CFP2000 Result

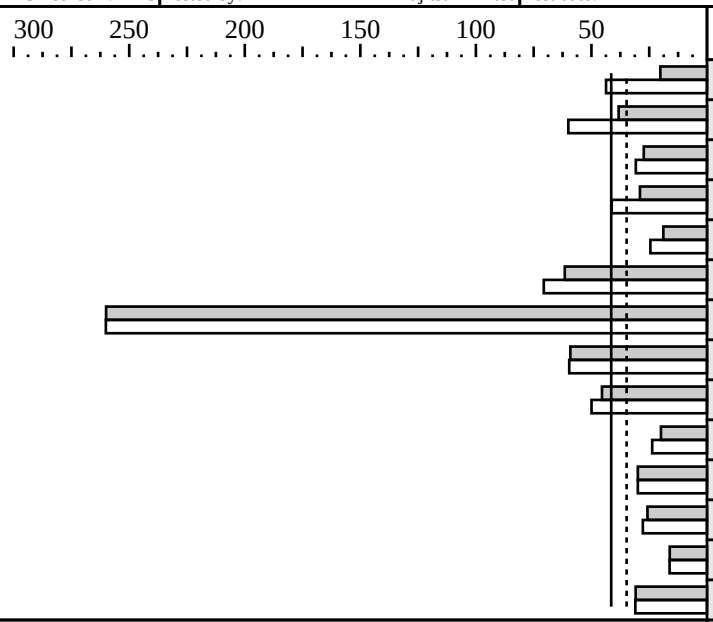
Copyright ©1999-2004, Standard Performance Evaluation Corporation

Fujitsu Limited
PRIMEPOWER450 (1100MHz)

SPECfp_rate2000 = 41.4

SPECfp_rate_base2000 = 34.8

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	368	20.2	4	170	43.7
171.swim	4	376	38.2	4	240	60.0
172.mgrid	4	305	27.4	4	271	30.8
173.applu	4	336	29.0	4	236	41.2
177.mesa	4	344	18.9	4	265	24.5
178.galgel	4	219	61.5	4	191	70.6
179.art	4	46.4	260	4	46.4	260
183.equake	4	102	59.1	4	101	59.6
187.facerec	4	194	45.4	4	176	50.0
188.ammp	4	512	19.9	4	430	23.7
189.lucas	4	310	29.9	4	310	29.9
191.fma3d	4	378	25.8	4	351	27.8
200.sixtrack	4	317	16.1	4	315	16.2
301.apsi	4	391	30.9	4	389	31.0

Hardware

CPU:	SPARC64 V
CPU MHz:	1100
FPU:	Integrated
CPU(s) enabled:	4 cores, 4 chips, 1 core/chip
CPU(s) orderable:	1 to 4 (increments of 1)
Parallel:	None
Primary Cache:	128KBI+128KBD on chip
Secondary Cache:	1MB(I+D) on chip
L3 Cache:	None
Other Cache:	None
Memory:	8192MB
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 (EA2 version of Sun ONE Studio 8 used) 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 EA2)
   fdo_pre0=rm -rf ./feedback.profile ./SunWS_cache
   PASS1=-xprofile=collect:./feedback
   PASS2=-xprofile=use:./feedback
Baseline:
(using Fortran compiler of  Sun ONE Studio 8 EA2)
   -fast -xtarget=ultra3 -lprism32 FDO
(using C compiler of Sun ONE Studio 8 EA2)
   -fast -xtarget=ultra3 -xipo=2 FDO ONESTEP=yes
Peak:
(for Parallelnavi 2.1)
168.wupwise: -fs -Kfast_GP2=2,largepage -O5 -x dir=./
    -Kpreex,prefetch_infer,alignl=64,preschedule_length=17 FDO
172.mgrid: -fs -Kfast_GP2=2,largepage,GREG_SYSTEM
```

Copyright ©1999-2004, Standard Performance Evaluation Corporation

Notes/Tuning Information (Continued)

