



CINT2000 Result

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Sun Microsystems
Sun Blade 2000 (1.2GHz)

SPECint2000 = 722
SPECint_base2000 = 642

SPEC license #: 6 Tested by: Sun Microsystems, Santa Clara Test date: Mar-2003 Hardware Avail: Apr-2003 Software Avail: May-2003

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	293	477	238	587	
175.vpr	1400	254	551	236	593	
176.gcc	1100	162	681	151	726	
181.mcf	1800	263	683	213	847	
186.crafty	1000	150	665	128	778	
197.parser	1800	315	571	272	663	
252.eon	1300	169	770	162	803	
253.perlbmk	1800	282	639	257	700	
254.gap	1100	236	465	205	537	
255.vortex	1900	191	997	168	1131	
256.bzip2	1500	215	697	200	751	
300.twolf	3000	456	658	422	711	

Hardware

CPU: UltraSPARC III Cu
 CPU MHz: 1200
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip
 CPU(s) orderable: 1-2
 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 73GB 10K RPM FC-AL Disk, Sun Option X6805A
 Other Hardware: None

Software

Operating System: Solaris 9 12/02
 Compiler: Sun ONE Studio 8 (pre-FCS build 3/09)
 Sun Performance Library 8 (pre-FCS build 3/09)
 File System: ufs with ufs logging
 System State: Multi-User

Notes/Tuning Information

Compiler invocation:

```
C: cc
CXX: CC
F90: f90
F77: f90
```

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):

```

autoup=900
tune_t_fsflushr=1

```

System Settings:

2nd cpu physically removed from system