



OMPM2001 Result

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Hewlett-Packard Company
HP Superdome 64-way (875MHz PA-8700+)

SPECompMpeak2001 = 19654
SPECompMbase2001 = 19094

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	200	30017	159	37709	
312.swim_m	6000	191	31355	191	31355	
314.mgrid_m	7300	285	25646	285	25646	
316.applu_m	4000	61.5	65018	63.9	62627	
318.galgel_m	5100	1075	4743	1089	4682	
320.earthquake_m	2600	207	12542	207	12542	
324.apsi_m	3400	305	11137	265	12814	
326.gafort_m	8700	341	25477	341	25477	
328.fma3d_m	4600	320	14392	320	14392	
330.art_m	6400	197	32476	197	32476	
332.ammp_m	7000	705	9934	705	9934	

Hardware

CPU: PA-8700+
 CPU MHz: 875
 FPU: Integrated
 CPU(s) enabled: 64
 CPU(s) orderable: 8 to 64
 Primary Cache: 0.75MB(I) + 1.5MB(D) on chip
 Secondary Cache: None
 L3 Cache: None
 Other Cache: None
 Memory: 256GB
 Disk Subsystem: 5x9GB Fiberchannel (striped)
 1x9GB SCSI disk (root), 28x9GB FC disks (swap)
 Other Hardware: 16 cells

Software

OpenMP Threads: 64
 Parallel: OpenMP
 Operating System: HP-UX 11i TCOE B.11.11.0206.5
 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 ANSIC 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: Online JFS
 System State: Single-user

Notes/Tuning Information

```
User environment:
OMP_NUM_THREADS=64
Kernel Parameters (/stand/system):
maxdsiz      3221225472
maxdsiz_64bit 274877906944
maxssiz      0x10000000
maxssiz_64bit 1073741824
maxtsiz      1073741824
maxtsiz_64bit 4294967296
vps_pagesize 4096
vps_ceiling  16384
dbc_min_pct  10
dbc_max_pct  10
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