



NASsoftware Limited
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VSIPL Performance on Atom

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1 Introduction

These tables show timings for the NAS VSIPL library, taken on an Atom N270-powered system at 1.6GHz. Times are in microseconds. They have been measured by averaging over a number of iterated calls to the routine. Times for the CSIPL library are essentially identical to these. Results are given for the following types of data:

N: Normal data, ie vectors are aligned on the most efficient memory boundaries, and elements are contiguous in memory (stride = 1). This will be the case in most DSP application codes.

U: Unaligned, ie contiguous vector data but not optimally aligned in memory.

S: Strided (ie not contiguous) data.

Timings for data of type U, S are illustrative: they will depend in detail on the actual stride and/or on the degree of misalignment. The library design treats all cases, as efficiently as possible.

2 Timings

FFT Routines

processor	N270								
cycle time	1.6Ghz								
max threads used	2								
version	Linux								
vsip_ccfftop.create.f:									
output is microseconds.									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
	7	10	16.96	25.984	56	98.048	173.056	347.136	413.696
vsip_ccfftop.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
x=N y=N	1	3	6	14.016	32	82.048	206.08	488.96	1011.71
x=U y=U	2	4	8	17.984	41.024	100.992	241.92	558.08	1146.88
x=S y=S	3	8	16.96	31.008	65.92	149.76	355.84	998.4	1822.72
x=S y=S	3	6	16.96	38.08	65.92	148.48	350.72	844.8	1822.72
vsip_ccfftip.create.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
	16.96	20	33.92	51.968	115.968	215.04	420.864	835.584	983.04
vsip_ccfftip.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
xy=N	1.99738	3.99475	8.99719	20.0097	45.9696	119.963	309.023	737.05	1437.25
xy=U	2.99906	5.99813	11.9963	26.0079	59.0216	147.026	348.947	836.858	1673.72
xy=S	5.00244	8.99719	19.0021	44.0022	97.8894	232.247	510.56	1236.09	3393.5
xy=S	5.00244	8.99719	19.0021	44.0022	97.8894	222.65	625.724	1205.38	3316.72
vsip_rccfftop.create.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
	11	15.04	39.04	67.84	112	221.44	430.08	803.84	1914.88
vsip_rccfftop.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
x=N y=N	1	2	4	12	30.976	66.048	187.904	453.12	1105.92
x=U y=U	2	4	5.008	12	35.968	75.008	227.072	522.24	1300.48
x=S y=S	3	5	12	33.92	67.84	143.36	330.24	757.76	1802.24
x=S y=S	3	5	12	33.92	67.84	148.48	345.6	762.88	1781.76
vsip_rccfftmop.create.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
	10	12	17.92	30.016	49.024	91.008	180.992	337.92	775.168
vsip_rccfftmop.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
x=N y=N	1	2	4	11.008	19.008	43.008	101.888	245.76	590.848
x=U y=U	2	3	5.008	11.008	24	51.968	122.88	274.944	666.624
x=S y=S	2	4	8	17.984	35.968	77.952	179.968	410.112	966.656
x=S y=S	2	4	8	17.984	35.968	77.952	227.072	410.112	987.136
vsip_ccfftmop.create.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
	19	24.96	36	38.08	69.12	134.4	299.52	686.08	1505.28
vsip_ccfftmop.f:									
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2			
X=N Y=N	6	19.008	80.896	340.992	1867.78	9207.81			
X=U Y=U	8.992	30.976	119.04	477.184	2162.69	9732.1			
X=S Y=S	15.008	54.016	218.112	1018.88	4464.64	18841.6			
X=S Y=S	15.008	54.016	217.088	947.2	4423.68	18677.8			
vsip_ccfftmip.create.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
	22.9977	29.9595	43.979	59.919	105.242	212.021	491.643	1136.92	1413.47
vsip_ccfftmip.f:									
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2			
XY=N	6	19.008	78.08	330.752	1650.69	8585.22			
XY=U	8.992	30.976	116.992	464.896	2113.54	9437.18			
XY=S	14	51.008	201.984	891.904	4423.68	19824.6			

XY=S	14	51.008	201.984	901.12	4423.68	19988.5			
vsip_rcfftmop_create.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
	12	16	43.04	70.08	113.92	225.28	430.08	803.84	1955.84
vsip_rcfftmop_f:									
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2			
X=N Y=N	11.008	38.976	132.096	481.28	2056.19	9011.2			
X=U Y=U	12	62.016	143.872	542.72	2297.86	9633.79			
vsip_crfmop_create.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
	20	25.92	41.92	62.976	102.016	187.904	366.08	678.912	1566.72
vsip_crfmop_f:									
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2			
X=N Y=N	10	25.984	83.968	294.912	1273.86	6045.7			
X=U Y=U	12	30.016	94.976	334.848	1376.26	6193.15			
Window Routines									
vsip_vcreate_hanning.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
Atmp=N	3	4	6	11.008	33.024	46.976	101.888	202.24	416.768
Atmp=U	3	4	8	11.008	20.032	64	122.88	254.976	489.472
Atmp=S	3	4	6	11.008	33.984	65.024	128	252.928	418.816
Atmp=S	3	4	6	12.992	33.024	66.048	129.024	247.808	512
vsip_vcreate_blackman.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
Atmp=N	8.96	15.008	24	41.024	103.936	198.912	392.192	786.432	1591.3
Atmp=U	8.96	15.008	28	40	104.96	198.912	391.168	786.432	1587.2
Atmp=S	8.96	15.008	24.992	41.024	93.056	241.92	468.992	934.912	1591.3
Atmp=S	8.96	14	23.008	69.76	93.952	198.912	392.192	925.696	1894.4
vsip_vcreate_kaiser.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
Atmp=N	11	20	47.04	271.04	202.88	414.72	826.88	1653.76	6645.76
Atmp=U	38	20	163.04	261.12	202.88	414.72	826.88	4321.28	3317.76
Atmp=S	11	68.96	164.96	103.04	204.16	432.64	829.44	1776.64	3317.76
Atmp=S	11	68.96	132.96	296.96	647.04	1272.32	2588.16	1653.76	3317.76
vsip_vcreate_cheby.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
Atmp=N	77	138	241.92	451.84	874.24	1756.16	3584	7587.84	14970.9
Atmp=U	77	138	241.92	451.84	874.24	1756.16	3596.8	7598.08	14960.6
Atmp=S	77	138.96	240.96	454.08	872.96	1756.16	3594.24	7603.2	14960.6
Atmp=S	77	138	240	453.12	874.24	1753.6	3537.92	7296	15052.8
FIR / Convolution / Correlation									
vsip_firflt.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
x=N y=N	20	106	39.04	77.12	177.92	426.24	965.12	2334.72	5181.44
x=U y=U	21	110	40	76.16	177.28	436.48	949.76	2411.52	5181.44
x=S y=S	32	112	47.04	104	229.12	522.24	1164.8	2785.28	6144
x=S y=S	32	112	43.04	102.08	227.2	529.92	1159.68	2754.56	6113.28
vsip_cfirflt.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
x=N y=N	47	15.04	44	109.12	275.2	678.4	1594.88	3527.68	9216
x=U y=U	47	16.96	46.08	112	291.2	678.4	1607.68	3568.64	9134.08
x=S y=S	47	31.04	66.08	141.12	334.72	805.12	1889.28	4387.84	10946.6
x=S y=S	47	31.04	76	141.12	336	802.56	1940.48	4234.24	10752
vsip_convolve1d.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
x=N y=N	6	12	33.92	69.12	142.72	352	803.84	1981.44	4126.72
x=U y=U	6	12.96	36	72	158.72	363.52	837.12	2068.48	4229.12
x=S y=S	7	15.04	41.92	106.88	193.92	444.16	1246.72	2816	5253.12
x=S y=S	7	15.04	51.04	83.84	241.92	446.72	1006.08	3205.12	5283.84
vsip_correlate1d.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384

ref=N x=N y=N	8	16	44.96	101.12	222.08	517.12	1182.72	2938.88	6154.24
ref=U x=U y=U	8	16	44.96	102.08	222.72	519.68	1190.4	2959.36	6103.04
ref=S x=S y=S	9	19.04	49.92	141.12	330.24	587.52	1694.72	3322.88	7669.76
ref=S x=S y=S	9	19.04	69.92	146.88	344.32	759.04	1351.68	3461.12	7444.48
Other Routines									
vsip_vhisto.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	2	3	6	31.008	51.968	83.968	133.12	331.776	929.792
A=U R=U	2	5	8.992	31.008	48	78.976	158.976	404.992	993.28
A=S R=S	3	3	10	14.016	71.04	88.96	229.12	443.904	933.888
A=S R=S	3	3	7.008	16	71.04	128	103.936	614.4	510.976
vsip_vrandu.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
R=N	2	3	6	12	35.008	68.992	158.976	322.048	575.488
R=U	2	3	7.008	12	35.008	76.032	146.944	321.024	575.488
R=S	2	3	6	12	35.008	71.04	141.056	292.864	602.112
R=S	2	3	7.008	12	35.008	71.04	141.056	291.84	599.04
vsip_cvrandu.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
R=N	3	6	14	34.88	76.8	139.52	289.28	578.56	1157.12
R=U	3	6	12.992	34.88	74.88	139.52	289.28	578.56	1167.36
R=S	3	6	12	39.04	83.84	154.88	299.52	721.92	1587.2
R=S	3	6	12	34.88	81.28	172.8	353.28	629.76	1361.92
vsip_vrandn.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
R=N	15	40.96	80.96	172.16	353.92	706.56	1415.68	2862.08	5703.88
R=U	15	40	80.96	172.16	353.92	706.56	1413.12	2867.2	5969.92
R=S	15	40.96	80.96	172.16	353.92	706.56	1413.12	2846.72	6901.76
R=S	15	40	80.96	172.16	353.92	707.84	1420.8	2867.2	5990.4
vsip_cvrandn.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
R=N	13.0113	24.9662	62.0315	135.97	284.999	582.29	1164.58	2372.18	4744.35
R=U	13.0113	24.9662	62.0315	137.122	284.999	582.29	1179.94	2347.59	4744.35
R=S	13.0113	24.9662	62.9917	137.122	288.072	699.055	1189.16	2980.59	5494.11
R=S	13.0113	24.9662	73.9385	137.122	300.363	588.435	1189.16	2384.47	5395.78
Float Vector Routines									
vsip_vacos.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	2	4	7.008	15.008	40	96	195.072	392.192	799.744
A=U R=U	2	4	8.992	17.984	46.016	100.992	207.104	401.92	852.992
A=S R=S	2	5	10	31.008	64	129.28	261.12	542.72	1085.44
A=S R=S	3	5	10	32	65.28	130.56	261.12	568.32	1095.68
vsip_vasin.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	2	3	7.008	14.016	36.992	81.024	171.008	356.864	728.064
A=U R=U	2	4	8	16.992	43.008	97.024	168.96	336.896	686.08
A=S R=S	2	4	8	16.992	46.976	103.04	217.088	537.6	1126.4
A=S R=S	2	5	10	20.992	52.992	116.992	253.952	527.36	1034.24
vsip_vatan.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	2	5	10	17.984	51.008	120.96	235.008	480.768	955.392
A=U R=U	3	5	11.008	32	62.976	116.992	256	517.12	1034.24
A=S R=S	3	6	12	34.88	71.68	143.36	291.84	624.64	1310.72
A=S R=S	3	6	12	34.88	71.68	153.6	302.08	629.76	1269.76
vsip_vatan2.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	4	7	16.96	38.08	97.28	197.12	394.24	793.6	1617.92
A=U B=U R=U	4	8.96	17.92	45.12	103.04	204.8	424.96	849.92	1720.32
A=S B=S R=S	5	10	31.04	53.12	126.08	253.44	524.8	1049.6	2088.96
A=S B=S R=S	5	10	19.04	51.84	112	253.44	514.56	1034.24	2088.96
vsip_vcos.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	2	3	7.008	12.992	36.992	83.968	168.96	314.88	630.784

