



CFP2000 Result

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Fujitsu Limited
PRIMEPOWER650 (1350MHz)

SPECfp_rate2000 = 99.6
SPECfp_rate_base2000 = 74.3

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	307	48.3	8	154	96.3
171.swim	8	515	55.8	8	136	211
172.mgrid	8	354	47.1	8	328	50.9
173.applu	8	331	58.8	8	204	95.6
177.mesa	8	271	48.0	8	221	58.8
178.galgel	8	150	180	8	109	247
179.art	8	26.2	921	8	25.9	930
183.equake	8	128	94.2	8	128	94.2
187.facerec	8	184	95.6	8	170	104
188.amp	8	325	62.8	8	291	70.1
189.lucas	8	375	49.5	8	375	49.5
191.fma3d	8	370	52.7	8	320	60.9
200.sixtrack	8	507	20.1	8	265	38.5
301.apsi	8	273	88.3	8	272	88.7

Hardware

CPU: SPARC64 V
CPU MHz: 1350
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
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: -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
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.quake: 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=4294967296,set shmsys:shminfo_shmmni=256,
set shmsys:shminfo_shmseg=400,set shmsys:shminfo_shmmmin=1
set tune_t_fsflushr = 86400
set autoup = 86400

```

System Tunables: (for /etc/opt/FJSVpnm/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).

Standard Performance Evaluation Corporation

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Notes/Tuning Information (Continued)

Stack size set to unlimited via "ulimit -s unlimited".
Sun ONE Studio 8 , posted at URL <http://www.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.