



CINT2000 Result

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Advanced Micro Devices

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

SPECint_rate2000 = 44.0

SPECint_rate_base2000 = 38.8

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	2	103	31.4	2	90.6	35.9
175.vpr	2	118	27.5	2	95.2	34.1
176.gcc	2	77.5	32.9	2	54.1	47.2
181.mcf	2	170	24.6	2	130	32.2
186.crafty	2	53.0	43.8	2	50.5	45.9
197.parser	2	105	39.8	2	105	39.6
252.eon	2	50.3	59.9	2	45.0	67.0
253.perlbnk	2	88.0	47.5	2	86.1	48.5
254.gap	2	60.2	42.4	2	60.2	42.4
255.vortex	2	74.6	59.1	2	69.6	63.3
256.bzip2	2	104	33.5	2	102	34.2
300.twolf	2	176	39.6	2	133	52.1

Hardware

CPU: AMD Opteron (TM) 2220SE
 CPU MHz: 2800
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 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: 4x512MB, 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 -Qunroll3 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
```