CINT2000 Result

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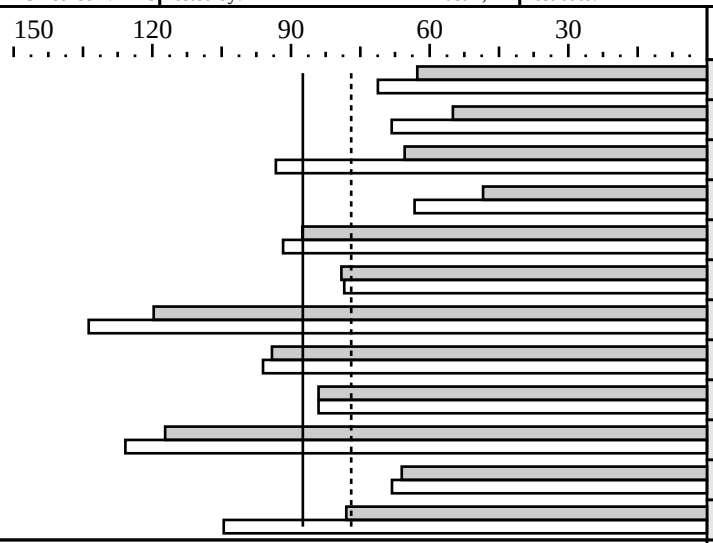
Advanced Micro Devices

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.perlbmk	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.perlbmk:  -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.perlbmk:  -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
```