



# CFP2000 Result

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Advanced Micro Devices  
TYAN Tomcat K8E (S2865), AMD Opteron (TM) 154

SPECfp2000 = 1929  
SPECfp\_base2000 = 1778

SPEC license #: 49 | Tested by: AMD, Austin, TX | Test date: Aug-2005 | Hardware Avail: Sep-2005 | Software Avail: Jun-2005

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	57.0	2806	57.2	2798	
171.swim	3100	152	2039	144	2154	
172.mgrid	1800	108	1665	108	1662	
173.applu	2100	146	1434	134	1567	
177.mesa	1400	138	1018	68.0	2057	
178.galgel	2900	98.4	2948	93.2	3112	
179.art	2600	58.8	4424	58.8	4424	
183.quake	1300	74.9	1736	74.6	1742	
187.facerec	1900	94.7	2006	94.8	2003	
188.amp	2200	170	1291	145	1514	
189.lucas	2000	113	1765	106	1894	
191.fma3d	2100	128	1637	127	1650	
200.sixtrack	1100	128	857	128	857	
301.apsi	2600	166	1566	166	1567	

### Hardware

CPU: AMD Opteron (TM) 154 (939-pin)  
CPU MHz: 2800  
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++ 9.0 build 20050430z for IA32, Intel Fortran 9.0 build 20050430z for IA32, PGI Fortran compiler 6.0-4 for Windows XP, PGI C compiler 6.0-4 for Windows XP, ACML Version 2.5.3 (bundled with PGI 6.0-4) Microsoft Visual Studio .NET 7.0.9466  
File System: NTFS  
System State: default

## Notes/Tuning Information

```
+FDO:
  icl, ifort : PASS1=-Qprof_gen PASS2=-Qprof_use
  pgf90      : PASS1=-Mpfi      PASS2=-Mpfo
ifort is the Intel Fortran compiler, icl is the Intel C++ compiler and
pgf90 is the PGI Fortran 90 compiler.
pgcc is the PGI C compiler.
ONESTEP is set to 1 for every compile with the PGI compilers.
Portability:
178.galgel: -Mfixed
Baseline: C : pgcc -fastsse -Mipa=fast,inline
Baseline: Fortran: pgf90 -fastsse -Mipa=fast,inline +FDO
Peak tuning:
168.wupwise: pgf90 -fastsse -Mipa=fast,inline -Mvect
171.swim: ifort -Qipo -O3 -QaxN -QxW -Qunroll0 +FDO
172.mgrid: pgf90 -fastsse -Mipa=fast,inline
173.applu: ifort -Qipo -O3 -QaxN -QxW -auto +FDO
177.mesa: icl -Qipo -arch:SSE2 -Qunroll1 -Qansi_alias +FDO
```



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## Notes/Tuning Information (Continued)

-Qoption,f,-ip\_ninl\_max\_stats=1500,-ip\_ninl\_max\_total\_stats=4500

```

178.galgel:      pgf90  -fastsse -Mipa=fast,safe RM_SOURCES=lapak.f90
                 -Munix -lacml
179.art:         pgcc   basepeak=yes
183.quake:      icl    -fast -arch:SSE2 -QaxW +FDO
187.facerec:    pgf90  -fastsse -Mipa=fast,inline +FDO
188.amp:        icl    -Oa  -arch:SSE2 -Zp4 -Qansi_alias
189.lucas:      ifort  -Qipo -QxW -Qunroll1
191.fma3d:      pgf90  -Mipa=fast,inline -fastsse -Mnovect +FDO
200.sixtrack:   pgf90  -fastsse -Mipa=fast,inline
301.apsi:       pgf90  -fastsse -Mipa=fast,inline

```

The tested system can be assembled using a standard ATX case and an Antec True 550 Watt EPS12V power supply.

All memory slots were populated with Corsair CMX512-3200XL.

Memory timings manually set in BIOS: CAS=2, TRCD=2, TRAS=5, TRP=2

BIOS V2.00b