| Digest | Method | Bytes | Microseconds | MB/Second | MiB/Second | Microseconds/Byte |
|---------|-----------------------|----------|--------------|-----------|------------|-------------------|
| aich | chan | 64 | 11.906 | 5.38 | 5.13 | 0.1860 |
| aich | chan | 128 | 12.347 | 10.37 | 9.89 | 0.0965 |
| aich | chan | 256 | 12.667 | 20.21 | 19.27 | 0.0495 |
| aich | chan | 512 | 14.315 | 35.77 | 34.11 | 0.0280 |
| aich | chan | 1024 | 19.535 | 52.42 | 49.99 | 0.0191 |
| aich | chan | 2048 | 29.252 | 70.01 | 66.77 | 0.0143 |
| aich | chan | 4096 | 48.006 | 85.32 | 81.37 | 0.0117 |
| aich | chan | 8192 | 84.461 | 96.99 | 92.50 | 0.0103 |
| aich | chan | 16384 | 162.300 | 100.95 | 96.27 | 0.0099 |
| aich | chan | 32768 | 306.433 | 106.93 | 101.98 | 0.0094 |
| aich | chan | 65536 | 604.001 | 108.50 | 103.47 | 0.0092 |
| aich | chan | 131072 | 1213.782 | 107.99 | 102.99 | 0.0093 |
| aich | chan | 262144 | 2432.391 | 107.77 | 102.78 | 0.0093 |
| aich | chan | 524288 | 4826.421 | 108.63 | 103.60 | 0.0092 |
| aich | chan | 1048576 | 9644.905 | 108.72 | 103.68 | 0.0092 |
| aich | chan | 2097152 | 19650.421 | 106.72 | 101.78 | 0.0094 |
| aich | chan | 4194304 | 38575.072 | 108.73 | 103.69 | 0.0092 |
| aich | chan | 8388608 | 77672.706 | 108.00 | 103.00 | 0.0093 |
| aich | chan | 16777216 | 156593.065 | 107.14 | 102.18 | 0.0093 |
| aich | chan | 33554432 | 313336.428 | 107.09 | 102.13 | 0.0093 |
| aich | chan | 67108864 | 623582.355 | 107.62 | 102.63 | 0.0093 |
| blake2b | chan | 64 | 9.209 | 6.95 | 6.63 | 0.1439 |
| blake2b | chan | 128 | 9.206 | 13.90 | 13.26 | 0.0719 |
| blake2b | chan | 256 | 9.927 | 25.79 | 24.60 | 0.0388 |
| blake2b | chan | 512 | 11.156 | 45.89 | 43.76 | 0.0218 |
| blake2b | chan | 1024 | 14.458 | 70.83 | 67.55 | 0.0141 |
| blake2b | chan | 2048 | 20.198 | 101.40 | 96.70 | 0.0099 |
| blake2b | chan | 4096 | 30.370 | 134.87 | 128.62 | 0.0074 |
| blake2b | chan | 8192 | 49.463 | 165.62 | 157.95 | 0.0060 |
| blake2b | chan | 16384 | 87.290 | 187.70 | 179.00 | 0.0053 |
| blake2b | chan | 32768 | 183.641 | 178.44 | 170.17 | 0.0056 |
| blake2b | chan | 65536 | 334.922 | 195.68 | 186.61 | 0.0051 |
| blake2b | chan | 131072 | 680.821 | 192.52 | 183.60 | 0.0052 |
| blake2b | $_{ m chan}$ | 262144 | 1416.068 | 185.12 | 176.54 | 0.0054 |
| blake2b | $_{ m chan}$ | 524288 | 2701.982 | 194.04 | 185.05 | 0.0052 |
| blake2b | chan | 1048576 | 5434.075 | 192.96 | 184.02 | 0.0052 |
| blake2b | chan | 2097152 | 10966.669 | 191.23 | 182.37 | 0.0052 |
| blake2b | chan | 4194304 | 21905.242 | 191.47 | 182.60 | 0.0052 |
| blake2b | chan | 8388608 | 43350.121 | 193.51 | 184.55 | 0.0052 |
| blake2b | chan | 16777216 | 86293.727 | 194.42 | 185.41 | 0.0051 |
| blake2b | chan | 33554432 | 173321.850 | 193.60 | 184.63 | 0.0052 |
| blake2b | $_{ m chan}$ | 67108864 | 346961.330 | 193.42 | 184.46 | 0.0052 |

| Digest | Method | Bytes | Microseconds | MB/Second | MiB/Second | Microseconds/Byte |
|---------|-----------------------|----------|--------------|-----------|------------|-------------------|
| blake2s | chan | 64 | 9.833 | 6.51 | 6.21 | 0.1536 |
| blake2s | chan | 128 | 9.972 | 12.84 | 12.25 | 0.0779 |
| blake2s | chan | 256 | 18.683 | 13.70 | 13.07 | 0.0730 |
| blake2s | chan | 512 | 22.049 | 23.22 | 22.14 | 0.0431 |
| blake2s | chan | 1024 | 17.508 | 58.49 | 55.78 | 0.0171 |
| blake2s | chan | 2048 | 31.094 | 65.86 | 62.81 | 0.0152 |
| blake2s | chan | 4096 | 43.705 | 93.72 | 89.38 | 0.0107 |
| blake2s | chan | 8192 | 76.585 | 106.97 | 102.01 | 0.0093 |
| blake2s | $_{ m chan}$ | 16384 | 164.249 | 99.75 | 95.13 | 0.0100 |
| blake2s | $_{ m chan}$ | 32768 | 301.932 | 108.53 | 103.50 | 0.0092 |
| blake2s | $_{ m chan}$ | 65536 | 583.580 | 112.30 | 107.10 | 0.0089 |
| blake2s | $_{ m chan}$ | 131072 | 1124.359 | 116.57 | 111.17 | 0.0086 |
| blake2s | chan | 262144 | 2268.808 | 115.54 | 110.19 | 0.0087 |
| blake2s | $_{ m chan}$ | 524288 | 4448.750 | 117.85 | 112.39 | 0.0085 |
| blake2s | $_{ m chan}$ | 1048576 | 8919.000 | 117.57 | 112.12 | 0.0085 |
| blake2s | $_{ m chan}$ | 2097152 | 18008.326 | 116.45 | 111.06 | 0.0086 |
| blake2s | $_{ m chan}$ | 4194304 | 35556.941 | 117.96 | 112.50 | 0.0085 |
| blake2s | $_{ m chan}$ | 8388608 | 71704.628 | 116.99 | 111.57 | 0.0085 |
| blake2s | $_{ m chan}$ | 16777216 | 143243.243 | 117.12 | 111.69 | 0.0085 |
| blake2s | $_{ m chan}$ | 33554432 | 287455.977 | 116.73 | 111.32 | 0.0086 |
| blake2s | chan | 67108864 | 575869.219 | 116.53 | 111.13 | 0.0086 |
| btih | chan | 64 | 14.638 | 4.37 | 4.17 | 0.2287 |
| btih | $_{ m chan}$ | 128 | 14.730 | 8.69 | 8.29 | 0.1151 |
| btih | $_{ m chan}$ | 256 | 16.276 | 15.73 | 15.00 | 0.0636 |
| btih | $_{ m chan}$ | 512 | 18.938 | 27.04 | 25.79 | 0.0370 |
| btih | $_{ m chan}$ | 1024 | 24.625 | 41.58 | 39.65 | 0.0240 |
| btih | $_{ m chan}$ | 2048 | 33.039 | 61.99 | 59.12 | 0.0161 |
| btih | $_{ m chan}$ | 4096 | 53.654 | 76.34 | 72.80 | 0.0131 |
| btih | $_{ m chan}$ | 8192 | 89.494 | 91.54 | 87.30 | 0.0109 |
| btih | $_{ m chan}$ | 16384 | 173.140 | 94.63 | 90.25 | 0.0106 |
| btih | $_{ m chan}$ | 32768 | 326.098 | 100.49 | 95.83 | 0.0100 |
| btih | $_{ m chan}$ | 65536 | 638.239 | 102.68 | 97.92 | 0.0097 |
| btih | $_{ m chan}$ | 131072 | 1249.859 | 104.87 | 100.01 | 0.0095 |
| btih | $_{ m chan}$ | 262144 | 2440.792 | 107.40 | 102.42 | 0.0093 |
| btih | chan | 524288 | 4913.445 | 106.70 | 101.76 | 0.0094 |
| btih | $_{ m chan}$ | 1048576 | 9841.577 | 106.55 | 101.61 | 0.0094 |
| btih | chan | 2097152 | 19616.875 | 106.91 | 101.96 | 0.0094 |
| btih | chan | 4194304 | 39155.111 | 107.12 | 102.16 | 0.0093 |
| btih | chan | 8388608 | 78274.227 | 107.17 | 102.21 | 0.0093 |
| btih | $_{ m chan}$ | 16777216 | 156645.066 | 107.10 | 102.14 | 0.0093 |
| btih | $_{ m chan}$ | 33554432 | 312953.949 | 107.22 | 102.25 | 0.0093 |
| btih | chan | 67108864 | 626088.832 | 107.19 | 102.22 | 0.0093 |

