



CFP2000 Result

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Compaq Computer Corporation
AlphaServer ES40 Model 6/500

SPECfp_rate2000 = 9.03
SPECfp_rate_base2000 = 8.16

SPEC license #: 2 | Tested by: Compaq NH | Test date: Sep-2000 | Hardware Avail: Apr-1999 | Software Avail: Jul-2000

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	451	8.23	2	417	8.90
171.swim	2	448	16.1	2	448	16.1
172.mgrid	2	505	8.28	2	486	8.59
173.applu	2	744	6.55	2	597	8.16
177.mesa	2	343	9.48	2	323	10.1
178.galgel	2	957	7.03	2	552	12.2
179.art	2	342	17.7	2	287	21.0
183.quake	2	778	3.88	2	775	3.89
187.facerec	2	439	10.0	2	368	12.0
188.ammmp	2	810	6.30	2	810	6.30
189.lucas	2	441	10.5	2	441	10.5
191.fma3d	2	601	8.10	2	564	8.64
200.sixtrack	2	553	4.62	2	552	4.62
301.apsi	2	844	7.15	2	804	7.51

Hardware

CPU: Alpha 21264
CPU MHz: 500
FPU: Integrated
CPU(s) enabled: 2 cores, 2 chips, 1 core/chip
CPU(s) orderable: 1 to 4
Parallel: No
Primary Cache: 64KB(I)+64KB(D) on chip
Secondary Cache: 4MB off chip
L3 Cache: None
Other Cache: None
Memory: 16GB
Disk Subsystem: 1x18GB BD018122C0
Other Hardware: Ethernet

Software

Operating System: Tru64 UNIX V4.0G
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

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

Peak: -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.quake: kcc -fast -ckapargs='-arl=4' -xtaso_short
187.facerec: f90 -fast -O4
188.ammmp: cc -fast -O4 -xtaso_short
189.lucas: kf90 -fast -O5 -fkapargs='-ur=1' -unroll 1
191.fma3d: kf90 -O4



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Notes/Tuning Information (Continued)

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

Portability: galgel: -fixed