CFP2000 Result

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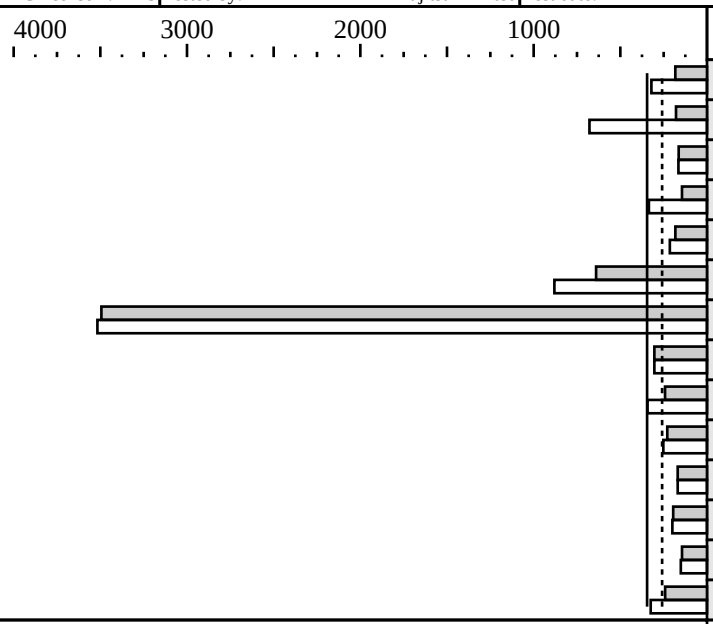
Fujitsu Limited
PRIMEPOWER1500 (1350MHz)

SPECfp_rate2000 = 346

SPECfp_rate_base2000 = 259

SPEC license #: 19 | Tested by: Fujitsu Limited | Test date: Jun-2003 | Hardware Avail: May-2003 | Software Avail: May-2003



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	32	325	183	32	185	321
171.swim	32	644	179	32	170	678
172.mgrid	32	409	163	32	405	165
173.applu	32	540	144	32	233	335
177.mesa	32	285	182	32	242	214
178.galgel	32	168	640	32	122	880
179.art	32	27.6	3494	32	27.4	3517
183.equake	32	159	304	32	159	304
187.facerec	32	291	242	32	205	343
188.ammp	32	356	229	32	324	252
189.lucas	32	439	169	32	439	169
191.fma3d	32	400	195	32	390	200
200.sixtrack	32	283	144	32	270	151
301.apsi	32	400	241	32	297	325

Hardware

CPU:	SPARC64 V
CPU MHz:	1350
FPU:	Integrated
CPU(s) enabled:	32 cores, 32 chips, 1 core/chip
CPU(s) orderable:	1 to 32 (increments of 1)
Parallel:	None
Primary Cache:	128KBI+128KBD on chip
Secondary Cache:	2MB(I+D) on chip
L3 Cache:	None
Other Cache:	None
Memory:	131072MB
Disk Subsystem:	1 x 36.4GB SCSI (10000rpm)
Other Hardware:	None

Software

Operating System:	Solaris8 2/02 with current patches (see notes)
Compiler:	Fujitsu Parallelnavi 2.1 with patch 912528-02 Sun ONE Studio 8 Sun Performance Library 8
File System:	ufs
System State:	multi user

Notes/Tuning Information

```
FDO: (for Parallelnavi 2.1)
   fdo_pre0=rm -rf 'pwd'/*.f.d
   PASS1=-Kpg    PASS2=-Kpu

FDO: (for Sun ONE Studio 8 )
   fdo_pre0=rm -rf ./feedback.profile ./SunWS_cache
   PASS1=-xprofile=collect:./feedback
   PASS2=-xprofile=use:./feedback

Baseline:
(using Fortran compiler of Parallelnavi 2.1 )
   -Kfast_GP2=2,prefetch_infer,largepage -O5
(using C compiler of Sun ONE Studio 8 )
   -fast -xtarget=ultra3 -xipo=2 ONESTEP=yes FDO

Peak:
(using FORTRAN90 compiler of Parallelnavi 2.1)
```

