



# CFP2000 Result

Copyright ©1999-2004, Standard Performance Evaluation Corporation

**SGI**  
**SGI 2100 4X 350MHz R12k**

**SPECfp\_rate2000 = 11.5**  
**SPECfp\_rate\_base2000 = 10.7**

SPEC license #: 4 | Tested by: SGI | Test date: Apr-2000 | Hardware Avail: Jun-2000 | Software Avail: Apr-2000

45 40 35 30 25 20 15 10 5							Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
							168.wupwise	4	723	10.3	4	616	12.0
							171.swim	4	1814	7.93	4	1824	7.89
							172.mgrid	4	1230	6.79	4	1132	7.38
							173.applu	4	1191	8.18	4	1080	9.02
							177.mesa	4	569	11.4	4	545	11.9
							178.galgel	4	361	37.2	4	315	42.8
							179.art	4	305	39.5	4	309	39.0
							183.equake	4	868	6.95	4	853	7.07
							187.facerec	4	802	11.0	4	807	10.9
							188.ampm	4	703	14.5	4	700	14.6
							189.lucas	4	1248	7.44	4	1261	7.36
							191.fma3d	4	1516	6.43	4	1320	7.38
							200.sixtrack	4	645	7.91	4	639	7.98
							301.apsi	4	1426	8.46	4	1068	11.3

### Hardware

CPU: R12000  
CPU MHz: 350  
FPU: Integrated  
CPU(s) enabled: 4 cores, 4 chips, 1 core/chip  
CPU(s) orderable: 2, 4, 6, 8  
Parallel: No  
Primary Cache: 32KBI + 32KBD on chip  
Secondary Cache: 4MB(I+D) off chip  
L3 Cache: N/A  
Other Cache: N/A  
Memory: 2048MB  
Disk Subsystem: 1 x 18 GB SCSI, 2 x 18 GB (striped)  
Other Hardware: None

### Software

Operating System: IRIX 6.5.8f  
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:fission=2:ou=2

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)

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org



# CFP2000 Result

Copyright ©1999-2004, Standard Performance Evaluation Corporation

SGI  
SGI 2100 4X 350MHz R12k

SPECfp\_rate2000 = 11.5  
SPECfp\_rate\_base2000 = 10.7

SPEC license #: 4 | Tested by: SGI | Test date: Apr-2000 | Hardware Avail: Jun-2000 | Software Avail: Apr-2000

## Notes/Tuning Information (Continued)

```
.
  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/$(EXEBASE) -LNO:fusion=2 (FEEDBACK)
188.ammp: -Ofast=ip27 -OPT:goto=off -IPA:space=500:plimit=900 (FEEDBACK)
189.lucas: -Ofast=ip27 -LNO:fusion=2:blocking=off -CG:ld_latency=4 -IPA:min_hot=8 (FEEDBACK)
191.fma3d: -Ofast=ip27 -bigp_off -LNO:prefetch=0 -OPT:goto=off:unroll_size=160:unroll_times_max=4
  -CG:ld_latency=2 (FEEDBACK)
200.sixtrack:= -Ofast=ip27 -IPA:maxdepth=2 -LNO:prefetch=0 (FEEDBACK)
301.apsi: -Ofast=ip27 -TENV:X=4 -LNO:prefetch=0:blocking=off -IPA:linear=on:use_intrinsic
The following O/S parameters were set:
  setenv PAGESIZE_DATA 4096
  setenv PAGESIZE_TEXT 4096
  setenv PAGESIZE_STACK 4096
  systune -i ; percent_totalmem_4m_pages = 50 ; nlpages_4m = 128
  limit stacksize 500000
The following is done before building each benchmark that requires (FEEDBACK):
rm -rf /tmp/SPEC2000/FBDIR_peak/$baseexe ; mkdir -p /tmp/SPEC2000/FBDIR_peak/$baseexe
or
rm -rf /tmp/SPEC2000/FBDIR_base/$baseexe ; mkdir -p /tmp/SPEC2000/FBDIR_base/$baseexe
```