



CFP2000 Result

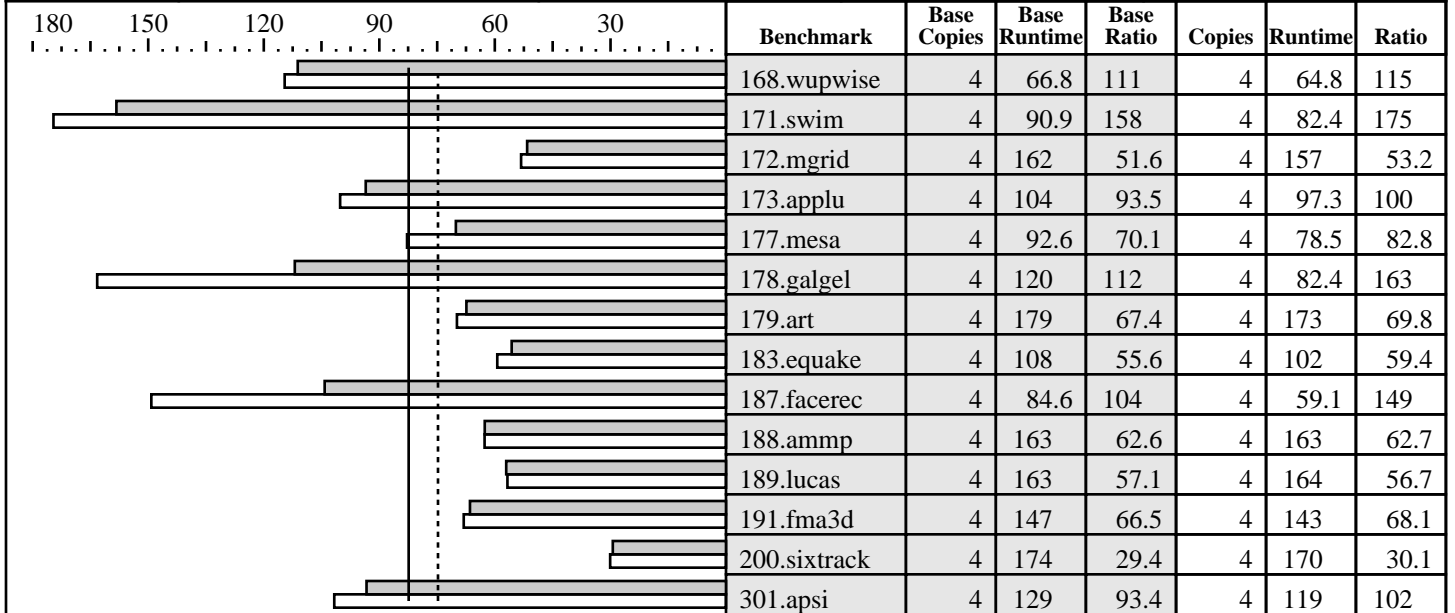
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Sun Microsystems
Sun Fire X4200

SPECfp_rate2000 = 82.4

SPECfp_rate_base2000 = 74.7

SPEC license #: 6 | Tested by: Sun Microsystems, Santa Clara | Test date: Nov-2005 | Hardware Avail: Dec-2005 | Software Avail: Nov-2005



Hardware

CPU: AMD Opteron (TM) 285 SE
 CPU MHz: 2600
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
 CPU(s) orderable: 1,2 (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 (8x2GB, PC3200 CL3 DDR ECC Registered SDRAM)
 Disk Subsystem: SAS, 36GB, 10K RPM
 Other Hardware: None

Software

Operating System: Solaris 10 3/05 HW1
 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 -xpad=common:3969 -xipo=2 -xarch=amd64 -xprefetch_level=3 -xpagesize_heap=2m



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Notes/Tuning Information (Continued)

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171.swim:      -fast -xpad=common:3969 -xipo=2 -xvector=simd -xprefetch_level=3 -Qoption iropt
               -Atile:skewp,-Ainline:cs=700 -xarch=amd64 -Qoption ube_ipa -inl_alt
               -xpagesize_stack=2m
172.mgrid:    -fast -unroll=5 -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 -unroll=5 -stackvar -xO4 -xipo=2 -xprefetch_level=3 -xarch=amd64a
               -qoption iropt -Rloop_dist -xpagesize_heap=2m
177.mesa:     -fast -xO4 -xipo=2 -Wd,-iropt-prof -xarch=amd64 -xalias_level=strong -xpagesize=2m +FDO
178.galgel:   -fast -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.earthquake: -fast -xipo=2 -xprefetch -xalias_level=strong -xpagesize=2m -lmopt -lm +FDO
187.facerec:  -fast -xcache=64/64/2:512/64/16 -xO4 -xipo=2 -xprefetch_level=3 -xpagesize=2m
               RM_SOURCES=cfft.f90 cfft.f90 cfft.f90
               EXTRALIBS=-xlic_lib=sunperf
188.ammp:     -fast -xO4 -xipo=2 -xarch=amd64 -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 -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: -e -fixed -DSPEC_CPU2000_LP64

Shell Environments:

Stack size set to unlimited via "ulimit -s unlimited"

Processes were bound to CPUs using submit=pbind

Default BIOS setting was used

This result was measured on the Sun Fire X4200. In addition, Sun has submitted the same result for the Sun Fire X4100, which is electronically equivalent to the Sun Fire X4200.