



CINT2000 Result

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Verari Systems
QuatreX-64 (TM), AMD Opteron (TM) 850

SPECint_rate2000 = 68.5
SPECint_rate_base2000 = 63.4

SPEC license #: 49 | Tested by: AMD, Austin, TX | Test date: Apr-2004 | Hardware Avail: Jun-2004 | Software Avail: Feb-2004

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	4	112	58.1	4	108	60.1
175.vpr	4	128	50.9	4	124	52.2
176.gcc	4	68.9	74.1	4	69.3	73.7
181.mcf	4	281	29.7	4	220	38.0
186.crafty	4	64.8	71.6	4	59.0	78.6
197.parser	4	136	61.3	4	139	60.2
252.eon	4	60.4	99.8	4	50.5	119
253.perlbnk	4	124	67.2	4	113	74.0
254.gap	4	78.3	65.2	4	75.3	67.8
255.vortex	4	87.6	101	4	83.7	105
256.bzip2	4	137	50.8	4	135	51.4
300.twolf	4	212	65.7	4	178	78.3

Hardware

CPU: AMD Opteron (TM) 850
 CPU MHz: 2400
 FPU: Integrated
 CPU(s) enabled: 4 cores, 4 chips, 1 core/chip
 CPU(s) orderable: 4
 Parallel: No
 Primary Cache: 64KBI + 64KBD on chip
 Secondary Cache: 1024KB(I+D) on chip
 L3 Cache: N/A
 Other Cache: N/A
 Memory: 8 x 512 MB PC3200 DDR SDRAM CL3.0
 Disk Subsystem: SCSI, Ultra 320, 10k rpm
 Other Hardware: None

Software

Operating System: Microsoft Windows Server 2003 Enterprise Edition
 Compiler: Intel C++ 8.0 build 20031229Z
 Microsoft Visual Studio .NET 7.0.9466 (libraries)
 MicroQuill Smartheap Library 6.0
 File System: NTFS
 System State: Default

Notes/Tuning Information

Tested by AMD

shlw32M6.lib is the SmartHeap library V6.0 from MicroQuill 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: -fast -arch:SSE +FDO shlw32M6.lib
 175.vpr: -fast -arch:SSE2 +FDO
 -Qoption,c,-ip_ninl_max_stats=2000 -Qoption,c,-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 -Qoption,c,-ip_ninl_max_total_stats=4500



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Notes/Tuning Information (Continued)

```
253.perlbnk:      -arch:SSE2 +FDO      -Qipo shlw32M6.lib
254.gap:          -fast -arch:SSE2 +FDO -Oi- -Oa
                  -Qoption,c,-ip_ninl_max_stats=500 -Qoption,c,-ip_ninl_max_total_stats=3000
255.vortex:      -fast -arch:SSE  +FDO -Oi- shlw32M6.lib
                  -Qoption,c,-ip_ninl_max_stats=2000 -Qoption,c,-ip_ninl_max_total_stats=4500
256.bzip2:       -fast                                     -Qunroll2
300.twolf:       -fast -arch:SSE2 +FDO      -Qunroll3 shlw32M6.lib -Qansi_alias
BIOS rev.: PQTDX0-C
```