| Digest | Method | Bytes | Microseconds | MB/Second | MiB/Second | Microseconds/Byte |
|-----------|-----------------------|----------|--------------|-----------|------------|-------------------|
| ed2k | chan | 64 | 17.338 | 3.69 | 3.52 | 0.2709 |
| ed2k | chan | 128 | 16.118 | 7.94 | 7.57 | 0.1259 |
| ed2k | chan | 256 | 14.571 | 17.57 | 16.76 | 0.0569 |
| ed2k | chan | 512 | 21.221 | 24.13 | 23.01 | 0.0414 |
| ed2k | chan | 1024 | 19.493 | 52.53 | 50.10 | 0.0190 |
| ed2k | chan | 2048 | 18.286 | 112.00 | 106.81 | 0.0089 |
| ed2k | chan | 4096 | 22.510 | 181.96 | 173.53 | 0.0055 |
| ed2k | chan | 8192 | 23.598 | 347.15 | 331.07 | 0.0029 |
| ed2k | chan | 16384 | 35.881 | 456.62 | 435.47 | 0.0022 |
| ed2k | chan | 32768 | 57.651 | 568.39 | 542.06 | 0.0018 |
| ed2k | chan | 65536 | 96.775 | 677.20 | 645.83 | 0.0015 |
| ed2k | chan | 131072 | 171.705 | 763.36 | 728.00 | 0.0013 |
| ed2k | chan | 262144 | 327.609 | 800.17 | 763.10 | 0.0012 |
| ed2k | chan | 524288 | 637.955 | 821.83 | 783.76 | 0.0012 |
| ed2k | chan | 1048576 | 1316.587 | 796.44 | 759.54 | 0.0013 |
| ed2k | chan | 2097152 | 2635.250 | 795.81 | 758.94 | 0.0013 |
| ed2k | chan | 4194304 | 5394.292 | 777.54 | 741.52 | 0.0013 |
| ed2k | chan | 8388608 | 11014.635 | 761.59 | 726.31 | 0.0013 |
| ed2k | chan | 16777216 | 21831.982 | 768.47 | 732.87 | 0.0013 |
| ed2k | chan | 33554432 | 43712.224 | 767.62 | 732.06 | 0.0013 |
| ed2k | chan | 67108864 | 86514.064 | 775.70 | 739.77 | 0.0013 |
| edonr/224 | chan | 64 | 14.283 | 4.48 | 4.27 | 0.2232 |
| edonr/224 | chan | 128 | 15.765 | 8.12 | 7.74 | 0.1232 |
| edonr/224 | chan | 256 | 21.517 | 11.90 | 11.35 | 0.0841 |
| edonr/224 | chan | 512 | 18.055 | 28.36 | 27.05 | 0.0353 |
| edonr/224 | chan | 1024 | 23.609 | 43.37 | 41.36 | 0.0231 |
| edonr/224 | chan | 2048 | 27.928 | 73.33 | 69.93 | 0.0136 |
| edonr/224 | chan | 4096 | 31.991 | 128.04 | 122.11 | 0.0078 |
| edonr/224 | chan | 8192 | 48.448 | 169.09 | 161.26 | 0.0059 |
| edonr/224 | chan | 16384 | 77.518 | 211.36 | 201.57 | 0.0047 |
| edonr/224 | chan | 32768 | 143.786 | 227.89 | 217.33 | 0.0044 |
| edonr/224 | chan | 65536 | 268.680 | 243.92 | 232.62 | 0.0041 |
| edonr/224 | chan | 131072 | 522.893 | 250.67 | 239.06 | 0.0040 |
| edonr/224 | chan | 262144 | 1004.838 | 260.88 | 248.79 | 0.0038 |
| edonr/224 | chan | 524288 | 2018.487 | 259.74 | 247.71 | 0.0038 |
| edonr/224 | chan | 1048576 | 4062.178 | 258.13 | 246.17 | 0.0039 |
| edonr/224 | chan | 2097152 | 8119.170 | 258.30 | 246.33 | 0.0039 |
| edonr/224 | chan | 4194304 | 16164.631 | 259.47 | 247.45 | 0.0039 |
| edonr/224 | chan | 8388608 | 32605.032 | 257.28 | 245.36 | 0.0039 |
| edonr/224 | chan | 16777216 | 64982.862 | 258.18 | 246.22 | 0.0039 |
| edonr/224 | chan | 33554432 | 129964.202 | 258.18 | 246.22 | 0.0039 |
| edonr/224 | chan | 67108864 | 259699.686 | 258.41 | 246.44 | 0.0039 |

| Digest | Method | Bytes | Microseconds | MB/Second | MiB/Second | Microseconds/Byte |
|-----------|--------|----------|--------------|-----------|------------|-------------------|
| edonr/256 | chan | 64 | 15.961 | 4.01 | 3.82 | 0.2494 |
| edonr/256 | chan | 128 | 18.530 | 6.91 | 6.59 | 0.1448 |
| edonr/256 | chan | 256 | 20.033 | 12.78 | 12.19 | 0.0783 |
| edonr/256 | chan | 512 | 18.205 | 28.12 | 26.82 | 0.0356 |
| edonr/256 | chan | 1024 | 20.196 | 50.70 | 48.35 | 0.0197 |
| edonr/256 | chan | 2048 | 24.542 | 83.45 | 79.58 | 0.0120 |
| edonr/256 | chan | 4096 | 33.882 | 120.89 | 115.29 | 0.0083 |
| edonr/256 | chan | 8192 | 45.222 | 181.15 | 172.76 | 0.0055 |
| edonr/256 | chan | 16384 | 77.772 | 210.67 | 200.91 | 0.0047 |
| edonr/256 | chan | 32768 | 138.538 | 236.53 | 225.57 | 0.0042 |
| edonr/256 | chan | 65536 | 280.280 | 233.82 | 222.99 | 0.0043 |
| edonr/256 | chan | 131072 | 514.646 | 254.68 | 242.88 | 0.0039 |
| edonr/256 | chan | 262144 | 1002.701 | 261.44 | 249.33 | 0.0038 |
| edonr/256 | chan | 524288 | 1993.972 | 262.94 | 250.76 | 0.0038 |
| edonr/256 | chan | 1048576 | 4039.043 | 259.61 | 247.58 | 0.0039 |
| edonr/256 | chan | 2097152 | 8211.769 | 255.38 | 243.55 | 0.0039 |
| edonr/256 | chan | 4194304 | 16260.477 | 257.94 | 245.99 | 0.0039 |
| edonr/256 | chan | 8388608 | 32703.003 | 256.51 | 244.63 | 0.0039 |
| edonr/256 | chan | 16777216 | 65593.798 | 255.77 | 243.92 | 0.0039 |
| edonr/256 | chan | 33554432 | 130137.076 | 257.84 | 245.90 | 0.0039 |
| edonr/256 | chan | 67108864 | 260440.579 | 257.67 | 245.73 | 0.0039 |
| edonr/384 | chan | 64 | 18.547 | 3.45 | 3.29 | 0.2898 |
| edonr/384 | chan | 128 | 16.913 | 7.57 | 7.22 | 0.1321 |
| edonr/384 | chan | 256 | 19.722 | 12.98 | 12.38 | 0.0770 |
| edonr/384 | chan | 512 | 21.133 | 24.23 | 23.11 | 0.0413 |
| edonr/384 | chan | 1024 | 18.363 | 55.76 | 53.18 | 0.0179 |
| edonr/384 | chan | 2048 | 20.990 | 97.57 | 93.05 | 0.0102 |
| edonr/384 | chan | 4096 | 28.235 | 145.07 | 138.35 | 0.0069 |
| edonr/384 | chan | 8192 | 33.992 | 241.00 | 229.84 | 0.0041 |
| edonr/384 | chan | 16384 | 41.529 | 394.52 | 376.24 | 0.0025 |
| edonr/384 | chan | 32768 | 80.158 | 408.79 | 389.85 | 0.0024 |
| edonr/384 | chan | 65536 | 140.836 | 465.34 | 443.78 | 0.0021 |
| edonr/384 | chan | 131072 | 270.383 | 484.76 | 462.30 | 0.0021 |
| edonr/384 | chan | 262144 | 517.499 | 506.56 | 483.09 | 0.0020 |
| edonr/384 | chan | 524288 | 1028.083 | 509.97 | 486.35 | 0.0020 |
| edonr/384 | chan | 1048576 | 2049.788 | 511.55 | 487.85 | 0.0020 |
| edonr/384 | chan | 2097152 | 4150.356 | 505.29 | 481.88 | 0.0020 |
| edonr/384 | chan | 4194304 | 8524.111 | 492.05 | 469.26 | 0.0020 |
| edonr/384 | chan | 8388608 | 16986.384 | 493.84 | 470.96 | 0.0020 |
| edonr/384 | chan | 16777216 | 34037.816 | 492.90 | 470.07 | 0.0020 |
| edonr/384 | chan | 33554432 | 67897.827 | 494.19 | 471.30 | 0.0020 |
| edonr/384 | chan | 67108864 | 136062.442 | 493.22 | 470.37 | 0.0020 |

