CFP2000 Result

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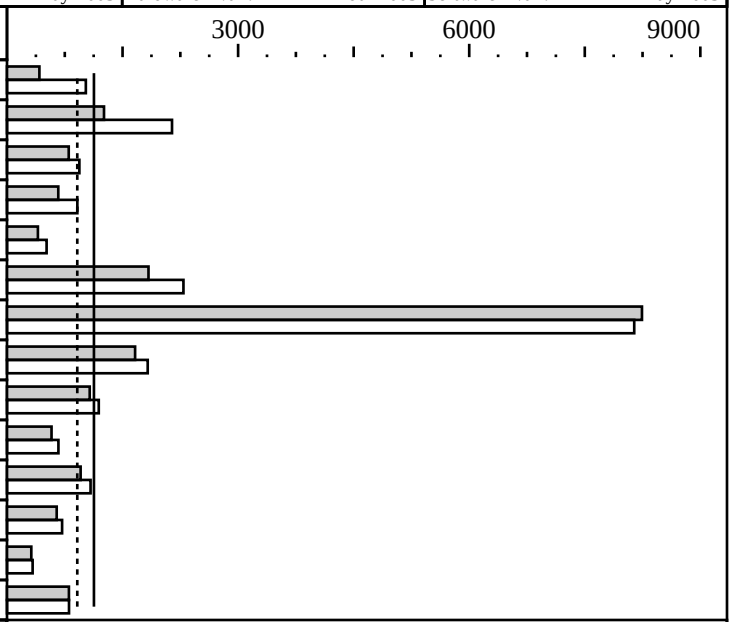
Fujitsu Limited
PRIMEPOWER650 (1080MHz)

SPECfp2000 = 1129

SPECfp_base2000 = 912

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	380	421	156	1023
171.swim	3100	246	1259	145	2142
172.mgrid	1800	225	801	192	939
173.applu	2100	315	666	230	913
177.mesa	1400	349	401	272	514
178.galgel	2900	158	1837	127	2290
179.art	2600	31.5	8242	31.9	8142
183.equake	1300	78.2	1663	71.2	1827
187.facerec	1900	177	1074	160	1191
188.ammp	2200	381	578	330	668
189.lucas	2000	209	956	184	1085
191.fma3d	2100	326	645	294	715
200.sixtrack	1100	349	315	331	333
301.apsi	2600	324	804	323	805



Hardware

CPU:	SPARC64 V
CPU MHz:	1080
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 1 core/chip
CPU(s) orderable:	1 to 8 (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:	4096MB
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 ONESTEP=yes FDO
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 -Kpreex,prefetch_line=6,commonpad=144,alignc=64 FDO
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Notes/Tuning Information (Continued)

189.lucas: -fs -Kfast_GP2=2,largepage,GREG_SYSTEM -O5
-Kpreex,prefetch_infer,prefetch_line=6,preschedule_length=70 FDO
191.fma3d: -fs -Kfast_GP2=2,largepage,GREG_SYSTEM -x dir=./ -x55
-Kpreex,prefetch_infer,prefetch=4 FDO
200.sixtrack: -fs -Kfast_GP2=2,largepage,GREG_SYSTEM -O5
-Kunroll=2,preex,prefetch_line=8,frecipro,novfunc,preschedule_length=27 FDO
(using FORTRAN90 compiler of Sun ONE Studio 8 EA2)
171.swim: -fast -xchip=ultra3cu -xcache=128/64/2:2048/64/4 -xarch=v8plusb
-xpad=common:4002 -xprefetch=latx:2.2
-Qoption iropt -Atile:skewp,-Ainline:cs=700 -lprism32
173.applu: -fast -xchip=ultra3 -xcache=128/64/2:2048/64/4 -xarch=v8plusb
-xipo=2 -xprefetch=latx:0.6 FDO ONESTEP=yes
178.galgel: -fast -xchip=ultra3cu -xcache=128/64/2:2048/64/4 -xarch=v8plusb -xipo=2
-xprefetch=latx:0.4 -Qoption iropt -Addindt: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 -xprefrtch=latx:2.0 -xvector=no -xdepend -ftrap=%none
-fns -fsimple=2 -lprism32 FDO ONESTEP=yes
301.apsi: -fast -xchip=ultra3 -xcache=128/64/2:2048/64/4 -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=128/64/2:2048/64/4 -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=128/64/2:2048/64/4 -xarch=v8plusb -xipo=2 -xalias_level=std FDO ONESTEP=yes
183.equake: -fast -xchip=ultra3cu -xcache=128/64/2:2048/64/4 -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=128/64/2:2048/64/4 -xarch=v8plusb
-xipo=2 -xrestrict -xalias_level=std -xdepend -xprefetch=latx:2.6 -lprism32 FDO ONESTEP=yes

Portability:
178.galgel: -e -fixed (for Sun ONE Studio 8 EA2)

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_HEAP=268435456
PRISM_MODE=2
Feedback directed optimization was used except 171.swim(peak).
Small configuration memory system mode used ("4cpu mode", enabled via front panel).
Stack size set to unlimited via "ulimit -s unlimited"
System board used with only one CPU present.
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.
All patches for Solaris8 posted at

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Notes/Tuning Information (Continued)

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.