CFP2000 Result

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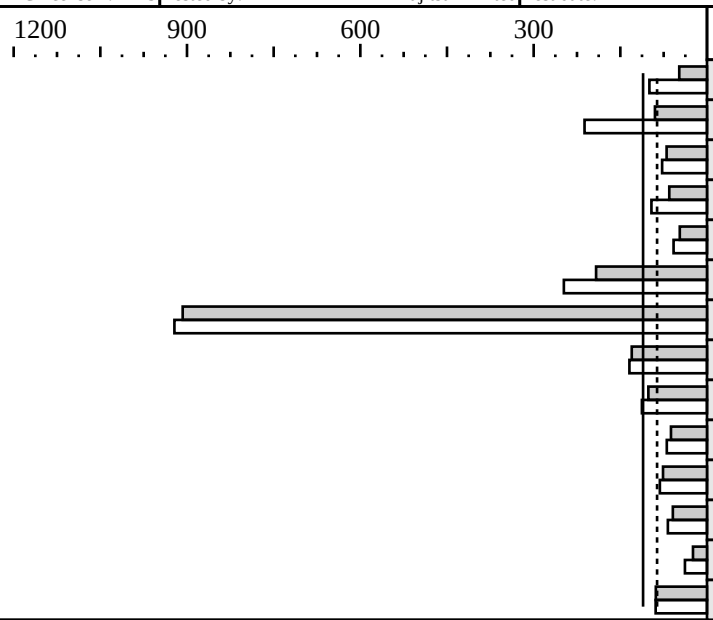
Fujitsu Limited
PRIMEPOWER850 (1350MHz)

SPECfp_rate2000 = 111

SPECfp_rate_base2000 = 86.4

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	8	309	48.0	8	149	99.7
171.swim	8	319	90.1	8	136	212
172.mgrid	8	239	69.9	8	215	77.7
173.applu	8	299	65.3	8	203	96.2
177.mesa	8	276	47.1	8	225	57.9
178.galgel	8	140	192	8	109	248
179.art	8	26.6	907	8	26.2	922
183.equake	8	92.6	130	8	89.8	134
187.facerec	8	174	101	8	157	113
188.ammp	8	327	62.3	8	293	69.6
189.lucas	8	244	76.1	8	228	81.6
191.fma3d	8	330	59.1	8	288	67.7
200.sixtrack	8	421	24.3	8	267	38.2
301.apsi	8	272	88.6	8	272	88.9

Hardware

CPU:	SPARC64 V
CPU MHz:	1350
FPU:	Integrated
CPU(s) enabled:	8 cores, 8 chips, 1 core/chip
CPU(s) orderable:	1 to 16 (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:	65536MB
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  Sun ONE Studio 8 )
   -fast -xtarget=ultra3 -lprism32 FDO

(using C compiler of Sun ONE Studio 8 )
   -fast -xtarget=ultra3 -xipo=2 ONESTEP=yes FDO

Peak:
```

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Notes/Tuning Information (Continued)

```
(using FORTRAN90 compiler of Parallelnavi 2.1)
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
189.lucas: -fs -Kfast_GP2=2,largepage,GREG_SYSTEM -O5
    -Kpreex,prefetch_infer,prefetch_line=6,preschedule_length=70 -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: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
    -xarch=v8plusa -xprefetch_level=1 -xprefetch=latx:2.2
    -lprism32 FDO ONESTEP=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: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
    -xalias_level=strong -xdepend -W2,-whole,-Amemopt:arrayloc -xprefetch=latx:1.2
    -Wc,-Qms_pipe-pref,-Qlp=1-av=512-t=6-fa=1-fl=1
    -lprism32 -lmopt -lm FDO ONESTEP=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:
178.galgel: -e -fixed (for Sun ONE Studio 8 )

Note:
System Tunables: (for /etc/system)
 set consistent_coloring=1,
 set shmsys:shminfo_shmmax=8589934592,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=4096M, 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.
4 CPUs each on 2 system boards.
Unused CPUs have physically removed.
```