



# OMP2001 Result

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Fujitsu Limited  
PRIMEPOWER HPC2500 (1.3GHz)

SPECompMpeak2001 = --  
SPECompMbase2001 = 31444

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio	
310.wupwise_m	6000	137	43743			
312.swim_m	6000	143	42079			
314.mgrid_m	7300	188	38833			
316.applu_m	4000	39.4	101578			
318.galgel_m	5100	295	17288			
320.earthquake_m	2600	226	11495			
324.apsi_m	3400	60.5	56197			
326.gafort_m	8700	205	42368			
328.fma3d_m	4600	186	24797			
330.art_m	6400	244	26253			
332.ammp_m	7000	527	13286			

### 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: 1x 36GB Ultra SCSI  
 Other Hardware: None

### Software

OpenMP Threads: 64  
 Parallel: OpenMP  
 Operating System: Solaris 8  
 Fujitsu Parallelnavi 2.3 (NQS etc)  
 Compiler: Fujitsu Parallelnavi 2.3 (C & F90)  
 File System: ufs  
 System State: Multi-user

## Notes/Tuning Information

### Baseline flags:

C: -KOMP,fast\_GP2=2,V9,hardbarrier  
 -x- -Klargepage=2,mfunc,prefetch=2  
 F90: -KOMP,fast\_GP2=2,V9,hardbarrier -Klargepage=1,prefetch\_line=4  
 -Nautoobjstack -O5 -Kprefetch\_cache\_level=3

### 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=2147483648
set shmsys:shminfo_shmmni=256
set shmsys:shminfo_shmseg=256
set autoup=172800
set memscrub_period_sec=345600
/etc/opt/FJSVpnm/lpg.conf:
JOB=256G,SHMSEGSIZE=2048M
```



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## Notes/Tuning Information (Continued)

```
/etc/opt/FJSVpnm/cpursc.conf:
```

```
CPU_USE=0,1:0,1
```

NQS:

```
Per-process data size limit = UNLIMITED  
Per-process permanent file size limit = UNLIMITED  
Per-process memory size limit = 128 gigabytes  
Per-request memory size limit = 128 gigabytes  
Per-process number of cpus limit = 126  
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  
OMP_NUM_THREADS=64  
export OMP_NUM_THREADS  
. ./shrc  
runspec --config=Fujitsu --reportable medium
```