



OMPM2001 Result

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Sun Microsystems
Sun Fire X2100

SPECompMpeak2001 = 5050

SPECompMbase2001 = 4806

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	936	6408	936	6408
312.swim_m	6000	1934	3103	1932	3105
314.mgrid_m	7300	1807	4039	1807	4039
316.applu_m	4000	1128	3547	1128	3547
318.galgel_m	5100	1088	4687	753	6772
320.earthquake_m	2600	426	6102	424	6127
324.apsi_m	3400	590	5766	590	5766
326.gafort_m	8700	1882	4624	1845	4714
328.fma3d_m	4600	1389	3311	1356	3393
330.art_m	6400	430	14868	407	15719
332.ammp_m	7000	2371	2952	2203	3177

Hardware		Software
CPU:	AMD Opteron (TM) 175	OpenMP Threads: 2
CPU MHz:	2200	Parallel: OpenMP
FPU:	Integrated	Operating System: Solaris 10 3/05 HW1
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip	Compiler: Sun Studio 11
CPU(s) orderable:	1	File System: ufs
Primary Cache:	64KBI + 64KBD (on chip) per core	System State: Multi-User
Secondary Cache:	1024KB (I+D) (on chip) per core	
L3 Cache:	None	
Other Cache:	None	
Memory:	4GB (4x1GB, PC3200 CL3 DDR SDRAM ECC)	
Disk Subsystem:	SATA, 80GB, 7200 RPM	
Other Hardware:	None	

Notes/Tuning Information

```
*****
*vvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvv*
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)

Peak tuning:

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 -xipo=2 -xprefetch_level=3 -xvector=simd
                  : -xarch=amd64 -xopenmp -xpagesize=2m -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 -xipo=2 -xarch=amd64 -xprefetch_level=3 -xvector=simd
                  : -xopenmp -xpagesize=2m
328.fma3d_m       : -fast -xipo=2 -xprefetch_level=3 -xarch=amd64 -xopenmp -xpagesize=2m +FDO
330.art_m         : -fast -xcrossfile -xarch=amd64 -xalias_level=std -xopenmp
                  : -xpagesize=2m -lmtmalloc -lm
332.ammp_m        : -fast -xipo=2 -xarch=amd64 -xalias_level=std -xopenmp -xpagesize=2m -lmopt -lm

```

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
312.swim_m       : Approved srcalt ompl.32 used for peak
320.equake_m     : Approved srcalt ompl.32 used for peak

```

Base and Peak User Environment:

```

export OMP_NUM_THREADS=2
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

```

For a description of Sun Studio 11 Compiler flags, portability flags and system parameters used to generate this result, please refer to SUN-20051207-Studio-Solaris-opteron.txt file in the flags directory.

Default BIOS settings used.