OMPM2001 Result

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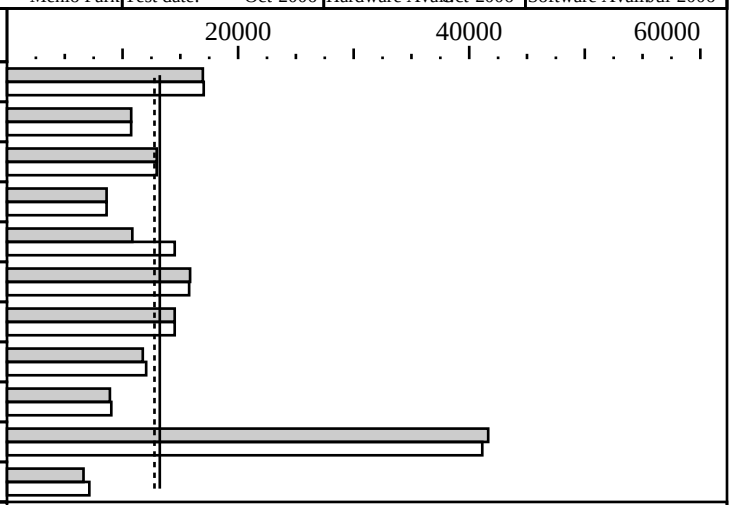
Sun Microsystems
Sun Fire X4100 M2

SPECompMpeak2001 = 13222

SPECompMbase2001 = 12763

SPEC license #:	HPG0010	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	354	16948	352	17024
312.swim_m	6000	558	10748	558	10744
314.mgrid_m	7300	563	12958	563	12955
316.applu_m	4000	464	8618	464	8618
318.galgel_m	5100	470	10845	351	14513
320.equake_m	2600	164	15845	165	15762
324.apsi_m	3400	234	14512	234	14512
326.gafort_m	8700	740	11750	722	12043
328.fma3d_m	4600	517	8905	510	9026
330.art_m	6400	154	41642	156	41129
332.ammp_m	7000	1057	6621	982	7125



Hardware

CPU:	AMD Opteron (TM) 2220 SE
CPU MHz:	2800
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2 (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:	16GB (8x2GB, DDR2-667 CL5 ECC Reg)
Disk Subsystem:	SAS, 72GB, 10K RPM
Other Hardware:	None

Software

OpenMP Threads:	4
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
```

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Notes/Tuning Information (Continued)

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Peak tuning:
 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=4
  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.

This result was measured on the Sun Fire X4100 M2. In addition,
Sun has submitted the same result for the Sun Fire X4200 M2, which is
electronically equivalent to the Sun Fire X4100 M2.

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.
```