



# OMPM2001 Result

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**Hewlett-Packard Company**  
HP Superdome 32-way (875MHz PA-8700+)

SPECompMpeak2001 = 12265  
SPECompMbase2001 = 11846

SPEC license #HPG2116 | Tested by: Hewlett-Packard Company | Test site: Richardson, Texas | Test date: Jun-2002 | Hardware Avail:Jun-2002 | Software Avail:Jun-2002

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio	
310.wupwise_m	6000	388	15466	307	19574	
312.swim_m	6000	366	16406	366	16406	
314.mgrid_m	7300	517	14130	517	14130	
316.applu_m	4000	150	26665	150	26743	
318.galgel_m	5100	984	5182	981	5198	
320.earthquake_m	2600	269	9657	269	9657	
324.apsi_m	3400	547	6215	475	7157	
326.gafort_m	8700	580	14995	580	14995	
328.fma3d_m	4600	481	9557	481	9557	
330.art_m	6400	275	23267	275	23267	
332.ammp_m	7000	1077	6499	1077	6499	

### Hardware

CPU: PA-8700+  
 CPU MHz: 875  
 FPU: Integrated  
 CPU(s) enabled: 32  
 CPU(s) orderable: 4 to 32  
 Primary Cache: 0.75MB(I) + 1.5MB(D) on chip  
 Secondary Cache: None  
 L3 Cache: None  
 Other Cache: None  
 Memory: 64GB  
 Disk Subsystem: 80x36GB FibreChannel (striped)  
 1x9GB SCSI disk (root)  
 17x9GB disk (swap)  
 Other Hardware: 8 cells

### Software

OpenMP Threads: 32  
 Parallel: OpenMP  
 Operating System: HP-UX 11i TCOE B.11.11.0109  
 Compiler: HP C/ANSI C Compiler v11.11.04  
 HP Fortran 90 Compiler v2.5.14  
 HP aC++ Compiler A.03.35

PHSS\_26263 ld(1) and linker tools patch  
 PHSS\_25719 LIBCL patch  
 PHSS\_26913 CPSlib patch  
 PHSS\_26792 ANSI C compiler patch  
 PHSS\_26793 +O4/PBO compiler patch  
 PHSS\_27072 Fortran90 compiler patch  
 PHSS\_26952 aC++ -AA runtime libraries  
 PHSS\_24207 libm patch  
 PHSS\_26264 linker startup code

File System: VxFS  
 System State: Multi-user

## Notes/Tuning Information

```
User environment:
OMP_NUM_THREADS=32
Kernel Parameters (/stand/system):
maxdsiz      4294963200
maxdsiz_64bit 0X4000000000
maxssiz      256000000
maxssiz_64bit 1073741824
maxtsiz      1073741824
maxtsiz_64bit 1073741824
vps_pagesize 4096
vps_ceiling  16384
dbc_min_pct  50
dbc_max_pct  50
Base:
F90 +O3 +Oall +Onofltacc -Wl,+FPD +Oopenmp
-Wl,-aarchive +Oinfo +DA2.0 -N +Oloop_unroll=2
aCC +Oall +DA2.0W +Oopenmp +Oinfo -Wl,-aarchive
PASS1_CFLAGS +I
```



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## Notes/Tuning Information (Continued)

```
PASS1_LDCFLAGS +I -Wl,-aarchive
PASS2_CFLAGS +P +Ostatic_prediction
PASS2_LDCFLAGS +P +Ostatic_prediction -Wl,-aarchive
```

Peak:

```
310.wupwise_m: +O3 +Oall +Onofltacc -Wl,+FPD
+Oopenmp -Wl,-aarchive +Oinfo +DA2.0 -N
+Oloop_unroll=2 +cat +Oinline_budget=10000
ONESTEP = true
```

```
316.applu_m: +O3 +Oall +Onofltacc -Wl,+FPD
+Oopenmp -Wl,-aarchive +Oinfo +DA2.0 -N
+Oloop_unroll=2 +Ono_ptrs_to_globals
```

```
318.galgel_m: +O3 +Oall +Onofltacc -Wl,+FPD
+Oopenmp -Wl,-aarchive +Oinfo +DA2.0 -N
+Oloop_unroll=2 +Ono_ptrs_to_globals
```

```
324.apsi_m: +O3 +Oall +Onofltacc -Wl,+FPD
+Oopenmp -Wl,-aarchive +Oinfo +DA2.0 -N
+Oloop_unroll=2 +Onodataprefetch
```

Alternate Sources

hpg.1 C++ compiler compatible sources  
from SPEC ompm2001-isoc-20020619.tar.gz