A=U R=U	2	4	7.008	15.008	41.984	76.032	177.92	386.048	653.312
A=S R=S	2	4	8	16.992	46.016	100.992	201.984	422.912	1002.5
A=S R=S	2	4	8.992	31.008	49.984	100.992	201.984	453.12	1018.88
vsip_vexp.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	2	3	6	11.008	33.024	64	128	271.872	564.224
A=U R=U	1	2	4	8.992	17.984	41.984	93.952	189.952	365.568
A=S R=S	2	4	7.008	14.016	41.024	91.008	199.936	416.768	901.12
A=S R=S	2	4	7.008	14.016	40	91.008	172.032	388.096	830.464
vsip_cvexp.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	3	7	14	35.84	76.16	145.92	302.08	614.4	1413.12
A=U R=U	4	7	14	38.08	76.16	179.2	332.8	686.08	1351.68
A=S R=S	4	8.96	16.96	45.12	99.84	199.68	414.72	942.08	2119.68
A=S R=S	4	8	16.96	49.92	106.88	230.4	417.28	1039.36	2109.44
vsip_vexp10.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	3	6	14	33.92	67.84	135.68	284.16	573.44	1361.92
A=U R=U	3	7	12.992	34.88	69.76	139.52	291.84	701.44	1177.6
A=S R=S	4	8	16	42.88	78.08	166.4	414.72	834.56	1495.04
A=S R=S	4	7	14	38.08	78.08	166.4	414.72	839.68	1689.6
vsip_vlog.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	2	3	7.008	12.992	35.968	80	172.032	301.056	610.304
A=U R=U	2	3	5.008	11.008	32	71.04	148.992	253.952	506.88
A=S R=S	2	5	8	16.992	46.016	100.992	204.032	444.928	950.272
A=S R=S	2	5	10	30.016	62.016	114.944	247.04	436.224	927.744
vsip_vlog10.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	2	3	7.008	15.008	36.992	82.944	183.04	317.952	633.856
A=U R=U	2	4	7.008	14.016	43.008	96	166.912	332.8	801.792
A=S R=S	2	4	8	16.992	46.016	102.016	214.016	437.76	876.544
A=S R=S	2	5	10	16.992	46.016	102.016	216.064	436.224	1085.44
vsip_vsin.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	4	7.008	14.016	30.976	73.984	163.072	340.992	632.832	1267.71
A=U R=U	4	8	14.016	28.032	84.992	189.952	329.216	658.432	1548.29
A=S R=S	5	8	16	33.984	92.032	203.008	408.064	871.424	1740.8
A=S R=S	5	10	17.984	33.024	91.008	203.008	427.008	845.824	2109.44
vsip_vsqrt.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	3.008	4.992	9.984	30.976	61.952	109.056	229.376
A=U R=U	1	2	3.008	6.016	12.032	36.992	76.032	163.84	320.512
A=S R=S	1	2	4	8.992	19.008	59.008	133.888	288.768	579.584
A=S R=S	1	2	5.008	10.016	32	65.024	130.048	326.144	497.664
vsip_cvsqrt.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	7	14	36.96	73.92	158.72	321.28	642.56	1285.12	2590.72
A=U R=U	7	14	36.96	74.88	158.72	321.28	642.56	1305.6	2611.2
A=S R=S	8	15.04	44.96	93.12	184.96	363.52	734.72	1838.08	3072
A=S R=S	8	15.04	40	81.92	209.92	359.68	883.2	1761.28	3061.76
vsip_vtan.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	2.0021	5.00285	9.00705	19.0128	48.012	117.072	231.994	406.835	839.48
A=U R=U	2.0021	5.00285	8.0084	15.0182	50.0093	102.938	172.075	358.899	898.477
A=S R=S	3.00075	5.00285	11.0044	22.0087	58.9971	129.056	270.096	553.098	1128.32
A=S R=S	3.00075	6.0015	12.003	25.0047	57.9985	129.056	270.096	550.026	1202.07
vsip_cvconj.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	0	0	0	0.9984	1.9968	8	15.0016	37.0176	74.0352
A=U R=U	1	1	1	2	6.976	16	32	81.92	156.672
A=S R=S	1	2	5.008	12	33.024	59.008	121.088	457.216	897.024
A=S R=S	1	2	4	10.016	19.008	49.024	124.928	329.216	889.856
vsip_veuler.f:									

Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	2	4	8	15.008	41.024	100.992	176.896	364.032	738.304
A=U R=U	2	4	8.992	16	49.024	105.984	196.096	391.168	791.552
A=S R=S	3	5	12	34.88	64	128	254.976	593.92	1290.24
A=S R=S	3	6	11.008	34.88	67.2	125.952	253.952	578.56	1085.44
vsip_vmag.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	0	0	0	0.9984	0.9984	1.9968	6.9888	9.984	31.0272
A=U R=U	0	0	1	2	1.9968	5.0048	12.0064	41.984	95.0272
A=S R=S	1	1	2	4	11.008	30.976	61.952	169.984	389.12
A=S R=S	1	1	2	4	11.008	34.944	73.984	136.192	357.376
vsip_vmag.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	2	4.992	8	16	61.952	97.792	195.584
A=U R=U	1	1	2	4	9.984	20.992	44.032	108.032	195.584
A=S R=S	1	1	3.008	7.008	12.992	32	65.024	181.76	351.232
A=S R=S	1	1	2	4	11.008	32	65.024	188.928	352.256
vsip_vmag.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	2	4	6.976	13.952	34.048	90.112	138.24
A=U R=U	1	1	2	3.0016	6.976	25.984	33.024	83.968	148.48
A=S R=S	1	1	2	4	9.024	18.048	37.888	104.96	230.4
A=S R=S	1	1	2	3.0016	6.0032	13.952	38.912	88.064	171.008
vsip_cvmag.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	2	3.008	6.016	12.032	36.992	69.12	137.216	286.72
A=U R=U	1	2	4	7.008	17.024	40.96	98.048	203.776	418.816
A=S R=S	2	3	5.008	12.992	38.016	91.008	158.976	330.24	677.888
A=S R=S	2	3	5.008	12.992	40	89.984	154.88	348.16	670.72
vsip_vcmagsq.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	0	1	1	2	3.0016	7.0016	16	37.9904	78.9504
A=U R=U	1	1	1	3.0016	6.0032	13.056	33.024	88.064	135.168
A=S R=S	1	2	3.008	8	16	43.008	99.072	231.936	588.8
A=S R=S	1	2	3.008	8	16	43.008	97.024	253.952	599.04
vsip_vmeanval.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	0	0	0	0.99865	0.99865	1.9973	2.99902	11.0005	29.9902
A=U	0	0.99865	1.00057	0.99865	1.9973	3.9946	12.0145	18.9897	50.0247
A=S	0.99865	0.99865	1.00057	2.99979	5.99958	13.9965	39.0242	78.0483	201.574
A=S	0.99865	0.99865	1.00057	2.99979	5.99958	14.9951	39.0242	78.0483	169.617
vsip_cvmeanval.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	0	0	1	0.9984	1.9968	1.9968	7.9872	13.0048	36.0448
A=U	1	1	1	3.0016	6.0032	8	28.928	67.072	105.472
A=S	1	1	2	4	9.984	19.968	62.976	169.984	311.296
A=S	1	1	2	4.992	12.032	30.976	60.928	114.176	321.536
vsip_vmeansqval.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	0	0	1	0.9984	1.9968	2.9952	4.992	24.9856	35.0208
A=U	0	1	1	0.9984	3.0016	6.0032	13.0048	35.9936	62.976
A=S	1	1	1	3.0016	6.976	12.0064	35.072	69.12	169.984
A=S	1	1	1	2	4.9984	12.0064	35.072	91.136	277.504
vsip_cvmeansqval.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	0	1	1	2	3.0016	6.0032	16.9984	37.9904	75.9808
A=U	1	1	1	3.0016	6.976	9.9968	32	73.216	128
A=S	1	1	2	4.992	12.032	34.048	67.072	153.088	328.704
A=S	1	1	2	4.992	12.032	34.048	80.128	194.048	326.656
vsip_vneg.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	0	1	0.9984	0.9984	1.9968	2.9952	11.008	24.9856	63.0784
A=U R=U	1	1	2	4	8	15.0016	22.9888	82.0224	133.939
A=S R=S	1	2	4	11.008	24.064	70.912	103.936	360.448	907.264
A=S R=S	1	2	4	8	20.992	61.952	124.928	278.528	716.8