| Digest | Method | Bytes | Microseconds | MB/Second | MiB/Second | Microseconds/Byte |
|------------|--------|----------|--------------|-----------|------------|-------------------|
| edonr/512 | chan | 64 | 16.566 | 3.86 | 3.68 | 0.2588 |
| edonr/512 | chan | 128 | 16.619 | 7.70 | 7.34 | 0.1298 |
| edonr/512 | chan | 256 | 17.742 | 14.43 | 13.76 | 0.0693 |
| edonr/512 | chan | 512 | 16.893 | 30.31 | 28.91 | 0.0330 |
| edonr/512 | chan | 1024 | 19.142 | 53.49 | 51.01 | 0.0187 |
| edonr/512 | chan | 2048 | 21.139 | 96.88 | 92.39 | 0.0103 |
| edonr/512 | chan | 4096 | 20.495 | 199.85 | 190.59 | 0.0050 |
| edonr/512 | chan | 8192 | 31.963 | 256.30 | 244.43 | 0.0039 |
| edonr/512 | chan | 16384 | 47.111 | 347.77 | 331.66 | 0.0029 |
| edonr/512 | chan | 32768 | 80.246 | 408.34 | 389.42 | 0.0024 |
| edonr/512 | chan | 65536 | 140.197 | 467.46 | 445.80 | 0.0021 |
| edonr/512 | chan | 131072 | 263.821 | 496.82 | 473.80 | 0.0020 |
| edonr/512 | chan | 262144 | 514.887 | 509.13 | 485.54 | 0.0020 |
| edonr/512 | chan | 524288 | 1038.619 | 504.79 | 481.41 | 0.0020 |
| edonr/512 | chan | 1048576 | 2036.234 | 514.96 | 491.10 | 0.0019 |
| edonr/512 | chan | 2097152 | 4240.398 | 494.56 | 471.65 | 0.0020 |
| edonr/512 | chan | 4194304 | 8472.980 | 495.02 | 472.09 | 0.0020 |
| edonr/512 | chan | 8388608 | 16913.920 | 495.96 | 472.98 | 0.0020 |
| edonr/512 | chan | 16777216 | 34514.076 | 486.10 | 463.58 | 0.0021 |
| edonr/512 | chan | 33554432 | 74571.002 | 449.97 | 429.12 | 0.0022 |
| edonr/512 | chan | 67108864 | 137653.122 | 487.52 | 464.94 | 0.0021 |
| gost12/256 | chan | 64 | 29.899 | 2.14 | 2.04 | 0.4672 |
| gost12/256 | chan | 128 | 33.288 | 3.85 | 3.67 | 0.2601 |
| gost12/256 | chan | 256 | 39.434 | 6.49 | 6.19 | 0.1540 |
| gost12/256 | chan | 512 | 52.348 | 9.78 | 9.33 | 0.1022 |
| gost12/256 | chan | 1024 | 75.455 | 13.57 | 12.94 | 0.0737 |
| gost12/256 | chan | 2048 | 123.582 | 16.57 | 15.80 | 0.0603 |
| gost12/256 | chan | 4096 | 220.461 | 18.58 | 17.72 | 0.0538 |
| gost12/256 | chan | 8192 | 417.172 | 19.64 | 18.73 | 0.0509 |
| gost12/256 | chan | 16384 | 898.623 | 18.23 | 17.39 | 0.0548 |
| gost12/256 | chan | 32768 | 1637.120 | 20.02 | 19.09 | 0.0500 |
| gost12/256 | chan | 65536 | 3251.657 | 20.15 | 19.22 | 0.0496 |
| gost12/256 | chan | 131072 | 6711.174 | 19.53 | 18.63 | 0.0512 |
| gost12/256 | chan | 262144 | 12974.820 | 20.20 | 19.26 | 0.0495 |
| gost12/256 | chan | 524288 | 25208.836 | 20.80 | 19.84 | 0.0481 |
| gost12/256 | chan | 1048576 | 53030.733 | 19.77 | 18.85 | 0.0506 |
| gost12/256 | chan | 2097152 | 108511.590 | 19.33 | 18.43 | 0.0517 |
| gost12/256 | chan | 4194304 | 206888.523 | 20.27 | 19.33 | 0.0493 |
| gost12/256 | chan | 8388608 | 427049.185 | 19.64 | 18.73 | 0.0509 |
| gost12/256 | chan | 16777216 | 825859.090 | 20.31 | 19.37 | 0.0492 |
| gost12/256 | chan | 33554432 | 1715600.077 | 19.56 | 18.65 | 0.0511 |
| gost12/256 | chan | 67108864 | 3529702.000 | 19.01 | 18.13 | 0.0526 |

| Digest | Method | Bytes | Microseconds | MB/Second | MiB/Second | Microseconds/Byte |
|-----------------------|--------|----------|--------------|-----------|------------|-------------------|
| ${\text{gost}12/512}$ | chan | 64 | 36.165 | 1.77 | 1.69 | 0.5651 |
| gost12/512 | chan | 128 | 33.754 | 3.79 | 3.61 | 0.2637 |
| gost12/512 | chan | 256 | 40.367 | 6.34 | 6.05 | 0.1577 |
| gost12/512 | chan | 512 | 55.306 | 9.26 | 8.83 | 0.1080 |
| gost12/512 | chan | 1024 | 93.325 | 10.97 | 10.46 | 0.0911 |
| gost12/512 | chan | 2048 | 136.701 | 14.98 | 14.29 | 0.0667 |
| gost12/512 | chan | 4096 | 233.826 | 17.52 | 16.71 | 0.0571 |
| gost12/512 | chan | 8192 | 464.654 | 17.63 | 16.81 | 0.0567 |
| gost12/512 | chan | 16384 | 969.634 | 16.90 | 16.12 | 0.0592 |
| gost12/512 | chan | 32768 | 1860.721 | 17.61 | 16.79 | 0.0568 |
| gost12/512 | chan | 65536 | 3372.702 | 19.43 | 18.53 | 0.0515 |
| gost12/512 | chan | 131072 | 7100.117 | 18.46 | 17.60 | 0.0542 |
| gost12/512 | chan | 262144 | 14111.046 | 18.58 | 17.72 | 0.0538 |
| gost12/512 | chan | 524288 | 27790.036 | 18.87 | 18.00 | 0.0530 |
| gost12/512 | chan | 1048576 | 55519.987 | 18.89 | 18.01 | 0.0529 |
| gost12/512 | chan | 2097152 | 110738.918 | 18.94 | 18.06 | 0.0528 |
| gost12/512 | chan | 4194304 | 220734.259 | 19.00 | 18.12 | 0.0526 |
| gost12/512 | chan | 8388608 | 442657.966 | 18.95 | 18.07 | 0.0528 |
| gost12/512 | chan | 16777216 | 884506.500 | 18.97 | 18.09 | 0.0527 |
| gost12/512 | chan | 33554432 | 1769409.921 | 18.96 | 18.08 | 0.0527 |
| gost12/512 | chan | 67108864 | 3553689.618 | 18.88 | 18.01 | 0.0530 |
| 404 | 1 | C 4 | 01 909 | 2.00 | 0.00 | 0.2200 |
| gost94 | chan | 64 | 21.303 | 3.00 | 2.86 | 0.3329 |
| gost94 | chan | 128 | 23.733 | 5.39 | 5.14 | 0.1854 |
| gost94 | chan | 256 | 26.339 | 9.72 | 9.27 | 0.1029 |
| gost94 | chan | 512 | 35.053 | 14.61 | 13.93 | 0.0685 |
| gost94 | chan | 1024 | 54.986 | 18.62 | 17.76 | 0.0537 |
| gost94 | chan | 2048 | 92.461 | 22.15 | 21.12 | 0.0451 |
| gost94 | chan | 4096 | 151.837 | 26.98 | 25.73 | 0.0371 |
| gost94 | chan | 8192 | 299.464 | 27.36 | 26.09 | 0.0366 |
| gost94 | chan | 16384 | 573.524 | 28.57 | 27.25 | 0.0350 |
| gost94 | chan | 32768 | 1138.347 | 28.79 | 27.46 | 0.0347 |
| gost94 | chan | 65536 | 2273.976 | 28.82 | 27.48 | 0.0347 |
| gost94 | chan | 131072 | 4467.554 | 29.34 | 27.98 | 0.0341 |
| gost94 | chan | 262144 | 8999.957 | 29.13 | 27.78 | 0.0343 |
| gost94 | chan | 524288 | 17985.395 | 29.15 | 27.80 | 0.0343 |
| gost94 | chan | 1048576 | 35911.551 | 29.20 | 27.85 | 0.0342 |
| gost94 | chan | 2097152 | 71910.944 | 29.16 | 27.81 | 0.0343 |
| gost94 | chan | 4194304 | 143674.465 | 29.19 | 27.84 | 0.0343 |
| gost94 | chan | 8388608 | 286789.919 | 29.25 | 27.89 | 0.0342 |
| gost94 | chan | 16777216 | 573847.969 | 29.24 | 27.89 | 0.0342 |
| gost94 | chan | 33554432 | 1148216.260 | 29.22 | 27.87 | 0.0342 |
| gost94 | chan | 67108864 | 2296338.596 | 29.22 | 27.87 | 0.0342 |

