CFP2000 Result

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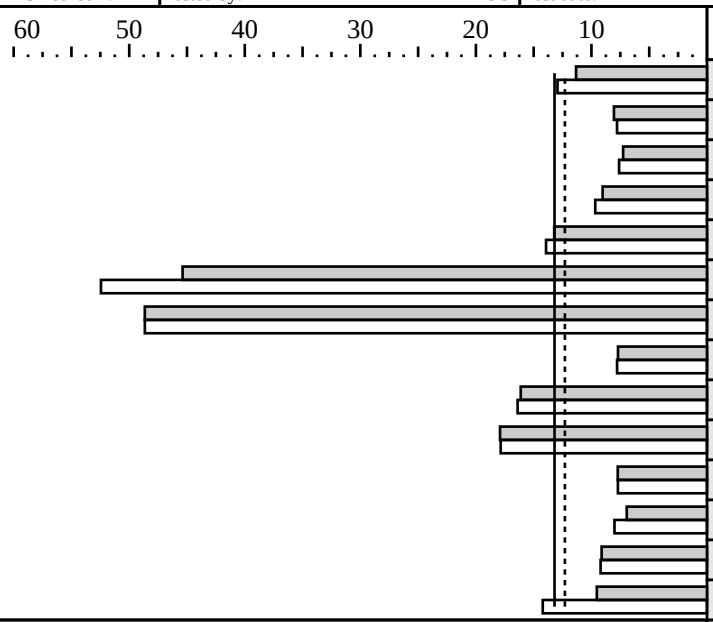
SGI
SGI 2200 4X 400MHz R12k

SPECfp_rate2000 = 13.2

SPECfp_rate_base2000 = 12.3

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	655	11.3	4	574	12.9
171.swim	4	1786	8.05	4	1847	7.79
172.mgrid	4	1151	7.26	4	1098	7.61
173.applu	4	1079	9.03	4	1008	9.67
177.mesa	4	491	13.2	4	466	13.9
178.galgel	4	297	45.4	4	257	52.4
179.art	4	248	48.7	4	248	48.6
183.equake	4	783	7.70	4	775	7.78
187.facerec	4	547	16.1	4	538	16.4
188.ammp	4	570	17.9	4	572	17.9
189.lucas	4	1202	7.72	4	1203	7.71
191.fma3d	4	1403	6.95	4	1217	8.01
200.sixtrack	4	560	9.12	4	554	9.21
301.apsi	4	1265	9.53	4	849	14.2

Hardware

CPU:	R12000
CPU MHz:	400
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:	8MB(I+D) off chip
L3 Cache:	N/A
Other Cache:	N/A
Memory:	2048MB
Disk Subsystem:	2 x 18 GB SCSI (striped)
Other Hardware:	None

Software

Operating System:	IRIX 6.5.8f
Compiler:	MIPSpro 7.3.1m 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 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: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 -lscs (FEEDBACK)
```

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Notes/Tuning Information (Continued)

```
.           RM_SOURCES = lapak.f90
179.art: -Ofast=ip27 -bigp_off -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/$(EXEBASE) -LNO:fusion=2 (FEEDBACK)
188.ammp: -Ofast=ip27 -OPT:goto=off -IPA:space=500:plimit=900 (FEEDBACK)
189.lucas: -Ofast=ip27 -LNO:fusion=2:blocking=off -CG:ld_latency=4 -IPA:min_hot=8 (FEEDBACK)
191.fma3d: -Ofast=ip27 -bigp_off -LNO:prefetch=0 -OPT:goto=off:unroll_size=160:unroll_times_max=4
.           -CG:ld_latency=2 (FEEDBACK)
200.sixtrack:= -Ofast=ip27 -IPA:maxdepth=2 -LNO:prefetch=0 (FEEDBACK)
301.apsi: -Ofast=ip27 -TENV:X=4 -LNO:prefetch=0:blocking=off -IPA:linear=on:use_intrinsic
The following O/S parameters were set:
   setenv PAGESIZE_DATA 4096
   setenv PAGESIZE_TEXT 4096
   setenv PAGESIZE_STACK 4096
   systune -i ; percent_totalmem_4m_pages = 50 ; nlpages_4m = 128
   limit stacksize 500000
The following is done before building each benchmark that requires (FEEDBACK):
 rm -rf /tmp/SPEC2000/FBDIR_peak/$baseexe ; mkdir -p /tmp/SPEC2000/FBDIR_peak/$baseexe
 or
 rm -rf /tmp/SPEC2000/FBDIR_base/$baseexe ; mkdir -p /tmp/SPEC2000/FBDIR_base/$baseexe
```