vsip_vneg_i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	0	1	1	2	4.9984	9.9968	14.0032	61.952	75.9808
A=U R=U	0	1	1	2	3.0016	6.0032	29.952	39.9872	75.9808
A=S R=S	0	1	1	2	6.0032	12.0064	43.008	110.08	480.256
A=S R=S	0	1	1	2	6.976	24.96	41.984	95.232	407.552
vsip_vneg_si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	2	3.0016	9.9968	20.992	24.0128	100.966	142.95
A=U R=U	1	1	2	4.9984	6.0032	12.0064	24.0128	73.0112	142.95
A=S R=S	1	1	3.0016	4.9984	7.0016	17.9968	56.832	172.032	258.048
A=S R=S	1	1	2	3.0016	7.0016	17.9968	56.832	149.504	245.76
vsip_cvneg_f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	0	0	0	0.9984	1.9968	8	14.0032	37.0176	75.9808
A=U R=U	0	1	1	2	6.976	14.976	33.024	66.048	135.168
A=S R=S	1	2	4	10.016	19.008	59.008	112.896	346.112	874.496
A=S R=S	1	2	4	10.016	19.008	59.008	124.928	318.976	941.056
vsip_vrecip_f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	2	3.0016	6.0032	12.0064	37.888	72.192	143.36
A=U R=U	1	1	2	4	8	16	39.936	96.768	169.984
A=S R=S	1	2	3.008	8	17.024	40.064	101.12	239.104	444.416
A=S R=S	1	2	3.008	6.016	14.976	40.064	90.112	230.912	412.672
vsip_cvrecip_f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	2	3.008	6.016	11.008	34.944	69.888	138.752	291.84
A=U R=U	1	2	3.008	7.008	16	38.016	76.032	161.792	327.68
A=S R=S	2	3	6	14.016	36.992	73.984	167.936	423.936	919.552
A=S R=S	2	3	6	14.016	36.992	76.032	215.04	381.952	920.576
vsip_vrsqrt_f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	2	4	6.976	14.976	26.88	76.8	151.552	346.112
A=U R=U	2	3.008	4.992	9.024	18.944	64	129.024	261.12	509.952
A=S R=S	2	4	7.008	14.016	33.024	86.016	192	499.712	1148.93
A=S R=S	2	4	8	17.024	38.016	115.968	238.08	476.16	1173.5
vsip_vsq_f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	0.9984	1.9968	3.9936	7.9872	15.0016	31.9488	80.0768
A=U R=U	1	1	2	3.0016	6.0032	12.0064	35.9936	73.0112	156.058
A=S R=S	1	2	4	9.024	20.992	62.976	125.952	350.208	708.608
A=S R=S	1	2	4.992	9.984	20.992	62.976	143.872	277.504	698.368
vsip_vsumval_bl:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	0	1	1	2	4	8.9984	17.9968	45.0048	99.0208
A=U	0	1	1	2	4	8	16	43.9808	99.0208
A=S	0	1	1	2	4	12.0064	34.048	68.096	182.272
A=S	0	1	1	2	6.0032	12.0064	37.12	74.24	155.648
vsip_vsumval_f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	0	0	0	0	0.9984	1.9968	3.9936	7.9872	24.9856
A=U	0	0	1	0.9984	1.9968	5.0048	6.9888	26.0096	62.976
A=S	0	1	1	2	4.9984	10.9952	33.024	75.776	141.312
A=S	0	1	1	2	6.0032	10.9952	35.072	74.24	146.432
vsip_vsumval_i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	0	0	1	0.9984	3.0016	5.0048	10.0096	33.024	66.048
A=U	0	0	1	0.9984	3.0016	5.0048	10.0096	33.024	66.048
A=S	0	0	1	0.9984	3.0016	9.9968	30.976	69.12	125.952
A=S	0	0	1	0.9984	4	9.9968	20.992	57.856	131.072
vsip_vsumval_si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	0	0	1	0.9984	4	7.0016	10.0096	41.0112	64
A=U	0	1	1	0.9984	3.0016	5.0048	15.0016	30.976	64

A=S	0	0	1	0.9984	3.0016	6.0032	26.88	45.0048	103.424
A=S	0	0	1	2	4	8	13.0048	35.9936	116.736
vsip_vsumsqval.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	1	1	0.9984	1.9968	2.9952	5.9904	11.008	31.0272	70.0416
A=U	1	1	2	3.0016	5.0048	10.0096	22.9888	62.976	125.952
A=S	1	1	2	4.9984	9.9968	25.0112	70.144	143.36	317.44
A=S	1	1	2	4.9984	9.9968	25.0112	69.12	139.264	313.344
vsip_vadd.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	0	1	0.9984	1.9968	5.0048	10.0096	32	64
A=U B=U R=U	1	1	1	2	4	8.9984	18.9952	68.096	156.672
A=S B=S R=S	1	2	4	8.992	28.992	60.032	143.104	303.104	690.176
A=S B=S R=S	1	2	4	8.992	19.008	61.056	132.096	330.24	709.632
vsip_vadd.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	3.0016	6.976	9.9968	39.936	80.896	192.512
A=U B=U R=U	1	1	2	3.0016	6.976	24.96	40.96	83.968	188.416
A=S B=S R=S	1	1	2	6.016	11.008	33.024	91.904	244.224	745.472
A=S B=S R=S	1	1	2	4.992	11.008	33.024	80.128	235.008	741.376
vsip_vadd.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	3.0016	6.976	13.952	37.12	78.848	169.984
A=U B=U R=U	1	1	1	2	4.9984	8.9984	39.936	89.088	169.984
A=S B=S R=S	1	1	2	3.0016	9.024	18.944	50.944	128	347.136
A=S B=S R=S	1	1	2	4	9.024	29.056	59.904	161.792	274.432
vsip_cvadd.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	2	4.9984	9.9968	22.9888	39.9872	87.9616
A=U B=U R=U	1	1	3.008	4	9.984	25.984	40.96	109.056	176.128
A=S B=S R=S	2	3	8	15.008	30.016	59.008	176.128	394.24	886.784
A=S B=S R=S	2	3	8	15.008	28.992	76.032	142.08	391.168	1331.2
vsip_cvadd.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	2	5.008	8.992	33.984	50.048	135.936	227.84	478.208
A=U B=U R=U	1	2	5.008	8.992	19.008	50.048	110.08	227.84	475.136
A=S B=S R=S	1	3	7.008	12.992	35.968	73.984	208.896	727.04	1269.76
A=S B=S R=S	1	3	7.008	12.992	41.984	71.936	263.68	558.08	1300.48
vsip_rcvadd.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	0	1	0.9984	3.0016	8.9984	17.9968	50.9952	132.096
A=U B=U R=U	1	1	2	4	9.984	30.976	62.976	117.248	266.24
A=S B=S R=S	1	4	7.008	15.008	38.976	81.024	256	578.56	1372.16
A=S B=S R=S	1	3	7.008	15.008	41.024	96	225.024	573.44	1331.2
vsip_svadd.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N R=N	0	0	1	0.9984	1.9968	2.9952	6.9888	26.9824	56.0128
B=U R=U	0	1	1	2	4	8	16	37.0176	78.0288
B=S R=S	1	1	2	4	11.008	36.992	73.984	172.032	441.344
B=S R=S	1	1	2	6.016	12.032	35.968	73.984	181.76	453.632
vsip_svadd.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N R=N	1	1	2	3.0016	9.9968	20.992	65.024	130.048	260.096
B=U R=U	1	1	2	4.9984	9.9968	20.992	60.928	74.9568	142.95
B=S R=S	1	1	3.0016	6.976	14.976	50.944	90.112	321.536	843.776
B=S R=S	1	1	3.0016	6.976	16	50.944	84.992	307.2	862.208
vsip_svadd.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N R=N	0	1	1	2	4.9984	9.9968	19.9936	61.952	114.688
B=U R=U	0	1	1	2	4.9984	9.9968	20.992	61.952	123.904
B=S R=S	0	1	2	3.0016	6.0032	13.056	36.096	86.016	171.008
B=S R=S	0	1	1	3.0016	4.9984	12.0064	36.096	73.216	180.224
vsip_csvadd.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384

B=N R=N	0	1	1	0.9984	3.0016	8	16	32	67.9936
B=U R=U	1	1	1	3.0016	4.9984	13.056	32	67.072	106.496
B=S R=S	1	2	4	10.016	19.008	38.016	80.128	345.088	757.76
B=S R=S	1	2	4	10.016	19.008	48	87.04	210.944	629.76
vsip_rscvadd.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N R=N	0	0	1	0.9984	3.0016	8	16.9984	43.9808	117.76
B=U R=U	1	1	1	3.0016	4.9984	13.056	35.072	96.768	198.656
B=S R=S	1	2	5.008	11.008	33.984	67.968	160	453.12	1085.44
B=S R=S	1	2	5.008	11.008	33.024	68.992	154.112	422.912	1146.88
vsip_cvjdot.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N	1	1	1	3.0016	4.9984	14.976	36.096	72.192	155.648
A=U B=U	1	2	4	6.016	14.976	35.968	70.912	140.8	292.864
A=S B=S	1	2	5.008	15.008	33.984	93.056	174.08	331.776	720.896
A=S B=S	1	2	5.008	14.016	40	68.992	143.104	338.944	672.768
vsip_vdiv.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	2	3.008	6.016	12.032	34.944	70.912	139.776	293.888
A=U B=U R=U	1	2	4	8	14.976	39.04	77.056	189.952	339.968
A=S B=S R=S	2	3	5.008	12.992	35.968	71.936	147.968	330.752	691.2
A=S B=S R=S	2	3	5.008	12.992	35.968	71.936	156.928	332.8	718.848
vsip_cvdiv.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	2	3.008	6.016	12.992	25.984	79.104	148.992	318.464	647.168
A=U B=U R=U	3	5.008	8.992	17.984	39.04	99.072	216.064	450.56	946.176
A=S B=S R=S	4	8	20	38.976	138.24	215.04	522.24	1177.6	2580.48
A=S B=S R=S	4	8	20	38.976	134.4	241.92	686.08	1802.24	2703.36
vsip_sdiv.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N R=N	1	2	3.008	6.016	12.032	34.048	70.912	155.136	302.08
B=U R=U	1	2	3.008	7.008	12.992	34.944	71.936	142.848	328.704
B=S R=S	1	2	5.008	11.008	32	66.048	133.12	293.888	598.016
B=S R=S	1	2	5.008	11.008	33.984	66.048	135.936	294.912	652.288
vsip_vdot.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N	1	1	0.9984	1.9968	3.9936	5.9904	15.9744	54.9888	84.992
A=U B=U	1	1	2	4	9.9968	17.9968	33.024	87.04	192.102
A=S B=S	1	3.008	4.992	14.016	27.008	66.048	133.12	379.904	659.456
A=S B=S	2	3.008	4.992	9.024	23.04	67.072	132.096	316.416	778.24
vsip_cvdot.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N	1	1	1	3.0016	4.9984	13.952	36.096	72.192	147.456
A=U B=U	1	2	4	6.016	17.024	36.992	72.96	145.92	315.392
A=S B=S	1	2	5.008	15.008	33.984	87.04	142.08	329.216	675.84
A=S B=S	1	2	5.008	14.016	38.016	80	146.944	333.824	676.864
vsip_vhypot.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	2	3.008	7.008	12.992	35.968	72.96	154.112	311.296
A=U B=U R=U	1	2	4	8	14.016	40.064	80.896	173.056	352.256
A=S B=S R=S	2	3	6	12.992	36.992	72.96	171.008	387.072	698.368
A=S B=S R=S	2	3	6	12.992	36.992	72.96	161.024	350.208	702.464
vsip_cvjmul.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	1	1	3.0016	6.0032	13.952	35.072	70.144	159.744
A=U B=U R=U	1	2	3.008	7.008	12.032	41.984	70.912	140.8	318.464
A=S B=S R=S	2	3	8	16	57.024	94.976	228.096	645.12	1341.44
A=S B=S R=S	2	3	8	16	56	93.952	224	568.32	1320.96
vsip_vmul.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	0	1	0.9984	1.9968	5.0048	11.008	28.9792	45.9776
A=U B=U R=U	0	1	1	2	6.0032	12.0064	18.9952	59.904	106.496
A=S B=S R=S	1	2	4	8.992	30.016	41.984	97.024	308.224	637.952
A=S B=S R=S	1	2	3.008	8	16	41.984	100.096	323.072	575.488