| Digest | Method | Bytes | Microseconds | MB/Second | MiB/Second | Microseconds/Byte |
|---------|--------|----------|--------------|-----------|------------|-------------------|
| has 160 | chan | 64 | 16.675 | 3.84 | 3.66 | 0.2605 |
| has160 | chan | 128 | 16.857 | 7.59 | 7.24 | 0.1317 |
| has 160 | chan | 256 | 18.988 | 13.48 | 12.86 | 0.0742 |
| has160 | chan | 512 | 19.123 | 26.77 | 25.53 | 0.0373 |
| has 160 | chan | 1024 | 22.591 | 45.33 | 43.23 | 0.0221 |
| has160 | chan | 2048 | 29.513 | 69.39 | 66.18 | 0.0144 |
| has160 | chan | 4096 | 33.834 | 121.06 | 115.45 | 0.0083 |
| has160 | chan | 8192 | 51.142 | 160.18 | 152.76 | 0.0062 |
| has160 | chan | 16384 | 116.660 | 140.44 | 133.93 | 0.0071 |
| has160 | chan | 32768 | 186.704 | 175.51 | 167.38 | 0.0057 |
| has 160 | chan | 65536 | 325.338 | 201.44 | 192.11 | 0.0050 |
| has 160 | chan | 131072 | 633.996 | 206.74 | 197.16 | 0.0048 |
| has160 | chan | 262144 | 1276.850 | 205.31 | 195.80 | 0.0049 |
| has160 | chan | 524288 | 2390.026 | 219.36 | 209.20 | 0.0046 |
| has 160 | chan | 1048576 | 4876.832 | 215.01 | 205.05 | 0.0047 |
| has 160 | chan | 2097152 | 9719.561 | 215.77 | 205.77 | 0.0046 |
| has 160 | chan | 4194304 | 19502.831 | 215.06 | 205.10 | 0.0046 |
| has 160 | chan | 8388608 | 39134.818 | 214.35 | 204.42 | 0.0047 |
| has 160 | chan | 16777216 | 77797.763 | 215.65 | 205.66 | 0.0046 |
| has 160 | chan | 33554432 | 155832.927 | 215.32 | 205.35 | 0.0046 |
| has160 | chan | 67108864 | 310157.879 | 216.37 | 206.35 | 0.0046 |
| md4 | chan | 64 | 12.258 | 5.22 | 4.98 | 0.1915 |
| md4 | chan | 128 | 17.009 | 7.53 | 7.18 | 0.1329 |
| md4 | chan | 256 | 14.185 | 18.05 | 17.21 | 0.0554 |
| md4 | chan | 512 | 18.605 | 27.52 | 26.25 | 0.0363 |
| md4 | chan | 1024 | 17.401 | 58.85 | 56.12 | 0.0170 |
| md4 | chan | 2048 | 16.931 | 120.96 | 115.36 | 0.0083 |
| md4 | chan | 4096 | 24.481 | 167.31 | 159.56 | 0.0060 |
| md4 | chan | 8192 | 24.493 | 334.46 | 318.97 | 0.0030 |
| md4 | chan | 16384 | 34.077 | 480.79 | 458.52 | 0.0021 |
| md4 | chan | 32768 | 66.210 | 494.91 | 471.98 | 0.0020 |
| md4 | chan | 65536 | 103.924 | 630.61 | 601.40 | 0.0016 |
| md4 | chan | 131072 | 174.313 | 751.93 | 717.10 | 0.0013 |
| md4 | chan | 262144 | 337.410 | 776.93 | 740.94 | 0.0013 |
| md4 | chan | 524288 | 656.840 | 798.20 | 761.22 | 0.0013 |
| md4 | chan | 1048576 | 1349.555 | 776.98 | 740.99 | 0.0013 |
| md4 | chan | 2097152 | 2770.914 | 756.84 | 721.78 | 0.0013 |
| md4 | chan | 4194304 | 5637.288 | 744.03 | 709.56 | 0.0013 |
| md4 | chan | 8388608 | 11280.695 | 743.63 | 709.18 | 0.0013 |
| md4 | chan | 16777216 | 22629.943 | 741.37 | 707.03 | 0.0013 |
| md4 | chan | 33554432 | 44797.053 | 749.03 | 714.33 | 0.0013 |
| md4 | chan | 67108864 | 88961.174 | 754.36 | 719.41 | 0.0013 |

| Digest | Method | Bytes | Microseconds | MB/Second | MiB/Second | Microseconds/Byte |
|-----------|--------|----------|--------------|-----------|------------|-------------------|
| md5 | chan | 64 | 16.076 | 3.98 | 3.80 | 0.2512 |
| md5 | chan | 128 | 15.330 | 8.35 | 7.96 | 0.1198 |
| md5 | chan | 256 | 17.239 | 14.85 | 14.16 | 0.0673 |
| md5 | chan | 512 | 21.055 | 24.32 | 23.19 | 0.0411 |
| md5 | chan | 1024 | 18.631 | 54.96 | 52.41 | 0.0182 |
| md5 | chan | 2048 | 13.874 | 147.61 | 140.77 | 0.0068 |
| md5 | chan | 4096 | 28.593 | 143.25 | 136.61 | 0.0070 |
| md5 | chan | 8192 | 35.300 | 232.07 | 221.32 | 0.0043 |
| md5 | chan | 16384 | 46.576 | 351.77 | 335.47 | 0.0028 |
| md5 | chan | 32768 | 86.293 | 379.73 | 362.14 | 0.0026 |
| md5 | chan | 65536 | 144.759 | 452.72 | 431.75 | 0.0022 |
| md5 | chan | 131072 | 272.271 | 481.40 | 459.10 | 0.0021 |
| md5 | chan | 262144 | 530.338 | 494.30 | 471.40 | 0.0020 |
| md5 | chan | 524288 | 1071.616 | 489.25 | 466.59 | 0.0020 |
| md5 | chan | 1048576 | 2054.295 | 510.43 | 486.78 | 0.0020 |
| md5 | chan | 2097152 | 4274.540 | 490.61 | 467.88 | 0.0020 |
| md5 | chan | 4194304 | 8508.042 | 492.98 | 470.14 | 0.0020 |
| md5 | chan | 8388608 | 16948.485 | 494.95 | 472.02 | 0.0020 |
| md5 | chan | 16777216 | 33713.238 | 497.64 | 474.59 | 0.0020 |
| md5 | chan | 33554432 | 67295.567 | 498.61 | 475.51 | 0.0020 |
| md5 | chan | 67108864 | 134536.159 | 498.82 | 475.71 | 0.0020 |
| ripemd160 | chan | 64 | 16.177 | 3.96 | 3.78 | 0.2528 |
| ripemd160 | chan | 128 | 18.224 | 7.02 | 6.69 | 0.1424 |
| ripemd160 | chan | 256 | 16.100 | 15.90 | 15.16 | 0.0629 |
| ripemd160 | chan | 512 | 19.776 | 25.89 | 24.69 | 0.0386 |
| ripemd160 | chan | 1024 | 17.600 | 58.18 | 55.48 | 0.0172 |
| ripemd160 | chan | 2048 | 23.202 | 88.27 | 84.18 | 0.0113 |
| ripemd160 | chan | 4096 | 36.197 | 113.16 | 107.92 | 0.0088 |
| ripemd160 | chan | 8192 | 55.618 | 147.29 | 140.47 | 0.0068 |
| ripemd160 | chan | 16384 | 89.298 | 183.48 | 174.98 | 0.0055 |
| ripemd160 | chan | 32768 | 163.452 | 200.47 | 191.18 | 0.0050 |
| ripemd160 | chan | 65536 | 316.615 | 206.99 | 197.40 | 0.0048 |
| ripemd160 | chan | 131072 | 595.411 | 220.14 | 209.94 | 0.0045 |
| ripemd160 | chan | 262144 | 1236.500 | 212.00 | 202.18 | 0.0047 |
| ripemd160 | chan | 524288 | 2453.094 | 213.73 | 203.83 | 0.0047 |
| ripemd160 | chan | 1048576 | 4821.859 | 217.46 | 207.39 | 0.0046 |
| ripemd160 | chan | 2097152 | 9624.901 | 217.89 | 207.80 | 0.0046 |
| ripemd160 | chan | 4194304 | 19332.896 | 216.95 | 206.90 | 0.0046 |
| ripemd160 | chan | 8388608 | 38462.963 | 218.10 | 208.00 | 0.0046 |
| ripemd160 | chan | 16777216 | 77305.571 | 217.02 | 206.97 | 0.0046 |
| ripemd160 | chan | 33554432 | 154134.436 | 217.70 | 207.61 | 0.0046 |
| ripemd160 | chan | 67108864 | 308017.342 | 217.87 | 207.78 | 0.0046 |

