



CINT2000 Result

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Sun Microsystems
Sun Fire V480 (1050MHz)

SPECint2000 = 619
SPECint_base2000 = 556

SPEC license #: 6 Tested by: Sun Microsystems Test date: Apr-2003 Hardware Avail: Jul-2003 Software Avail: May-2003

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	336	417	274	511	
175.vpr	1400	295	474	275	510	
176.gcc	1100	188	586	175	628	
181.mcf	1800	306	588	265	679	
186.crafty	1000	173	577	149	672	
197.parser	1800	363	496	314	574	
252.eon	1300	194	670	186	698	
253.perlbnk	1800	324	555	304	592	
254.gap	1100	272	404	238	462	
255.vortex	1900	221	859	197	965	
256.bzip2	1500	247	606	231	649	
300.twolf	3000	525	572	484	620	

Hardware

CPU: UltraSPARC III Cu
 CPU MHz: 1050
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip
 CPU(s) orderable: 2,4
 Parallel: No
 Primary Cache: 32KBI+64KBD on chip
 Secondary Cache: 8MB(I+D) off chip
 L3 Cache: None
 Other Cache: None
 Memory: 4GB 4-way interleaved
 Disk Subsystem: 2 x 36GB Seagate ST336605
 Other Hardware: None

Software

Operating System: Solaris 9
 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:  -xO5 -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 -ll2amm
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 cpu_bringup_set=4
set autoup=900
set tune_t_fsflushr=1

```

System Settings:

```

2nd CPU disabled at boot time by using /etc/system
parameter "cpu_bringup_set" to bring up only cpu#2

```