



# CFP2000 Result

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**Advanced Micro Devices**  
TYAN Thunder K8S Pro S2882, AMD Opteron (TM) 252

SPECfp2000 = **1742**  
SPECfp\_base2000 = **1664**

SPEC license #: 49 Tested by: AMD, Austin, TX Test date: Feb-2005 Hardware Avail: Feb-2005 Software Avail: Jan-2005

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	1000 2000 3000 4000			
168.wupwise	1600	59.9	2670	59.9	2670	[Bar chart showing ratio 2670]			
171.swim	3100	140	2211	137	2267	[Bar chart showing ratio 2267]			
172.mgrid	1800	126	1431	126	1431	[Bar chart showing ratio 1431]			
173.applu	2100	149	1405	134	1572	[Bar chart showing ratio 1572]			
177.mesa	1400	74.1	1889	69.2	2023	[Bar chart showing ratio 2023]			
178.galgel	2900	106	2729	97.5	2974	[Bar chart showing ratio 2974]			
179.art	2600	145	1798	143	1812	[Bar chart showing ratio 1812]			
183.quake	1300	80.8	1609	80.8	1609	[Bar chart showing ratio 1609]			
187.facerec	1900	100	1897	98.0	1939	[Bar chart showing ratio 1939]			
188.amp	2200	176	1254	160	1376	[Bar chart showing ratio 1376]			
189.lucas	2000	113	1766	98.4	2033	[Bar chart showing ratio 2033]			
191.fma3d	2100	147	1427	135	1555	[Bar chart showing ratio 1555]			
200.sixtrack	1100	139	794	139	794	[Bar chart showing ratio 794]			
301.apsi	2600	175	1486	175	1486	[Bar chart showing ratio 1486]			

### Hardware

CPU: AMD Opteron (TM) 252  
CPU MHz: 2600  
FPU: Integrated  
CPU(s) enabled: 1 core, 1 chip, 1 core/chip  
CPU(s) orderable: 1  
Parallel: No  
Primary Cache: 64KBI + 64KBD on chip  
Secondary Cache: 1024KB(I+D) on chip  
L3 Cache: N/A  
Other Cache: N/A  
Memory: 4x512 MB PC3200 (Kingston) CL2.5 ECC Reg  
Disk Subsystem: IDE, Western Digital WD2000JB, 7200 rpm  
Other Hardware: None

### Software

Operating System: Microsoft Windows Server 2003, Enterprise Edition  
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 files\intel\fortran\compiler80\ia32\bin\ifortvars.bat"
"c:\program files\intel\cpp\compiler80\ia32\bin\iclvars.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 files\intel\fortran\compiler80\ia32\lib"
(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)

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Peak tuning:
168.wupwise:      pgf90 basepeak=yes
171.swim:         ifort -Qipo -O3 -QaxN -QxW +FDO -Qunroll10 +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 -Qunroll11 -Qansi_alias
                  -Qoption,f,-ip_ninl_max_stats=1500,-ip_ninl_max_total_stats=4500
179.art:          icl -Qipo -Zp4 +FDO
183.earthquake:  icl basepeak=yes
178.galgel:      pgf90 -fastsse -Mipa=fast,safe RM_SOURCES=lapak.f90 -Munix +ACML
187.facerec:     ifort -Qipo -QxW +FDO -Qunroll13 +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 -Qunroll11 +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 v3.E

The tested system can be assembled using an Extended ATX footprint  
ANTEC True 550Watt EPS12V power supply