| Digest | Method | Bytes | Microseconds | MB/Second | MiB/Second | Microseconds/Byte |
|----------|--------------|----------|--------------|-----------|------------|-------------------|
| sha1 | chan | 64 | 11.699 | 5.47 | 5.22 | 0.1828 |
| sha1 | chan | 128 | 16.971 | 7.54 | 7.19 | 0.1326 |
| sha1 | chan | 256 | 21.489 | 11.91 | 11.36 | 0.0839 |
| sha1 | chan | 512 | 19.503 | 26.25 | 25.03 | 0.0381 |
| sha1 | chan | 1024 | 21.848 | 46.87 | 44.70 | 0.0213 |
| sha1 | chan | 2048 | 29.474 | 69.48 | 66.26 | 0.0144 |
| sha1 | chan | 4096 | 38.880 | 105.35 | 100.47 | 0.0095 |
| sha1 | chan | 8192 | 52.311 | 156.60 | 149.35 | 0.0064 |
| sha1 | chan | 16384 | 104.422 | 156.90 | 149.63 | 0.0064 |
| sha1 | chan | 32768 | 186.265 | 175.92 | 167.77 | 0.0057 |
| sha1 | chan | 65536 | 356.510 | 183.83 | 175.31 | 0.0054 |
| sha1 | chan | 131072 | 732.481 | 178.94 | 170.65 | 0.0056 |
| sha1 | chan | 262144 | 1390.674 | 188.50 | 179.77 | 0.0053 |
| sha1 | chan | 524288 | 2794.589 | 187.61 | 178.92 | 0.0053 |
| sha1 | chan | 1048576 | 5666.662 | 185.04 | 176.47 | 0.0054 |
| sha1 | $_{ m chan}$ | 2097152 | 11274.083 | 186.02 | 177.40 | 0.0054 |
| sha1 | chan | 4194304 | 22384.413 | 187.38 | 178.70 | 0.0053 |
| sha1 | chan | 8388608 | 44893.851 | 186.85 | 178.19 | 0.0054 |
| sha1 | chan | 16777216 | 89583.948 | 187.28 | 178.60 | 0.0053 |
| sha1 | chan | 33554432 | 179476.627 | 186.96 | 178.30 | 0.0053 |
| sha1 | chan | 67108864 | 358060.844 | 187.42 | 178.74 | 0.0053 |
| sha2/224 | chan | 64 | 16.803 | 3.81 | 3.63 | 0.2625 |
| sha2/224 | $_{ m chan}$ | 128 | 25.975 | 4.93 | 4.70 | 0.2029 |
| sha2/224 | chan | 256 | 17.427 | 14.69 | 14.01 | 0.0681 |
| sha2/224 | chan | 512 | 19.999 | 25.60 | 24.41 | 0.0391 |
| sha2/224 | chan | 1024 | 23.714 | 43.18 | 41.18 | 0.0232 |
| sha2/224 | chan | 2048 | 28.356 | 72.22 | 68.87 | 0.0138 |
| sha2/224 | chan | 4096 | 39.125 | 104.69 | 99.84 | 0.0096 |
| sha2/224 | chan | 8192 | 67.373 | 121.59 | 115.96 | 0.0082 |
| sha2/224 | chan | 16384 | 114.944 | 142.54 | 135.94 | 0.0070 |
| sha2/224 | chan | 32768 | 208.624 | 157.07 | 149.79 | 0.0064 |
| sha2/224 | chan | 65536 | 402.074 | 162.99 | 155.44 | 0.0061 |
| sha2/224 | chan | 131072 | 790.984 | 165.71 | 158.03 | 0.0060 |
| sha2/224 | chan | 262144 | 1617.618 | 162.06 | 154.55 | 0.0062 |
| sha2/224 | chan | 524288 | 3335.559 | 157.18 | 149.90 | 0.0064 |
| sha2/224 | chan | 1048576 | 6383.376 | 164.27 | 156.66 | 0.0061 |
| sha2/224 | chan | 2097152 | 13038.321 | 160.85 | 153.40 | 0.0062 |
| sha2/224 | chan | 4194304 | 25534.610 | 164.26 | 156.65 | 0.0061 |
| sha2/224 | chan | 8388608 | 51363.694 | 163.32 | 155.75 | 0.0061 |
| sha2/224 | chan | 16777216 | 102184.617 | 164.19 | 156.58 | 0.0061 |
| sha2/224 | chan | 33554432 | 204770.910 | 163.86 | 156.27 | 0.0061 |
| sha2/224 | chan | 67108864 | 408986.113 | 164.09 | 156.49 | 0.0061 |

| Digest | Method | Bytes | Microseconds | MB/Second | MiB/Second | Microseconds/Byte |
|----------|--------------|----------|--------------|-----------|------------|-------------------|
| sha2/256 | chan | 64 | 13.277 | 4.82 | 4.60 | 0.2075 |
| sha2/256 | chan | 128 | 19.124 | 6.69 | 6.38 | 0.1494 |
| sha2/256 | chan | 256 | 19.781 | 12.94 | 12.34 | 0.0773 |
| sha2/256 | chan | 512 | 18.566 | 27.58 | 26.30 | 0.0363 |
| sha2/256 | $_{ m chan}$ | 1024 | 25.777 | 39.73 | 37.89 | 0.0252 |
| sha2/256 | chan | 2048 | 29.566 | 69.27 | 66.06 | 0.0144 |
| sha2/256 | chan | 4096 | 40.995 | 99.91 | 95.28 | 0.0100 |
| sha2/256 | chan | 8192 | 65.436 | 125.19 | 119.39 | 0.0080 |
| sha2/256 | chan | 16384 | 119.248 | 137.39 | 131.03 | 0.0073 |
| sha2/256 | $_{ m chan}$ | 32768 | 210.021 | 156.02 | 148.79 | 0.0064 |
| sha2/256 | $_{ m chan}$ | 65536 | 398.845 | 164.31 | 156.70 | 0.0061 |
| sha2/256 | chan | 131072 | 814.252 | 160.97 | 153.51 | 0.0062 |
| sha2/256 | chan | 262144 | 1594.737 | 164.38 | 156.76 | 0.0061 |
| sha2/256 | $_{ m chan}$ | 524288 | 3284.236 | 159.64 | 152.24 | 0.0063 |
| sha2/256 | chan | 1048576 | 6360.665 | 164.85 | 157.21 | 0.0061 |
| sha2/256 | chan | 2097152 | 12879.805 | 162.82 | 155.28 | 0.0061 |
| sha2/256 | chan | 4194304 | 25554.023 | 164.13 | 156.53 | 0.0061 |
| sha2/256 | chan | 8388608 | 51217.124 | 163.79 | 156.20 | 0.0061 |
| sha2/256 | chan | 16777216 | 102793.353 | 163.21 | 155.65 | 0.0061 |
| sha2/256 | chan | 33554432 | 205362.422 | 163.39 | 155.82 | 0.0061 |
| sha2/256 | chan | 67108864 | 410713.621 | 163.40 | 155.83 | 0.0061 |
| sha2/384 | chan | 64 | 16.093 | 3.98 | 3.80 | 0.2515 |
| sha2/384 | $_{ m chan}$ | 128 | 19.283 | 6.64 | 6.33 | 0.1506 |
| sha2/384 | chan | 256 | 19.173 | 13.35 | 12.73 | 0.0749 |
| sha2/384 | chan | 512 | 15.438 | 33.16 | 31.62 | 0.0302 |
| sha2/384 | chan | 1024 | 19.257 | 53.18 | 50.72 | 0.0188 |
| sha2/384 | chan | 2048 | 24.780 | 82.65 | 78.82 | 0.0121 |
| sha2/384 | chan | 4096 | 34.955 | 117.18 | 111.75 | 0.0085 |
| sha2/384 | chan | 8192 | 51.124 | 160.24 | 152.82 | 0.0062 |
| sha2/384 | chan | 16384 | 80.303 | 204.03 | 194.58 | 0.0049 |
| sha2/384 | $_{ m chan}$ | 32768 | 132.846 | 246.66 | 235.23 | 0.0041 |
| sha2/384 | chan | 65536 | 265.755 | 246.60 | 235.18 | 0.0041 |
| sha2/384 | chan | 131072 | 560.938 | 233.67 | 222.85 | 0.0043 |
| sha2/384 | $_{ m chan}$ | 262144 | 988.111 | 265.30 | 253.01 | 0.0038 |
| sha2/384 | $_{ m chan}$ | 524288 | 2097.101 | 250.01 | 238.43 | 0.0040 |
| sha2/384 | $_{ m chan}$ | 1048576 | 4052.254 | 258.76 | 246.77 | 0.0039 |
| sha2/384 | chan | 2097152 | 8430.166 | 248.77 | 237.25 | 0.0040 |
| sha2/384 | chan | 4194304 | 16524.694 | 253.82 | 242.06 | 0.0039 |
| sha2/384 | chan | 8388608 | 32690.644 | 256.61 | 244.72 | 0.0039 |
| sha2/384 | chan | 16777216 | 65928.610 | 254.48 | 242.69 | 0.0039 |
| sha2/384 | chan | 33554432 | 131147.144 | 255.85 | 244.00 | 0.0039 |
| sha2/384 | chan | 67108864 | 261909.752 | 256.23 | 244.36 | 0.0039 |

