



# CFP2000 Result

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Alpha Processor, Inc.  
API UP2000 750 MHz

SPECfp2000 = 533

SPECfp\_base2000 = 478

SPEC license #: 537 Tested by: API Test date: Jun-2000 Hardware Avail: Oct-2000 Software Avail: Feb-2000

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	300 600 900 1200			
168.wupwise	1600	324	494	298	537	[Bar chart showing ratio 537]			
171.swim	3100	367	845	351	882	[Bar chart showing ratio 882]			
172.mgrid	1800	368	489	359	502	[Bar chart showing ratio 502]			
173.applu	2100	575	365	460	457	[Bar chart showing ratio 457]			
177.mesa	1400	233	601	226	621	[Bar chart showing ratio 621]			
178.galgel	2900	667	435	381	761	[Bar chart showing ratio 761]			
179.art	2600	290	898	246	1056	[Bar chart showing ratio 1056]			
183.earthquake	1300	609	214	597	218	[Bar chart showing ratio 218]			
187.facerec	1900	292	650	232	818	[Bar chart showing ratio 818]			
188.amp	2200	570	386	537	410	[Bar chart showing ratio 410]			
189.lucas	2000	353	567	360	555	[Bar chart showing ratio 555]			
191.fma3d	2100	456	460	427	491	[Bar chart showing ratio 491]			
200.sixtrack	1100	365	301	374	294	[Bar chart showing ratio 294]			
301.apsi	2600	582	447	557	467	[Bar chart showing ratio 467]			

### Hardware

CPU: Alpha 21264A  
 CPU MHz: 750  
 FPU: Integrated  
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip  
 CPU(s) orderable: 1 to 2  
 Parallel: No  
 Primary Cache: 64KB(I)+64KB(D) on chip  
 Secondary Cache: 8MB off chip  
 L3 Cache: None  
 Other Cache: None  
 Memory: 512 MB (8x64MB)  
 Disk Subsystem: 1x9GB  
 Other Hardware: Ethernet

### Software

Operating System: Tru64 UNIX V4.0F  
 UNIX V4.0F Patch Kit 1  
 Compiler: Compaq C X6.2-259-449AT  
 Compaq Fortran V5.3  
 /usr/bin/f77: fort (not fort90)  
 KAP Fortran V4.2  
 KAP C 4.0  
 File System: ufs  
 System State: Multi-user

## Notes/Tuning Information

Tested by Alpha Processor, Inc.

Baseline C: cc -arch ev6 -fast -O4 ONESTEP  
 Fortran: kf90 -arch ev6 -O5 -fkapargs='-ur=-1' ONESTEP

Peak: -v -g3 -arch ev6 -non\_shared ONESTEP plus:  
 168.wupwise: f77 -fast -O4 -pipeline -unroll 2  
 171.swim: f90 -fast -O5 -transform\_loops  
 172.mgrid: kf77 -O5 -transform\_loops -tune ev6 -unroll 8  
 173.applu: f77 -fast -O5 -transform\_loops -unroll 14  
 177.mesa: cc -fast -O4  
 178.galgel: kf90 -O4 -unroll 2 -ldxml  
 RM\_SOURCES = lapak.f90  
 179.art: kcc -fast -O4 -ckapargs='-arl=4 -ur=4' -unroll 10  
 183.earthquake: kcc -fast -ckapargs='-arl=4' -xtaso\_short  
 187.facerec: f90 -fast -O4  
 188.amp: cc -fast -O4 -xtaso\_short  
 189.lucas: kf90 -fast -O5 -fkapargs='-ur=1' -unroll 1



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## Notes/Tuning Information (Continued)

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191.fma3d: kf90 -O4
200.sixtrack: f90 -fast -O5 -transform_loops
301.apsi: kf90 -O5 -transform_loops -unroll 8 -fkapargs='-ur=1'
```

Portability: galgel: -fixed

Information on UNIX V4.0F Patch Kit 1 is available at  
<http://ftpl.service.digital.com/public/unix/v4.0f/>