



# CFP2000 Result

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Advanced Micro Devices  
TYAN S2865 K8E Tomcat, AMD Opteron (TM) 152

SPECfp2000 = 1698  
SPECfp\_base2000 = 1630

SPEC license #: 49 Tested by: AMD, Austin, TX Test date: Jul-2005 Hardware Avail: Aug-2005 Software Avail: Oct-2004

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	1000 2000 3000 4000			
168.wupwise	1600	60.3	2655	60.3	2655	[Bar chart showing ratio 2655]			
171.swim	3100	167	1860	153	2025	[Bar chart showing ratio 2025]			
172.mgrid	1800	127	1412	127	1412	[Bar chart showing ratio 1412]			
173.applu	2100	153	1370	139	1516	[Bar chart showing ratio 1516]			
177.mesa	1400	73.3	1909	69.3	2021	[Bar chart showing ratio 2021]			
178.galgel	2900	110	2643	103	2825	[Bar chart showing ratio 2825]			
179.art	2600	149	1740	145	1789	[Bar chart showing ratio 1789]			
183.quake	1300	79.8	1630	79.8	1630	[Bar chart showing ratio 1630]			
187.facerec	1900	101	1873	99.4	1912	[Bar chart showing ratio 1912]			
188.amp	2200	167	1314	157	1400	[Bar chart showing ratio 1400]			
189.lucas	2000	120	1661	111	1803	[Bar chart showing ratio 1803]			
191.fma3d	2100	147	1430	137	1532	[Bar chart showing ratio 1532]			
200.sixtrack	1100	137	801	137	801	[Bar chart showing ratio 801]			
301.apsi	2600	179	1456	179	1456	[Bar chart showing ratio 1456]			

### Hardware

CPU: AMD Opteron (TM) 152 (939-pin)  
 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 DDR400 CL2.0  
 Disk Subsystem: SATA, Western Digital WD740GD, 10000 rpm  
 Other Hardware: None

### Software

Operating System: Microsoft Windows XP Pro SP2  
 Compiler: Intel C++ 8.0 build 20040714Z,  
 Intel Fortran 8.1 for IA32 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
Peak tuning:
```



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## Notes/Tuning Information (Continued)

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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.earthquake: 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

```

The tested system can be assembled using a standard ATX footprint, an Antec True 550 Watt EPS12V power supply, and a PCI or PCIe graphics card.  
 All memory slots were populated with Corsair CMX512-3200XL.  
 Memory timings manually set in BIOS: CAS=2, TRCD=2, TRAS=5, TRP=2  
 BIOS version 1.01