| Digest | Method | Bytes | Microseconds | MB/Second | MiB/Second | Microseconds/Byte |
|----------|-----------------------|--------------------|--------------|-----------|------------|-------------------|
| sha2/512 | chan | 64 | 14.696 | 4.35 | 4.15 | 0.2296 |
| sha2/512 | chan | 128 | 14.747 | 8.68 | 8.28 | 0.1152 |
| sha2/512 | $_{ m chan}$ | 256 | 18.955 | 13.51 | 12.88 | 0.0740 |
| sha2/512 | $_{ m chan}$ | 512 | 17.453 | 29.34 | 27.98 | 0.0341 |
| sha2/512 | $_{ m chan}$ | 1024 | 19.623 | 52.18 | 49.76 | 0.0192 |
| sha2/512 | $_{ m chan}$ | 2048 | 28.576 | 71.67 | 68.35 | 0.0140 |
| sha2/512 | $_{ m chan}$ | 4096 | 32.684 | 125.32 | 119.51 | 0.0080 |
| sha2/512 | chan | 8192 | 45.296 | 180.85 | 172.47 | 0.0055 |
| sha2/512 | chan | 16384 | 96.165 | 170.37 | 162.48 | 0.0059 |
| sha2/512 | chan | 32768 | 141.902 | 230.92 | 220.22 | 0.0043 |
| sha2/512 | chan | 65536 | 266.761 | 245.67 | 234.29 | 0.0041 |
| sha2/512 | chan | 131072 | 525.861 | 249.25 | 237.70 | 0.0040 |
| sha2/512 | chan | 262144 | 1026.426 | 255.39 | 243.56 | 0.0039 |
| sha2/512 | chan | 524288 | 1982.423 | 264.47 | 252.22 | 0.0038 |
| sha2/512 | chan | 1048576 | 4079.091 | 257.06 | 245.15 | 0.0039 |
| sha2/512 | $_{ m chan}$ | 2097152 | 8173.593 | 256.58 | 244.69 | 0.0039 |
| sha2/512 | $_{ m chan}$ | 4194304 | 16560.791 | 253.27 | 241.54 | 0.0039 |
| sha2/512 | $_{ m chan}$ | 8388608 | 32790.890 | 255.82 | 243.97 | 0.0039 |
| sha2/512 | $_{ m chan}$ | 16777216 | 66363.193 | 252.81 | 241.10 | 0.0040 |
| sha2/512 | $_{ m chan}$ | 33554432 | 131126.695 | 255.89 | 244.04 | 0.0039 |
| sha2/512 | chan | 67108864 | 261618.834 | 256.51 | 244.63 | 0.0039 |
| sha3/224 | chan | 64 | 21.485 | 2.98 | 2.84 | 0.3357 |
| sha3/224 | chan | 128 | 20.995 | 6.10 | 5.82 | 0.1640 |
| sha3/224 | chan | 256 | 28.379 | 9.02 | 8.60 | 0.1109 |
| sha3/224 | $_{ m chan}$ | 512 | 26.385 | 19.40 | 18.50 | 0.0515 |
| sha3/224 | $_{ m chan}$ | 1024 | 37.213 | 27.52 | 26.25 | 0.0363 |
| sha3/224 | chan | 2048 | 44.702 | 45.81 | 43.69 | 0.0218 |
| sha3/224 | $_{ m chan}$ | 4096 | 82.917 | 49.40 | 47.11 | 0.0202 |
| sha3/224 | $_{ m chan}$ | 8192 | 135.066 | 60.65 | 57.84 | 0.0165 |
| sha3/224 | $_{ m chan}$ | 16384 | 273.627 | 59.88 | 57.11 | 0.0167 |
| sha3/224 | $_{ m chan}$ | 32768 | 565.408 | 57.95 | 55.27 | 0.0173 |
| sha3/224 | chan | 65536 | 1082.407 | 60.55 | 57.74 | 0.0165 |
| sha3/224 | chan | 131072 | 2085.830 | 62.84 | 59.93 | 0.0159 |
| sha3/224 | chan | 262144 | 4198.790 | 62.43 | 59.54 | 0.0160 |
| sha3/224 | chan | 524288 | 8651.360 | 60.60 | 57.79 | 0.0165 |
| sha3/224 | chan | 1048576 | 16462.508 | 63.69 | 60.74 | 0.0157 |
| sha3/224 | chan | 2097152 | 32781.360 | 63.97 | 61.01 | 0.0156 |
| sha3/224 | chan | 4194304 | 65327.248 | 64.20 | 61.23 | 0.0156 |
| sha3/224 | chan | 8388608 | 130599.556 | 64.23 | 61.25 | 0.0156 |
| sha3/224 | chan | 16777216 | 261305.770 | 64.21 | 61.24 | 0.0156 |
| sha3/224 | chan | 33554432 | 523304.540 | 64.12 | 61.15 | 0.0156 |
| sha3/224 | chan | 67108864 | 1049258.054 | 63.96 | 61.00 | 0.0156 |
| , 1 | | 5. <u>-</u> 5000 1 | | 00.00 | 01.00 | 0.0100 |

