



CFP2000 Result

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

SPECfp2000 = 1898
SPECfp_base2000 = 1737

SPEC license #: 49 Tested by: AMD, Austin, Texas Test date: Dec-2005 Hardware Avail: Aug-2005 Software Avail: Oct-2005

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	56.3	2840	56.8	2816	
171.swim	3100	161	1922	145	2143	
172.mgrid	1800	112	1613	112	1611	
173.applu	2100	154	1367	140	1503	
177.mesa	1400	132	1059	63.4	2207	
178.galgel	2900	102	2842	95.8	3026	
179.art	2600	59.2	4393	59.2	4393	
183.quake	1300	77.3	1682	76.7	1694	
187.facerec	1900	94.0	2021	94.0	2021	
188.amp	2200	172	1279	147	1499	
189.lucas	2000	119	1676	111	1796	
191.fma3d	2100	133	1574	131	1602	
200.sixtrack	1100	129	855	128	857	
301.apsi	2600	178	1458	179	1456	

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: 2x512MB, DDR400 CL2
Disk Subsystem: IDE, 40 GB
Other Hardware: None

Software

Operating System: Windows Server 2003 Enterprise edition (32 bit)
Compiler: Intel C++ 9.0 build 20050912Z for IA32, Intel Fortran 9.0 build 20050912Z for IA32, Microsoft Visual Studio .NET 7.0.9466 (libraries) PGI Fortran compiler 6.0-5 for Windows XP, PGI C compiler 6.0-5 for Windows XP, ACML Version 2.5.3 (bundled with PGI 6.0-5)
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 -QxW -Qunroll1 -Qansi_alias +FDO
```



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Notes/Tuning Information (Continued)

-Qoption,c,-ip_ninl_max_stats=1500,-ip_ninl_max_total_stats=4500

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178.galgel:      pgf90  -fastsse -Mipa=fast,safe -Munix -lacml
                  RM_SOURCES=lapak.f90
179.art:         pgcc   basepeak=yes
183.equake:      icl    -O3 -Qipo -QxW +FDO
187.facerec:     pgf90  basepeak=1
188.amp:         icl    -Oa  -QxW  -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

```

Corsair CMX512-3200XL memory used in Dual Channel configuration
Memory timings manually set in BIOS: CAS=2, Trcd=2, Tras=5, Trp=2
BIOS rev 3.00

The tested system can be assembled using a standard ATX case and an Antec True 550 watt EPS12V Power Supply