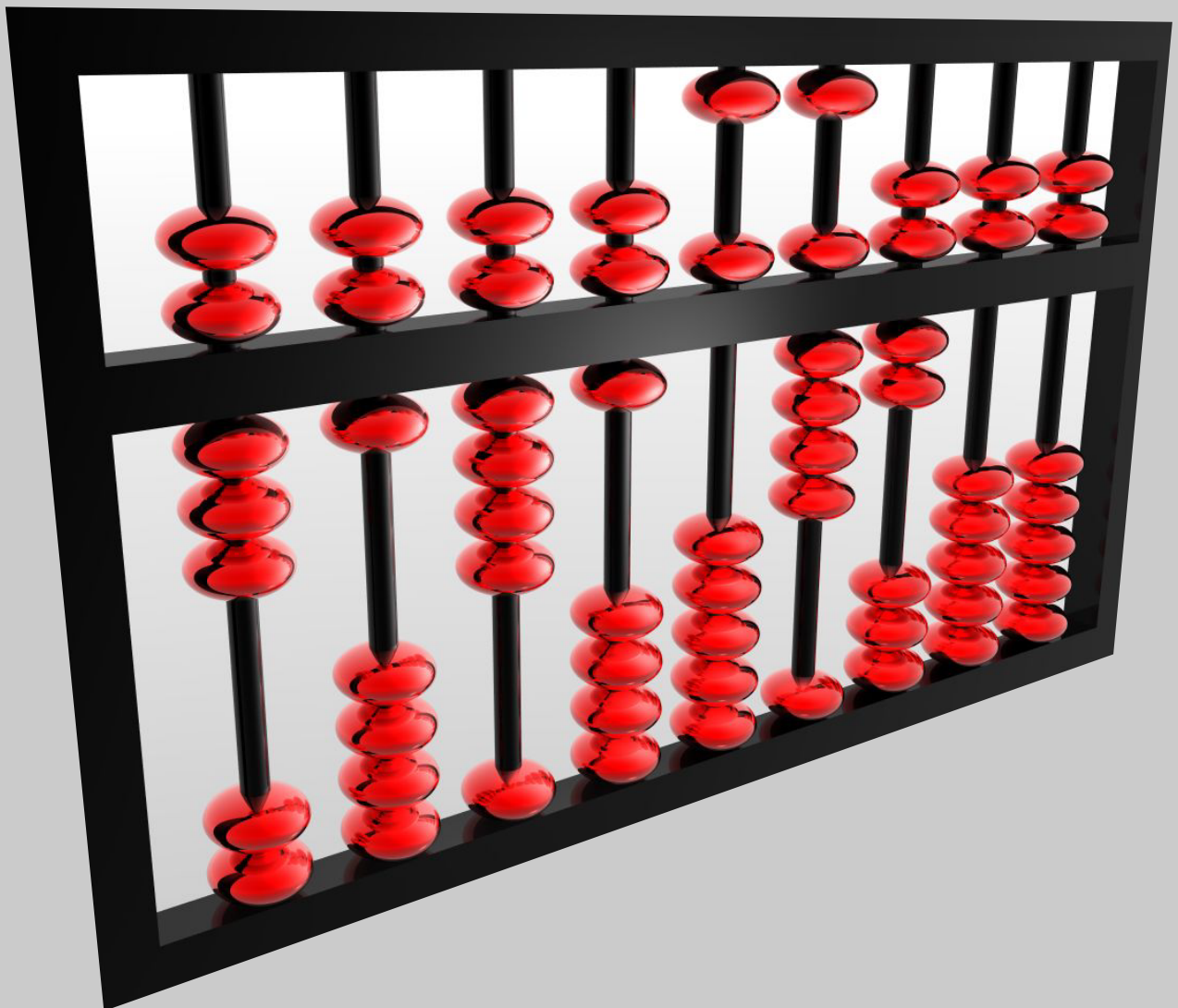


# NASL

## Intel VSIPL Libraries

New FFT Routines



The following times were taken with the beta release VSIPL library for Intel processors, on Caneland systems with 1.88GHz and 2.66Ghz processors. Times on other systems will depend on the specific processor and on system details such as memory and bus speed.

Times are in microseconds; 64 bit code.

## 1.88GHz

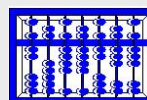
| N/Routine | rcfftop   | crfftop   | ccfftop   | ccfftip   |
|-----------|-----------|-----------|-----------|-----------|
| 4         | 0.100     | 0.092     | 0.051     | 0.039     |
| 8         | 0.111     | 0.105     | 0.061     | 0.048     |
| 16        | 0.134     | 0.117     | 0.110     | 0.110     |
| 32        | 0.239     | 0.194     | 0.147     | 0.138     |
| 64        | 0.321     | 0.291     | 0.260     | 0.249     |
| 128       | 0.508     | 0.498     | 0.576     | 0.512     |
| 256       | 0.999     | 0.991     | 1.196     | 1.167     |
| 512       | 2.057     | 2.039     | 2.636     | 2.714     |
| 1024      | 4.301     | 4.467     | 5.748     | 5.724     |
| 2048      | 9.275     | 9.510     | 15.481    | 14.378    |
| 4096      | 21.715    | 22.035    | 41.310    | 32.726    |
| 8192      | 47.736    | 48.107    | 84.778    | 84.949    |
| 16384     | 115.778   | 116.000   | 207.659   | 174.926   |
| 32768     | 232.630   | 228.972   | 443.787   | 399.866   |
| 65536     | 515.876   | 509.798   | 988.984   | 944.888   |
| 131072    | 1158.418  | 1143.509  | 2523.266  | 2279.311  |
| 262144    | 2974.718  | 2879.893  | 5969.562  | 4869.094  |
| 524288    | 6580.591  | 6455.156  | 20081.480 | 16019.464 |
| 1048576   | 21979.591 | 22174.983 | 56879.495 | 56041.545 |

## 2.66GHz

| N/Routine | rcfftop   | crfftop   | ccfftop   | ccfftip   |
|-----------|-----------|-----------|-----------|-----------|
| 4         | 0.067     | 0.063     | 0.033     | 0.025     |
| 8         | 0.076     | 0.075     | 0.052     | 0.046     |
| 16        | 0.118     | 0.104     | 0.076     | 0.060     |
| 32        | 0.137     | 0.132     | 0.109     | 0.099     |
| 64        | 0.211     | 0.205     | 0.191     | 0.175     |
| 128       | 0.336     | 0.373     | 0.423     | 0.373     |
| 256       | 0.680     | 0.681     | 0.808     | 0.825     |
| 512       | 1.311     | 1.347     | 1.865     | 1.992     |
| 1024      | 2.869     | 2.933     | 4.023     | 3.982     |
| 2048      | 6.115     | 6.369     | 10.731    | 10.113    |
| 4096      | 14.529    | 15.057    | 28.151    | 23.933    |
| 8192      | 34.256    | 34.628    | 62.552    | 66.086    |
| 16384     | 81.594    | 81.914    | 147.272   | 127.700   |
| 32768     | 158.788   | 159.829   | 340.142   | 292.586   |
| 65536     | 365.026   | 369.709   | 706.180   | 660.568   |
| 131072    | 822.292   | 818.597   | 1857.144  | 1638.260  |
| 262144    | 2108.996  | 2158.328  | 4711.453  | 3663.521  |
| 524288    | 6001.905  | 6247.953  | 15005.681 | 13616.851 |
| 1048576   | 18523.635 | 18519.366 | 40044.190 | 34337.680 |

### Further Information

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