# CFP2000 Result

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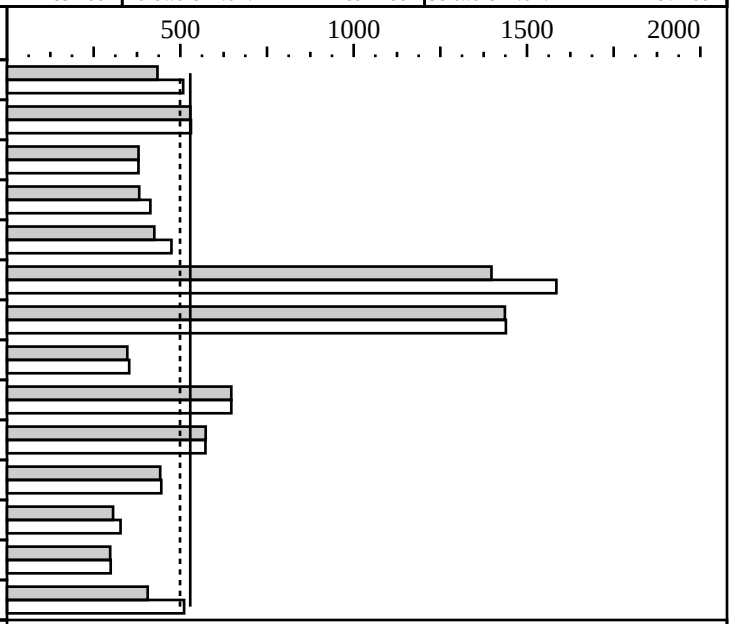
## SGI
## SGI Origin 3200 1X 600MHz R14k

SPECfp2000 = 529

SPECfp_base2000 = 499

SPEC license #: 4 | Tested by: SGI | Test date: Feb-2002 | Hardware Avail: Jan-2002 | Software Avail: Nov-2001

| Benchmark | Reference Time | Base Runtime | Base Ratio | Runtime | Ratio |
|---|---|---|---|---|---|
| 168.wupwise | 1600 | 369 | 434 | 315 | 508 |
| 171.swim | 3100 | 586 | 529 | 584 | 531 |
| 172.mgrid | 1800 | 474 | 379 | 475 | 379 |
| 173.applu | 2100 | 551 | 381 | 508 | 414 |
| 177.mesa | 1400 | 329 | 425 | 295 | 474 |
| 178.galgel | 2900 | 208 | 1398 | 183 | 1585 |
| 179.art | 2600 | 181 | 1436 | 181 | 1439 |
| 183.equake | 1300 | 375 | 347 | 369 | 352 |
| 187.facerec | 1900 | 294 | 647 | 294 | 647 |
| 188.ammp | 2200 | 384 | 573 | 384 | 572 |
| 189.lucas | 2000 | 453 | 442 | 449 | 445 |
| 191.fma3d | 2100 | 686 | 306 | 641 | 328 |
| 200.sixtrack | 1100 | 370 | 298 | 368 | 299 |
| 301.apsi | 2600 | 641 | 406 | 509 | 511 |




### Hardware

| | |
|---|---|
| CPU: | R14000 |
| CPU MHz: | 600 |
| 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: | 1 GB |
| Disk Subsystem: | 1 x 18 GB FC, 4 x 18 GB FC (striped) |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | IRIX 6.5.14m |
| Compiler: | MIPSpro 7.3.1.3m C, Fortran90<br>SCSL 1.4 Math Library |
| File System: | xfs |
| System State: | Single-user |

## Notes/Tuning Information

```
Baseline optimization flags (for C benchmarks):
  PASS1 : -Ofast=ip35 -fb_create /tmp/SPEC2000/FBDIR_base/$(EXEBASE)
  PASS2 : -Ofast=ip35 -fb_opt /tmp/SPEC2000/FBDIR_base/$(EXEBASE)
Baseline optimization flags (for Fortran benchmarks): -Ofast=ip35 -LNO:fusion=2
Portability Flags:
  178.galgel: -fixedform
Peak optimization flags:
note:  all occurances 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=ip35 -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=ip35 -CG:ld_latency=10
172.mgrid: -Ofast=ip35 -LNO:fusion=2
173.applu: -Ofast=ip35 -LNO:ou_max=5:ou_prod_max=10:prefetch=0:fusion=2 -CG:ld_latency=3
177.mesa: -Ofast=ip35 -OPT:goto=off -LNO:opt=0 -CG:ld_latency=6 (FEEDBACK)
178.galgel: -Ofast=ip35 -LNO:ou_max=7 -CG:ld_latency=3 -lscs (FEEDBACK)
```

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## Notes/Tuning Information (Continued)

```
.           RM_SOURCES = lapak.f90
 179.art: -Ofast=ip35 -LNO:prefetch=0 -IPA:min_hot=15 -CG:ld_latency=3 (FEEDBACK)
 183.equake: -Ofast=ip35 -LNO:prefetch=0 -TENV:X=4  -CG:ld_latency=7 -IPA:space=500 (FEEDBACK)
 187.facerec: -Ofast=ip35 -LNO:fusion=2
 188.ammp: -Ofast=ip35 -OPT:goto=off -IPA:space=500:plimit=900 -CG:ld_latency=7 (FEEDBACK)
189.lucas: -Ofast=ip35 -LNO:fusion=2:blocking=off -CG:ld_latency=4 -IPA:min_hot=8 (FEEDBACK)
 191.fma3d: -Ofast=ip35 -bigp_off -LNO:prefetch=0 -CG:ld_latency=2
.           -OPT:goto=off:unroll_size=160:unroll_times_max=4 (FEEDBACK)
 200.sixtrack:= -Ofast=ip35 -IPA:maxdepth=2 -LNO:prefetch=0 (FEEDBACK)
 301.apsi: -Ofast=ip35 -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
   systune -i ; r12k_bdiag = 0x4000000
   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
 The first disk mentioned in the Disk Subsystem is the system disk. A striped
 XFS filesystem was created using the rest of the disks and the benchmark was
 run on this.
```