



# CFP2000 Result

Copyright ©1999-2004, Standard Performance Evaluation Corporation

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.amp	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:



# CFP2000 Result

Copyright ©1999-2004, Standard Performance Evaluation Corporation

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

## 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.aplu: -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_shmmmin=1
set tune_t_fsflushr = 86400
set autoup = 86400

```

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

TSS=4096M, SHMSEGSIZE=256M

Shell Environments:

LD\_LIBRARY\_PATH="/opt3/SUNWsprom/prod/lib/v8plusb"

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org



# CFP2000 Result

Copyright ©1999-2004, Standard Performance Evaluation Corporation

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

## 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://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](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.