



# OMPM2001 Result

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## SGI

### SGI Origin 3800 64X 600MHz R14000A

SPECompMpeak2001 = 20739

SPECompMbase2001 = 16607

SPEC license #HPG0014 | Tested by: SGI | Test site: SGI | Test date: Jul-2002 | Hardware Avail: Jan-2002 | Software Avail: Aug-2002

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio	
310.wupwise_m	6000	181	33146	181	33146	
312.swim_m	6000	255	23510	234	25671	
314.mgrid_m	7300	231	31581	233	31289	
316.applu_m	4000	186	21459	144	27849	
318.galgel_m	5100	657	7767	487	10472	
320.quake_m	2600	238	10932	101	25774	
324.apsi_m	3400	206	16479	160	21303	
326.gafort_m	8700	642	13545	484	17972	
328.fma3d_m	4600	321	14336	265	17384	
330.art_m	6400	315	20350	258	24838	
332.ammp_m	7000	771	9075	759	9227	

### Hardware

CPU: R14000A  
 CPU MHz: 600  
 FPU: Integrated  
 CPU(s) enabled: 64  
 CPU(s) orderable: 2-512  
 Primary Cache: 32KBI + 32KBD on chip  
 Secondary Cache: 8MB(I+D) off chip  
 L3 Cache: N/A  
 Other Cache: N/A  
 Memory: 64 GB  
 Disk Subsystem: 1 x 18 GB FC, 20x 18 GB (striped) FC  
 Other Hardware: None

### Software

OpenMP Threads: 64  
 Parallel: OpenMP  
 Operating System: IRIX 6.5.17f  
 Compiler: MIPSpro 7.3.1.3m C, Fortran90  
 File System: xfs  
 System State: Single-user

## Notes/Tuning Information

Baseline flags (C benchmarks): -64 -mp -Ofast=ip35 -LNO:prefetch=0 -CG:ld\_latency=7

Baseline flags (Fortran benchmarks): -64 -mp -Ofast=ip35 -LNO:fusion=2

Portability Flags:

318.galgel\_m: -fixedform -extend\_source

Peak flags:

310.wupwise\_m: basepeak=true

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:prefetch=0:fusion=2 -CG:ld\_latency=3

318.galgel\_m: -64 -mp -Ofast=ip35

320.quake\_m: -64 -mp -Ofast=ip35 -CG:ld\_latency=7

324.apsi\_m: -64 -mp -Ofast=ip35 -LNO:prefetch=0:blocking=off -IPA:linear=on

326.gafort\_m: -64 -mp -Ofast=ip35

328.fma3d\_m: -64 -mp -Ofast=ip35 -bigp\_off -LNO:prefetch=0 -CG:ld\_latency=2 -OPT:goto=off

330.art\_m: -64 -mp -Ofast=ip35 -LNO:prefetch=0 -CG:ld\_latency=3

332.ammp\_m: -64 -mp -Ofast=ip35 -OPT:goto=off -CG:ld\_latency=7

Baseline user environment:

limit stacksize 512m

OMP\_NUM\_THREADS=64

OMP\_DYNAMIC=FALSE

MPC\_GANG=OFF

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org



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## Notes/Tuning Information (Continued)

\_DSM\_MUSTRUN=

Peak user environment:

316.applu\_m: PAGESIZE\_DATA=4096, PAGESIZE\_STACK=4096, \_DSM\_PLACEMENT=ROUND\_ROBIN

318.galgel\_m: \_DSM\_PLACEMENT=ROUND\_ROBIN, OMP\_NUM\_THREADS=40

324.apsi\_m: PAGESIZE\_DATA=4096, PAGESIZE\_STACK=4096

332.ammp\_m: PAGESIZE\_DATA=1024, PAGESIZE\_STACK=1024, \_DSM\_PLACEMENT=ROUND\_ROBIN

Peak sources:

SPEC OMPL2001 source for 64bit systems modified for SPEC OMPM2001.

Available as SPEC OMPM2001 Source: ompm2001-src164bit-20020807.tar.gz.

For 312.swim, 314.mgrid, 320.earthquake, 324.apsi, 326.gafort, 328.fma3d, and 330.art.

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