OMPM2001 Result

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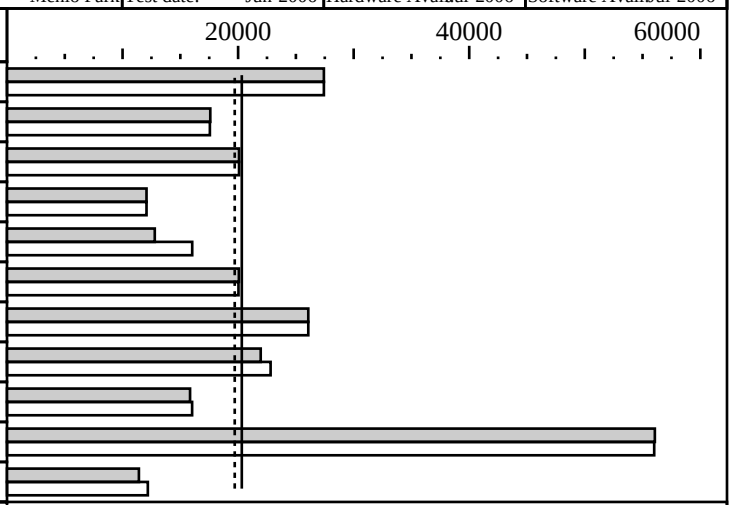
Sun Microsystems
Sun Fire X4600

SPECompMpeak2001 = 20319

SPECompMbase2001 = 19708

SPEC license #:HPG0010 | Tested by: Sun Microsystems, Santa Clara | Test site: Menlo Park | Test date: Jun-2006 | Hardware Avail:Jul-2006 | Software Avail:Jul-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	219	27423	219	27423
312.swim_m	6000	341	17592	342	17557
314.mgrid_m	7300	364	20080	364	20080
316.applu_m	4000	331	12074	331	12074
318.galgel_m	5100	399	12788	318	16028
320.equake_m	2600	130	20066	130	20032
324.apsi_m	3400	130	26073	130	26073
326.gafort_m	8700	396	21955	381	22812
328.fma3d_m	4600	290	15842	287	16020
330.art_m	6400	114	56064	114	56008
332.ammp_m	7000	613	11414	574	12187



Hardware

CPU:	AMD Opteron (TM) 856
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	8 cores, 8 chips, 1 core/chip
CPU(s) orderable:	4,8 (order by # of chips)
Primary Cache:	64KBI + 64KBD (on chip) per core
Secondary Cache:	1024KB (I+D) (on chip) per core
L3 Cache:	None
Other Cache:	None
Memory:	64GB (32x2GB, PC3200 CL3 DDR SDRAM ECC Registered)
Disk Subsystem:	SAS,73GB,10K RPM
Other Hardware:	None

Software

OpenMP Threads:	8
Parallel:	OpenMP
Operating System:	Solaris 10 1/06
Compiler:	Sun Studio 11 with Patches
File System:	ufs
System State:	Multi-User

Notes/Tuning Information

```
*****************************************************************
*vvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvv*
     This config uses the -xalias_level=strong flag for "base"
     and is in violation of run rule 2.2.4.  It is unacceptable
     as a base flag for future submissions.  This submission was
     accepted prior to this rule clarification and it has been
     established that any variation in performance due to this
     flag was within the range of tolerance for reproducibility.
*^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^*
*****************************************************************
 Compiler Invocation:
   C   : cc
   F90 : f90
   F77 : f90

 Base tuning:
   Fortran : -fast -xipo=2 -xarch=amd64 -xprefetch_level=3 -xvector=simd -xopenmp
   C       : -fast -xipo=2 -xalias_level=strong -xarch=amd64 -xopenmp
   ONESTEP=yes

 +FDO:  PASS1= -xprofile=collect:./feedback PASS2= -xprofile=use:./feedback

 Peak tuning:
```

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Notes/Tuning Information (Continued)

```
 ONESTEP=yes for all peak tests.

 310.wupwise_m   : basepeak=yes
 312.swim_m      : -fast -xipo=2 -xarch=amd64 -xprefetch_level=3 -xvector=simd -xopenmp
 314.mgrid_m     : basepeak=yes
 316.applu_m     : basepeak=yes
 318.galgel_m    : -fast -xpagesize=2m -xipo=2 -qoption iropt -xprefetch_level=3 -xvector=simd
                   -xarch=amd64 -xopenmp -xlic_lib=sunperf +FDO
                   RM_SOURCES=lapak.f90
 320.equake_m    : -fast -xipo=2 -xalias_level=strong  -xarch=amd64 -xopenmp
 324.apsi_m      : basepeak=yes
 326.gafort_m    : -fast -xpagesize=2m -xipo=2 -xarch=amd64 -xprefetch_level=3 -xvector=simd
                   :  -xopenmp
 328.fma3d_m     : -fast -xpagesize=2m -xipo=2 -xprefetch_level=3 -xarch=amd64 -xopenmp +FDO
 330.art_m       : -fast -xpagesize=2m -xipo=2 -xarch=amd64 -xalias_level=std -xopenmp
                   -lmtmalloc -lm
 332.ammp_m      : -fast -xpagesize=2m -xipo=2 -xarch=amd64 -xalias_level=std -xopenmp -lmopt -lm

Portablility flags:
      318.galgel_m      : -e -fixed
      330.art_m         : Extra Flag: -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8

Base and Peak User Environment:
  export OMP_NUM_THREADS=8
  export SUNW_MP_PROCBIND=TRUE
  export SUNW_MP_THR_IDLE=SPIN
  export OMP_NESTED=FALSE
  export STACKSIZE=16384
  export OMP_DYNAMIC=TRUE
  ulimit -s unlimited

The following patches were applied to Sun Studio 11 compiler:
120759-07 : x86/x64
121016-03 : x86 C
121020-03 : x86 F90
121018-03 : x86 C++

Default BIOS settings used.

For a description of Sun Studio 11 Compiler flags, portability flags
and system parameters used to generate this result, please refer to
SUN-20051104-Studio-Solaris-opteron.txt  file in the flags directory.
```