



# CINT2000 Result

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**Fujitsu Limited**  
**PRIMEPOWER200 (700MHz)**

SPECint2000 = **521**  
SPECint\_base2000 = **446**

SPEC license #: 19 Tested by: Fujitsu Limited Test date: Jun-2002 Hardware Avail: Aug-2002 Software Avail: May-2002

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	345	405	300	467	
175.vpr	1400	349	401	313	448	
176.gcc	1100	365	301	236	466	
181.mcf	1800	359	502	359	502	
186.crafty	1000	228	439	174	576	
197.parser	1800	389	463	353	510	
252.eon	1300	244	532	220	591	
253.perlbnk	1800	356	506	313	576	
254.gap	1100	408	270	403	273	
255.vortex	1900	286	665	198	959	
256.bzip2	1500	317	473	288	522	
300.twolf	3000	548	547	507	592	

### Hardware

CPU: SPARC64 GP  
CPU MHz: 700  
FPU: Integrated  
CPU(s) enabled: 1 core, 1 chip, 1 core/chip  
CPU(s) orderable: 1 to 2  
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: Ethernet

### Software

Operating System: Solaris 8 2/02 with patches 108434-07 and 108435-07.  
Compiler: Fujitsu Parallelnavi 1.0.2 with patches 911403-01 and 911746-01, Sun ONE Studio 7 with patches 111704-01, 111705-01, 111706-01, 111708-01, 111709-01, 111715-01 and 111716-01, Sun Performance Library 7  
File System: ufs  
System State: single user

## Notes/Tuning Information

Baseline (except 252.eon, for Parallelnavi 1.0.2): -Kfast\_GP=3,largepage  
fdo\_pre0=rm -rf `pwd`/\*.fbk  
PASS1=-Kpg  
PASS2=-Kpu=\$(EXEBASE).fbk  
(252.eon, for Sun ONE Studio 7): -fast -xcrossfile -xtarget=ultra3  
fdo\_pre0=rm -rf `pwd`/../feedback.profile `pwd`/SunWS\_cache  
PASS1=-xprofile=collect:`pwd`/../feedback  
PASS2=-xprofile=use:`pwd`/../feedback

### Peak

(for Sun ONE Studio 7)  
fdo\_pre0=rm -rf `pwd`/../feedback.profile `pwd`/SunWS\_cache  
PASS1=-xprofile=collect:`pwd`/../feedback  
PASS2=-xprofile=use:`pwd`/../feedback  
164.gzip: -x05 -xtarget=ultra3 -xalias\_level=std -W2,-whole -xcrossfile -W2,-Ainline -xprefetch -Wc,-Qgsched-trace\_late=1,-Qgsched-spec\_load=1 -l12amm  
175.vpr: -fast -xarch=v8plusb -xalias\_level=std -xcrossfile -xsfpcnst -xdepend -W2,-whole,-Mt600,-Mr4000 -Wc,-Qeps:enabled=1,-Qeps:do\_spec\_load=1,-Qeps:rp\_filtering\_margin=100 -xregs=syst -xprefetch=auto,latx:5.0 -lprism32 -lmopt -lm  
176.gcc: -fast -xtarget=ultra3 -xcrossfile -W2,-whole -Wc,-Qgsched-trace\_late=1,-Qgsched-T4 -l12amm  
186.crafty: -fast -xtarget=ultra3 -xarch=v8plus -xF -xinline= -xcrossfile -Wc,-Qgsched-spec\_load=1,-Qiselect-funcalign=64



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## Notes/Tuning Information (Continued)

```

-xalias_level=strong -xregs=syst -W2,-Ashort_ldst,-Aivel:duplicate_loops -xprefetch=auto,latx:5.0
197.parser: -fast -xarch=v8plusb -xdepend -xprefetch=no%auto -xcrossfile
-xregs=syst -Wc,-Qgsched-trace_late=1,-Qgsched-T4 -xalias_level=strong -Wc,-Qipa:valueprediction
-W2,-Ashort_ldst,-Mt5000 -Wc,-Qiselect-funcalign=32 -lprism32
252.eon: -fast -xtarget=ultra3 -xcrossfile -xalias_level=compatible -xsafe=mem
-Qoption iropt -Mt2000,-xrestrict -Qoption cg -Qgsched-trace_spec_load=1,-Qgsched-trace_late=1
253.perlbnk: -xO5 -xtarget=ultra3 -xarch=v8plusb -xcrossfile
-xalias_level=strong -xsafe=mem -Wc,-Qgsched-trace_late=1,-Qgsched-T4,-Qgsched-trace_spec_load=1 -Wc,-Qinline_memcpy=32
-Wc,-Qiselect-funcalign=32,-Qicache-chbab=1 -Wc,-Qiselect-sw_pf_tbl_th=20 -W2,-Adata_access -xprefetch=auto,latx:5.0 -l12amm -dn
255.vortex: -fast -xtarget=ultra3 -xcrossfile
-W2,-Aheap,-reroll=1,-Aunroll,-Msl,-Mt600,-Mrl3000,-crit
-Wc,-Qdepgraph-early_cross_call=1 -Wc,-Qiselect-funcalign=32 -Wc,-Qpeep-Sh0 -xrestrict -xdepend -W2,-Amemopt -l12amm -lprism32
256.bzip2: -fast -xtarget=ultra3 -W2,-whole,-crit -xcrossfile -xalias_level=strong -Wc,-Qiselect-funcalign=32
-xdepend -xregs=syst -xsfpconst -Wc,-Qgsched-trace_spec_load=1 -xsafe=mem -l12amm -lprism32

```

(for Parallelnavi 1.0.2):

```

fdo_pre0=rm -rf `pwd`/*.fbk
PASS1=-Kpg
PASS2=-Kpu=$(EXEBASE).fbk
181.mcf: basepeak=yes
254.gap: -Kfast_GP=3,popt,eval,cfunc,largepage,xi=10
300.twolf: -Kfast_GP=5,eval,GREG,popt,cfunc,staticclump,use_rodata,xi=10,largepage,bcopy,nounroll,prefetch=4

```

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

```

Note:

```

System Tunables: (for /etc/system)
consistent_coloring=1, tune_t_fsflushr=86400, autoup=86400,
shmsys:shminfo_shmmax=1477846784, shmsys:shminfo_shmni=1024, shmsys:shminfo_shmseg=1024,shminfo_shmmin=1
(for /etc/opt/FJSVpnm/lpg.conf)
TSS=4G, SHMSEGSIZE=256M

```

Shell Environments:

```

LD_LIBRARY_PATH="/usr/lib:/opt/SUNWspro/lib/v8plusb:/opt/SUNWspro/prod/lib/v8plusb:/opt/FSUNf90/lib"
LD_LIBRARY_PATH_64="/usr/lib/64:/opt/SUNWspro/lib/v9:/opt/SUNWspro/prod/lib/v9"
PRISM_HEAP=268435456
PRISM_MODE=2

```

ONESTEP=yes was set for all baseline and peak benchmarks.  
Feedback directed optimization was used for all baseline and peak benchmarks.  
System board used with only one CPU present.