vsip_vmul.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	1	2	4	9.024	17.024	54.016	97.792	194.56
A=U B=U R=U	1	1	2	4.992	9.984	17.024	44.032	116.224	194.56
A=S B=S R=S	1	1	2	6.016	12.032	33.024	69.12	193.024	574.464
A=S B=S R=S	1	1	2	6.016	11.008	34.048	96	196.096	594.944
vsip_vmul.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	1	2	6.016	9.984	28.032	67.072	104.96	221.184
A=U B=U R=U	1	1	2	4.992	12.032	28.032	47.104	131.072	221.184
A=S B=S R=S	1	1	2	4.992	11.008	32	64	183.808	284.672
A=S B=S R=S	1	1	2	4.992	11.008	32	64	131.072	288.768
vsip_cvmul.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	2	3.0016	6.0032	14.976	30.976	76.8	151.552	358.4
A=U B=U R=U	2	3.008	7.008	11.008	24.96	72.96	140.8	281.6	641.024
A=S B=S R=S	3	6	16	32	118.016	187.904	478.208	1157.12	2580.48
A=S B=S R=S	3	6	16	32	112	188.928	445.952	1167.36	2519.04
vsip_rcvmul.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	0	1	0.9984	4	8.9984	18.9952	50.0224	100.045
A=U B=U R=U	1	1	2	4.992	9.984	32	61.952	130.048	272.384
A=S B=S R=S	1	3	7.008	24.992	41.024	93.952	227.072	588.8	1361.92
A=S B=S R=S	1	3	7.008	24.992	41.024	94.976	225.024	583.68	1361.92
vsip_vsub.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	0	1	0.9984	1.9968	5.0048	11.008	28.9792	57.0368
A=U B=U R=U	0	1	1	3.0016	6.0032	8.9984	28.928	66.048	105.472
A=S B=S R=S	1	2	3.008	8	16	41.984	99.072	308.224	582.656
A=S B=S R=S	1	2	3.008	8	16	41.984	100.096	310.784	634.88
vsip_vsub.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	3.0016	6.976	10.9952	40.96	64	133.12
A=U B=U R=U	0	1	1	2	6.976	10.9952	32	89.088	132.096
A=S B=S R=S	0	1	1	4.992	9.984	29.056	65.024	183.808	579.584
A=S B=S R=S	0	1	1	4.992	9.024	29.056	64	263.168	570.368
vsip_vsub.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	3.0016	6.0032	8.9984	37.12	59.904	110.592
A=U B=U R=U	0	1	1	3.0016	6.0032	8.9984	19.9936	75.776	109.568
A=S B=S R=S	0	1	1	2	6.976	13.952	48.896	91.136	207.872
A=S B=S R=S	0	1	1	2	6.976	13.952	37.888	123.904	258.048
vsip_cvsub.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	0	1	2	4.9984	12.0064	30.976	60.928	149.504
A=U B=U R=U	1	1	2	6.016	9.984	38.016	51.968	122.88	262.144
A=S B=S R=S	2	3	8	15.008	44.032	91.008	256	578.56	1300.48
A=S B=S R=S	2	3	7.008	15.008	44.032	93.952	281.6	640	1310.72
vsip_rcvsub.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	1	0.9984	1.9968	8	16	37.9904	118.784	199.066
A=U B=U R=U	1	2	4	9.024	20.992	64	126.976	257.024	559.104
A=S B=S R=S	3	6	15.008	28.992	80	190.976	471.04	1167.36	2764.8
A=S B=S R=S	3	6	15.008	30.016	78.976	189.952	463.872	1126.4	2723.84
vsip_cvsub.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	0	1	0.9984	4	8	16.9984	33.024	70.9632
A=U B=U R=U	1	1	2	3.0016	8	20.992	35.072	70.144	144.384
A=S B=S R=S	1	2	6	12.992	25.024	50.048	123.904	306.176	738.304
A=S B=S R=S	1	2	6	12.992	25.024	62.976	118.016	300.032	739.328
vsip_svsub.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N R=N	0	0	1	0.9984	0.9984	2.9952	7.9872	15.0016	44.032
B=U R=U	0	1	1	2	4	8	16.9984	45.9776	100.966
B=S R=S	1	1	2	6.016	12.032	34.944	71.936	216.064	444.416

B=S R=S	1	1	2	6.016	12.992	34.944	71.936	174.08	431.104
vsip_svsusb.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N R=N	0	1	1	0.9984	4.9984	10.9952	30.976	61.952	130.048
B=U R=U	0	1	1	2	4.9984	9.9968	32	65.024	130.048
B=S R=S	0	1	1	3.0016	6.976	25.984	46.08	131.072	398.336
B=S R=S	0	1	1	3.0016	6.976	16	45.056	125.952	417.792
vsip_svsusb.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N R=N	0	1	1	0.9984	3.0016	5.0048	11.008	66.048	124.928
B=U R=U	0	1	1	2	4.9984	8.9984	29.952	52.224	123.904
B=S R=S	0	1	1	2	6.0032	12.0064	36.096	77.824	185.344
B=S R=S	0	1	1	3.0016	6.0032	12.0064	36.096	74.752	169.984
vsip_cvsusb.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N R=N	0	1	1	0.9984	4	8	16	32	65.024
B=U R=U	1	1	1	4	9.024	13.056	25.0112	50.0224	101.99
B=S R=S	1	2	4	10.016	19.008	38.016	90.88	239.104	611.328
B=S R=S	1	2	5.008	11.008	22.016	38.016	80.896	217.088	604.16
vsip_rvsusb.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N R=N	0	0	1	0.9984	1.9968	8	16.9984	48.0256	119.808
B=U R=U	1	1	2	4	8	17.024	44.032	100.864	216.064
B=S R=S	1	2	5.008	11.008	33.984	71.936	157.952	471.04	1136.64
B=S R=S	1	2	5.008	11.008	33.984	68.992	161.024	461.824	1064.96
vsip_vam.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N C=N R=N	0	1	1	2	3.0016	8	25.0112	43.008	74.9568
A=U B=U C=U R=U	1	1	2	4	8	17.024	46.08	98.816	222.208
A=S B=S C=S R=S	1	3	6	12.992	38.976	88.96	190.976	445.952	992.256
A=S B=S C=S R=S	1	3	6	14.016	38.016	77.952	189.952	532.48	915.456
vsip_cvam.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N C=N R=N	1	2	4	6.976	18.944	36.096	103.936	201.728	491.52
A=U B=U C=U R=U	2	4	10.016	14.976	34.048	124.928	253.952	407.552	864.256
A=S B=S C=S R=S	4	10	22.016	62.976	126.976	279.04	983.04	1576.96	3584
A=S B=S C=S R=S	4	10	22.016	62.976	153.6	340.48	691.2	1679.36	3276.8
vsip_vma.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N C=N R=N	0	1	1	2	3.0016	7.0016	14.0032	43.9808	74.9568
A=U B=U C=U R=U	1	1	2	4	6.0032	13.952	38.912	75.776	163.84
A=S B=S C=S R=S	1	2	5.008	11.008	33.024	264.96	192	344.064	865.28
A=S B=S C=S R=S	1	2	5.008	11.008	33.024	80	198.912	347.136	872.448
vsip_cvma.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N C=N R=N	1	1	2	4.992	9.984	18.944	67.072	104.96	249.856
A=U B=U C=U R=U	1	2	4	10.016	17.024	45.056	128	202.24	435.2
A=S B=S C=S R=S	2	5	11.008	34.88	76.16	192	327.68	824.32	1761.28
A=S B=S C=S R=S	2	5	11.008	32	76.8	190.72	322.56	870.4	1679.36
vsip_vmsa.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	0.9984	3.0016	6.0032	14.0032	35.9936	70.0416
A=U B=U R=U	1	1	1	3.0016	6.0032	13.952	33.024	74.752	131.072
A=S B=S R=S	1	2	4	8.992	17.024	44.032	112.896	237.056	591.872
A=S B=S R=S	1	2	3.008	8.992	27.008	44.032	102.912	293.888	747.52
vsip_cvmsa.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	1	1	3.0016	6.976	18.048	40.96	91.136	191.488
A=U B=U R=U	1	2	3.008	7.008	12.032	35.968	96	140.8	322.56
A=S B=S R=S	2	3	8	16	60.992	97.024	229.888	675.84	1280
A=S B=S R=S	2	3	8	16.992	51.008	98.048	228.096	583.68	1280
vsip_vmsb.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N C=N R=N	0	1	1	2	3.0016	8	15.0016	45.9776	82.0224

