CFP2000 Result

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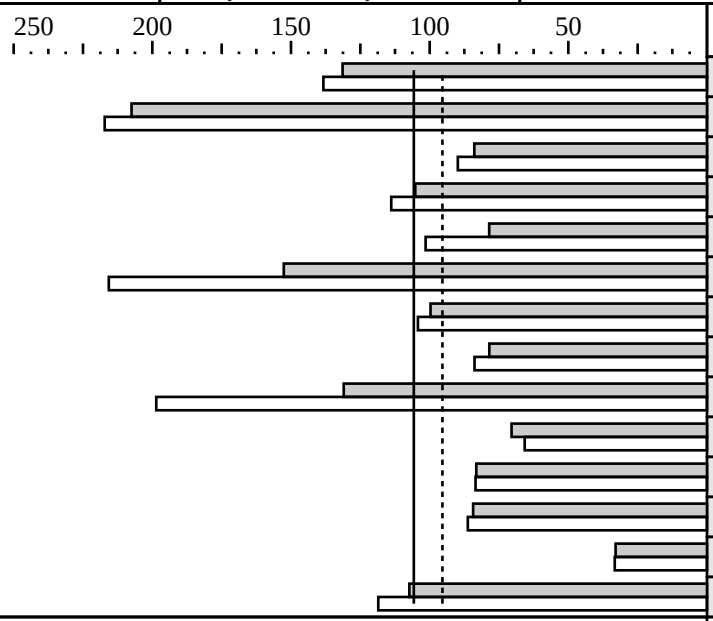
Sun Microsystems
Sun Fire V40z

SPECfp_rate2000 = 106

SPECfp_rate_base2000 = 95.4

SPEC license #: 6 | Tested by: Sun Microsystems, Santa Clara | Test date: Mar-2006 | Hardware Avail: May-2006 | Software Avail: Jan-2006



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	56.5	131	4	53.7	138
171.swim	4	69.3	207	4	66.2	217
172.mgrid	4	99.5	83.9	4	93.0	89.8
173.applu	4	92.6	105	4	85.6	114
177.mesa	4	82.7	78.5	4	64.0	101
178.galgel	4	88.2	153	4	62.4	216
179.art	4	121	99.7	4	116	104
183.equake	4	76.8	78.5	4	72.0	83.8
187.facerec	4	67.3	131	4	44.4	199
188.ammp	4	145	70.5	4	155	65.7
189.lucas	4	112	83.2	4	111	83.5
191.fma3d	4	116	84.3	4	113	86.2
200.sixtrack	4	155	33.0	4	153	33.3
301.apsi	4	112	107	4	102	119

Hardware

CPU:	AMD Opteron (TM) 856
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	4 cores, 4 chips, 1 core/chip
CPU(s) orderable:	2,4 (order by # of chips)
Parallel:	No
Primary Cache:	64KBI + 64KBD (on chip) per core
Secondary Cache:	1024KB (I+D) (on chip) per core
L3 Cache:	N/A
Other Cache:	N/A
Memory:	16GB (16x1GB, PC3200 CL3 DDR ECC Registered SDRAM)
Disk Subsystem:	SCSI,72GB,10K RPM
Other Hardware:	None

Software

Operating System:	Solaris 10 1/06
Compiler:	Sun Studio 11
File System:	ufs
System State:	Multi-user

Notes/Tuning Information

```
Compiler invocation:
  C: cc
  F90: f90
  F77: f90

FDO:  PASS1= -xprofile=collect:./feedback PASS2= -xprofile=use:./feedback
      fdo_pre0:  rm -rf ./feedback.profile

Floating point base flags:
  F90:   -fast -xipo=2 -xarch=amd64 -xprefetch_level=3 ONESTEP=yes
    C:   -fast -xcrossfile -xalias_level=std -xpagesize=2m ONESTEP=yes

Floating point peak flags:
 ONESTEP=yes for all benchmarks

 168.wupwise:   -fast -xautopar -xpad=common:3969 -xipo=2 -xarch=amd64 -xprefetch_level=3  -xpagesize_heap=2m
 171.swim:      -fast -xpad=common:3969 -xipo=2 -xvector=simd -xprefetch_level=3 -Qoption iropt
```

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Notes/Tuning Information (Continued)

```
                -Atile:skewp,-Ainline:cs=700 -xarch=amd64 -Qoption ube_ipa -inl_alt
                -xpagesize_stack=2m
 172.mgrid:     -fast -xautopar -stackvar -xpad=common:900 -xipo=2 -xarch=amd64 -xprefetch_level=3
                -xvector -xpagesize=2m -Qoption ld -M,/usr/lib/ld/map.bssalign
 173.applu:     -fast -xautopar -unroll=5 -stackvar -xO4 -xipo=2 -xprefetch_level=3 -xarch=amd64a
                -qoption iropt -Rloop_dist -xpagesize_heap=2m
 177.mesa:      -fast -xautopar -xO4 -xipo=2 -Wd,-iropt-prof -xarch=amd64 -xalias_level=strong -xpagesize=2m +FDO
 178.galgel:    -fast -xcache=64/32/4:1024/64/4 -xcrossfile -xpagesize_heap=2m -xprefetch_level=3 -xvector=simd -xarch=amd64
                RM_SOURCES=lapak.f90
                EXTRALIBS=-xlic_lib=sunperf
 179.art:       -fast  -xipo=2 -xprefetch  -xalias_level=strong -xpagesize=2m
 183.equake:    -fast -xipo=2 -xprefetch -xalias_level=strong -xpagesize=2m -lmopt -lm +FDO
 187.facerec:   -fast -xO4 -xipo=2 -xprefetch_level=3 -xpagesize=2m
                RM_SOURCES=cfftb.f90 cffti.f90 cfftf.f90
                EXTRALIBS=-xlic_lib=sunperf
 188.ammp:      -fast -xcache=64/32/4:1024/64/4 -xO4 -xipo=2 -xarch=amd64a -xalias_level=std -xpagesize_heap=2m -lmopt -lm
 189.lucas:     -fast -Qoption ube_ipa -inl_alt -xipo=2 -xarch=amd64 -xprefetch_level=3
 191.fma3d:     -fast -xcache=64/32/4:1024/64/4 -unroll=5 -fsimple=1 -xipo=2
                -xprefetch_level=3 -xarch=amd64 -xpagesize_heap=2m +FDO
 200.sixtrack:  -fast -xipo=2 -O -xprefetch_level=3 -xarch=amd64
                -xpagesize_heap=2m -Qoption ld -M,/usr/lib/ld/map.bssalign +FDO
 301.apsi:      -fast -xO4 -xipo=2 -xprefetch_level=3 -xarch=amd64a -xpagesize=2m

Portability:
 178.galgel:  -fixed

Shell Environments:
  Stack size set to unlimited via "ulimit -s unlimited"

Kernel Parameters (/etc/system):
  autoup=900
  tune_t_fsflushr=1

Processes were bound to CPUs using submit=pbind
Default BIOS setting was used
```