| Digest | Method | Bytes | Microseconds | MB/Second | MiB/Second | Microseconds/Byte |
|-----------------|-----------------------|----------|--------------|-----------|------------|-------------------|
| ${\sinh 3/256}$ | chan | 64 | 20.645 | 3.10 | 2.96 | 0.3226 |
| sha3/256 | chan | 128 | 17.673 | 7.24 | 6.90 | 0.1381 |
| sha3/256 | chan | 256 | 20.841 | 12.28 | 11.71 | 0.0814 |
| sha3/256 | chan | 512 | 22.468 | 22.79 | 21.73 | 0.0439 |
| sha3/256 | $_{ m chan}$ | 1024 | 29.703 | 34.47 | 32.87 | 0.0290 |
| sha3/256 | chan | 2048 | 49.498 | 41.38 | 39.46 | 0.0242 |
| sha3/256 | chan | 4096 | 84.469 | 48.49 | 46.24 | 0.0206 |
| sha3/256 | chan | 8192 | 148.267 | 55.25 | 52.69 | 0.0181 |
| sha3/256 | $_{ m chan}$ | 16384 | 275.673 | 59.43 | 56.68 | 0.0168 |
| sha3/256 | $_{ m chan}$ | 32768 | 573.787 | 57.11 | 54.46 | 0.0175 |
| sha3/256 | $_{ m chan}$ | 65536 | 1099.406 | 59.61 | 56.85 | 0.0168 |
| sha3/256 | $_{ m chan}$ | 131072 | 2242.905 | 58.44 | 55.73 | 0.0171 |
| sha3/256 | $_{ m chan}$ | 262144 | 4353.141 | 60.22 | 57.43 | 0.0166 |
| sha3/256 | $_{ m chan}$ | 524288 | 8496.808 | 61.70 | 58.84 | 0.0162 |
| sha3/256 | $_{ m chan}$ | 1048576 | 17313.245 | 60.56 | 57.75 | 0.0165 |
| sha3/256 | $_{ m chan}$ | 2097152 | 34698.785 | 60.44 | 57.64 | 0.0165 |
| sha3/256 | $_{ m chan}$ | 4194304 | 69195.045 | 60.62 | 57.81 | 0.0165 |
| sha3/256 | chan | 8388608 | 138699.791 | 60.48 | 57.68 | 0.0165 |
| sha3/256 | chan | 16777216 | 277520.653 | 60.45 | 57.65 | 0.0165 |
| sha3/256 | chan | 33554432 | 553986.943 | 60.57 | 57.76 | 0.0165 |
| sha3/256 | chan | 67108864 | 1112034.339 | 60.35 | 57.55 | 0.0166 |
| sha3/384 | chan | 64 | 16.909 | 3.78 | 3.60 | 0.2642 |
| sha3/384 | chan | 128 | 17.836 | 7.18 | 6.85 | 0.1393 |
| sha3/384 | chan | 256 | 25.270 | 10.13 | 9.66 | 0.0987 |
| sha3/384 | chan | 512 | 28.528 | 17.95 | 17.12 | 0.0557 |
| sha3/384 | chan | 1024 | 33.976 | 30.14 | 28.74 | 0.0332 |
| sha3/384 | chan | 2048 | 62.251 | 32.90 | 31.38 | 0.0304 |
| sha3/384 | chan | 4096 | 116.844 | 35.06 | 33.44 | 0.0285 |
| sha3/384 | chan | 8192 | 198.163 | 41.34 | 39.42 | 0.0242 |
| sha3/384 | $_{ m chan}$ | 16384 | 368.863 | 44.42 | 42.36 | 0.0225 |
| sha3/384 | chan | 32768 | 696.431 | 47.05 | 44.87 | 0.0213 |
| sha3/384 | chan | 65536 | 1411.572 | 46.43 | 44.28 | 0.0215 |
| sha3/384 | chan | 131072 | 2780.530 | 47.14 | 44.96 | 0.0212 |
| sha3/384 | chan | 262144 | 5696.507 | 46.02 | 43.89 | 0.0217 |
| sha3/384 | chan | 524288 | 11729.965 | 44.70 | 42.63 | 0.0224 |
| sha3/384 | chan | 1048576 | 22631.943 | 46.33 | 44.18 | 0.0216 |
| sha3/384 | chan | 2097152 | 45229.615 | 46.37 | 44.22 | 0.0216 |
| sha3/384 | chan | 4194304 | 90474.236 | 46.36 | 44.21 | 0.0216 |
| sha3/384 | chan | 8388608 | 180798.208 | 46.40 | 44.25 | 0.0216 |
| sha3/384 | chan | 16777216 | 357082.526 | 46.98 | 44.80 | 0.0213 |
| sha3/384 | chan | 33554432 | 705869.673 | 47.54 | 45.34 | 0.0210 |
| sha3/384 | chan | 67108864 | 1429203.781 | 46.96 | 44.78 | 0.0213 |

| sha3/512 chan 128 20.529 6.24 5.95 0.16 sha3/512 chan 256 21.476 11.92 11.37 0.08 sha3/512 chan 512 34.955 14.65 13.97 0.06 sha3/512 chan 1024 44.561 22.98 21.92 0.04 sha3/512 chan 4096 136.535 30.00 28.61 0.03 sha3/512 chan 8192 257.469 31.82 30.35 0.03 sha3/512 chan 16384 488.473 33.54 31.99 0.02 sha3/512 chan 65536 1925.380 34.04 32.46 0.02 sha3/512 chan 65536 1925.380 34.04 32.46 0.02 sha3/512 chan 524288 15583.064 33.64 32.94 0.02 sha3/512 chan 524288 15583.064 33.64 32.08 0.02 sha3/512 | Digest | Method | Bytes | Microseconds | MB/Second | MiB/Second | Microseconds/Byte |
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| Digest | Method | Bytes | Microseconds | MB/Second | MiB/Second | Microseconds/Byte |
|------------|--------|----------|--------------|-----------|------------|-------------------|
| snefru/256 | chan | 64 | 27.178 | 2.35 | 2.24 | 0.4247 |
| snefru/256 | chan | 128 | 29.867 | 4.29 | 4.09 | 0.2333 |
| snefru/256 | chan | 256 | 44.452 | 5.76 | 5.49 | 0.1736 |
| snefru/256 | chan | 512 | 68.470 | 7.48 | 7.13 | 0.1337 |
| snefru/256 | chan | 1024 | 121.359 | 8.44 | 8.05 | 0.1185 |
| snefru/256 | chan | 2048 | 214.002 | 9.57 | 9.13 | 0.1045 |
| snefru/256 | chan | 4096 | 411.515 | 9.95 | 9.49 | 0.1005 |
| snefru/256 | chan | 8192 | 806.572 | 10.16 | 9.69 | 0.0985 |
| snefru/256 | chan | 16384 | 1601.828 | 10.23 | 9.76 | 0.0978 |
| snefru/256 | chan | 32768 | 3186.231 | 10.28 | 9.80 | 0.0972 |
| snefru/256 | chan | 65536 | 6356.773 | 10.31 | 9.83 | 0.0970 |
| snefru/256 | chan | 131072 | 12696.632 | 10.32 | 9.84 | 0.0969 |
| snefru/256 | chan | 262144 | 25384.426 | 10.33 | 9.85 | 0.0968 |
| snefru/256 | chan | 524288 | 50732.168 | 10.33 | 9.85 | 0.0968 |
| snefru/256 | chan | 1048576 | 101535.758 | 10.33 | 9.85 | 0.0968 |
| snefru/256 | chan | 2097152 | 203023.774 | 10.33 | 9.85 | 0.0968 |
| snefru/256 | chan | 4194304 | 406137.759 | 10.33 | 9.85 | 0.0968 |
| snefru/256 | chan | 8388608 | 812467.135 | 10.32 | 9.84 | 0.0969 |
| snefru/256 | chan | 16777216 | 1625438.647 | 10.32 | 9.84 | 0.0969 |
| snefru/256 | chan | 33554432 | 3250354.911 | 10.32 | 9.84 | 0.0969 |
| snefru/256 | chan | 67108864 | 6500059.358 | 10.32 | 9.84 | 0.0969 |
| tiger | chan | 64 | 18.861 | 3.39 | 3.23 | 0.2947 |
| tiger | chan | 128 | 17.914 | 7.15 | 6.82 | 0.1400 |
| tiger | chan | 256 | 19.037 | 13.45 | 12.83 | 0.0744 |
| tiger | chan | 512 | 20.563 | 24.90 | 23.75 | 0.0402 |
| tiger | chan | 1024 | 18.651 | 54.90 | 52.36 | 0.0182 |
| tiger | chan | 2048 | 24.828 | 82.49 | 78.67 | 0.0121 |
| tiger | chan | 4096 | 33.537 | 122.13 | 116.47 | 0.0082 |
| tiger | chan | 8192 | 43.274 | 189.31 | 180.54 | 0.0053 |
| tiger | chan | 16384 | 69.409 | 236.05 | 225.11 | 0.0042 |
| tiger | chan | 32768 | 121.780 | 269.08 | 256.61 | 0.0037 |
| tiger | chan | 65536 | 225.924 | 290.08 | 276.64 | 0.0034 |
| tiger | chan | 131072 | 431.732 | 303.60 | 289.54 | 0.0033 |
| tiger | chan | 262144 | 845.789 | 309.94 | 295.58 | 0.0032 |
| tiger | chan | 524288 | 1657.410 | 316.33 | 301.68 | 0.0032 |
| tiger | chan | 1048576 | 3298.446 | 317.90 | 303.17 | 0.0031 |
| tiger | chan | 2097152 | 6627.898 | 316.41 | 301.75 | 0.0032 |
| tiger | chan | 4194304 | 13468.445 | 311.42 | 296.99 | 0.0032 |
| tiger | chan | 8388608 | 27318.034 | 307.07 | 292.84 | 0.0033 |
| tiger | chan | 16777216 | 54970.079 | 305.21 | 291.07 | 0.0033 |
| tiger | chan | 33554432 | 108408.966 | 309.52 | 295.18 | 0.0032 |
| tiger | chan | 67108864 | 216527.668 | 309.93 | 295.57 | 0.0032 |

