



OMPM2001 Result

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

SPECompMpeak2001 = 15025
SPECompMbase2001 = 13035

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio	
310.wupwise_m	6000	354	16930	300	20015	
312.swim_m	6000	352	17070	352	17070	
314.mgrid_m	7300	546	13359	546	13359	
316.applu_m	4000	142	28229	142	28229	
318.galgel_m	5100	946	5394	958	5323	
320.earthquake_m	2600	264	9845	220	11844	
324.apsi_m	3400	529	6430	151	22516	
326.gafort_m	8700	552	15767	552	15767	
328.fma3d_m	4600	458	10047	458	10047	
330.art_m	6400	274	23357	282	22679	
332.ammp_m	7000	522	13404	522	13404	

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: 128GB
 Disk Subsystem: 5x9GB Fiberchannel (striped)
 1x9GB SCSI disk (root), 28x9GB FC disks (swap)
 Other Hardware: 8 cells

Software

OpenMP Threads: 32
 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 v2.6.1
 HP aC++ Compiler A.03.35
 PHSS_26263 ld(1) and linker tools patch
 PHSS_25719 LIBCL patch
 PHSS_27700 CPSlib patch
 PHSS_26792 ANSI C compiler patch
 PHSS_26793 +O4/PBO compiler patch
 PHSS_27735 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

Base Flags:

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

Peak Flags:

Unless otherwise noted, all tests use:

```
F90 +O3 +Oall +Onofltacc -Wl,+FPD +Oopenmp
      -Wl,-aarchive +Oinfo +DA2.0 -N +Oloop_unroll=2
aCC +Oall +DA2.0W +Oopenmp +Oinfo -Wl,-aarchive
```

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



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Notes/Tuning Information (Continued)

```
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 Source used for (both) Base (and Peak):
ISO C and C++ compatible sources available as:
SPEC OMPM2001 Source: ompm2001-isoc-20020619.tar.gz
(BASE) 320.equake_m, 330.art_m, 332.amp_m
(PEAK) 332.amp_m

Peak Source:
SPEC OMPM2001 source for 64bit systems available as:
SPEC OMPM2001 Source: ompm2001-srcl32bit-20020822.tar.gz
Used for 320.equake_m, 324.apsi_m, and 330.art_m

Base and Peak User Environment:
CPS_STACK_SIZE=128

Peak User Environment:
310.wupwise_m: ONESTEP = true

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