



OMPM2001 Result

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Sun Microsystems
Sun Fire V40z

SPECompMpeak2001 = 8694

SPECompMbase2001 = 8382

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	489	12273	487	12315	
312.swim_m	6000	501	11967	488	12305	
314.mgrid_m	7300	771	9469	763	9565	
316.applu_m	4000	622	6434	483	8280	
318.galgel_m	5100	568	8971	554	9202	
320.earthquake_m	2600	340	7647	330	7883	
324.apsi_m	3400	392	8664	386	8811	
326.gafort_m	8700	1282	6788	1249	6967	
328.fma3d_m	4600	834	5518	834	5518	
330.art_m	6400	371	17231	371	17231	
332.ammp_m	7000	1674	4181	1658	4221	

Hardware

CPU: AMD Opteron (TM) 850
 CPU MHz: 2400
 FPU: Integrated
 CPU(s) enabled: 4 cores, 4 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: 16x1GB, PC2700 CL2.5 DDR SDRAM ECC Registered
 Disk Subsystem: SCSI, 73GB, 10K RPM
 Other Hardware: None

Software

OpenMP Threads: 4
 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.earthquake_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=4
export NCPUS=4
export OMP_DYNAMIC=FALSE
ulimit -s unlimited
```

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.