OMPM2001 Result

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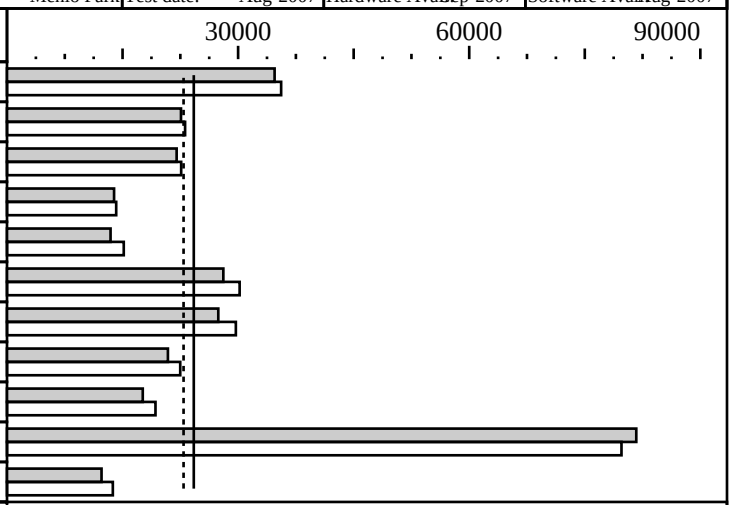
Sun Microsystems
Sun Blade X8440

SPECompMpeak2001 = 24246

SPECompMbase2001 = 22921

SPEC license #:	HPG0010	Tested by:	Sun Microsystems, Santa Clara	Test site:	Menlo Park	Test date:	Aug-2007	Hardware Avail:	Sep-2007	Software Avail:	Aug-2007

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	173	34737	169	35585
312.swim_m	6000	266	22585	260	23117
314.mgrid_m	7300	332	22021	323	22609
316.applu_m	4000	288	13899	282	14174
318.galgel_m	5100	379	13442	336	15156
320.equake_m	2600	92.6	28083	86.1	30198
324.apsi_m	3400	124	27427	114	29707
326.gafort_m	8700	417	20888	387	22485
328.fma3d_m	4600	261	17623	239	19275
330.art_m	6400	78.3	81685	80.2	79765
332.ammp_m	7000	570	12271	510	13737



Hardware

CPU:	AMD Opteron 8222
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	8 cores, 4 chips, 2 cores/chip
CPU(s) orderable:	2, 4 chips
Primary Cache:	64 KB I + 64 KB D (on chip) per core
Secondary Cache:	1024 KB (I+D) (on chip) per core
L3 Cache:	None
Other Cache:	None
Memory:	64 GB (16x4GB, DDR2-667 CL5 ECC Registered)
Disk Subsystem:	SCSI, 72 GB, 10K RPM
Other Hardware:	None

Software

OpenMP Threads:	8
Parallel:	OpenMP
Operating System:	Solaris 10 11/06
Compiler:	Sun Studio 12 with Patches
File System:	ufs
System State:	Multi-User

Notes/Tuning Information

```
Compiler Invocation:
  C   : cc
  F90 : f90
  F77 : f90

Base tuning:
  Fortran : -fast -xipo=2 -m64 -xarch=sse2a -xprefetch_level=3 -xvector=simd -xopenmp
  C       : -fast -xipo=2 -m64 -xarch=sse2a -xopenmp
  ONESTEP=yes

+FDO:  PASS1= -xprofile=collect:./feedback PASS2= -xprofile=use:./feedback

Peak tuning:
 ONESTEP=yes for all peak tests.

 310.wupwise_m   : -fast  -Qoption ube -sched_first_pass=1 -xipo=2 -xarch=amd64
                   -xprefetch_level=3 -xvector=simd -xopenmp -lmvec
 312.swim_m      : -fast -Qoption ube -fsimple=3 -xipo=2 -m64 -xarch=sse2a
                   -xprefetch_level=3 -xvector=simd -xopenmp -lmvec
                   used ompl.32 src.alt
 314.mgrid_m     : -fast  -Qoption ube -sched_first_pass=1 -xipo=2 -xarch=amd64
                   -xprefetch_level=3 -xvector=simd -xopenmp -lmvec
 316.applu_m     : -fast -xipo=2 -Qoption f90comp -hoist_expensive,-hoist_trivial -m64
```

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Notes/Tuning Information (Continued)

```
                      -xarch=sse2a -xprefetch_level=3 -xvector -xopenmp -lmtmalloc
                      used ompl.32 src.alt
    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 -Wu,-sched_first_pass=1 -xipo=2
                      -xarch=amd64 -xopenmp  -lmvec
                      used ompl.32 src.alt
    324.apsi_m      : -fast -xipo=2 -Qoption f90comp -hoist_expensive,-hoist_trivial
                      -xarch=amd64a -xprefetch_level=3 -xvector -xopenmp -lmtmalloc
                      used ompl.32 src.alt
    326.gafort_m    : -fast -Qoption ube -sched_first_pass=1 -xpagesize=2m -xipo=2
                      -xarch=amd64 -xprefetch_level=3 -xvector=simd -lmvec
    328.fma3d_m     : -fast -xipo=2 -m64 -xarch=sse2a -xprefetch_level=3
                      -xvector=simd -xopenmp
                      used ompl.32 src.alt
    330.art_m       : -fast -xpagesize=2m -xipo=2 -xarch=amd64 -xalias_level=std -xopenmp
                      -lmtmalloc -lm
    332.ammp_m      : -fast -Wu,-sched_first_pass=1 -xpagesize=2m -xipo=2 -m64
                      -xarch=sse2a -xalias_level=std -xopenmp -lmopt -lm

  Portability flags:
    318.galgel_m      : -e -fixed

  Extra art allowed flags:
    330.art_m         : -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8

  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=16384
    export OMP_DYNAMIC=TRUE
    ulimit -s unlimited

 Sun Studio 12 Patches Installed:
   + Sun Studio 12 Compilers and Tools
     124864, 124868, 124869, 124873, 124876, 126496, 126498, 126504, 126996,
     127002, 127003, 127144, 127153
   + Solaris 10
     119964, 120754, 118677, 119961, 119255

   + Details on these Sun Studio 12 Patches can be found at:
     http://developers.sun.com/sunstudio/downloads/patches/ss12_patches.jsp

  For a description of Sun Studio 10 Compiler flags, portability flags
  and system parameters used to generate this result, please refer to
  SUN-20070711-Studio-Solaris-opteron.txt file in the flags directory.

  Default BIOS settings used.
```