





# OMPM2001 Result

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Sun Microsystems  
Sun Fire X4200

SPECompMpeak2001 = 10403

SPECompMbase2001 = 9921

SPEC license #HPG0010 | Tested by: Sun Microsystems, Santa Clara | Test site: Menlo Park | Test date: Aug-2005 | Hardware Avail: Oct-2005 | Software Avail: Sep-2005

## Notes/Tuning Information (Continued)

+MPSS mean setting the following environment variables:

```
ENV_MPSSHEAP=2m
ENV_MPSSSTACK=2m
ENV_LD_PRELOAD=mpss.so.1
```

Peak tuning:

ONESTEP=yes for all peak tests.

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

Portability flags:

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

Alternate Source:

```
330.art_m : Required srcalt purduel used for base and peak
310.wupwise_m : Approved srcalt ompl.32 used for peak
312.swim_m : Approved srcalt ompl.32 used for peak
314.mgrid_m : Approved srcalt ompl used for peak
320.equake_m : Approved srcalt ompl.32 used for peak
324.apsi_m : Approved srcalt ompl used for peak
```

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
```

Patch-02 includes the following patches for Sun Studio 10 compiler, these can be downloaded from (as of 04/21/2005)

```
http://developers.sun.com/prodtech/cc/downloads/patches/ss10_patches.html
117831-02 C++
117837-02 C
117845-01 Debugger
117846-02 x86/x64 backend (codegen)
```

For a description of Sun Studio 10 Compiler flags, portability flags



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and system parameters used to generate this result, please refer to SUN-20050330-Studio-Solaris-opteron.txt file in the flags directory.

Default BIOS settings used.