



CINT2000 Result

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Advanced Micro Devices

Tyan Thunder K9QE (S4985) AMD Opteron (TM) 2220SE

SPECint_rate2000 = 87.4

SPECint_rate_base2000 = 77.0

SPEC license #: 49 | Tested by: AMD Austin, TX | Test date: Jul-2006 | Hardware Avail: Sep-2006 | Software Avail: Sep-2005

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	4	104	62.7	4	91.2	71.2
175.vpr	4	118	55.0	4	95.2	68.2
176.gcc	4	78.0	65.4	4	54.7	93.3
181.mcf	4	172	48.4	4	132	63.3
186.crafty	4	53.0	87.5	4	50.6	91.7
197.parser	4	106	79.1	4	106	78.5
252.eon	4	50.4	120	4	45.1	134
253.perlbnk	4	88.7	94.1	4	87.0	96.1
254.gap	4	60.7	84.0	4	60.7	84.0
255.vortex	4	75.2	117	4	70.1	126
256.bzip2	4	105	66.0	4	102	68.2
300.twolf	4	178	78.0	4	133	105

Hardware

CPU: AMD Opteron (TM) 2220SE
 CPU MHz: 2800
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
 CPU(s) orderable: 1,2,4
 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: 8x512MB, DDR2-667 CL4 ECC Reg
 Disk Subsystem: SATA, 74Gb
 Other Hardware: None

Software

Operating System: Windows Server 2003 SP1 (32-bit)
 Compiler: Intel C++ 9.0 build 20050912Z 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)

+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: -O3 -Qipo -Op +FDO

Baseline C++: -O3 -Qipo -Qcxx-features +FDO

Peak Tuning:

164.gzip: -O3 -Qipo -QxW +FDO

175.vpr: -O3 -Qipo -QxW +FDO

-Qoption,c,-ip_ninl_max_stats=2000,-ip_ninl_max_total_stats=4500

176.gcc: -O3 -Qipo -QxW -Oi- -Qunroll3 +FDO

181.mcf: -O3 -Qipo -QaxN +FDO

186.crafty: -O3 -Qipo -QxW +FDO

197.parser: -QxW +FDO -Oi- -Qipo

252.eon: -O3 -Qipo -QxW +FDO -Qansi_alias

-Qoption,c,-ip_ninl_max_stats=2000,-ip_ninl_max_total_stats=4500

253.perlbnk: -O3 -Qipo -QxW +FDO

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Notes/Tuning Information (Continued)

```
254.gap:          basepeak = yes
255.vortex:       -O3 -Qipo -arch:SSE +FDO -Oi- shlW32M.lib
                  -Qoption,c,-ip_ninl_max_stats=2000,-ip_ninl_max_total_stats=4500
256.bzip2:        -O3 -Qipo -Qunroll2
300.twolf:        -O3 -Qipo -QxW +FDO -Qunroll13 shlW32M.lib -Qansi_alias
All memory slots populated on all CPU(s)
'start /b /wait /affinity' command is used to bind CPU(s) to processes
The system can be built using a Zippy 700W EPS12V power supply and any SSI-MEB case.
BIOS Changes: Enable Basic ECC
```