



OMPM2001 Result

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Fujitsu Limited
PRIMEPOWER HPC2500 (1.3GHz)

SPECompMpeak2001 = --
SPECompMbase2001 = 35686

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	99.0	60628			
312.swim_m	6000	132	45383			
314.mgrid_m	7300	195	37470			
316.applu_m	4000	31.0	128843			
318.galgel_m	5100	290	17601			
320.earthquake_m	2600	223	11657			
324.apsi_m	3400	53.1	64045			
326.gafort_m	8700	164	53088			
328.fma3d_m	4600	168	27377			
330.art_m	6400	230	27795			
332.ammp_m	7000	413	16954			

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: 96
 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=96
export OMP_NUM_THREADS
. ./shrc
runspec --config=Fujitsu --reportable medium
```