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Notes/Tuning Information (Continued)

```
168.wupwise: -fs -Kfast_GP2=2,largepage -O5 -x dir=./
    -Kpreex,prefetch_infer,alignl=64,preschedule_length=17 -fs FDO
172.mgrid: -fs -Kfast_GP2=2,largepage,GREG_SYSTEM
    -Kpreex,prefetch_line=6,commonpad=144,alignc=64 -fs FDO
191.fma3d: -fs -Kfast_GP2=2,largepage,GREG_SYSTEM -x dir=./ -x55
    -Kpreex,prefetch_infer,prefetch=4 -fs -Am FDO
200.sixtrack: -fs -Kfast_GP2=2,largepage,GREG_SYSTEM -O5
    -Kunroll=2,preex,prefetch_line=8,frecipro,novfunc,preschedule_length=27 -fs  FDO

(using FORTRAN90 compiler of Sun ONE Studio 8 )
171.swim: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
    -xpad=common:1660 -xprefetch=latx:2.6
    -Qoption iropt -Atile:skewp:b10,-Ainline:cs=700 -lprism32
173.applu: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
    -xchip=ultra3 -xipo=2 -xprefetch=latx:0.6 FDO ONESTEP=yes
178.galgel: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
    -xipo=2 -xprefetch=latx:0.4 -Qoption iropt -Addint:sf=9
    -lprism32 -xlic_lib=sunperf RM_SOURCES=lapak.f90 FDO ONESTEP=yes
187.facerec: -xO5 -xchip=ultra3 -xcache=128/64/2:2048/64/4 -xarch=v8plus
    -xprefetch=yes -xprefetch_level=1 -xprefetch=latx:2.2 -xvector=no
    -xdepend -ftrap=%none -fns -fsimple=2 -lprism32 FDO ONESTEP=yes
189.lucas: basepeak=yes
301.apsi: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
    -xchip=ultra3 -xipo=2 -xprefetch=latx:2.0 -Qoption iropt -Mt450
    -lprism32 FDO ONESTEP=yes

(using C compiler of Sun ONE Studio 8 )
177.mesa: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
    -xchip=ultra2 -xipo=2 -xrestrict -xalias_level=strong
    -Wc,-Qgsched-trace_late=1,-Qgsched-T4,-Qms_pipe+unoovf FDO ONESTEP=yes
179.art: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
    -xchip=ultra3 -xipo=2 -xalias_level=std FDO ONESTEP=yes
183.equake: basepeak=yes
188.ammp: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
    -xchip=ultra3 -xipo=2 -xalias_level=std -xdepend -xprefetch=latx:2.6 -xrestrict
    -lprism32 FDO ONESTEP=yes

Portability:
Peak:
178.galgel:  -e -fixed (for Sun ONE Studio 8 )
Baseline:
178.galgel:  -Am -Fixed (for Parallelnavi 2.1 )
187.facerec: -Am  (for Parallelnavi 2.1 )
191.fm3d:    -Am  (for Parallelnavi 2.1 )

Note:
System Tunables: (for /etc/system)
 set consistent_coloring=1,
 set shmsys:shminfo_shmmax=17179869184,set shmsys:shminfo_shmmni=256,
 set shmsys:shminfo_shmseg=400,set shmsys:shminfo_shmmin=1
 set tune_t_fsflushr = 86400
 set autoup = 86400
System Tunables: (for /etc/opt/FJSVpnrm/lpg.conf)
 TSS=8192M, SHMSEGSIZE=256M
Shell Environments:
 LD_LIBRARY_PATH="/opt3/SUNWspro/prod/lib/v8plusb"
```

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Notes/Tuning Information (Continued)

```
  PRISM_HEAP=268435456
  PRISM_MODE=2

Feedback directed optimization was used except 171.swim(peak).
Processes were bound to CPUs using "submit=pbind".
Stack size set to unlimited via "ulimit -s unlimited".
Sun ONE Studio 8 , posted at URL http://wwws.sun.com/software/sundev/suncc/
was used for this submission.
All patches for Solaris8 posted at
   http://access1.sun.com/patch.public/cgi-bin/show_list.cgi/wrk/Sun_ONE_Studio_7_SPARC_SunOS_5.8
as of date 2003/04/21 were applied: 108434-12, 108435-12, 111697-04, 111721-03.
```