| Digest | Method | Bytes | Microseconds | MB/Second | MiB/Second | Microseconds/Byte |
|----------------------|-----------------------|----------|--------------|-----------|------------|-------------------|
| tth | chan | 64 | 17.959 | 3.56 | 3.40 | 0.2806 |
| tth | chan | 128 | 18.873 | 6.78 | 6.47 | 0.1474 |
| tth | chan | 256 | 13.198 | 19.40 | 18.50 | 0.0516 |
| tth | chan | 512 | 18.732 | 27.33 | 26.06 | 0.0366 |
| tth | chan | 1024 | 18.624 | 54.98 | 52.43 | 0.0182 |
| tth | chan | 2048 | 24.363 | 84.06 | 80.17 | 0.0119 |
| tth | chan | 4096 | 31.928 | 128.29 | 122.35 | 0.0078 |
| tth | chan | 8192 | 48.598 | 168.57 | 160.76 | 0.0059 |
| tth | chan | 16384 | 78.620 | 208.39 | 198.74 | 0.0048 |
| tth | chan | 32768 | 139.139 | 235.51 | 224.60 | 0.0042 |
| tth | chan | 65536 | 260.106 | 251.96 | 240.29 | 0.0040 |
| tth | chan | 131072 | 502.426 | 260.88 | 248.79 | 0.0038 |
| tth | chan | 262144 | 987.770 | 265.39 | 253.10 | 0.0038 |
| tth | chan | 524288 | 1957.121 | 267.89 | 255.48 | 0.0037 |
| tth | chan | 1048576 | 3915.307 | 267.81 | 255.40 | 0.0037 |
| tth | chan | 2097152 | 8182.746 | 256.29 | 244.42 | 0.0039 |
| tth | chan | 4194304 | 15928.837 | 263.32 | 251.12 | 0.0038 |
| tth | chan | 8388608 | 32084.946 | 261.45 | 249.34 | 0.0038 |
| tth | chan | 16777216 | 64203.885 | 261.31 | 249.20 | 0.0038 |
| tth | chan | 33554432 | 128168.039 | 261.80 | 249.67 | 0.0038 |
| tth | chan | 67108864 | 256415.618 | 261.72 | 249.60 | 0.0038 |
| whirlpool | chan | 64 | 18.690 | 3.42 | 3.26 | 0.2920 |
| whirlpool | chan | 128 | 21.911 | 5.84 | 5.57 | 0.1712 |
| whirlpool | chan | 256 | 24.202 | 10.58 | 10.09 | 0.0945 |
| whirlpool | chan | 512 | 28.374 | 18.04 | 17.20 | 0.0554 |
| whirlpool | chan | 1024 | 38.547 | 26.56 | 25.33 | 0.0376 |
| whirlpool | chan | 2048 | 56.015 | 36.56 | 34.87 | 0.0274 |
| whirlpool | chan | 4096 | 93.676 | 43.73 | 41.70 | 0.0229 |
| whirlpool | chan | 8192 | 161.359 | 50.77 | 48.42 | 0.0197 |
| whirlpool | chan | 16384 | 309.736 | 52.90 | 50.45 | 0.0189 |
| whirlpool | chan | 32768 | 595.158 | 55.06 | 52.51 | 0.0182 |
| whirlpool | chan | 65536 | 1177.542 | 55.65 | 53.07 | 0.0180 |
| whirlpool | chan | 131072 | 2345.091 | 55.89 | 53.30 | 0.0179 |
| whirlpool | $_{ m chan}$ | 262144 | 4674.933 | 56.07 | 53.47 | 0.0178 |
| whirlpool | $_{ m chan}$ | 524288 | 9347.355 | 56.09 | 53.49 | 0.0178 |
| whirlpool | chan | 1048576 | 18695.158 | 56.09 | 53.49 | 0.0178 |
| whirlpool | chan | 2097152 | 37565.798 | 55.83 | 53.24 | 0.0179 |
| whirlpool | chan | 4194304 | 74943.342 | 55.97 | 53.38 | 0.0179 |
| whirlpool | chan | 8388608 | 150668.143 | 55.68 | 53.10 | 0.0180 |
| whirlpool | chan | 16777216 | 300210.327 | 55.88 | 53.29 | 0.0179 |
| whirlpool | chan | 33554432 | 600638.937 | 55.86 | 53.27 | 0.0179 |
| whirlpool | chan | 67108864 | 1201339.426 | 55.86 | 53.27 | 0.0179 |

Maxima

| Digest | Method | Bytes | Micros | MB/Second | MiB/Second | Micros/Byte | Gain | R/G |
|----------------------------|--------|----------|-------------|-----------|------------|-------------|--------|-----|
| $\overline{\mathrm{ed2k}}$ | chan | 524288 | 637.955 | 821.83 | 783.76 | 0.0012 | 79.558 | 1.0 |
| md4 | chan | 524288 | 656.840 | 798.20 | 761.22 | 0.0013 | 77.270 | 1. |
| edonr/512 | chan | 1048576 | 2036.234 | 514.96 | 491.10 | 0.0019 | 49.851 | 1.0 |
| edonr/384 | chan | 1048576 | 2049.788 | 511.55 | 487.85 | 0.0020 | 49.521 | 1.0 |
| md5 | chan | 1048576 | 2054.295 | 510.43 | 486.78 | 0.0020 | 49.412 | 1.0 |
| tiger | chan | 1048576 | 3298.446 | 317.90 | 303.17 | 0.0031 | 30.774 | 1. |
| au h | chan | 524288 | 1957.121 | 267.89 | 255.48 | 0.0037 | 25.933 | 1.0 |
| sha2/384 | chan | 262144 | 988.111 | 265.30 | 253.01 | 0.0038 | 25.682 | 1.0 |
| sha2/512 | chan | 524288 | 1982.423 | 264.47 | 252.22 | 0.0038 | 25.602 | 1.0 |
| edonr/256 | chan | 524288 | 1993.972 | 262.94 | 250.76 | 0.0038 | 25.454 | 1.0 |
| edonr/224 | chan | 262144 | 1004.838 | 260.88 | 248.79 | 0.0038 | 25.255 | 1. |
| ripemd160 | chan | 131072 | 595.411 | 220.14 | 209.94 | 0.0045 | 21.311 | 1.0 |
| has 160 | chan | 524288 | 2390.026 | 219.36 | 209.20 | 0.0046 | 21.235 | 1. |
| blake2b | chan | 65536 | 334.922 | 195.68 | 186.61 | 0.0051 | 18.943 | 1.0 |
| sha1 | chan | 262144 | 1390.674 | 188.50 | 179.77 | 0.0053 | 18.248 | 1. |
| sha2/224 | chan | 131072 | 790.984 | 165.71 | 158.03 | 0.0060 | 16.042 | 1.0 |
| sha2/256 | chan | 1048576 | 6360.665 | 164.85 | 157.21 | 0.0061 | 15.958 | 1.3 |
| blake2s | chan | 4194304 | 35556.941 | 117.96 | 112.50 | 0.0085 | 11.419 | 1.0 |
| aich | chan | 4194304 | 38575.072 | 108.73 | 103.69 | 0.0092 | 10.526 | 1.0 |
| btih | chan | 262144 | 2440.792 | 107.40 | 102.42 | 0.0093 | 10.397 | 1.0 |
| sha3/224 | chan | 8388608 | 130599.556 | 64.23 | 61.25 | 0.0156 | 6.218 | 1.0 |
| sha3/256 | chan | 524288 | 8496.808 | 61.70 | 58.84 | 0.0162 | 5.973 | 1. |
| whirlpool | chan | 524288 | 9347.355 | 56.09 | 53.49 | 0.0178 | 5.430 | 1. |
| sha3/384 | chan | 33554432 | 705869.673 | 47.54 | 45.34 | 0.0210 | 4.602 | 1.3 |
| sha3/512 | chan | 67108864 | 1908770.161 | 35.16 | 33.53 | 0.0284 | 3.404 | 1. |
| gost94 | chan | 131072 | 4467.554 | 29.34 | 27.98 | 0.0341 | 2.840 | 1.4 |
| gost12/256 | chan | 524288 | 25208.836 | 20.80 | 19.84 | 0.0481 | 2.014 | 1.0 |
| gost12/512 | chan | 65536 | 3372.702 | 19.43 | 18.53 | 0.0515 | 1.881 | 1.5 |
| snefru/128 | chan | 524288 | 33827.213 | 15.50 | 14.78 | 0.0645 | 1.500 | 1. |
| snefru/256 | chan | 262144 | 25384.426 | 10.33 | 9.85 | 0.0968 | 1.000 | 1.0 |