OMPM2001 Result

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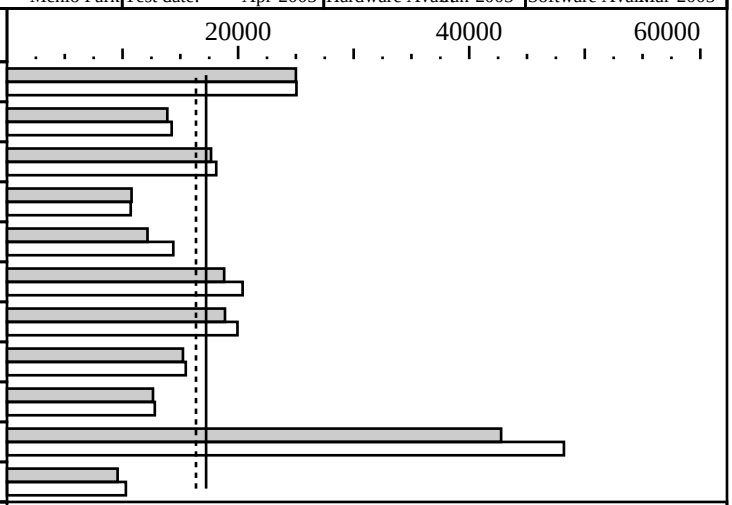
Sun Microsystems
Sun Fire V40z

SPECompMpeak2001 = 17230

SPECompMbase2001 = 16356

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	240	25001	240	25050
312.swim_m	6000	432	13874	421	14252
314.mgrid_m	7300	413	17657	403	18108
316.applu_m	4000	371	10779	374	10707
318.galgel_m	5100	419	12159	354	14390
320.equake_m	2600	138	18793	128	20390
324.apsi_m	3400	180	18864	170	19946
326.gafort_m	8700	571	15226	562	15471
328.fma3d_m	4600	364	12634	360	12790
330.art_m	6400	150	42760	133	48196
332.ammp_m	7000	731	9572	680	10287



Hardware

CPU:	AMD Opteron (TM) 875
CPU MHz:	2200
FPU:	Integrated
CPU(s) enabled:	8 cores, 4 chips, 2 cores/chip
CPU(s) orderable:	2, 4 (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:	16x1GB,PC3200 CL3 DDR SDRAM ECC Registered
Disk Subsystem:	SCSI, 36GB, 15K RPM
Other Hardware:	None

Software

OpenMP Threads:	8
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

 +MPSS mean setting the following environment variables:
```

Notes/Tuning Information (Continued)

```
  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=8
  export SUNW_MP_PROCBIND=TRUE
  export SUNW_MP_THR_IDLE=SPIN
  export OMP_NESTED=FALSE
  export STACKSIZE=32768
  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.

Default BIOS settings used.
```

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HPG0010					

Notes/Tuning Information (Continued)