



CFP2000 Result

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SGI
SGI Origin 3200 400MHz R12k

SPECfp2000 = **407**
SPECfp_base2000 = **382**

SPEC license #: 4 Tested by: SGI Test date: Sep-2000 Hardware Avail: Sep-2000 Software Avail: Sep-2000

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	507	316	405	395	
171.swim	3100	659	470	660	470	
172.mgrid	1800	580	310	562	320	
173.applu	2100	710	296	666	315	
177.mesa	1400	485	289	451	310	
178.galgel	2900	291	998	254	1144	
179.art	2600	232	1121	237	1098	
183.quake	1300	430	303	421	309	
187.facerec	1900	403	472	396	479	
188.amp	2200	561	392	562	391	
189.lucas	2000	522	383	520	384	
191.fma3d	2100	862	244	751	280	
200.sixtrack	1100	555	198	550	200	
301.apsi	2600	845	308	691	376	

Hardware

CPU: R12000
 CPU MHz: 400
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip
 CPU(s) orderable: 2-8
 Parallel: No
 Primary Cache: 32KBI + 32KBD on chip
 Secondary Cache: 8MB(I+D) off chip
 L3 Cache: N/A
 Other Cache: N/A
 Memory: 1GB
 Disk Subsystem: 1 x 18 GB FC, 2 x 18 GB FC (striped)
 Other Hardware: None

Software

Operating System: IRIX 6.5.9m
 Compiler: MIPSpro 7.3.1.1m C, C++, Fortran90
 SCSL 1.2 Math Library
 File System: xfs
 System State: Single-user

Notes/Tuning Information

Baseline optimization flags (for C benchmarks):

PASS1 : -Ofast=ip27 -IPA:use_intrinsic -fb_create /tmp/SPEC2000/FBDIR_base/\$(EXEBASE)

PASS2 : -Ofast=ip27 -IPA:use_intrinsic -fb_opt /tmp/SPEC2000/FBDIR_base/\$(EXEBASE)

Baseline optimization flags (for Fortran benchmarks): -Ofast=ip27 -LNO:fusion=2

Portability Flags:

178.galgel: -fixedform

Peak optimization flags:

note: all occurrences of (FEEDBACK) below means compiled with a two-step process:

PASS1 = -fb_create /tmp/SPEC2000/FBDIR_peak/\$(EXEBASE)

PASS2 = -fb_opt /tmp/SPEC2000/FBDIR_peak/\$(EXEBASE)

168.wupwise: -Ofast=ip27 -IPA:space=1000:linear=on:plimit=10000:callee_limit=5000 -INLINE:aggressive=on

. -OPT:Olimit=0 -LNO:fusion=2:prefetch Ahead=5

171.swim: -Ofast=ip27 -LNO:cs2=8m

172.mgrid: -Ofast=ip27 -LNO:cs2=8m:blocking=off

173.applu: -Ofast=ip27 -LNO:ou_max=5:ou_prod_max=10:prefetch=0:fusion=2

177.mesa: -Ofast=ip27 -OPT:goto=off -LNO:opt=0 (FEEDBACK)

178.galgel: -Ofast=ip27 -LNO:ou_max=7 -lscs (FEEDBACK)

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Notes/Tuning Information (Continued)

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  RM_SOURCES = lapak.f90
179.art: -Ofast=ip27 -bigp_off -LNO:prefetch=0 -IPA:min_hot=15 (FEEDBACK)
183.quake: -Ofast=ip27 -LNO:prefetch=0 -TENV:X=4 -CG:ld_latency=7 -IPA:space=500 (FEEDBACK)
187.facerec: -Ofast=ip27 -fb_opt /tmp/SPEC2000/FBDIR_peak/$(EXEBASE) -LNO:fusion=2 (FEEDBACK)
188.ammp: -Ofast=ip27 -OPT:goto=off -IPA:space=500:plimit=900 (FEEDBACK)
189.lucas: -Ofast=ip27 -LNO:fusion=2:blocking=off -CG:ld_latency=4 -IPA:min_hot=8 (FEEDBACK)
191.fma3d: -Ofast=ip27 -bigp_off -LNO:prefetch=0 -OPT:goto=off:unroll_size=160:unroll_times_max=4
.
  -CG:ld_latency=2 (FEEDBACK)
200.sixtrack:= -Ofast=ip27 -IPA:maxdepth=2 -LNO:prefetch=0 (FEEDBACK)
301.apsi: -Ofast=ip27 -TENV:X=4 -LNO:prefetch=0:blocking=off -IPA:linear=on:use_intrinsic
The following O/S parameters were set:
  setenv PAGESIZE_DATA 4096 ; setenv PAGESIZE_TEXT 4096 ; setenv PAGESIZE_STACK 4096
  systune -i ; percent_totalmem_4m_pages = 40 ; percent_totalmem_1m_pages = 7
  systune -i ; percent_totalmem_256k_pages = 7 ; percent_totalmem_64k_pages = 7
  limit stacksize 500000
The following is done before building each benchmark that requires (FEEDBACK):
  rm -rf /tmp/SPEC2000/FBDIR_peak/$baseexe ; mkdir -p /tmp/SPEC2000/FBDIR_peak/$baseexe

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