OMPM2001 Result

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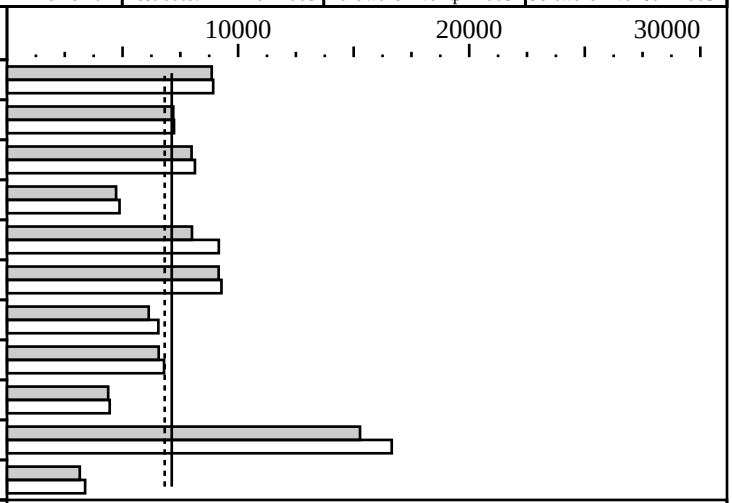
Sun Microsystems
Sun Fire V40z

SPECompMpeak2001 = 7129

SPECompMbase2001 = 6824

SPEC license #1	HPG0010	Tested by:	Sun Microsystems, Santa Clara	Test site:	Menlo Park	Test date:	Mar-2005	Hardware Avail:	Apr-2005	Software Avail:	Jan-2005

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	677	8859	673	8921
312.swim_m	6000	834	7194	830	7227
314.mgrid_m	7300	914	7987	898	8132
316.applu_m	4000	847	4721	821	4869
318.galgel_m	5100	637	8004	556	9165
320.equake_m	2600	284	9159	280	9280
324.apsi_m	3400	554	6132	519	6550
326.gafort_m	8700	1325	6564	1280	6795
328.fma3d_m	4600	1051	4378	1035	4444
330.art_m	6400	419	15275	384	16648
332.ammp_m	7000	2223	3149	2071	3381



Hardware

CPU:	AMD Opteron (TM) 852
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	2 cores, 2 chips, 1 core/chip
CPU(s) orderable:	2,4
Primary Cache:	64KBI + 64KBD on chip
Secondary Cache:	1024KB (I+D) on chip
L3 Cache:	None
Other Cache:	None
Memory:	8GB (4x2GB PC3200 CL3 DDR SDRAM ECC Registered)
Disk Subsystem:	SCSI, 73GB, 10K RPM
Other Hardware:	None

Software

OpenMP Threads:	2
Parallel:	OpenMP
Operating System:	Solaris 10
Compiler:	Sun Studio 10 with Patch-01 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 -Xc -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)

```
+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

Portablility 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 purdue1 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=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

Patch-01 includes the following patches for Sun Studio 10 compiler:
  117831-01 C++
  117835-01 Fortran 90
  117837-01 C
  117841-01 Fortran Libraries

For a description of Sun Studio 10 Compiler flags, portability flags
and system parameters used to generate this result, please refer to
SUN-20050330-Studio-Solaris-opteron.txt file in the flags directory.
```

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Notes/Tuning Information (Continued)

Default BIOS settings used.