A=U B=U C=U R=U	1	1	2	4	6.976	18.048	39.936	103.936	167.936
A=S B=S C=S R=S	1	2	5.008	12	33.024	67.968	215.04	349.184	833.536
A=S B=S C=S R=S	1	2	5.008	12	38.016	89.984	195.072	386.048	856.064
vsip_cvmsb.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N C=N R=N	1	1	2	4	9.984	29.056	67.072	104.96	244.736
A=U B=U C=U R=U	1	2	4	10.016	17.024	45.056	124.928	200.192	425.984
A=S B=S C=S R=S	2	5	11.008	32	87.04	174.08	330.24	824.32	1761.28
A=S B=S C=S R=S	2	5	11.008	32	76.8	189.44	327.68	803.84	1597.44
vsip_vmsa.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N C=N R=N	1.00169	1.00049	1.00049	2.00097	4.00195	9.00199	20.0001	52.9754	103.033
A=U C=U R=U	1.00169	1.00049	2.00097	4.99044	6.99621	17.0059	49.1366	112.861	196.547
A=S C=S R=S	1.00169	2.99906	4.99044	13.0039	40.9792	65.0677	155.088	356.241	970.449
A=S C=S R=S	1.00169	2.99906	4.99044	13.0039	24.9522	66.0274	166.988	439.159	872.175
vsip_cvmsa.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N C=N R=N	1	1	1	3.0016	6.976	17.024	41.984	93.184	193.536
A=U C=U R=U	1	2	3.008	6.016	12.032	36.992	70.912	153.088	306.176
A=S C=S R=S	2	3	8	16	51.008	96	230.912	578.56	1280
A=S C=S R=S	2	3	8	16.992	59.008	96	227.072	563.2	1259.52
vsip_vmsa.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	0	0	1	0.9984	3.0016	7.0016	11.008	35.9936	66.048
A=U R=U	0	1	1	2	4	8	19.9936	43.008	100.045
A=S R=S	1	1	2	4.992	11.008	33.024	66.048	158.208	4925.44
A=S R=S	1	1	2	6.016	14.016	33.024	65.024	141.824	473.088
vsip_cvmsa.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	2	3.0016	4.9984	13.056	24.0128	74.752	136.192	282.624
A=U R=U	1	3.008	4	9.984	20.992	37.12	93.184	259.072	438.272
A=S R=S	2	4	10.016	22.016	65.024	129.024	270.848	706.56	2519.04
A=S R=S	2	4	10.016	22.016	65.024	129.024	340.992	735.232	1800.19
vsip_vleq.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	0	1	0.9984	3.0016	6.0032	11.008	32	62.976
A=U B=U R=U	0	1	1	3.0016	6.976	13.056	20.992	74.752	112.64
A=S B=S R=S	1	2	4	8.992	17.024	44.032	101.888	247.808	716.8
A=S B=S R=S	1	2	3.008	8	20.032	61.952	112.896	245.76	651.264
vsip_vleq.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	2	4	8	18.048	27.904	90.112	154.624	335.872
A=U B=U R=U	1	2	4	8	13.056	27.904	78.848	184.32	333.824
A=S B=S R=S	1	2	4	9.984	20.992	60.928	135.168	384	1161.22
A=S B=S R=S	1	2	4	11.008	19.968	61.952	135.168	476.16	1120.26
vsip_vlge.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	0	1	0.9984	1.9968	6.0032	12.0064	20.0192	58.9824
A=U B=U R=U	1	1	1	3.0016	6.976	13.056	30.976	74.24	122.88
A=S B=S R=S	1	2	4	11.008	30.976	44.032	102.912	309.248	623.616
A=S B=S R=S	1	2	3.008	8.992	27.008	44.032	101.888	374.784	750.592
vsip_vlge.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	2	3.008	6.016	16	24.96	71.936	145.92	310.272	602.112
A=U B=U R=U	2	3.008	6.016	16	24.96	71.936	145.92	310.272	606.208
A=S B=S R=S	2	3.008	7.008	17.024	52.992	84.992	203.776	448.512	1167.36
A=S B=S R=S	2	3.008	7.008	16	32	86.016	198.144	668.672	1243.14
vsip_vlgt.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	0	1	0.9984	3.0016	6.0032	10.0096	20.0192	49.0496
A=U B=U R=U	1	1	1	3.0016	6.976	13.056	30.976	61.952	122.88
A=S B=S R=S	1	2	5.008	8.992	30.976	44.032	103.936	301.056	602.112
A=S B=S R=S	1	2	4	11.008	20.992	44.032	101.888	352.256	742.4
vsip_vlgt.i:									

Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	2	3.008	8	12.032	41.984	72.96	155.136	301.056
A=U B=U R=U	1	2	3.008	6.016	16	35.968	72.96	144.896	312.32
A=S B=S R=S	1	2	3.008	8	27.008	59.008	132.096	228.864	596.992
A=S B=S R=S	1	2	3.008	8	16	48	101.12	227.84	624.64
vsip_vlle.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	0	1	0.9984	1.9968	5.0048	11.008	30.0032	58.9824
A=U B=U R=U	1	1	1	3.0016	6.976	13.056	30.976	75.776	112.64
A=S B=S R=S	1	2	5.008	8.992	17.024	44.032	115.968	247.808	604.16
A=S B=S R=S	1	2	3.008	8.992	17.024	44.032	103.936	299.008	581.632
vsip_vlle.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	2	3.008	7.008	12.992	41.984	75.008	160.256	380.928
A=U B=U R=U	1	2	3.008	7.008	12.992	43.008	76.032	160.256	321.536
A=S B=S R=S	1	2	4	8.992	20.032	44.032	102.912	241.152	638.976
A=S B=S R=S	1	2	3.008	8.992	17.024	50.048	114.944	232.96	579.584
vsip_vllt.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	0	1	0.9984	3.0016	5.0048	12.0064	30.0032	58.9824
A=U B=U R=U	1	1	1	3.0016	4.9984	9.9968	30.976	75.776	124.928
A=S B=S R=S	1	2	3.008	8.992	17.024	44.032	103.936	239.104	641.024
A=S B=S R=S	1	2	3.008	8.992	17.024	44.032	102.912	299.008	594.944
vsip_vllt.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	1	2	4	8	13.952	45.056	77.824	166.912
A=U B=U R=U	1	1	2	4	8	13.952	38.912	102.912	165.888
A=S B=S R=S	1	1	2	4.992	9.984	29.952	65.024	195.072	568.32
A=S B=S R=S	1	1	2	4.992	9.984	30.976	66.048	244.224	572.416
vsip_vlne.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	1	0.9984	1.9968	5.0048	11.008	24.0128	64	124.928
A=U B=U R=U	1	2	3.0016	6.0032	9.9968	20.992	41.0112	123.904	245.76
A=S B=S R=S	2	3.008	6.016	17.024	33.024	87.04	204.8	477.184	1282.05
A=S B=S R=S	2	3.008	6.016	17.024	34.048	87.04	203.776	585.728	1181.7
vsip_vlne.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	1	2	4	6.976	18.048	38.912	77.824	166.912
A=U B=U R=U	1	1	2	4	8	13.952	38.912	103.936	166.912
A=S B=S R=S	1	1	2	4.992	9.984	29.952	68.096	186.88	582.656
A=S B=S R=S	1	1	2	4.992	9.984	20.992	66.048	258.048	550.912
vsip_vclip.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	0	1	1	2	4.9984	8	26.88	50.0224	100.045
A=U R=U	1	1	2	4	8	17.024	34.048	97.792	137.216
A=S R=S	1	1	3.008	7.008	12.992	36.992	72.96	180.224	420.864
A=S R=S	1	1	3.008	4.992	12.992	36.992	93.952	169.984	542.72
vsip_vclip.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	3.008	6.016	6.976	17.024	48.896	101.888	301.056
A=U R=U	1	1	3.008	4.992	12.992	35.968	65.024	92.16	229.376
A=S R=S	1	1	3.008	4	11.008	32	68.096	138.24	329.728
A=S R=S	1	1	3.008	4.992	9.024	35.968	90.88	161.792	343.04
vsip_vclip.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	3.008	6.016	9.024	28.032	49.92	110.08	267.264
A=U R=U	1	1	3.008	6.016	12.032	32	76.032	100.864	187.392
A=S R=S	1	2	3.008	4	9.984	33.024	61.952	150.016	266.24
A=S R=S	1	1	3.008	4.992	8	35.968	68.096	217.088	256
vsip_vinclip.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	2	4	8	16	35.072	93.184	139.264
A=U R=U	1	1	3.008	4.992	12.032	35.968	59.904	138.24	228.352
A=S R=S	1	2	3.008	6.016	17.024	56.96	105.984	188.928	412.672
A=S R=S	1	2	4	8.992	14.976	40.064	80.128	189.952	411.648

vsip_vinclip.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	3.008	4.992	9.024	32	45.056	101.888	268.288
A=U R=U	1	1	3.008	6.016	9.984	19.968	93.952	72.192	264.192
A=S R=S	1	2	3.008	7.008	14.016	40.96	75.008	202.752	453.632
A=S R=S	1	1	2	6.016	11.008	39.04	46.08	203.776	433.152
vsip_vinclip.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	3.008	4.992	11.008	34.944	44.032	108.032	296.96
A=U R=U	1	1	3.008	6.016	14.016	32	76.032	84.992	293.888
A=S R=S	1	2	3.008	7.008	17.024	45.952	75.008	144.896	449.536
A=S R=S	1	2	3.008	6.016	11.008	38.016	43.008	160.256	253.952
vsip_vmax.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	0	1	0.9984	3.0016	5.0048	12.0064	18.9952	47.0016
A=U B=U R=U	0	1	1	3.0016	6.0032	9.9968	19.9936	71.168	108.544
A=S B=S R=S	1	2	3.008	8	16	41.984	109.056	243.2	598.016
A=S B=S R=S	1	2	3.008	8	16	41.984	109.056	227.84	599.04
vsip_vmaxmg.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	0	1	0.9984	3.0016	7.0016	14.0032	33.9968	66.048
A=U B=U R=U	1	1	1	3.0016	6.976	13.952	32	77.824	128
A=S B=S R=S	1	2	4	10.016	30.976	43.008	100.096	313.856	619.52
A=S B=S R=S	1	2	3.008	8	16	43.008	99.072	352.768	677.888
vsip_vcmxmsgsq.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	2	3.0016	6.0032	10.9952	27.904	73.216	144.384	319.488
A=U B=U R=U	2	3.008	6.016	12.992	22.016	75.008	136.192	278.528	577.536
A=S B=S R=S	3	6	14.016	28.992	87.04	175.104	392.192	917.504	2068.48
A=S B=S R=S	3	6	14.016	28.992	83.968	156.928	377.856	920.576	2000.9
vsip_vcmxmsgsqval.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	1	2	4	8.992	17.984	44.032	100.096	200.192	410.624
A=U	1	2	4	8.992	17.984	44.032	100.096	200.192	401.408
A=S	1	2	4	8.992	20.032	61.056	133.888	229.888	490.496
A=S	1	2	4	10.016	32	60.032	111.104	248.832	609.28
vsip_vmaxmgval.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	2	3.008	6.016	11.008	20.992	61.952	102.912	230.4	571.392
A=U	2	3.008	6.016	12.032	20.992	61.952	102.912	250.88	499.712
A=S	2	3.008	6.016	11.008	22.016	67.072	148.992	267.264	571.392
A=S	2	3.008	6.016	11.008	20.992	67.072	133.12	323.584	638.976
vsip_vmaxval.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	1	1	3.008	6.016	9.984	18.944	66.048	110.08	230.4
A=U	1	1	3.008	4.992	11.008	18.944	58.88	129.024	230.4
A=S	1	1	3.008	4.992	9.984	34.048	70.912	128	265.216
A=S	1	1	3.008	4.992	12.032	33.024	70.912	128	264.192
vsip_vmin.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	0	1	0.9984	3.0016	5.0048	12.0064	30.0032	57.9584
A=U B=U R=U	0	1	1	3.0016	6.0032	9.9968	19.9936	71.168	118.784
A=S B=S R=S	1	2	3.008	8	25.984	41.984	111.104	325.12	584.704
A=S B=S R=S	1	2	3.008	8	16	41.984	100.096	299.008	583.68
vsip_vminmg.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	2	1.9968	6.0032	14.0032	33.9968	66.048
A=U B=U R=U	1	1	1	3.0016	6.976	13.952	32	76.8	128
A=S B=S R=S	1	2	4	8	17.024	43.008	113.92	241.152	638.976
A=S B=S R=S	1	2	3.008	8	16	43.008	100.096	297.984	769.024
vsip_vcminmsgsq.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	1	2	3.0016	6.976	14.976	36.096	72.192	159.744
A=U B=U R=U	1	2	3.008	6.016	11.008	38.016	68.096	139.776	283.648

