



# CFP2000 Result

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**ION**  
A20 (Intel Xeon processor 5160, 3.0GHz)

SPECfp2000 = 2666

SPECfp\_base2000 = 2666

SPEC license #: 2697 | Tested by: ION | Test date: Jun-2006 | Hardware Avail: Jul-2006 | Software Avail: May-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	40.8	3919	40.8	3921
171.swim	3100	123	2526	123	2526
172.mgrid	1800	96.3	1870	96.3	1870
173.applu	2100	102	2062	102	2062
177.mesa	1400	45.5	3075	45.5	3075
178.galgel	2900	42.5	6820	42.5	6820
179.art	2600	22.4	11617	22.4	11617
183.quake	1300	62.9	2068	62.8	2069
187.facerec	1900	68.5	2773	68.5	2773
188.amp	2200	104	2108	104	2112
189.lucas	2000	101	1984	101	1984
191.fma3d	2100	103	2039	103	2039
200.sixtrack	1100	96.2	1143	96.2	1143
301.apsi	2600	148	1762	148	1762

### Hardware

CPU: Intel Xeon Processor 5160 (1333Mhz System Bus)  
CPU MHz: 3000  
FPU: Integrated  
CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
CPU(s) orderable: 1-2  
Parallel: No  
Primary Cache: 32KB(I) + 32KB(D) on chip, per core  
Secondary Cache: 4MB (I+D) on chip, per chip  
L3 Cache: None  
Other Cache: None  
Memory: 8 GB (8\*1GB PC2 5300 FB-DIMMs)  
Disk Subsystem: 1 x 80GB SATA (Seagate Barracuda 7200rpm)  
Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux ES 4 Update 2 for AMD64/EM64T  
Compiler: Intel(R) Fortran Compiler 9.1 for EM64T (Build 20060323)  
Intel(R) C Compiler 9.1 for EM64T (Build 20060323)  
File System: ext3  
System State: Multi-user

## Notes/Tuning Information

Tested by ION Computer Systems  
BIOS 01.00.0043  
Enhanced SpeedStep Disabled in BIOS  
Hardware Prefetcher Enabled in BIOS  
Adjacent Cache Line Prefetch Enabled in BIOS  
kernel 2.6.9-22.ELsmp  
+FDO: PASS1=-prof\_gen PASS2=-prof\_use

SPEC CFP2000 Baseline optimization flags  
C programs: -fast -ansi\_alias +FDO  
Fortran programs: -fast +FDO  
+FDO: PASS1=-prof\_gen PASS2=-prof\_use

SPEC CFP2000 Peak optimization flags:  
168.wupwise: -fast -align all +FDO  
171.swim: -fast -align all +FDO  
172.mgrid: -fast -align all +FDO  
173.applu: -fast -align all +FDO



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## Notes/Tuning Information (Continued)

```
177.mesa: basepeak=yes
178.galgel: basepeak=yes
179.art: basepeak=yes
183.quake: -xW -O3 -ipo -no-prec-div -static +FDO
187.facerec: basepeak=yes
188.ammp: -xW -O3 -ipo -no-prec-div -static +FDO
189.lucas: basepeak=yes
191.fma3d: basepeak=yes
200.sixtrack: basepeak=yes
301.apsi: basepeak=yes
```

Portability Flags:  
178.galgel: -FI