



# OMP2001 Result

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Fujitsu Limited  
PRIMEPOWER HPC2500 (1.3GHz)

SPECompMpeak2001 = --  
SPECompMbase2001 = 28533

SPEC license #HPG0003 | Tested by: Fujitsu Limited | Test site: Numazu, Japan | Test date: May-2003 | Hardware Avail: Jul-2003 | Software Avail: May-2003

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio	30000 60000 90000		
310.wupwise_m	6000	162	37130			[Bar chart showing peak ratio]		
312.swim_m	6000	139	43199			[Bar chart showing peak ratio]		
314.mgrid_m	7300	176	41484			[Bar chart showing peak ratio]		
316.applu_m	4000	55.0	72777			[Bar chart showing peak ratio]		
318.galgel_m	5100	310	16457			[Bar chart showing peak ratio]		
320.earthquake_m	2600	241	10772			[Bar chart showing peak ratio]		
324.apsi_m	3400	76.9	44210			[Bar chart showing peak ratio]		
326.gafort_m	8700	212	41035			[Bar chart showing peak ratio]		
328.fma3d_m	4600	207	22198			[Bar chart showing peak ratio]		
330.art_m	6400	270	23735			[Bar chart showing peak ratio]		
332.ammp_m	7000	563	12436			[Bar chart showing peak ratio]		

### Hardware

CPU: SPARC64 V  
 CPU MHz: 1299  
 FPU: Integrated  
 CPU(s) enabled: 128  
 CPU(s) orderable: 8 to 128  
 Primary Cache: 128KBI+128KBD on chip  
 Secondary Cache: 2MB(I+D) on chip, per CPU  
 L3 Cache: None  
 Other Cache: None  
 Memory: 512GB  
 Disk Subsystem: 1 x 36 GB Ultra SCSI  
 Other Hardware: None

### Software

OpenMP Threads: 64  
 Parallel: OpenMP  
 Operating System: Solaris 8  
 Fujitsu Parallelnavi 2.2 (NQS etc)  
 Compiler: Fujitsu Parallelnavi 2.2 (C & F90)  
 File System: ufs  
 System State: Multi-user

## Notes/Tuning Information

### Baseline flags:

C: -KOMP,fast\_GP2=2,V9,largepage=2,hardbarrier -x-  
 F90: -KOMP,fast\_GP2=2,V9,largepage=2,hardbarrier,prefetch\_line=4 -Nautoobjstack

### Portability Flags:

318.galgel\_m: -Am -Fixed -w  
 328.fma3d\_m: -Am

### Extra Flags:

330.art\_m: -DINTS\_PER\_CACHELINE=16 -DDBLS\_PER\_CACHELINE=8

### System tunables:

```
/etc/system:
set shmsys:shminfo_shmmax=268435456
set shmsys:shminfo_shmmni=2048
set shmsys:shminfo_shmseg=2048
set autoup=4800
set memscrub_period_sec=345600
/etc/opt/FJSVpnm/lpg.conf:
JOB=408G,SHMSEGSIZE=256M
/etc/opt/FJSVpnm/cpursc.conf:
CPU_USE=0-3:0-3
```



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## Notes/Tuning Information (Continued)

NQS:

```
Per-process data size limit = UNLIMITED
Per-process permanent file size limit = UNLIMITED
Per-process memory size limit = 40 gigabytes
Per-request memory size limit = 32 gigabytes
Per-process number of cpus limit = 124
Per-process stack size limit = 4 gigabytes
Per-process CPU time limit = 2147483646.000
Execution mode = SIMplex
Jobclass = 0
```

Submitting the runspec to NQS:

Run the qsub command with the following sh script.

```
cd /spec/omp2001
. ./shrc
OMP_NUM_THREADS=64
export OMP_NUM_THREADS
runspec --config=Fujitsu --reportable medium
```