A=S B=S R=S	2	3	7.008	14.016	41.984	88.064	190.976	450.048	986.112
A=S B=S R=S	2	3	7.008	14.016	43.008	77.952	187.904	458.24	1044.48
vsip_vcmnmsgval.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	1	2	4	8.992	17.024	49.024	100.096	200.192	410.624
A=U	1	2	4	8.992	17.024	44.032	107.008	200.192	410.624
A=S	1	2	4	10.016	32	50.048	133.888	281.088	573.44
A=S	1	2	5.008	11.008	30.016	50.048	133.12	236.032	506.88
vsip_vminmgval.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	1	2	3.008	6.016	9.984	30.976	68.096	115.2	239.616
A=U	1	2	3.008	6.016	9.984	30.976	68.096	124.928	239.616
A=S	1	1	3.008	4.992	11.008	33.024	69.888	135.168	281.6
A=S	1	1	3.008	4.992	12.032	35.968	71.936	134.144	309.248
vsip_vminval.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	1	1	3.008	6.016	9.984	18.944	65.024	110.08	230.4
A=U	1	1	3.008	4.992	11.008	18.944	58.88	126.976	230.4
A=S	1	2	3.008	4.992	9.984	34.048	69.888	128	274.432
A=S	1	1	3.008	6.016	12.032	34.944	64	128	263.168
vsip_vfill.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
R=N	0	0	0	0.9984	0.9984	0.99968	2.9952	7.9872	26.0096
R=U	0	0	1	0.9984	0.9984	1.9968	3.9936	9.984	31.0272
R=S	0	1	1	2	3.0016	8	16	45.0048	119.808
R=S	0	1	1	2	3.0016	8	16	43.008	104.448
vsip_vfill.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
R=N	0	0	1	0.9984	3.0016	6.0032	12.0064	37.0176	73.0112
R=U	0	1	1	0.9984	3.0016	5.0048	10.0096	33.9968	66.9696
R=S	0	0	1	0.9984	3.0016	6.0032	12.0064	33.9968	134.144
R=S	0	1	1	0.9984	3.0016	6.0032	12.0064	33.9968	120.832
vsip_vfill.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
R=N	0	0	1	0.9984	3.0016	6.0032	12.0064	35.0208	70.0416
R=U	0	1	1	0.9984	3.0016	5.0048	10.0096	30.976	64
R=S	0	0	1	0.9984	3.0016	6.0032	14.0032	37.9904	74.0352
R=S	0	1	1	0.9984	3.0016	6.0032	14.0032	37.9904	84.992
vsip_cvfill.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
R=N	0	0	0	0.9984	0.9984	1.9968	11.008	32	64
R=U	0	1	1	0.9984	1.9968	3.9936	15.0016	39.9872	91.0336
R=S	1	1	2	4	11.008	32	59.904	160.768	500.736
R=S	1	1	2	4	9.024	17.024	62.976	148.992	551.936
vsip_vramp.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
R=N	0	0	1	0.9984	1.9968	5.0048	9.0112	30.0032	49.0496
R=U	0	1	1	0.9984	3.0016	5.0048	11.008	33.9968	67.9936
R=S	0	1	1	2	4.9984	10.9952	36.096	89.088	173.056
R=S	0	1	1	3.0016	6.0032	13.056	37.12	74.752	186.368
vsip_vramp.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
R=N	0	1	1	2	4	7.0016	16	41.984	95.0272
R=U	0	1	1	2	3.0016	7.0016	13.0048	39.0144	77.0048
R=S	0	1	1	2	4	8.9984	18.9952	54.784	157.696
R=S	0	1	1	2	4	8.9984	28.928	45.9776	166.912
vsip_vramp.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
R=N	1	1	2	4	7.0016	15.0016	30.976	78.9504	185.958
R=U	1	1	2	4	7.0016	13.0048	26.0096	71.9872	149.094
R=S	1	1	2	4	8	16.9984	55.808	91.0336	206.848
R=S	1	1	2	4	7.0016	16.9984	35.0208	92.9792	231.424
vsip_vcmplx.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384

A=N B=N R=N	1	1	0.9984	0.9984	3.9936	12.0064	28.0064	70.0416	140.902
A=U B=U R=U	1	2	3.0016	6.0032	8.9984	24.0128	69.12	166.912	299.008
A=S B=S R=S	2	4	8	20.992	61.056	122.112	262.144	681.984	1945.6
A=S B=S R=S	2	4	8	20.992	40.96	122.112	262.144	876.544	1761.28
vsip_vexpoavg.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N C=N	0	1	1	2	4	7.0016	17.9968	43.9808	95.0272
B=U C=U	1	1	2	3.0016	6.976	13.952	36.096	80.896	154.624
B=S C=S	1	2	3.008	7.008	16	40.96	91.904	193.024	439.296
B=S C=S	1	2	3.008	7.008	16	40.96	82.944	195.072	421.888
vsip_cvexpoavg.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N C=N	0.99865	0.99865	1.9973	3.9946	6.99823	15.9784	43.9406	87.8812	191.741
B=U C=U	0.99865	1.9973	2.99595	6.99055	11.9838	43.9406	78.0483	154.868	314.651
B=S C=S	2.0021	4.0042	10.0057	20.0114	48.012	125.983	293.142	755.901	1315.14
B=S C=S	2.0021	4.0042	8.0084	22.0087	55.0026	96.9458	211.099	479.966	1302.85
vsip_vgather.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
X=N I=N Y=N	1	1	3.008	6.016	9.984	29.952	77.056	176.128	536.576
X=U I=U Y=U	1	1	3.008	4.992	9.984	33.024	62.976	176.128	520.192
X=S I=S Y=S	1	1	3.008	7.008	16	60.032	183.04	721.92	1484.8
X=S I=S Y=S	1	1	3.008	7.008	19.008	66.944	175.104	357.888	1505.28
vsip_vgather.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
X=N I=N Y=N	1	1	3.008	4.992	12.032	19.968	62.976	172.032	449.536
X=U I=U Y=U	1	1	3.008	4.992	9.984	29.952	76.032	173.056	518.144
X=S I=S Y=S	1	2	3.008	7.008	16	61.056	133.888	352.256	1361.92
X=S I=S Y=S	1	1	3.008	7.008	16	57.984	179.968	350.208	1515.52
vsip_vgather.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
X=N I=N Y=N	1	1	3.008	4.992	9.984	18.944	68.096	123.904	444.416
X=U I=U Y=U	1	1	3.008	4.992	12.032	19.968	60.928	126.976	346.112
X=S I=S Y=S	1	1	3.008	4.992	12.992	40.064	134.912	266.24	769.024
X=S I=S Y=S	1	1	3.008	4.992	12.992	39.04	148.992	271.872	886.784
vsip_cvgather.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
X=N I=N Y=N	1	2	4	8.992	16	61.056	140.032	461.824	899.072
X=U I=U Y=U	1	2	4	8.992	19.008	45.056	187.904	389.12	894.976
X=S I=S Y=S	1	2	5.008	12.992	44.032	151.04	348.16	1305.6	4259.84
X=S I=S Y=S	1	2	5.008	12.992	44.032	148.48	289.28	1218.56	4270.08
vsip_vimag.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	0	1	0.9984	0.9984	1.9968	3.9936	11.008	19.0464	58.9824
A=U R=U	1	1	2	3.0016	7.0016	14.0032	20.992	66.048	123.085
A=S R=S	1	2	4.992	12.032	24.064	61.952	122.88	421.888	708.608
A=S R=S	1	2	4	9.024	20.992	61.952	122.88	337.92	696.32
vsip_cvmodulate.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	2	5	8.992	16.992	44.992	103.936	207.872	425.984	865.28
A=U R=U	3	5	11.008	19.008	49.024	109.056	228.096	456.192	923.648
A=S R=S	3	6	12.992	37.12	72.96	157.44	317.44	670.72	1648.64
A=S R=S	3	6	12.992	37.12	83.84	185.6	401.92	660.48	1382.4
vsip_vmodulate.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	2	4	8	16	46.976	97.024	196.096	392.192	793.6
A=U R=U	2	4	8	16.992	44.032	98.944	236.032	397.824	993.28
A=S R=S	3	5	11.008	32.96	65.92	131.84	263.68	716.8	1413.12
A=S R=S	3	6	11.008	32.96	65.92	130.56	266.24	634.88	1146.88
vsip_vpolar.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N P=N	4	8	16.96	44.16	97.28	198.4	396.8	798.72	1986.56
A=U R=U P=U	5	8.96	17.92	45.12	99.84	250.88	432.64	834.56	1689.6
A=S R=S P=S	5	10	31.04	63.04	145.92	252.16	599.04	1054.72	2099.2
A=S R=S P=S	5	10	31.04	64	145.28	302.08	663.04	1085.44	2129.92

