



CINT2000 Result

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Sun Microsystems
Sun Fire V880 (1200MHz)

SPECint2000 = 700
SPECint_base2000 = 625

SPEC license #: 6 Tested by: Sun Microsystems Test date: Sep-2003 Hardware Avail: Sep-2003 Software Avail: Aug-2003

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	296	473	243	576	
175.vpr	1400	262	534	244	573	
176.gcc	1100	163	673	154	716	
181.mcf	1800	295	611	252	715	
186.crafty	1000	152	659	130	771	
197.parser	1800	321	561	278	648	
252.eon	1300	170	763	162	801	
253.perlbmk	1800	284	634	258	698	
254.gap	1100	245	449	210	523	
255.vortex	1900	197	966	176	1081	
256.bzip2	1500	219	686	203	740	
300.twolf	3000	464	647	427	702	

Hardware

CPU: UltraSPARC III Cu
 CPU MHz: 1200
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip
 CPU(s) orderable: 2,4,8
 Parallel: No
 Primary Cache: 32KBI+64KBD on chip
 Secondary Cache: 8MB(I+D) off chip
 L3 Cache: None
 Other Cache: None
 Memory: 2GB 4-way interleaved
 Disk Subsystem: 1 x 36GB SEAGATE ST336605FSUN36G
 Other Hardware: None

Software

Operating System: Solaris 9 8/03
 Compiler: Sun ONE Studio 8
 Sun Performance Library 8
 File System: ufs with ufs logging
 System State: Multi-User

Notes/Tuning Information

Compiler invocation:
 C: cc
 CXX: CC

Integer base flags:
 -fast -xipo=2 with ONESTEP=yes and feedback

Integer peak flags:
 ONESTEP=yes and feedback for all benchmarks

164.gzip: -xO4 -xbuiltin=%all -xtarget=native -xalias_level=std
 -xipo=2 -Wc,-Qeps:enabled=1,-Qeps:rp_filtering_margin=100
 175.vpr: -fast -xalias_level=std -xipo=2
 -Wc,-Qeps:enabled=1,-Qeps:rp_filtering_margin=100 -lmopt -lm
 176.gcc: -fast -xipo=2 -l12amm
 181.mcf: -fast -xipo=2 -xprefetch_level=3 -Wc,-Qeps:enabled=1
 186.crafty: -fast -xinline= -xipo=2 -xalias_level=strong -W2,-Ashort_ldst
 Feedback adds -xlinkopt in PASS2



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Notes/Tuning Information (Continued)

```

197.parser: -fast -xipo=2 -xalias_level=strong
            -Wc,-Qgsched-T6,-Qipa:valueprediction
252.eon:    -fast -xipo=2 -xalias_level=compatible -noex
            -Qoption cg -Qeps:enabled=1,-Qeps:ws=32
253.perlbnk: -x05 -xtarget=native -xipo -xalias_level=std -xsafe=mem
            -Wc,-Qeps:enabled=1,-Qeps:ws=8,-Qiselect-sw_pf_tbl_th=20,
            -Qiselect-funcalign=32,-Qicache-chbab=1
254.gap:    -fast -xipo=2 -xalias_level=strong -xvector
            -xprefetch_level=3 -W2,-Abcopy
255.vortex: -fast -xrestrict -xipo=2
            -W2,-crit,-Ainline:recursion=1:cs=500:irs=6000
            -Wc,-Qeps:enabled=1,-Qdepgraph-early_cross_call=1,
            -Qiselect-funcalign=32,-Qpeep-Sh0 -l12amm
256.bzip2:  -fast -xipo -xalias_level=strong -xrestrict
            -Wc,-Qeps:enabled=1
300.twolf:  -fast -xalias_level=strong -xsafe=mem -xipo=2
            -xprefetch=no%auto -Wc,-Qms_pipe+intdivusefp

```

Feedback is done as follows, unless otherwise noted:

```

fdo_pre0:  rm -rf ./feedback.profile ./SunWS_cache
PASS1:    -xprofile=collect:./feedback
PASS2:    -xprofile=use:./feedback

```

Portability:

```

176.gcc:   -Dalloca=__builtin_alloca -DHOST_WORDS_BIG_ENDIAN
186.crafty: -DSUN
252.eon:   -library=iostream
253.perlbnk: -DSPEC_CPU2000_SOLARIS
254.gap:   -DSYS_IS_USG -DSYS_HAS_TIME_PROTO -DSYS_HAS_SIGNAL_PROTO
            -DSYS_HAS_CALLOC_PROTO -DSYS_HAS_IOCTL_PROTO

```

Shell Environments:

```

Stack size set to unlimited via "ulimit -s unlimited"
MPSSHEAP=4M
MPSSSTACK=4M
LD_PRELOAD=mpss.so.1

```

Kernel Parameters (/etc/system):

```

set autoup=900
set tune_t_fsflushr=1
cpu_bringup_set=4

```

System Settings:

```

2nd CPU disabled at boot time by using /etc/system
parameter "cpu_bringup_set"

```