



CFP2000 Result

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Fujitsu Limited
PRIMEPOWER850 (2160MHz)

SPECfp_rate2000 = 312
SPECfp_rate_base2000 = 288

SPEC license #: 19 Tested by: Fujitsu Limited Test date: Dec-2005 Hardware Avail: Feb-2006 Software Avail: Nov-2005

8000	6000	4000	2000	Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
				168.wupwise	16	144	207	16	125	238
				171.swim	16	109	529	16	78.7	731
				172.mgrid	16	334	100	16	330	101
				173.applu	16	147	264	16	137	285
				177.mesa	16	121	215	16	99.0	263
				178.galgel	16	59.6	902	16	51.0	1055
				179.art	16	10.9	4428	16	10.9	4440
				183.quake	16	111	217	16	111	218
				187.facerec	16	95.2	371	16	94.0	375
				188.amp	16	166	245	16	142	288
				189.lucas	16	320	116	16	321	116
				191.fma3d	16	298	131	16	295	132
				200.sixtrack	16	137	149	16	137	149
				301.apsi	16	193	250	16	193	250

Hardware

CPU: SPARC64 V
 CPU MHz: 2160
 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: 4MB(I+D) on chip
 L3 Cache: None
 Other Cache: None
 Memory: 32GB (512MB x 64)
 Disk Subsystem: 1 x 36.4GB SCSI (10000rpm)
 Other Hardware: None

Software

Operating System: Solaris 10
 Compiler: Sun Studio 11
 File System: ufs
 System State: multi user

Notes/Tuning Information

```
FDO: (for Sun Studio 11)
fdo_pre0=rm -rf ./feedback.profile ./SunWS_cache
PASS1=-xprofile=collect:./feedback
PASS2=-xprofile=use:./feedback
```

```
Floating point base flags:
(using Fortran compiler of Sun Studio 11)
-fast -xtarget=ultra3cu -xipo=2 ONESTEP=yes FDO
(using C compiler of Sun Studio 11)
-fast -xtarget=ultra3 -xipo=2 ONESTEP=yes FDO
```

```
Floating point peak flags:
(using Fortran compiler of Sun Studio 11)
168.wupwise: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
             -xipo=1 -Qoption iropt -Ainline:inc=800:cp=1 ONESTEP=yes FDO
171.swim:    -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
```



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Notes/Tuning Information (Continued)

```

-xprefetch=latx:2.8 -Qoption iropt
-Ainline:cs=700,-Atile:skewp:b19 -xpad=common:1500
172.mgrid: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
           -stackvar -xipo=2 -xpad=common:800 -xprefetch=latx:1.6
           ONESTEP=yes FDO
173.applu: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
           -stackvar -xipo=2 -Qoption cg -Qlp=1-av=192-t=4-fa=1-fl=0
           -Qoption iropt -Aujam:inner=g ONESTEP=yes FDO
178.galgel: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
            -xipo=2 -Qoption iropt -Addint:sf=9 -xlic_lib=sunperf
            RM_SOURCES=lapak.f90 ONESTEP=yes FDO
187.facerec: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
            -xprefetch=latx:1.6 ONESTEP=yes FDO
189.lucas: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
            -stackvar -xipo=2 ONESTEP=yes FDO
191.fma3d: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
            -xipo=2 ONESTEP=yes FDO
200.sixtrack: basepeak=yes
301.apsi: basepeak=yes

```

(using C compiler of Sun Studio 11)

```

177.mesa: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
          -xchip=ultra2 -xalias_level=strong -xipo=2 -xrestrict
          ONESTEP=yes FDO
179.art: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
          -xipo=2 ONESTEP=yes FDO
183.quake: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
            -xalias_level=strong -W2,-whole -Wc,-Qms_pipe-pref,
            -Qlp=1-av=512-t=6-fa=1-fl=1 ONESTEP=yes FDO
188.ammp: -fast -xalias_level=std -xipo=2 ONESTEP=yes FDO

```

Portability:

178.galgel: -e -fixed

System Tunables:

```

(for /etc/system)
    set consistent_coloring=1
    set tune_t_fsflushr=86400
    set autoup=86400
    set memscrub_period_sec=172800

```

Shell Environments:

```

Stack size set to unlimited via "ulimit -s unlimited"
MPSSHEAP=4M
MPSSSTACK=4M
LD_PRELOAD=mpss.so.1

```

Processes were bound to CPUs using "submit=pbind"

Extended Interleave Mode enabled.

Sun Studio 11, posted at URL <http://www.sun.com/software/products/studio/index.xml> was used for this submission.

Model PRIMEPOWER850 (2160MHz) and model PRIMEPOWER900 (2160MHz) are electronically equivalent. This result was measured on model PRIMEPOWER900 (2160MHz).