vsip_vreal.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	0	0	0	0.99865	0.99865	1.9973	5.9919	11.9838	32.9401
A=U R=U	0	0.99865	1.00057	2.00114	4.00228	8.00456	14.0118	36.9961	79.0316
A=S R=S	0.99865	0.99865	1.9973	7.9892	13.9811	37.0269	74.0537	274.091	602.263
A=S R=S	0.99865	0.99865	1.9973	4.99325	12.9824	37.9487	74.9755	237.218	421.584
vsip_vrect.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
R=N P=N A=N	4	8	16	30.976	93.056	190.976	379.904	742.4	1533.95
R=U P=U A=U	5	8.992	17.984	35.008	91.008	248.064	415.744	852.992	1716.22
R=S P=S A=S	6	11.008	24	71.04	142.08	284.16	624.64	1546.24	2703.36
R=S P=S A=S	6	11.008	24	71.04	140.8	307.2	624.64	1566.72	3153.92
vsip_vscatter.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
X=N Y=N I=N	1	2	3.008	6.016	11.008	33.024	67.072	187.904	361.472
X=U Y=U I=U	1	2	3.008	6.016	12.992	33.024	71.936	185.856	375.808
X=S Y=S I=S	1	2	3.008	7.008	14.976	50.944	140.032	306.176	880.64
X=S Y=S I=S	1	2	3.008	7.008	14.976	59.008	105.984	258.048	847.872
vsip_vscatter.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
X=N Y=N I=N	1	2	3.008	6.016	11.008	34.944	67.072	187.904	359.424
X=U Y=U I=U	1	2	3.008	6.016	12.992	33.024	76.032	160.256	358.4
X=S Y=S I=S	1	2	3.008	7.008	14.976	61.056	108.032	258.048	881.664
X=S Y=S I=S	1	2	3.008	7.008	14.976	60.032	118.016	303.104	844.8
vsip_vscatter.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
X=N Y=N I=N	1	2	3.008	6.016	11.008	34.944	66.048	160.256	320.512
X=U Y=U I=U	1	2	3.008	6.016	12.992	32	66.048	132.096	312.32
X=S Y=S I=S	1	2	3.008	6.016	12.992	36.992	121.088	224.768	490.496
X=S Y=S I=S	1	2	3.008	6.016	12.992	41.984	109.056	220.16	485.376
vsip_cvscatter.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
X=N Y=N I=N	1	2	4	7.008	14.976	41.984	103.936	271.872	610.304
X=U Y=U I=U	1	2	4	7.008	14.976	41.984	104.96	265.216	604.16
X=S Y=S I=S	1	2	5.008	11.008	38.976	77.056	195.072	711.68	2355.2
X=S Y=S I=S	1	2	5.008	11.008	38.976	76.032	228.096	680.96	2375.68
vsip_vswap.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N	0	0	0	0.9984	0.9984	2.9952	9.0112	15.0016	39.0144
A=U B=U	0	1	1	3.0016	4	8	18.9952	71.168	107.52
A=S B=S	1	2	4	8	17.024	45.056	99.072	221.184	514.048
A=S B=S	1	2	4	8	27.008	45.056	100.096	215.04	514.048
vsip_vswap.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N	1.00169	1.00049	2.00097	4.99044	9.00199	23.0328	54.8948	112.093	236.47
A=U B=U	1.00169	1.00049	2.00097	4.99044	9.00199	18.004	56.0465	112.093	236.47
A=S B=S	1.00169	1.00049	2.00097	5.99813	14.9713	47.985	76.0082	215.741	657.203
A=S B=S	1.00169	1.00049	2.00097	4.99044	16.027	46.0656	94.8184	198.082	632.634
vsip_vswap.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N	1	2	3.0016	6.976	12.0064	26.88	68.096	142.336	280.576
A=U B=U	1	2	3.0016	6.976	12.0064	22.9888	68.096	142.336	280.576
A=S B=S	1	2	3.0016	6.0032	13.056	54.016	83.968	194.56	393.216
A=S B=S	1	2	3.0016	6.0032	13.056	32	87.04	189.44	391.168
vsip_cvswap.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N	0	0	1	0.9984	4	8	14.0032	39.0144	79.9744
A=U B=U	1	1	2	4.992	8	35.968	48.896	107.008	228.352
A=S B=S	2	4	8	28	46.016	128	220.928	537.6	1515.52
A=S B=S	2	4	8	31.008	60.992	129.28	220.928	537.6	1464.32
vsip_vmmul.f:									
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3			
A=N B=N R=N	1.00096	2.99008	10.9937	66.0603	456.131	2726.3			
A=U B=U R=U	1.00096	4.99712	19.9885	109.969	640.68	3640.66			
A=S B=S R=S	2.9952	12.0013	66.0275	559.677	2202.01	8975.81			

A=S B=S R=S	2.9952	12.0013	66.0275	538.706	2160.07	8975.81			
vsip_rvcmmul.f:									
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2			
A=N B=N R=N	2	6.0032	39.936	209.92	1458.18	5455.87			
A=U B=U R=U	3.008	11.008	68.096	279.552	1765.38	7012.35			
A=S B=S R=S	6	38.016	258.56	1689.6	4997.12	19988.5			
A=S B=S R=S	6	40	226.048	1689.6	4956.16	20152.3			
vsip_rscmmul.f:									
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2			
A=N R=N	2	4.9984	38.912	171.008	1277.95	5341.18			
A=U R=U	3.008	9.024	68.096	286.72	1540.1	6815.74			
A=S R=S	5.008	35.968	189.952	1546.24	4833.28	19333.1			
A=S R=S	5.008	35.968	166.912	1576.96	4874.24	19497			
Integer Vector Routines									
vsip_vmag.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	0	0	0	0.9984	0.9984	1.9968	6.9888	9.984	31.0272
A=U R=U	0	0	1	2	1.9968	5.0048	12.0064	41.984	95.0272
A=S R=S	1	1	2	4	11.008	30.976	61.952	169.984	389.12
A=S R=S	1	1	2	4	11.008	34.944	73.984	136.192	357.376
vsip_vmag.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	2	4.992	8	16	61.952	97.792	195.584
A=U R=U	1	1	2	4	9.984	20.992	44.032	108.032	195.584
A=S R=S	1	1	3.008	7.008	12.992	32	65.024	181.76	351.232
A=S R=S	1	1	2	4	11.008	32	65.024	188.928	352.256
vsip_vmag.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	2	4	6.976	13.952	34.048	90.112	138.24
A=U R=U	1	1	2	3.0016	6.976	25.984	33.024	83.968	148.48
A=S R=S	1	1	2	4	9.024	18.048	37.888	104.96	230.4
A=S R=S	1	1	2	3.0016	6.0032	13.952	38.912	88.064	171.008
vsip_vneg.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	0	1	0.9984	0.9984	1.9968	2.9952	11.008	24.9856	63.0784
A=U R=U	1	1	2	4	8	15.0016	22.9888	82.0224	133.939
A=S R=S	1	2	4	11.008	24.064	70.912	103.936	360.448	907.264
A=S R=S	1	2	4	8	20.992	61.952	124.928	278.528	716.8
vsip_vneg.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	0	1	1	2	4.9984	9.9968	14.0032	61.952	75.9808
A=U R=U	0	1	1	2	3.0016	6.0032	29.952	39.9872	75.9808
A=S R=S	0	1	1	2	6.0032	12.0064	43.008	110.08	480.256
A=S R=S	0	1	1	2	6.976	24.96	41.984	95.232	407.552
vsip_vneg.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	2	3.0016	9.9968	20.992	24.0128	100.966	142.95
A=U R=U	1	1	2	4.9984	6.0032	12.0064	24.0128	73.0112	142.95
A=S R=S	1	1	3.0016	4.9984	7.0016	17.9968	56.832	172.032	258.048
A=S R=S	1	1	2	3.0016	7.0016	17.9968	56.832	149.504	245.76
vsip_vadd.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	0	1	0.9984	1.9968	5.0048	10.0096	32	64
A=U B=U R=U	1	1	1	2	4	8.9984	18.9952	68.096	156.672
A=S B=S R=S	1	2	4	8.992	28.992	60.032	143.104	303.104	690.176
A=S B=S R=S	1	2	4	8.992	19.008	61.056	132.096	330.24	709.632
vsip_vadd.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	3.0016	6.976	9.9968	39.936	80.896	192.512
A=U B=U R=U	1	1	2	3.0016	6.976	24.96	40.96	83.968	188.416
A=S B=S R=S	1	1	2	6.016	11.008	33.024	91.904	244.224	745.472
A=S B=S R=S	1	1	2	4.992	11.008	33.024	80.128	235.008	741.376
vsip_vadd.si:									

Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	3.0016	6.976	13.952	37.12	78.848	169.984
A=U B=U R=U	1	1	1	2	4.9984	8.9984	39.936	89.088	169.984
A=S B=S R=S	1	1	2	3.0016	9.024	18.944	50.944	128	347.136
A=S B=S R=S	1	1	2	4	9.024	29.056	59.904	161.792	274.432
vsip_svadd.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N R=N	0	0	1	0.9984	1.9968	2.9952	6.9888	26.9824	56.0128
B=U R=U	0	1	1	2	4	8	16	37.0176	78.0288
B=S R=S	1	1	2	4	11.008	36.992	73.984	172.032	441.344
B=S R=S	1	1	2	6.016	12.032	35.968	73.984	181.76	453.632
vsip_svadd.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N R=N	1	1	2	3.0016	9.9968	20.992	65.024	130.048	260.096
B=U R=U	1	1	2	4.9984	9.9968	20.992	60.928	74.9568	142.95
B=S R=S	1	1	3.0016	6.976	14.976	50.944	90.112	321.536	843.776
B=S R=S	1	1	3.0016	6.976	16	50.944	84.992	307.2	862.208
vsip_svadd.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N R=N	0	1	1	2	4.9984	9.9968	19.9936	61.952	114.688
B=U R=U	0	1	1	2	4.9984	9.9968	20.992	61.952	123.904
B=S R=S	0	1	2	3.0016	6.0032	13.056	36.096	86.016	171.008
B=S R=S	0	1	1	3.0016	4.9984	12.0064	36.096	73.216	180.224
vsip_vmul.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	0	1	0.9984	1.9968	5.0048	11.008	28.9792	45.9776
A=U B=U R=U	0	1	1	2	6.0032	12.0064	18.9952	59.904	106.496
A=S B=S R=S	1	2	4	8.992	30.016	41.984	97.024	308.224	637.952
A=S B=S R=S	1	2	3.008	8	16	41.984	100.096	323.072	575.488
vsip_vmul.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	1	2	4	9.024	17.024	54.016	97.792	194.56
A=U B=U R=U	1	1	2	4.992	9.984	17.024	44.032	116.224	194.56
A=S B=S R=S	1	1	2	6.016	12.032	33.024	69.12	193.024	574.464
A=S B=S R=S	1	1	2	6.016	11.008	34.048	96	196.096	594.944
vsip_vmul.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	1	2	6.016	9.984	28.032	67.072	104.96	221.184
A=U B=U R=U	1	1	2	4.992	12.032	28.032	47.104	131.072	221.184
A=S B=S R=S	1	1	2	4.992	11.008	32	64	183.808	284.672
A=S B=S R=S	1	1	2	4.992	11.008	32	64	131.072	288.768
vsip_svmul.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N R=N	0	0	1	0.9984	1.9968	3.9936	7.9872	26.9824	57.0368
B=U R=U	0	1	1	2	4	8	16.9984	41.984	78.0288
B=S R=S	1	1	2	6.016	12.992	35.968	84.992	172.032	448.512
B=S R=S	1	1	2	6.016	12.032	34.944	73.984	193.024	439.296
vsip_svmul.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N R=N	1	1	1	3.0016	6.0032	12.0064	36.096	74.24	164.864
B=U R=U	1	1	1	3.0016	6.0032	12.0064	38.912	76.8	161.792
B=S R=S	1	1	2	4	9.024	18.048	50.944	146.944	390.144
B=S R=S	1	1	2	4	9.024	29.056	58.88	147.968	417.792
vsip_svmul.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N R=N	1	2	4	9.984	18.944	30.976	81.92	212.992	473.088
B=U R=U	1	2	4.992	9.984	18.944	57.088	101.888	185.344	348.16
B=S R=S	1	2	6.016	9.984	22.016	62.976	129.024	257.024	538.624
B=S R=S	1	2	4.992	9.984	20.992	64	130.048	288.768	534.528
vsip_vsub.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	0	1	0.9984	1.9968	5.0048	11.008	28.9792	57.0368
A=U B=U R=U	0	1	1	3.0016	6.0032	8.9984	28.928	66.048	105.472
A=S B=S R=S	1	2	3.008	8	16	41.984	99.072	308.224	582.656
A=S B=S R=S	1	2	3.008	8	16	41.984	100.096	310.784	634.88

