



OMPM2001 Result

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SGI
SGI 2800 16X 400MHz R12k

SPECompMpeak2001 = 4216

SPECompMbase2001 = 4112

SPEC license #HPG0014 | Tested by: SGI | Test site: | Test date: Jun-2001 | Hardware Avail: Sep-2000 | Software Avail: Mar-2001

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio	
310.wupwise_m	6000	1127	5323	1114	5387	
312.swim_m	6000	1515	3960	1518	3954	
314.mgrid_m	7300	1519	4806	1524	4790	
316.applu_m	4000	703	5691	571	7009	
318.galgel_m	5100	1067	4778	1054	4838	
320.earthquake_m	2600	670	3880	668	3891	
324.apsi_m	3400	867	3922	886	3839	
326.gafort_m	8700	2485	3500	2451	3550	
328.fma3d_m	4600	1262	3646	1259	3655	
330.art_m	6400	1741	3675	1732	3694	
332.ammp_m	7000	2423	2889	2317	3022	

Hardware

CPU: R12000
 CPU MHz: 400
 FPU: Integrated
 CPU(s) enabled: 16
 CPU(s) orderable: 2-256
 Primary Cache: 32KBI + 32KBD on chip
 Secondary Cache: 8MB(I+D) off chip
 L3 Cache: N/A
 Other Cache: N/A
 Memory: 16 GB
 Disk Subsystem: 1x 18 GB SCSI, 8x 36 GB (striped) SCSI
 Other Hardware: None

Software

OpenMP Threads: 16
 Parallel: --
 Operating System: IRIX 6.5.12m
 Compiler: MIPSpro 7.3.1.2m C, Fortran90
 File System: xfs
 System State: Multi-user

Notes/Tuning Information

Baseline flags: -64 -mp -Ofast=ip35 -LNO:fusion=2

Portability Flags:

318.galgel_m: -fixedform -extend_source

Peak flags:

310.wupwise_m: -64 -mp -Ofast=ip27 -LNO:fusion=2:prefetch Ahead=5 -INLINE:aggressive=on

. -IPA:space=1000:linear=on:plimit=10000:callee_limit=5000 -OPT:Olimit=0

312.swim_m: -64 -mp -Ofast=ip35 -LNO:fusion=2

314.mgrid_m: -64 -mp -Ofast=ip35 -LNO:fusion=2

316.applu_m: -64 -mp -Ofast=ip35 -LNO:ou_max=5:ou_prod_max=10:prefetch=0:fusion=2

. -CG:ld_latency=3

318.galgel_m: -64 -mp -Ofast=ip35 -LNO:fusion=2

320.earthquake_m: -64 -mp -Ofast=ip35 -OPT:goto=off:unroll_size=160:unroll_times_max=4

. -CG:ld_latency=3

324.apsi_m: -64 -mp -Ofast=ip35 -LNO:fusion=2 -TENV:X=4 -LNO:prefetch=0:blocking=off

326.gafort_m: -64 -mp -Ofast=ip35

328.fma3d_m: -64 -mp -Ofast=ip35 -LNO:fusion=2 -CG:ld_latency=3

. -IPA:linear=on:use_intrinsic

330.art_m: -64 -mp -Ofast=ip35 -LNO:fusion=2

332.ammp_m: -64 -mp -Ofast=ip35 -LNO:fusion=2:prefetch=0

Baseline user environment:

limit stacksize 512m

Standard Performance Evaluation Corporation

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Notes/Tuning Information (Continued)

```
OMP_NUM_THREADS=16
OMP_DYNAMIC=FALSE
MPC_GANG=OFF
_DSM_MUSTRUN=
_DSM_WAIT=SPIN
```

Peak user environment:

```
316.applu_m: PAGESIZE_DATA=4096, PAGESIZE_STACK=4096, _DSM_PLACEMENT=ROUND_ROBIN
318.galgel_m: _DSM_PLACEMENT=ROUND_ROBIN
324.apsi_m: PAGESIZE_DATA=4096, PAGESIZE_STACK=4096
332.ampm_m: PAGESIZE_DATA=1024, PAGESIZE_STACK=1024, _DSM_PLACEMENT=ROUND_ROBIN
```

The following O/S parameters were set via systune:

```
percent_totalmem_4m_pages = 25 ; percent_totalmem_1m_pages = 25
percent_totalmem_256k_pages = 10 ; percent_totalmem_64k_pages = 10
```