CFP2000 Result

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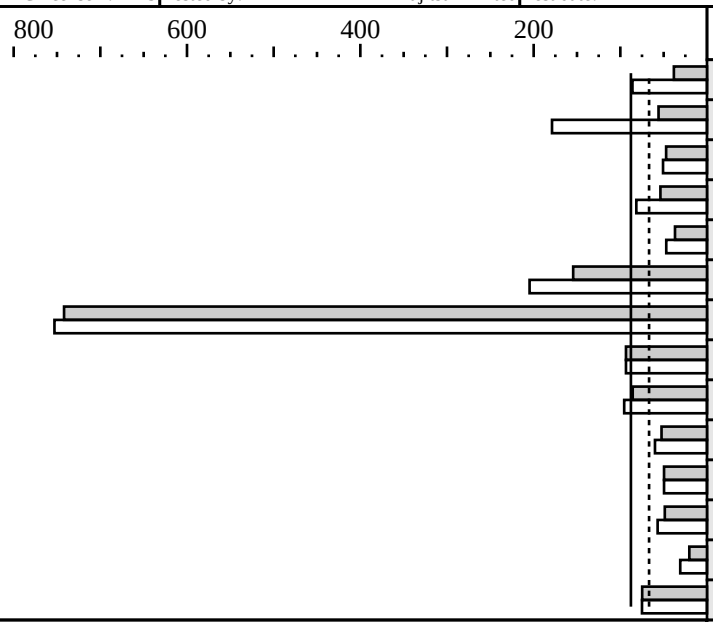
Fujitsu Limited
PRIMEPOWER650 (1080MHz)

SPECfp_rate2000 = 87.8

SPECfp_rate_base2000 = 66.8

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	8	388	38.2	8	173	86.0
171.swim	8	514	55.9	8	161	179
172.mgrid	8	354	47.2	8	329	50.7
173.applu	8	363	53.8	8	239	81.6
177.mesa	8	352	36.9	8	276	47.0
178.galgel	8	174	154	8	131	205
179.art	8	32.5	742	8	32.0	753
183.equake	8	129	93.5	8	129	93.5
187.facerec	8	206	85.7	8	185	95.5
188.ammp	8	389	52.5	8	340	60.0
189.lucas	8	374	49.6	8	374	49.6
191.fma3d	8	400	48.7	8	342	57.0
200.sixtrack	8	500	20.4	8	331	30.9
301.apsi	8	323	74.8	8	322	75.0

Hardware

CPU:	SPARC64 V
CPU MHz:	1080
FPU:	Integrated
CPU(s) enabled:	8 cores, 8 chips, 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:	32768MB
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
```

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Notes/Tuning Information (Continued)

```
    -Kpreex,prefetch_line=6,commonpad=144,alignc=64 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 -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 -xprefrtch=latx:2.0 -xvector=no
    -xdepend -ftrap=%none -fns -fsimple=2 -lprism32 FDO ONESTEP=yes
189.lucas: basepeak=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: basepeak=yes
    -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=4294967296, 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=2048M, 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).
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.
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.
```