



# CFP2000 Result

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## Advanced Micro Devices

Tyan Thunder K8QS Pro (S4882), AMD Opteron (TM) 850

SPECfp\_rate2000 = 61.6

SPECfp\_rate\_base2000 = 60.0

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	85.3	87.1	4	85.3	87.1
171.swim	4	152	94.7	4	152	94.7
172.mgrid	4	159	52.6	4	159	52.6
173.applu	4	190	51.3	4	190	51.3
177.mesa	4	83.7	77.6	4	78.0	83.3
178.galgel	4	134	100	4	124	108
179.art	4	258	46.8	4	237	50.9
183.equake	4	111	54.3	4	111	54.3
187.facerec	4	143	61.8	4	143	61.8
188.amp	4	215	47.5	4	189	53.9
189.lucas	4	134	69.4	4	133	69.8
191.fma3d	4	182	53.5	4	182	53.5
200.sixtrack	4	166	30.8	4	166	30.8
301.apsi	4	227	53.2	4	227	53.2

### Hardware

CPU: AMD Opteron (TM) 850  
 CPU MHz: 2400  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 4 chips, 1 core/chip  
 CPU(s) orderable: 4  
 Parallel: No  
 Primary Cache: 64KBI + 64KBD on chip  
 Secondary Cache: 1024KB(I+D) on chip  
 L3 Cache: N/A  
 Other Cache: N/A  
 Memory: 16x512 MB PC3200 CL3.0 ECC Registered  
 Disk Subsystem: SCSI, Seagate Cheetah ST336753LW  
 Ultra 320, 15K rpm  
 Other Hardware: None

### Software

Operating System: Microsoft Windows Server 2003, Enterprise Edition  
 Compiler: Intel C++ 8.0 build 20040611Z, Intel Fortran 8.0 build 20040519Z, PGI Fortran compiler 5.2-1 for Windows XP, AMD Core Math Library Version 2.0 (ACML), Microsoft Visual Studio .NET 7.0.9466 (libraries), MicroQuill Smartheap Library 7.0  
 File System: NTFS  
 System State: Default

## Notes/Tuning Information

Tested by Advanced Micro Devices  
 +FDO: PASS1=-Qprof\_gen PASS2=-Qprof\_use  
 +ACML is the AMD Core Math Library V2.0  
 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.  
 Portability:  
 178.galgel: -Mfixed  
 Baseline: C : icl -fast -arch:SSE2 -QaxW +FDO  
 Baseline: Fortran: pgf90 -fastsse -Mipa=fast,inline  
 Peak tuning:  
 168.wupwise: pgf90 basepeak=yes  
 171.swim: ifort basepeak=yes  
 172.mgrid: pgf90 basepeak=yes  
 173.applu: pgf90 basepeak=yes  
 177.mesa: icl -Qipo -arch:SSE2 +FDO -Qunroll1 -Qansi\_alias



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## Notes/Tuning Information (Continued)

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

```

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

```

BIOS rev. 1.02

All memory slots populated on all CPU(s)

The tested system can be assembled using an SSI MEB footprint case, such as the CCSI RC0352 3U rackmount case, and a Tyan recommended 650W EPS-12V power supply, such as the Enermax 660W power supply (PEG851AX-VH)

Physical Address Extension (PAE) enabled