# CFP2000 Result

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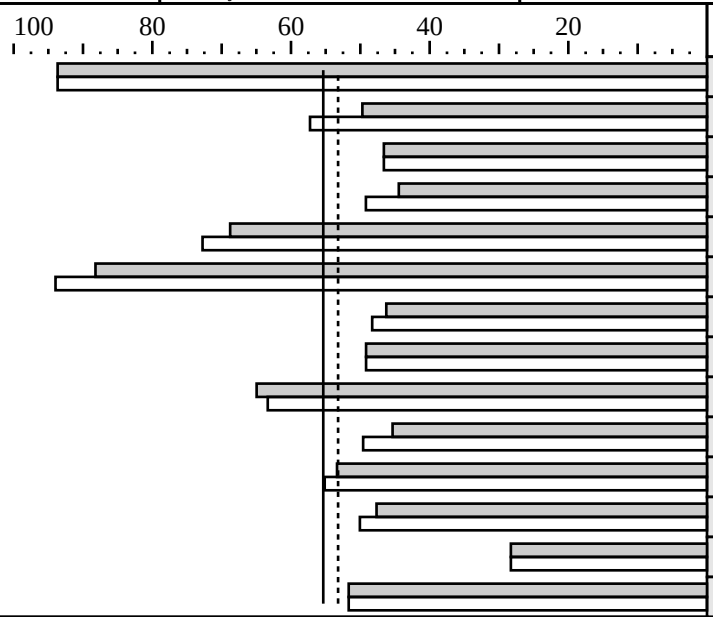
## Advanced Micro Devices

TYAN S2895 Thunder K8WE, AMD Opteron (TM) 270

SPECfp_rate2000 = 55.3

SPECfp_rate_base2000 = 53.2

SPEC license #: 49 | Tested by: AMD, Austin, TX | Test date: Apr-2005 | Hardware Avail: May-2005 | Software Avail: Mar-2005




| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|---|---|---|---|---|---|---|
| 168.wupwise | 4 | 79.3 | 93.7 | 4 | 79.3 | 93.7 |
| 171.swim | 4 | 289 | 49.7 | 4 | 251 | 57.3 |
| 172.mgrid | 4 | 179 | 46.6 | 4 | 179 | 46.6 |
| 173.applu | 4 | 219 | 44.5 | 4 | 198 | 49.2 |
| 177.mesa | 4 | 94.5 | 68.8 | 4 | 89.3 | 72.8 |
| 178.galgel | 4 | 153 | 88.2 | 4 | 143 | 94.0 |
| 179.art | 4 | 261 | 46.3 | 4 | 250 | 48.3 |
| 183.equake | 4 | 123 | 49.2 | 4 | 123 | 49.2 |
| 187.facerec | 4 | 136 | 65.0 | 4 | 139 | 63.4 |
| 188.ammp | 4 | 225 | 45.3 | 4 | 206 | 49.6 |
| 189.lucas | 4 | 174 | 53.4 | 4 | 168 | 55.1 |
| 191.fma3d | 4 | 204 | 47.7 | 4 | 195 | 50.1 |
| 200.sixtrack | 4 | 180 | 28.3 | 4 | 180 | 28.3 |
| 301.apsi | 4 | 233 | 51.7 | 4 | 233 | 51.7 |

### Hardware

| | |
|---|---|
| CPU: | AMD Opteron (TM) 270 |
| CPU MHz: | 2000 |
| FPU: | Integrated |
| CPU(s) enabled: | 4 cores, 2 chips, 2 cores/chip |
| CPU(s) orderable: | 1-2 |
| Parallel: | No |
| Primary Cache: | 64KBI + 64KBD/core |
| Secondary Cache: | 1024KB(I+D)/core |
| L3 Cache: | N/A |
| Other Cache: | N/A |
| Memory: | 8x512 MB PC3200 CL2.5 ECC Reg |
| Disk Subsystem: | SATA, Western Digital WD740GD, 10000 RPM |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | Microsoft Windows Server 2003 Enterprise Edition SP1 |
| Compiler: | Intel C++ 8.0 build 20040714Z, Intel Fortran 8.1 build 20041019Z, PGI Fortran compiler 5.2-4 for Windows XP, AMD Core Math library Version 2.1 (ACML), Microsoft Visual Studio .NET 7.0.9466 (libraries), MicroQuill Smartheap Library 7.0 |
| File System: | NTFS |
| System State: | Default |

## Notes/Tuning Information

```
+FDO: PASS1=-Qprof_gen  PASS2=-Qprof_use
+ACML is linking with AMD Core Math Library V2.1
ONESTEP is set for all peak runs.
ifort is the Intel Fortran compiler, icl is the Intel C++ compiler and
pgf90 is the PGI Fortran compiler.
The Intel C++ 8.0 and the Intel Fortran 8.1 compilers are setup in the following order:
   "c:program filesintel ortrancompiler80ia32 inifortvars.bat"
   "c:program filesintelcppcompiler80ia32 iniclvars.bat"
To make sure that the correct libraries are selected, the following link option is
added for the peak runs where Intel Fortran 8.1 compiler is used:
    LDOPT = -Fe$@ -link -LIBPATH:"c:program filesintel ortrancompiler80ia32lib"
 (denoted by +LIBPATH:INTEL8.1 in the optimization flags listed below)
Portability:
  178.galgel: -Mfixed
Baseline: C      : icl   -fast -arch:SSE2 -QaxW +FDO
Baseline: Fortran: pgf90 -fastsse -Mipa=fast,inline
```

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## Notes/Tuning Information (Continued)

```
  Peak tuning:
  168.wupwise:       pgf90 basepeak=yes
  171.swim:          ifort -Qipo  -O3  -QaxN -QxW +FDO -Qunroll0     +LIBPATH:INTEL8.1
  172.mgrid:         pgf90 basepeak=yes
  173.applu:         ifort -Qipo  -O3  -QaxN -QxW +FDO -auto         +LIBPATH:INTEL8.1
  177.mesa:          icl   -Qipo -arch:SSE2       +FDO -Qunroll1 -Qansi_alias
                         -Qoption,f,-ip_ninl_max_stats=1500,-ip_ninl_max_total_stats=4500
  179.art:           icl   -Qipo             -Zp4 +FDO
  183.equake:        icl   basepeak=yes
  178.galgel:        pgf90 -fastsse -Mipa=fast,safe RM_SOURCES=lapak.f90 -Munix +ACML
  187.facerec:       ifort -Qipo             -QxW +FDO -Qunroll3     +LIBPATH:INTEL8.1
                         -Qoption,f,-ip_ninl_max_stats=2500,-ip_ninl_max_total_stats=7000
  188.ammp:          icl   -Oa   -arch:SSE2  -Zp4      -Qansi_alias
  189.lucas:         ifort -Qipo             -QxW      -Qunroll1     +LIBPATH:INTEL8.1
  191.fma3d:         ifort -Qipo       -QaxN -QxW +FDO -Qansi-alias- +LIBPATH:INTEL8.1
  200.sixtrack:      pgf90 basepeak=yes
  301.apsi:          pgf90 basepeak=yes
Bios Rev 1.00.2895
The start /b /wait /affinity command is used to bind CPU(s) to processes.
The tested system can be assembled using the SSI EEB v3.5 footprint, an
Antec True 550 EPS12V 550W power supply, and a PCI-e graphics card.
```