



# CFP2000 Result

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## Appro 4144H

SPECfp\_rate2000 = 52.5

SPECfp\_rate\_base2000 = 46.9

SPEC license #: 49 Tested by: AMD, Austin, TX Test date: Sep-2003 Hardware Avail: Sep-2003 Software Avail: May-2003

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	136	54.6	4	126	58.8
171.swim	4	265	54.3	4	181	79.7
172.mgrid	4	209	40.0	4	203	41.2
173.applu	4	275	35.4	4	205	47.5
177.mesa	4	103	63.3	4	101	64.4
178.galgel	4	186	72.2	4	152	88.7
179.art	4	283	42.6	4	261	46.3
183.quake	4	154	39.1	4	119	50.8
187.facerec	4	163	54.0	4	169	52.3
188.amp	4	194	52.6	4	190	53.6
189.lucas	4	166	56.0	4	166	56.0
191.fma3d	4	192	50.8	4	192	50.8
200.sixtrack	4	229	22.3	4	203	25.1
301.apsi	4	275	43.8	4	250	48.3

### Hardware

CPU: AMD Opteron (TM) 846  
CPU MHz: 2000  
FPU: Integrated  
CPU(s) enabled: 4 cores, 4 chips, 1 core/chip  
CPU(s) orderable: 1,2,4  
Parallel: No  
Primary Cache: 64KBI + 64KBD on chip  
Secondary Cache: 1024KB(I+D) on chip  
L3 Cache: N/A  
Other Cache: N/A  
Memory: 8x512MB Registered ECC DRR 333, CL2.5  
Disk Subsystem: SCSI, U160, 18GB 15k RPM  
Other Hardware: None

### Software

Operating System: Microsoft Windows 2003 Server Enterprise Edition  
Compiler: Intel C/C++ 7.0 build 20021212Z and Intel Fortran 7.0 build 20021212Z  
Compaq Visual Fortran Compiler Version 6.6 (Update B)  
Microsoft Visual Studio .NET 7.0.9466 (for libraries)  
MicroQuill SmartHeap Library 6.0  
File System: NTFS  
System State: Default

## Notes/Tuning Information

+FDO: PASS1=-Qprof\_gen PASS2=-Qprof\_use  
icl and ifl are the Intel C/C++ and Fortran compilers  
f90 is the Compaq Fortran compiler  
shlw32M6.lib is the SmartHeap library V6.0 from MicroQuill www.microquill.com  
Portability:  
178.galgel: -FI -Fe\$@ -link -stack:32000000  
Baseline: C icl +FDO -O3 -QxW -Qipo  
Baseline: Fortran ifl +FDO -O3 -QxW -Qipo  
Peak tuning:  
168.wupwise: ifl +FDO -QxK -Qipo -Ow  
171.swim: f90 -Optimize:5 -alignment:dcommons -alignment:records  
-alignment:sequence -architecture:k7  
-assume:noaccuracy\_sensitive -math\_library:fast -tune:k7  
172.mgrid: ifl +FDO -O3 -QaxW -Qipo -Oa -Qprefetch-  
173.applu: ifl +FDO -O3 -QxK -Qipo -Qscalar\_rep- -Zp8  
177.mesa: icl +FDO -O3 -QxW -Qipo -Oa -Qscalar\_rep-  
178.galgel: f90 -Optimize:5 -fast



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## Notes/Tuning Information (Continued)

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179.art:          icl          -Qipo -Oa          -Qunroll14 -Zp4
183.quake:       icl          -O3 -QxK  -Qipo -Oa  shlw32M6.lib -Zp4
187.facerec:     ifl +FDO -O3 -QaxW -Qipo          -Qscalar_rep- -Qunroll11
188.ampp:        icl          -QxW          -Oa
189.lucas:       ifl +FDO -O3 -QxW  -Qipo          -Qprefetch-
191.fma3d:       ifl basepeak=1
200.sixtrack:    ifl          -Qipo -Oa          -Zp4
301.apsi:        f90 -Optimize:5 -fast
ONESTEP is used for all base and peak runs
ECC on, ECC scrubbing off

```