



# CINT2000 Result

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Sun Microsystems  
Sun Fire X4100

SPECint\_rate2000 = 70.0  
SPECint\_rate\_base2000 = 64.8

SPEC license #: 6 Tested by: Sun Microsystems, Santa Clara Test date: May-2006 Hardware Avail: Oct-2005 Software Avail: Apr-2004

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	4	117	55.4	4	117	55.4
175.vpr	4	120	54.1	4	117	55.7
176.gcc	4	69.7	73.2	4	69.1	73.8
181.mcf	4	213	39.2	4	171	49.0
186.crafty	4	70.4	65.9	4	63.6	73.0
197.parser	4	132	63.4	4	131	63.6
252.eon	4	70.5	85.5	4	54.5	111
253.perlbnk	4	122	68.7	4	122	68.7
254.gap	4	73.4	69.5	4	73.4	69.5
255.vortex	4	87.0	101	4	77.5	114
256.bzip2	4	131	53.2	4	129	53.9
300.twolf	4	203	68.7	4	170	81.8

### Hardware

CPU: AMD Opteron (TM) 275  
 CPU MHz: 2200  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
 CPU(s) orderable: 1,2 (order by # of chips)  
 Parallel: No  
 Primary Cache: 64KBI + 64KBD (on chip) per core  
 Secondary Cache: 1024KB (I+D) (on chip) per core  
 L3 Cache: N/A  
 Other Cache: N/A  
 Memory: 16GB (8x2GB, PC3200 CL3 DDR ECC Regd. SDRAM)  
 Disk Subsystem: SAS,36GB,10K RPM  
 Other Hardware: None

### Software

Operating System: Windows Server 2003 SP1 (64bit)  
 Compiler: Intel C++ 8.0 build 20040415Z for IA32  
 Microsoft Visual Studio .NET 7.0.9466 (libraries)  
 MicroQuill Smartheap Library 7.0  
 File System: NTFS  
 System State: default

## Notes/Tuning Information

shlw32M.lib is the SmartHeap library V7.0 from MicroQuill [www.microquill.com](http://www.microquill.com)

+FDO: PASS1=-Qprof\_gen PASS2=-Qprof\_use

Portability:

176.gcc: -Dalloca=\_alloca /F10000000

186.crafty: -DNT\_i386

253.perlbnk: -DSPEC\_CPU2000\_NTOS -DPERLDLL /MT

254.gap: -DSYS\_HAS\_CALLOC\_PROTO -DSYS\_HAS\_MALLOC\_PROTO

Baseline C: -fast -arch:SSE2 -Oi- +FDO

Baseline C++: -fast -arch:SSE2 -GX -GR

Peak Tuning:

164.gzip: basepeak=yes

175.vpr: -fast -arch:SSE2 +FDO

-Qoption,c,-ip\_ninl\_max\_stats=2000,-ip\_ninl\_max\_total\_stats=4500

176.gcc: -fast -arch:SSE2 +FDO -Oi- -Qunroll3

181.mcf: -fast -QaxN +FDO

186.crafty: -fast -arch:SSE2 +FDO

197.parser: -arch:SSE2 +FDO -Oi- -Qipo

252.eon: -fast -arch:SSE2 +FDO -Qansi\_alias

-Qoption,c,-ip\_ninl\_max\_stats=2000,-ip\_ninl\_max\_total\_stats=4500

253.perlbnk: basepeak=yes

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## Notes/Tuning Information (Continued)

```
254.gap:      basepeak=yes
255.vortex:   -fast -arch:SSE +FDO -Oi- shlw32m.lib
              -Qoption,c,-ip_ninl_max_stats=2000,-ip_ninl_max_total_stats=4500
256.bzip2:    -fast -Qunroll2
300.twolf:    -fast -arch:SSE2 +FDO -Qunroll3 shlw32m.lib -Qansi_alias
```

Default BIOS Setting was used.

'start /b /wait /affinity' command is used to bind CPU(s) to processes

This result was measured on the Sun Fire X4100. In addition, Sun has submitted the same result for the Sun Fire X4200, which is electronically equivalent to the Sun Fire X4100.