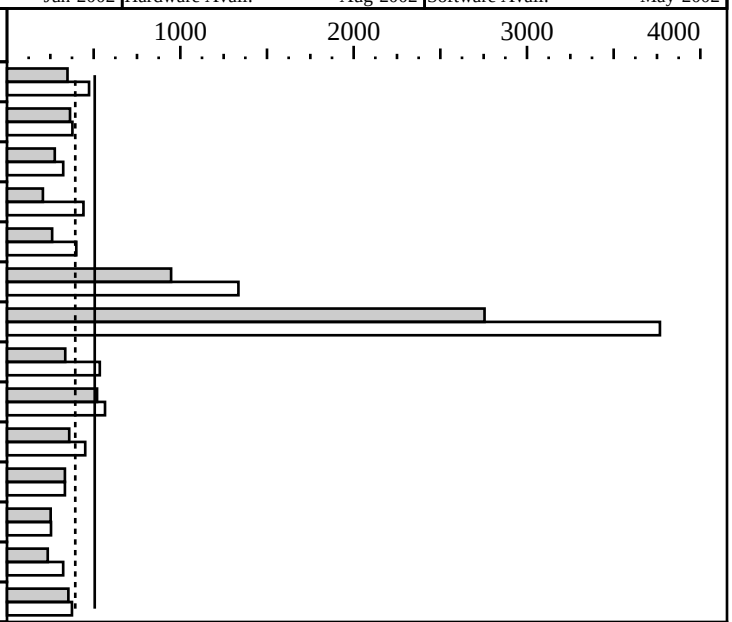
Fujitsu Limited
PRIMEPOWER400 (700MHz)

SPECfp2000 = 506

SPECfp_base2000 = 394

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	458	349	338	473
171.swim	3100	852	364	821	377
172.mgrid	1800	653	276	555	324
173.applu	2100	1014	207	476	441
177.mesa	1400	538	260	350	400
178.galgel	2900	306	947	217	1335
179.art	2600	94.4	2755	69.0	3767
183.equake	1300	387	336	243	535
187.facerec	1900	366	520	336	565
188.ammp	2200	613	359	487	451
189.lucas	2000	599	334	599	334
191.fma3d	2100	834	252	827	254
200.sixtrack	1100	468	235	339	324
301.apsi	2600	734	354	694	375



Hardware

CPU:	SPARC64 GP
CPU MHz:	700
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 1 core/chip
CPU(s) orderable:	1 to 4
Parallel:	None
Primary Cache:	128KBI+128KBD on chip
Secondary Cache:	8MB(I+D) off chip, per CPU
L3 Cache:	None
Other Cache:	None
Memory:	8192MB
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 FORTRAN77 compiler of Sun ONE Studio 7)
 168.wupwise: -fast -xtarget=ultra3 -xarch=v8plus -xipo=2 -xlic_lib=sunperf -lsunperf -lprism32
```

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Notes/Tuning Information (Continued)

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 Fortran compiler of Parallelnavi 1.0.2)
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=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 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
187.facerec: -Am

Note:
System Tunables: (for /etc/system)
consistent_coloring=1, tune_t_fsflushr=86400, autoup=86400,
shmsys:shminfo_shmmax=1477846784, shmsys:shminfo_shmmni=1024, shmsys:shminfo_shmseg=1024,shminfo_shmmin=1
(for /etc/opt/FJSVpnrm/lpg.conf)
TSS=4G, 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.

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Notes/Tuning Information (Continued)

System board used with only one CPU present.