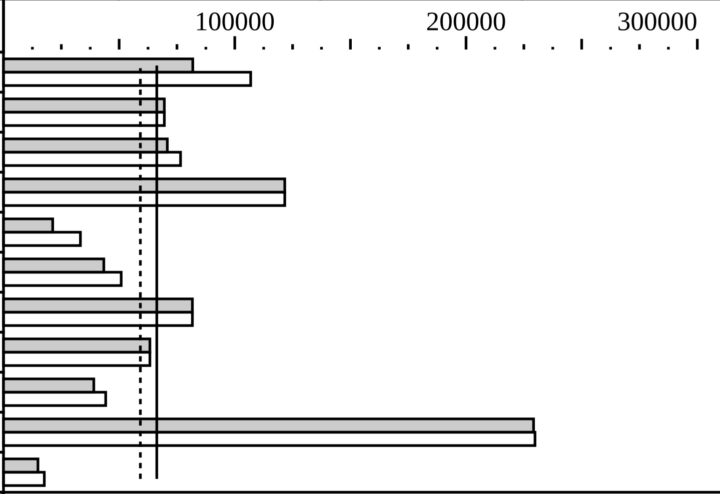
OMPM2001 Result

Fujitsu Limited
Fujitsu SPARC Enterprise M8000

SPECompMpeak2001 = 66283
SPECompMbase2001 = 59179

SPEC license #: HPG0003	Tested by: Fujitsu Limited	Test site:	Test date: Apr-2007	Hardware Avail: Apr-2007	Software Avail: Jul-2007

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	73.3	81842	56.1	106882
312.swim_m	6000	86.3	69546	86.3	69546
314.mgrid_m	7300	103	70828	95.4	76552
316.applu_m	4000	32.9	121617	32.9	121617
318.galgel_m	5100	240	21271	153	33254
320.equake_m	2600	59.9	43377	51.1	50890
324.apsi_m	3400	41.6	81673	41.6	81673
326.gafort_m	8700	137	63301	137	63301
328.fma3d_m	4600	118	39047	104	44189
330.art_m	6400	27.9	229194	27.8	229814
332.ammp_m	7000	470	14896	397	17646



Hardware

CPU:	SPARC64 VI
CPU MHz:	2280
FPU:	Integrated
CPU(s) enabled:	32 cores, 16 chips, 2 cores/chip
CPU(s) orderable:	1 to 4 CMUs; each CMU contains 2 or 4 chips
Primary Cache:	128 KB I + 128 KB D on chip per core
Secondary Cache:	5 MB I+D on chip per chip
L3 Cache:	None
Other Cache:	None
Memory:	256 GB (128 x 2 GB)
Disk Subsystem:	673 GB RAID 1+0 created by Solaris Volume Manager with 20 x 73 GB 10,000 RPM Fujitsu MAY2073RC SAS
Other Hardware:	--

Software

OpenMP Threads:	32
Parallel:	OpenMP and Autoparallel
Operating System:	Solaris 10 7/07
Compiler:	Sun Studio 12
File System:	ufs
System State:	Multi-User

Notes/Tuning Information

```
Compiler Invocation:
  C:   cc
  F90: f90
  F77: f77

Base Tuning:
  C:       -fast -xopenmp -xalias_level=std -xipo=2 -Xc
           -xprefetch_level=3 -m64 -lmtmalloc
           -xpagesize=4m -xprofile
  Fortran: -fast -openmp -m64 -xipo=2 -autopar
           -fma=fused -xpagesize=4m -xprofile
  ONESTEP=yes

Peak Tuning:
  ONESTEP=yes

  310.wupwise_m: -fast -openmp -autopar -m32 -xipo=2 -fma=fused
                 -xpagesize=512k -xprefetch_level=3
                 -Qoption iropt -Athr,-Apf:l2subblock=256,-Apf:ipa=9
                 -xprofile
```

Notes/Tuning Information (Continued)

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  312.swim_m:    basepeak=yes
  314.mgrid_m:   -fast -openmp -xipo=2 -xprefetch_level=3
                 -Qoption iropt -Apf:l2subblock=256 -m32 -xpagesize=4m
                 -fma=fused -xprefetch=latx:4 -xprofile
  316.applu_m:   basepeak=yes
  318.galgel_m:  -fast -xipo=2 -openmp -autopar -m32 -fma=fused
                 -xlic_lib=sunperf
                 RM_SOURCES=lapak.f90
                 -xalias_level=strong -xprefetch_level=3 -lmtmalloc
  320.equake_m:  -fast -xopenmp -xipo=2 -xrestrict
                 -m32 -xpagesize=64k -W2,-Apf:l2subblock=256
                 -xprofile
  324.apsi_m:    basepeak=yes
  326.gafort_m:  basepeak=yes
  328.fma3d_m:   -fast -openmp -Qoption iropt -Athr,-Apf:pdl=1
                 -Qoption cg -Qlp-ip=1 -xipo=2 -xprefetch_level=3
                 -lmtmalloc -fma=fused -m32 -xprofile
                 Alternative src ompl.32 was used
  330.art_m:     -fast -xopenmp -xalias_level=std -xipo=2
                 -xprefetch_level=3 -W2,-Apf:outer=0:pdl=1
                 -Wc,-Qlp-ip=1 -lmtmalloc -m64 -xprofile
  332.ammp_m:    -fast -xopenmp -xalias_level=strong
                 -xprefetch_level=3 -lmopt -lm -lmtmalloc -m32
                 -xprofile
                 SUNW_MP_GUIDED_SCHED_WEIGHT=2

Portability flags:
  318.galgel_m:  -e -fixed

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

Alternate Source for Peak:
  Approved alternate source ompl.32 was used for 328.fma3d_m

Feedback optimization (-xprofile) is done as follows,
unless otherwise noted:
  fdo_pre0:  rm -rf ‘pwd‘/feedback.profile
  PASS1:     -xprofile=collect:./feedback
  PASS2:     -xprofile=use:./feedback

Base and Peak User Environment:
  unlimit stacksize   (in /bin/csh)
  setenv STACKSIZE 16384
  setenv OMP_NUM_THREADS 32
  setenv OMP_DYNAMIC FALSE
  setenv SUNW_MP_PROCBIND "0 2 4 6 8 10 12 14 16 18
    20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50
    52 54 56 58 60 62 "
  setenv SUNW_MP_THR_IDLE SPIN

Kernel Paramters (/etc/system):
  set autoup=900
  set tune_t_fsflushr=5

System configuration details located at
```

Notes/Tuning Information (Continued)

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    http://www.fujitsu.com/global/services/computing/server/sparcenterprise/products/

 For a description of Sun Studio 12 Compiler flags, portability flags
 and system parameters used to generate this result, please refer to
 SUN-20070503-Studio-Solaris-sparc.txt file in the flags directory.

 This result was measured on a Fujitsu SPARC Enterprise M8000.
 The Sun SPARC Enterprise M8000 and the Fujitsu SPARC Enterprise
 M8000 are electrically equivalent.
```