CFP2000 Result

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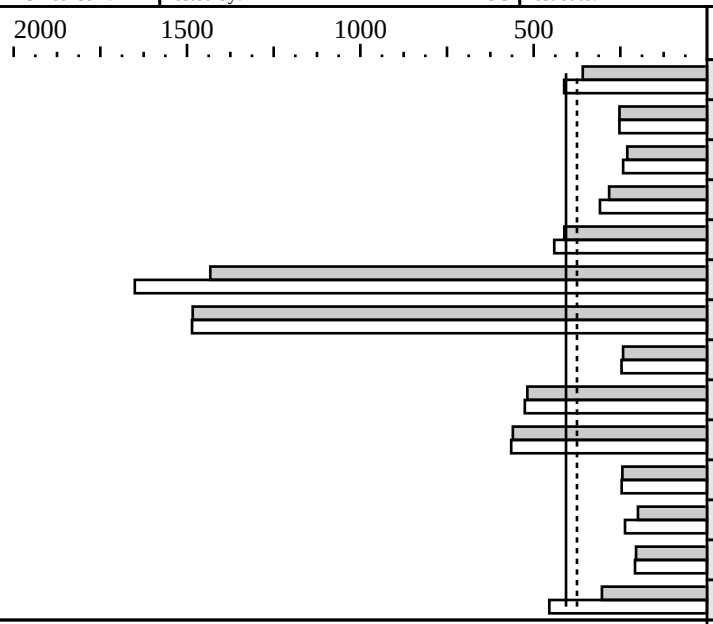
SGI
SGI 2800 128X 400MHz R12k

SPECfp_rate2000 = 407

SPECfp_rate_base2000 = 375

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	128	663	358	128	577	412
171.swim	128	1823	252	128	1822	253
172.mgrid	128	1162	230	128	1105	242
173.applu	128	1104	282	128	1010	309
177.mesa	128	505	412	128	472	441
178.galgel	128	301	1433	128	261	1651
179.art	128	260	1484	128	260	1485
183.equake	128	797	242	128	783	247
187.facerec	128	544	518	128	537	526
188.ammp	128	583	560	128	578	565
189.lucas	128	1217	244	128	1206	246
191.fma3d	128	1566	199	128	1318	237
200.sixtrack	128	798	205	128	787	208
301.apsi	128	1274	303	128	849	455

Hardware

CPU:	R12000
CPU MHz:	400
FPU:	Integrated
CPU(s) enabled:	128 cores, 128 chips, 1 core/chip
CPU(s) orderable:	64-512
Parallel:	No
Primary Cache:	32KBI + 32KBD on chip
Secondary Cache:	8MB(I+D) off chip
L3 Cache:	N/A
Other Cache:	N/A
Memory:	128GB
Disk Subsystem:	1 x 9 GB SCSI, 16 x 18 GB FC (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
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
```