```
    -Kpreex,prefetch_line=6,commonpad=144,alignc=64 FDO
178.galgel: -fs -Kfast_GP2=2,largepage,GREG_SYSTEM  -x dir=./
    -Kpreex,prefetch_infer,prefetch=4,frecipro,unroll=2,commonpad=152,
    arraypad_const=11,alignl=64 -Am -Fixed -KFMADD -SSL2 FDO
191.fma3d: -fs -Kfast_GP2=2,largepage,GREG_SYSTEM -x dir=./ -x55
    -Kpreex,prefetch_infer,prefetch=4 FDO
(using FORTRAN90 compiler of Sun ONE Studio 8 EA2)
171.swim: -fast -xchip=ultra3cu -xcache=128/64/2:1024/64/2  -xarch=v8plusb
    -xpad=common:4002 -xprefetch=latx:2.2
    -Qoption iropt -Atile:skewp,-Ainline:cs=700 -lprism32
173.applu: -fast -xchip=ultra3 -xcache=128/64/2:1024/64/2 -xarch=v8plusb
    -xipo=2 -xprefetch=latx:0.6 FDO ONESTEP=yes

187.facerec: -xO5 -xchip=ultra3 -xcache=128/64/2:1024/64/2 -xarch=v8plus
    -xprefetch=yes -xprefetch_level=1 -xprefrtch=latx:2.0 -xvector=no
    -xdepend -ftrap=%none -fns -fsimple=2 -lprism32 FDO ONESTEP=yes
189.lucas: basepeak=yes
200.sixtrack:-fast -xchip=ultra3 -xcache=128/64/2:1024/64/2 -xarch=v8plusb
    -xipo=2 -lprism32 ONESTEP=yes
301.apsi: -fast -xchip=ultra3 -xcache=128/64/2:1024/64/2 -xarch=v8plusb
    -xipo=2 -xprefrtch=latx:2.0 -Qoption iropt -Mt450 -lprism32 FDO ONESTEP=yes

(using C compiler of Sun ONE Studio 8 EA2)
177.mesa: -fast -xchip=ultra2 -xcache=128/64/2:1024/64/2 -xarch=v8plusb -xipo=2
    -xrestrict -xalias_level=strong
    -Wc,-Qgsched-trace_late=1,-Qgsched-T4,-Qms_pipe+unoovf FDO ONESTEP=yes
179.art: -fast -xchip=ultra3 -xcache=128/64/2:1024/64/2 -xarch=v8plusb
    -xipo=2 -xalias_level=std FDO ONESTEP=yes
183.equake: -fast -xchip=ultra3cu -xcache=128/64/2:1024/64/2 -xarch=v8plusb
    -xalias_level=strong -xdepend -W2,-whole,-Amemopt:arrayloc -xprefetch
    -Wc,-Qms_pipe-pref,-Qlp=1-av=512-t=6-fa=1-fl=1 -lprism32 -lmopt -lm FDO ONESTEP=yes
188.ammp: -fast -xchip=ultra3 -xcache=128/64/2:1024/64/2 -xarch=v8plusb -xipo=2
    -xrestrict -xalias_level=std -xdepend -xprefetch=latx:2.6 -lprism32 FDO ONESTEP=yes

Portability:
Base:
178.galgel: -e -fixed (for Sun ONE Studio 8 EA2)
Peak:
178.galgel: -Am -Fixed (for Parallelnavi 2.1)
Note:
 System Tunables: (for /etc/system)
 consistent_coloring=1,
 shmsys:shminfo_shmmax=2147483648, shmsys:shminfo_shmmni=256,
 shmsys:shminfo_shmseg=400,shminfo_shmmin=1
 set tune_t_fsflushr = 86400
 set autoup = 86400
(for /etc/opt/FJSVpnrm/lpg.conf)
 TSS=1024M, SHMSEGSIZE=256M
Shell Environments:
 LD_LIBRARY_PATH="/opt3/SUNWspro/prod/lib/v8plusb"
 PRISM_MODE=2
Feedback directed optimization was used except 171.swim(peak).
Stack size set to unlimited via "ulimit -s unlimited"
Sun ONE Studio 8 EA2 (Early Access 2), posted at URL http://access1.sun.com/s1sprod8
as updated through 27-Mar-2003, was used for this submission.
Sun ONE Studio 8 (final) will ship May-2003.
```

Copyright ©1999-2004, Standard Performance Evaluation Corporation

Notes/Tuning Information (Continued)

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: 108434-11, 108435-11, 111697-04, 111721-03.