OMPM2001 Result

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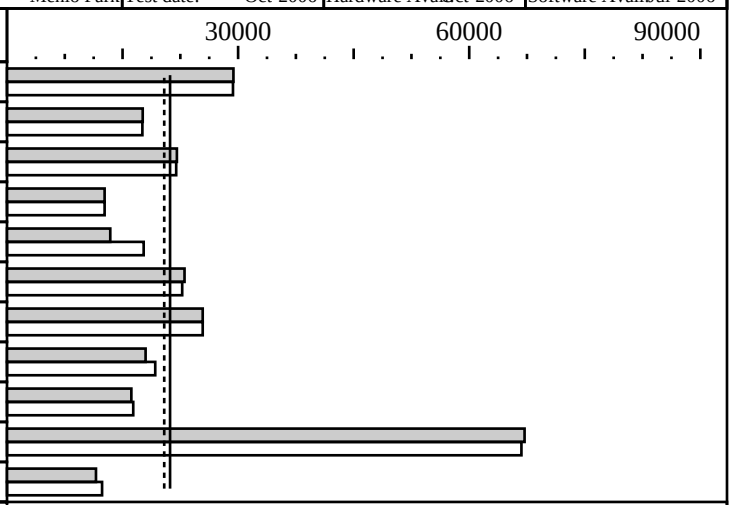
Sun Microsystems
Sun Fire X4600 M2

SPECompMpeak2001 = 21167

SPECompMbase2001 = 20409

SPEC license #:1	Tested by: Sun Microsystems, Santa Clara	Test site: Menlo Park	Test date: Oct-2006	Hardware Avail: Oct-2006	Software Avail: Jul-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	204	29393	205	29335
312.swim_m	6000	341	17617	341	17574
314.mgrid_m	7300	331	22053	332	21963
316.applu_m	4000	316	12671	316	12671
318.galgel_m	5100	380	13405	287	17741
320.equake_m	2600	113	23044	114	22742
324.apsi_m	3400	134	25404	134	25404
326.gafort_m	8700	484	17991	452	19243
328.fma3d_m	4600	285	16142	281	16387
330.art_m	6400	95.3	67185	95.8	66777
332.ammp_m	7000	606	11550	567	12342



Hardware

CPU:	AMD Opteron (TM) 8220SE
CPU MHz:	2800
FPU:	Integrated
CPU(s) enabled:	8 cores, 4 chips, 2 cores/chip
CPU(s) orderable:	4,8 (order by number 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:	16GB (16x1GB, DDR2-667 CL5 ECC Reg)
Disk Subsystem:	SCSI, 73GB, 10K RPM
Other Hardware:	None

Software

OpenMP Threads:	8
Parallel:	OpenMP
Operating System:	Solaris 10 6/06
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   : -fast -xipo=2 -xarch=amd64 -xprefetch_level=3 -xvector=simd -xopenmp -lmvec
312.swim_m      : -fast -xipo=2 -xarch=amd64 -xprefetch_level=3 -xvector=simd -xopenmp -lmvec
314.mgrid_m     : -fast -xipo=2 -xarch=amd64 -xprefetch_level=3 -xvector=simd -xopenmp -lmvec
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  -lmvec
324.apsi_m      : basepeak=yes
326.gafort_m    : -fast -xpagesize=2m -xipo=2 -xarch=amd64 -xprefetch_level=3 -xvector=simd -lmvec
                  :  -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

Extra art Base Flags:
      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++

For a description of Sun Studio 11 Compiler flags, portability flags
and system parameters used to generate this result, please refer to
SUN-20061102-Studio-Solaris-opteron.txt  file in the flags directory.

Default BIOS settings used.
```