



# OMPM2001 Result

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Sun Microsystems  
Sun Fire V40z

SPECompMpeak2001 = 5000

SPECompMbase2001 = 4938

SPEC license #HPG0010 | Tested by: Sun Microsystems, Santa Clara | Test site: Menlo Park | Test date: Oct-2004 | Hardware Avail:Jul-2004 | Software Avail:Jul-2004

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio	
310.wupwise_m	6000	893	6722	891	6735	
312.swim_m	6000	985	6088	968	6198	
314.mgrid_m	7300	1503	4857	1460	4999	
316.applu_m	4000	879	4552	874	4579	
318.galgel_m	5100	929	5490	913	5583	
320.quake_m	2600	513	5067	507	5125	
324.apsi_m	3400	677	5023	664	5119	
326.gafort_m	8700	2376	3662	2310	3766	
328.fma3d_m	4600	1272	3615	1272	3615	
330.art_m	6400	669	9568	669	9568	
332.ammp_m	7000	2636	2655	2611	2681	

### Hardware

CPU: AMD Opteron (TM) 850  
 CPU MHz: 2400  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 2 chips, 1 core/chip  
 CPU(s) orderable: 1,2,4  
 Primary Cache: 64KBI + 64KBD on chip  
 Secondary Cache: 1024KB (I+D) on chip  
 L3 Cache: None  
 Other Cache: None  
 Memory: 8x1GB, PC2700 CL2.5 DDR SDRAM ECC Registered  
 Disk Subsystem: SCSI, 73GB, 10K RPM  
 Other Hardware: None

### Software

OpenMP Threads: 2  
 Parallel: OpenMP + Auto Concurrentization  
 Operating System: SuSE Linux 9.0 Professional  
 Compiler: PGI Fortran 5.2-1  
 File System: Linux/ext3  
 System State: Multi-User

## Notes/Tuning Information

### Base tuning:

```
C      : pgcc -mp -fastsse -O4 -Minline=levels:8 -mcmmodel=medium
Fortran : pgf90 -mp -fastsse -O4 -Minline=levels:8 -mcmmodel=medium
ONESTEP=yes
srcalt = purduel used for 330.art_m
```

### Peak tuning:

ONESTEP=yes for all peak tests.

```
310.wupwise_m : -mp -fastsse -Minline=level:8 -mcmmodel=medium
312.swim_m    : -fastsse -Mconcur -Mipa=fast,inline -mcmmodel=medium
314.mgrid_m   : -mp -fastsse -Mnofptrap
316.applu_m   : -mp -fastsse -O4 -Minline=levels:8 -mcmmodel=medium
               srcalt = ompl.32
318.galgel_m  : -mp -fastsse -Mconcur -Mipa=fast,inline -mcmmodel=medium -Munsafe_par_align
320.quake_m   : -mp -fastsse -O4 -Minline=levels:8 -mcmmodel=medium
               srcalt = ompl.32
324.apsi_m    : -mp -fastsse -O4 -Minline=levels:8 -mcmmodel=medium -Munsafe_par_align
               srcalt = ompl.32
326.gafort_m  : -mp -fastsse -O4 -Minline=levels:8 -mcmmodel=medium
               srcalt = ompl
328.fma3d_m   : basepeak=yes
```



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## Notes/Tuning Information (Continued)

```
330.art_m      : basepeak=yes
332.ampp_m     : -mp -fastsse -O -Minline -Mframe
```

### Portability flags:

```
318.galgel_m   : -Mfixed -Mextend
```

### Base and Peak User Environment (bash):

```
export OMP_NUM_THREADS=2
export NCPUS=2
export OMP_DYNAMIC=FALSE
ulimit -s unlimited
```

Only two CPUs were present, others were removed physically out of the system.  
Default BIOS settings used.

For a description of PGI compiler and portability flags, and system parameters used to generate this result, please refer to SUN-20041028-pgi-linux-opteron.txt file in the flags directory.