SPEC CFP95 Results

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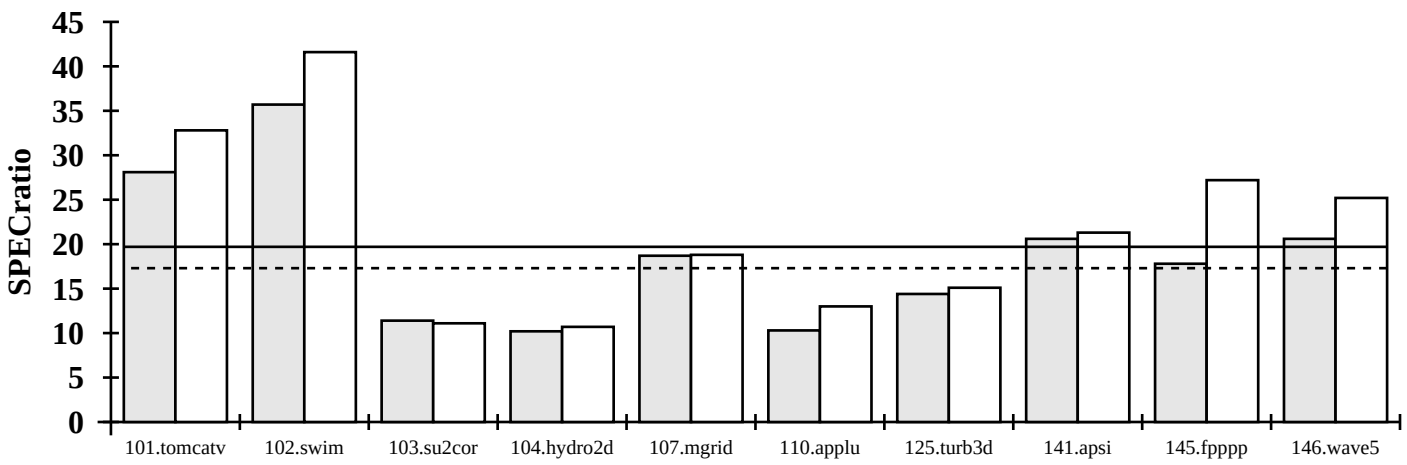
Sun Microsystems
Ultra 450

SPECfp95 = 19.7

SPECfp_base95 = 17.3

SPEC license # 6	Tested By: Sun, Palo Alto	Test Date: Jul-98	Hardware Avail: Jul-98	Software Avail: Oct-98



Hardware/Software Configuration for:
Ultra 450

Hardware

Model Name:	Ultra 450
CPU:	296 MHz UltraSPARC-II
FPU:	Integrated
Number of CPU(s):	1
Primary Cache:	16KBI+16KBD on chip
Secondary Cache:	2MB(I+D) off chip
Other Cache:	None
Memory:	512MB
Disk Subsystem:	2 x 4.0GB
Other Hardware:	Fast Ethernet System clock frequency: 99 MHz

Software

Operating System:	Solaris 2.6 3/98
Compiler:	Sun f77 SF775.0 EFT1 (8/98)
File System:	UFS
System State:	Single User
Kernel Extensions:	consistent_coloring=1

Benchmark # and Name	Reference Time	Base Run Time	Base SPEC Ratio	Run Time	SPEC Ratio
101.tomcatv	3700	132	28.1	113	32.8
102.swim	8600	241	35.7	207	41.6
103.su2cor	1400	123	11.4	126	11.1
104.hydro2d	2400	235	10.2	224	10.7
107.mgrid	2500	134	18.7	133	18.8
110.applu	2200	213	10.3	169	13.0
125.turb3d	4100	284	14.4	272	15.1
141.apsi	2100	102	20.6	99	21.3
145.fpppp	9600	541	17.8	353	27.2
146.wave5	3000	146	20.6	119	25.2
SPECfp_base95 (G. Mean)			17.3		
		SPECfp95 (G. Mean)			19.7

Notes/Tuning Information

```
P1= -xprofile=collect:‘pwd‘/../feedback
P2= -xprofile=use:‘pwd‘/../feedback
BCOPY=-Qoption iropt -O4+bcopy; INV=-Qoption iropt -O4+invccexp; BMR=-Qoption iropt -O4+bmerge
Baseline: -fast -xarch=v8plusa -fsimple=2 -xprefetch
Peak:     -fast -xO4 -xarch=v8plusa -xchip=ultra
101.tomcatv: -fast -xarch=v8plusa -xpad=local:23 -xprefetch -Qoption iropt -O4+data_access
102.swim:    -fast -xarch=v8plusa -xpad=common:15 -xprefetch -fsimple=2
103.su2cor:  -fast -xarch=v8plusa -xvector -Qoption cg -Qms_pipe+nfll=5 -fsimple=2  ${BCOPY}
103.su2cor:  PASS1= -xO4 ${P1}; PASS2= -xO5 -xsafe=mem ${P2}
104.hydro2d: -fast -xarch=v8plusa -xprefetch -Qoption iropt -O4+pde -fsimple=2
104.hydro2d: PASS1= ${P1}; PASS2= ${P2}
107.mgrid:   -fast -xarch=v8plusa -xprefetch -fsimple=2  ${BCOPY}
107.mgrid:   PASS1= -xO4 ${P1}; PASS2= -xO5 -xsafe=mem ${P2}
110.applu:   -fast -xarch=v8plusa -Qoption iropt -O4+scalarrep+ddint+perfect+loop_dist+pde+algassoc,-Mt6000,-Mr20000,-Ma140,-ldstr -fsimple=2
125.turb3d:  -fast -xarch=v8plusa -stackvar -xpad -fsimple=2 -Qoption iropt -O4+bcopy ${INV} -xvector=yes
125.turb3d:  PASS1= -xO4 ${P1}; PASS2= -xO5 -xsafe=mem ${P2}
141.apsi:    -fast -xarch=v8plusa -xchip=ultra3 -fsimple=2 -stackvar  -Qoption iropt -Si36  ${INV} -Qoption iropt -O4+algassoc
141.apsi:    PASS1= -xO4 ${P1}; PASS2= -xO5 -xsafe=mem ${P2}
145.fpppp:   -fast -xarch=v8plusa -xO5 -xsafe=mem -fsimple=2 -nodepend -Qoption iropt -O4+algassoc -Qoption iropt -reroll=1
145.fpppp:   PASS1= ${P1}; PASS2= ${P2}
146.wave5:   -fast -xarch=v8plusa  -stackvar -fsimple=2 -Qoption iropt -O4+unroll ${BCOPY}
Shell limits: # ulimit -n 1024  or % limit descriptors 1024
Config file: ultra450_fp.cfg
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