CFP2000 Result

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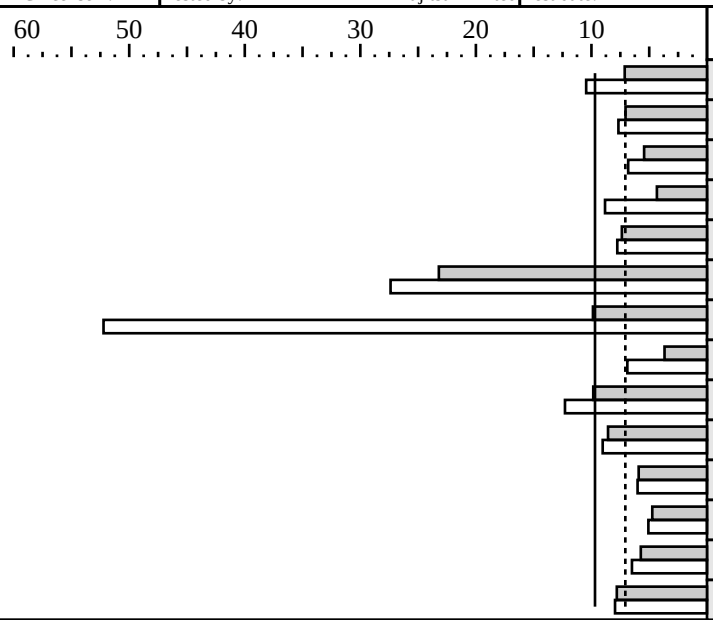
Fujitsu Siemens Computers PRIMEPOWER400 (600MHz)

SPECfp_rate2000 = 9.69

SPECfp_rate_base2000 = 7.07

SPEC license #: 22 | Tested by: Fujitsu Limited | Test date: Sep-2001 | Hardware Avail: Oct-2001 | Software Avail: Dec-2001



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	521	7.12	2	355	10.5
171.swim	2	1020	7.05	2	938	7.67
172.mgrid	2	767	5.44	2	612	6.82
173.applu	2	1124	4.34	2	552	8.82
177.mesa	2	441	7.37	2	418	7.76
178.galgel	2	290	23.2	2	246	27.4
179.art	2	611	9.87	2	116	52.2
183.equake	2	821	3.68	2	438	6.89
187.facerec	2	448	9.84	2	359	12.3
188.ammp	2	596	8.56	2	565	9.03
189.lucas	2	785	5.91	2	772	6.01
191.fma3d	2	1029	4.74	2	960	5.07
200.sixtrack	2	446	5.73	2	393	6.50
301.apsi	2	773	7.80	2	758	7.96

Hardware

CPU:	SPARC64 GP
CPU MHz:	600
FPU:	Integrated
CPU(s) enabled:	2 cores, 2 chips, 1 core/chip
CPU(s) orderable:	1 to 4
Parallel:	None
Primary Cache:	128KBI+128KBD on chip
Secondary Cache:	8MB(I+D) off chip, per CPU
L3 Cache:	None
Other Cache:	None
Memory:	8192MB
Disk Subsystem:	1 x 36.4GB SCSI (10000rpm)
Other Hardware:	None

Software

Operating System:	Solaris 8 7/01
Compiler:	Fujitsu Parallelnavi 1.0.2 with patch 911403-01 Sun Forte Developer 6 update 2
File System:	ufs
System State:	single user

Notes/Tuning Information

```
FDO: (Parallelnavi 1.0.2)
    fdo_pre0=rm -rf ‘pwd‘/*.*.d
    PASS1=-Kpg    PASS2=-Kpu
FDO: (Forte Developer 6 update 2)
    fdo_pre0=rm -rf ‘pwd‘/../feedback.profile
    PASS1=-xprofile=collect:‘pwd‘/../feedback
    PASS2=-xprofile=use:‘pwd‘/../feedback
Baseline :
(using Fortran compiler of Parallelnavi 1.0.2)
-Kfast_GP=2,largepage -O4 -fs FDO

(using C compiler of Parallelnavi 1.0.2)
-Kfast_GP=2,largepage FDO

Peak:
(using Fortran compiler of Parallelnavi 1.0.2)
 168.wupwise: -Kfast_GP=2,prefetch=4,nounroll,largepage -x dir=‘pwd‘/../../src -fs
```

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Notes/Tuning Information (Continued)

171.swim: -Kfast_GP=2,GREG,preex,ilfunc,prefetch=3,commonpad=152,prefetch_iteration=3,unroll=2,nogs,frecipro
-O4 -dn -fs
172.mgrid: -Kfast_GP=2,preex,GREG,commonpad=144,unroll=3,largepage,prefetch=3
-O4 -fs
178.galgel: -Kfast_GP=2,GREG,largepage,preex,unroll=2,prefetch_iteration=2,commonpad=24
-O4 -lssl2mtfma -fs FDO
RM_SOURCES=lapak.f90
189.lucas: -Kfast_GP=2,GREG,preex,largepage,nounroll -O4 -fs FDO
191.fma3d: -Kfast_GP=2,preex,GREG,nounroll,V9FMADD,prefetch=4 -O4 -fs FDO
200.sixtrack: -Kfast_GP=2,GREG,noprefetch,unroll=4,largepage,frecipro -fs
301.apsi: -Kfast_GP=2,GREG,preex,largepage,unroll=2 -O4 -fs FDO

(using C compiler of Parallelnavi 1.0.2)
188.ammp: -Kfast_GP=2,GREG,popt,prefetch=4,preex,preload,largepage,fuse,unroll=3 -x-

(using FORTRAN77 compiler of Forte Developer 6 update 2)
173.applu: -fast -Qoption iropt -whole,-Adata_access,-Mt6000,-Mm12000,-Mr40000,-Ma400 -xarch=v8plus -dn
ONESTEP=yes

(using FORTRAN90 compiler of Forte Developer 6 update 2)
187.facerec: -fast -xarch=v9 FDO ONESTEP=yes

(using C compiler of Forte Developer 6 update 2)
177.mesa: -fast -xcrossfile -xrestrict -xalias_level=std -xregs=syst -Wc,-Qgsched-trace_late=1,-Qgsched-trace_spec_load=1
-xarch=v8plus -W2,-Amemopt -dn
FDO ONESTEP=yes
179.art: -fast -xalias_level=strong -xdepend -xregs=syst -W2,-whole,-Amemopt
-xarch=v8plus -lmopt -lm -dn FDO ONESTEP=yes
183.equake: -fast -xalias_level=strong -xdepend -W2,-whole,-Amemopt
-xarch=v8plus -lmopt -lm FDO ONESTEP=yes

Portability:
(for Parallelnavi 1.0.2)
178.galgel: -Am -Fixed
187.facerec: -Am
191.fma3d: -Am

Note:
System Tunables: (for /etc/system)
consistent_coloring=1, tune_t_fsflushr=86400, autoup=86400,
shmsys:shminfo_shmmax=8589934592, shmsys:shminfo_shmmni=1024, shmsys:shminfo_shmseg=1024
(for /etc/opt/FJSVpnrm/lpg.conf)
TSS=512M, SHMSEGSIZE=256M
Feedback directed optimization was used for all baseline benchmarks and peak benchmarks
except following peak benchmarks: 171.swim, 172.mgrid, 173.applu, 188.ammp, 200.sixtrack.