



# CFP2000 Result

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**SGI**  
**SGI 2200 2X 400MHz R12k**

SPECfp2000 = **NC**  
SPECfp\_base2000 = **NC**

SPEC license #: 4 | Tested by: SGI | Test date: Nov-1999 | Hardware Avail: Mar-2000 | Software Avail: May-1999

**SPEC has determined that this result was not in compliance with the SPEC CPU2000 run and reporting rules. Specifically, the result did not meet the 3 month availability requirement in the SPEC CPU2000 run rules due to a change in availability of the system.**

| Benchmark    | Reference Time | Base Runtime | Base Ratio | Runtime | Ratio | 1 | 2 | 3 | 4 | 5 |
|--------------|----------------|--------------|------------|---------|-------|---|---|---|---|---|
| 168.wupwise  | 1600           | NC           | NC         | NC      | NC    |   |   |   |   |   |
| 171.swim     | 3100           | NC           | NC         | NC      | NC    |   |   |   |   |   |
| 172.mgrid    | 1800           | NC           | NC         | NC      | NC    |   |   |   |   |   |
| 173.applu    | 2100           | NC           | NC         | NC      | NC    |   |   |   |   |   |
| 177.mesa     | 1400           | NC           | NC         | NC      | NC    |   |   |   |   |   |
| 178.galgel   | 2900           | NC           | NC         | NC      | NC    |   |   |   |   |   |
| 179.art      | 2600           | NC           | NC         | NC      | NC    |   |   |   |   |   |
| 183.earth    | 1300           | NC           | NC         | NC      | NC    |   |   |   |   |   |
| 187.facerec  | 1900           | NC           | NC         | NC      | NC    |   |   |   |   |   |
| 188.ammmp    | 2200           | NC           | NC         | NC      | NC    |   |   |   |   |   |
| 189.lucas    | 2000           | NC           | NC         | NC      | NC    |   |   |   |   |   |
| 191.fma3d    | 2100           | NC           | NC         | NC      | NC    |   |   |   |   |   |
| 200.sixtrack | 1100           | NC           | NC         | NC      | NC    |   |   |   |   |   |
| 301.apsi     | 2600           | NC           | NC         | NC      | NC    |   |   |   |   |   |

### Hardware

CPU: R12000  
 CPU MHz: 400  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 2 chips, 1 core/chip  
 CPU(s) orderable: 2  
 Parallel: No  
 Primary Cache: 32KBI + 32KBD on chip  
 Secondary Cache: 8MB(I+D) off chip  
 L3 Cache: N/A  
 Other Cache: N/A  
 Memory: 640MB  
 Disk Subsystem: 1 x 8.7GB SCSI  
 Other Hardware: None

### Software

Operating System: IRIX 6.5.5m  
 Compiler: MIPSpro 7.3 C, C++, Fortran90  
 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)



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## Notes/Tuning Information (Continued)

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PASS2 = -fb_opt /tmp/SPEC2000/FBDIR_peak/$(EXEBASE)
168.wupwise: -Ofast=ip27 -IPA:space=1000:linear=on:plimit=10000:callee_limit=5000 -INLINE:aggressive=on
.
-OPT:Olimit=0 -LNO:fusion=2:prefetch Ahead=5
171.swim: -Ofast=ip27 -LNO:cs2=8m:fission=2:ou=2
172.mgrid: -Ofast=ip27 -LNO:cs2=8m:fission=2:ou=2
173.applu: -Ofast=ip27 -LNO:ou_max=5:ou_prod_max=10:prefetch=0:fusion=2
177.mesa: -Ofast=ip27 -OPT:goto=off -LNO:opt=0 (FEEDBACK)
178.galgel: -Ofast=ip27 -LNO:ou_max=7 (FEEDBACK)
179.art: -Ofast=ip27 -bigp_off -LNO:prefetch=0 -IPA:min_hot=15 (FEEDBACK)
183.earthquake: -Ofast=ip27 -LNO:prefetch=0 -TENV:X=4 -CG:ld_latency=7 -IPA:space=500 (FEEDBACK)
187.facerec: -Ofast=ip27 -fb_opt /tmp/SPEC2000/FBDIR_peak/$(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
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:
limit stacksize 500000
setenv PAGESIZE_DATA 4096
setenv PAGESIZE_TEXT 4096
setenv PAGESIZE_STACK 4096
systemd -i ; percent_totalmem_4m_pages = 50 ; nlpages_4m = 64

```