CFP2000 Result

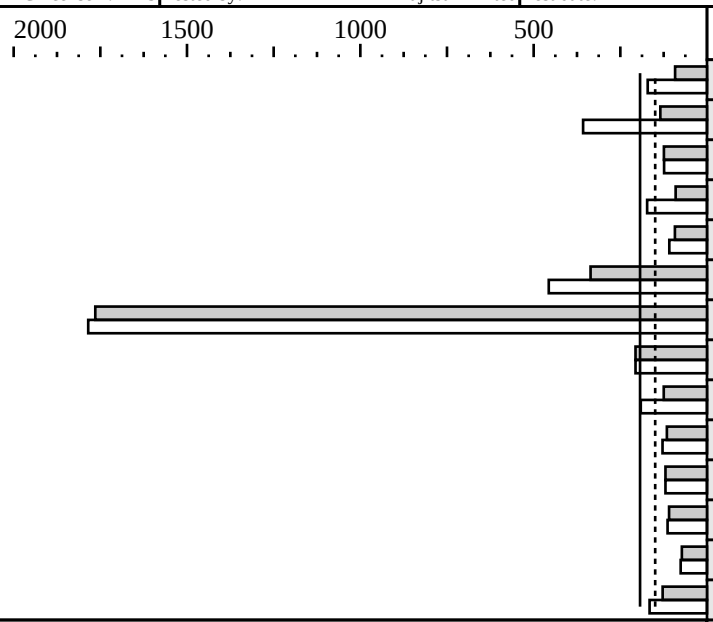
Copyright ©1999-2004, Standard Performance Evaluation Corporation

Fujitsu Limited
PRIMEPOWER1500 (1350MHz)

SPECfp_rate2000 = 193

SPECfp_rate_base2000 = 149

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	16	323	92.0	16	174	171
171.swim	16	427	135	16	161	357
172.mgrid	16	269	124	16	270	124
173.applu	16	431	90.5	16	226	173
177.mesa	16	281	92.6	16	239	109
178.galgel	16	160	336	16	118	456
179.art	16	27.3	1765	16	27.0	1785
183.equake	16	117	206	16	117	206
187.facerec	16	283	125	16	185	191
188.ammp	16	353	116	16	318	128
189.lucas	16	310	120	16	310	120
191.fma3d	16	356	109	16	343	114
200.sixtrack	16	281	72.5	16	269	75.9
301.apsi	16	377	128	16	291	166

Hardware

CPU:	SPARC64 V
CPU MHz:	1350
FPU:	Integrated
CPU(s) enabled:	16 cores, 16 chips, 1 core/chip
CPU(s) orderable:	1 to 32 (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:	131072MB
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 Parallelnavi 2.1 )
   -Kfast_GP2=2,prefetch_infer,largepage -O5

(using C compiler of Sun ONE Studio 8 )
   -fast -xtarget=ultra3 -xipo=2 ONESTEP=yes FDO

Peak:
```

Copyright ©1999-2004, Standard Performance Evaluation Corporation

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: -xO5 -xchip=ultra3 -xcache=128/64/2:2048/64/4 -xarch=v8plus
    -xprefetch=yes -xprefetch_level=1 -xprefetch=latx:2.2 -xvector=no
    -xdepend -ftrap=%none -fns -fsimple=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.equake: 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:
Peak:
178.galgel:  -e -fixed (for Sun ONE Studio 8 )
Baseline:
178.galgel:  -Am -Fixed (for Parallelnavi 2.1 )
187.facerec: -Am  (for Parallelnavi 2.1 )
191.fm3d:    -Am  (for Parallelnavi 2.1 )

Note:
System Tunables: (for /etc/system)
 set consistent_coloring=1,
 set shmsys:shminfo_shmmax=17179869184,set shmsys:shminfo_shmmni=256,
 set shmsys:shminfo_shmseg=400,set shmsys:shminfo_shmmin=1
 set tune_t_fsflushr = 86400
 set autoup = 86400
System Tunables: (for /etc/opt/FJSVpnrm/lpg.conf)
 TSS=8192M, SHMSEGSIZE=256M
Shell Environments:
```

Copyright ©1999-2004, Standard Performance Evaluation Corporation

Notes/Tuning Information (Continued)

```
  LD_LIBRARY_PATH="/opt3/SUNWspro/prod/lib/v8plusb"
  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://wwws.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.
4 CPUs each on 4 system boards.
Unused CPUs have physically removed.
```