CFP2000 Result

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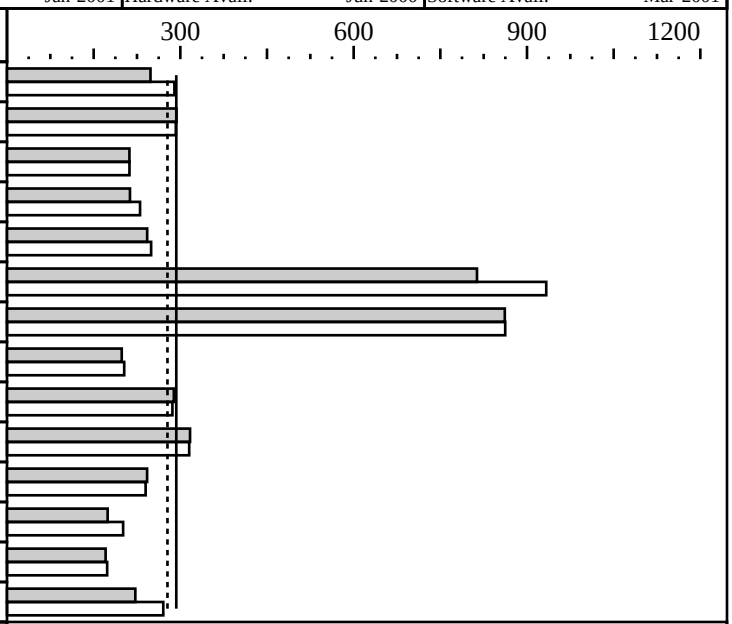
SGI
SGI 2100 1X 350MHz R12k

SPECfp2000 = 293

SPECfp_base2000 = 278

SPEC license #: 4 | Tested by: SGI | Test date: Jan-2001 | Hardware Avail: Jun-2000 | Software Avail: Mar-2001

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	644	248	552	290
171.swim	3100	1057	293	1061	292
172.mgrid	1800	849	212	849	212
173.applu	2100	987	213	912	230
177.mesa	1400	577	243	561	249
178.galgel	2900	357	813	311	933
179.art	2600	302	862	302	862
183.equake	1300	655	199	641	203
187.facerec	1900	658	289	664	286
188.ammp	2200	694	317	698	315
189.lucas	2000	825	242	834	240
191.fma3d	2100	1206	174	1045	201
200.sixtrack	1100	645	171	635	173
301.apsi	2600	1171	222	961	270



Hardware

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

Software

Operating System:	IRIX 6.5.10f
Compiler:	MIPSpro 7.3.1.2m C, C++, Fortran90 SCSL 1.3 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 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=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:fusion=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)
```

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Notes/Tuning Information (Continued)

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