CFP2000 Result

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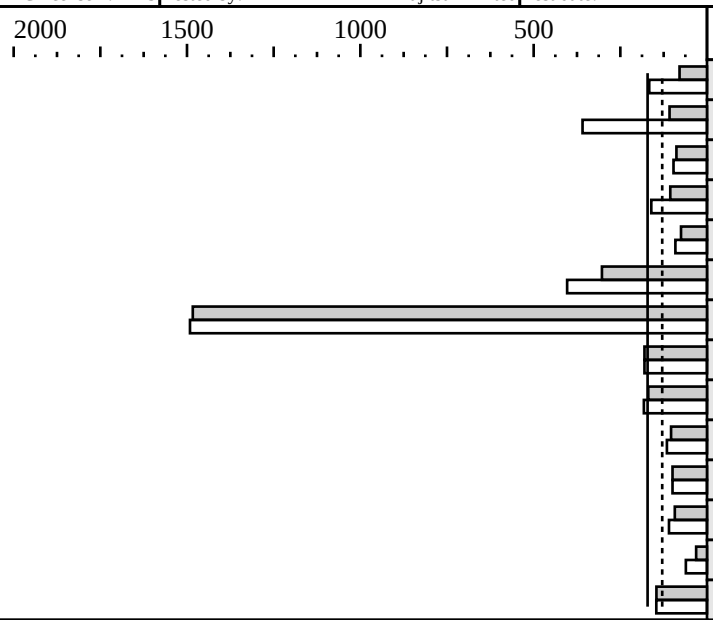
Fujitsu Limited
PRIMEPOWER850 (1080MHz)

SPECfp_rate2000 = 171

SPECfp_rate_base2000 = 129

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	16	375	79.2	16	178	167
171.swim	16	533	108	16	160	359
172.mgrid	16	379	88.2	16	346	96.6
173.applu	16	368	106	16	243	161
177.mesa	16	347	74.9	16	285	91.2
178.galgel	16	178	303	16	133	403
179.art	16	32.5	1483	16	32.4	1491
183.equake	16	134	180	16	134	180
187.facerec	16	208	169	16	194	182
188.ammp	16	394	104	16	353	116
189.lucas	16	373	99.5	16	373	99.5
191.fma3d	16	420	92.9	16	356	110
200.sixtrack	16	652	31.3	16	335	61.0
301.apsi	16	331	146	16	330	146

Hardware

CPU:	SPARC64 V
CPU MHz:	1080
FPU:	Integrated
CPU(s) enabled:	16 cores, 16 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
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:
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"
 PRISM_HEAP=268435456
 PRISM_MODE=2

Feedback directed optimization was used except 171.swim(peak).
```

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Notes/Tuning Information (Continued)

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.