vsip_vsub.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	3.0016	6.976	10.9952	40.96	64	133.12
A=U B=U R=U	0	1	1	2	6.976	10.9952	32	89.088	132.096
A=S B=S R=S	0	1	1	4.992	9.984	29.056	65.024	183.808	579.584
A=S B=S R=S	0	1	1	4.992	9.024	29.056	64	263.168	570.368
vsip_vsub.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	3.0016	6.0032	8.9984	37.12	59.904	110.592
A=U B=U R=U	0	1	1	3.0016	6.0032	8.9984	19.9936	75.776	109.568
A=S B=S R=S	0	1	1	2	6.976	13.952	48.896	91.136	207.872
A=S B=S R=S	0	1	1	2	6.976	13.952	37.888	123.904	258.048
vsip_svsub.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N R=N	0	0	1	0.9984	0.9984	2.9952	7.9872	15.0016	44.032
B=U R=U	0	1	1	2	4	8	16.9984	45.9776	100.966
B=S R=S	1	1	2	6.016	12.032	34.944	71.936	216.064	444.416
B=S R=S	1	1	2	6.016	12.992	34.944	71.936	174.08	431.104
vsip_svsub.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N R=N	0	1	1	0.9984	4.9984	10.9952	30.976	61.952	130.048
B=U R=U	0	1	1	2	4.9984	9.9968	32	65.024	130.048
B=S R=S	0	1	1	3.0016	6.976	25.984	46.08	131.072	398.336
B=S R=S	0	1	1	3.0016	6.976	16	45.056	125.952	417.792
vsip_svsub.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
B=N R=N	0	1	1	0.9984	3.0016	5.0048	11.008	66.048	124.928
B=U R=U	0	1	1	2	4.9984	8.9984	29.952	52.224	123.904
B=S R=S	0	1	1	2	6.0032	12.0064	36.096	77.824	185.344
B=S R=S	0	1	1	3.0016	6.0032	12.0064	36.096	74.752	169.984
vsip_vclip.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	0	1	1	2	4.9984	8	26.88	50.0224	100.045
A=U R=U	1	1	2	4	8	17.024	34.048	97.792	137.216
A=S R=S	1	1	3.008	7.008	12.992	36.992	72.96	180.224	420.864
A=S R=S	1	1	3.008	4.992	12.992	36.992	93.952	169.984	542.72
vsip_vclip.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	3.008	6.016	6.976	17.024	48.896	101.888	301.056
A=U R=U	1	1	3.008	4.992	12.992	35.968	65.024	92.16	229.376
A=S R=S	1	1	3.008	4	11.008	32	68.096	138.24	329.728
A=S R=S	1	1	3.008	4.992	9.024	35.968	90.88	161.792	343.04
vsip_vclip.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	3.008	6.016	9.024	28.032	49.92	110.08	267.264
A=U R=U	1	1	3.008	6.016	12.032	32	76.032	100.864	187.392
A=S R=S	1	2	3.008	4	9.984	33.024	61.952	150.016	266.24
A=S R=S	1	1	3.008	4.992	8	35.968	68.096	217.088	256
vsip_vinclip.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	2	4	8	16	35.072	93.184	139.264
A=U R=U	1	1	3.008	4.992	12.032	35.968	59.904	138.24	228.352
A=S R=S	1	2	3.008	6.016	17.024	56.96	105.984	188.928	412.672
A=S R=S	1	2	4	8.992	14.976	40.064	80.128	189.952	411.648
vsip_vinclip.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	3.008	4.992	9.024	32	45.056	101.888	268.288
A=U R=U	1	1	3.008	6.016	9.984	19.968	93.952	72.192	264.192
A=S R=S	1	2	3.008	7.008	14.016	40.96	75.008	202.752	453.632
A=S R=S	1	1	2	6.016	11.008	39.04	46.08	203.776	433.152
vsip_vinclip.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	3.008	4.992	11.008	34.944	44.032	108.032	296.96
A=U R=U	1	1	3.008	6.016	14.016	32	76.032	84.992	293.888

A=S R=S	1	2	3.008	7.008	17.024	45.952	75.008	144.896	449.536
A=S R=S	1	2	3.008	6.016	11.008	38.016	43.008	160.256	253.952
vsip_vand.bl:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	1	1	2	8	14.976	41.984	84.992	195.584
A=U B=U R=U	1	1	2	3.0016	6.976	14.976	38.912	84.992	189.44
A=S B=S R=S	1	1	2	4.992	12.032	34.048	79.104	384	578.56
A=S B=S R=S	0	1	1	4.992	9.024	34.048	71.936	240.128	651.264
vsip_vand.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	1	1	3.0016	6.0032	9.9968	39.936	94.208	192.512
A=U B=U R=U	1	1	2	3.0016	6.976	13.952	40.96	83.968	190.464
A=S B=S R=S	1	1	2	4.992	11.008	34.048	88.064	257.024	734.208
A=S B=S R=S	1	1	2	6.016	11.008	34.944	80.896	293.888	686.08
vsip_vand.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	3.0016	6.976	13.952	36.096	89.088	169.984
A=U B=U R=U	1	1	1	2	4.9984	13.056	37.888	89.088	155.648
A=S B=S R=S	1	1	2	4	9.024	29.952	48.896	125.952	287.744
A=S B=S R=S	1	1	2	4	9.024	29.952	58.88	125.952	319.488
vsip_vnot.bl:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	0	1	1	2	6.0032	13.056	37.12	50.9952	122.88
A=U R=U	1	1	1	2	4.9984	8.9984	19.9936	50.9952	160.768
A=S R=S	1	1	2	3.0016	6.976	14.976	39.936	98.816	373.76
A=S R=S	1	1	2	4	8	18.048	46.08	147.968	362.496
vsip_vnot.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	0	1	1	2	4.9984	6.0032	14.0032	39.9872	75.9808
A=U R=U	0	1	1	2	4.9984	9.9968	14.0032	50.9952	75.9808
A=S R=S	0	1	2	3.0016	8	25.984	34.048	128	377.856
A=S R=S	0	1	1	2	6.0032	12.0064	33.024	153.088	311.296
vsip_vnot.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	2	3.0016	9.9968	20.992	24.0128	122.88	142.95
A=U R=U	1	1	2	3.0016	9.9968	19.9936	24.0128	105.472	142.95
A=S R=S	1	1	2	3.0016	10.9952	26.112	56.832	150.528	413.696
A=S R=S	1	1	2	3.0016	7.0016	17.9968	56.832	146.432	243.712
vsip_vxor.bl:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	2	6.976	16	33.024	64	193.536
A=U B=U R=U	0	1	1	2	4.9984	14.976	39.936	64	131.072
A=S B=S R=S	1	1	2	6.016	12.032	34.048	101.888	176.128	678.912
A=S B=S R=S	1	1	1	4.992	9.024	29.056	65.024	175.104	563.2
vsip_vxor.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	3.0016	6.976	9.9968	38.912	64	132.096
A=U B=U R=U	0	1	1	2	6.976	13.952	33.024	94.208	132.096
A=S B=S R=S	0	1	1	4.992	9.984	18.944	60.928	188.928	578.56
A=S B=S R=S	0	1	1	4.992	9.024	29.056	61.952	334.848	571.392
vsip_vxor.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	3.0016	6.976	8.9984	37.12	50.0224	121.856
A=U B=U R=U	0	1	1	2	6.976	13.056	18.9952	89.088	120.832
A=S B=S R=S	0	1	1	2	6.976	24.064	48.896	126.976	214.016
A=S B=S R=S	0	1	1	2	6.976	13.952	48.896	125.952	205.824
vsip_vfill.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
R=N	0	0	0	0.9984	0.9984	0.99968	2.9952	7.9872	26.0096
R=U	0	0	1	0.9984	0.9984	1.9968	3.9936	9.984	31.0272
R=S	0	1	1	2	3.0016	8	16	45.0048	119.808
R=S	0	1	1	2	3.0016	8	16	43.008	104.448
vsip_vfill.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384

R=N	0	0	1	0.9984	3.0016	6.0032	12.0064	37.0176	73.0112
R=U	0	1	1	0.9984	3.0016	5.0048	10.0096	33.9968	66.9696
R=S	0	0	1	0.9984	3.0016	6.0032	12.0064	33.9968	134.144
R=S	0	1	1	0.9984	3.0016	6.0032	12.0064	33.9968	120.832
vsip_vfill.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
R=N	0	0	1	0.9984	3.0016	6.0032	12.0064	35.0208	70.0416
R=U	0	1	1	0.9984	3.0016	5.0048	10.0096	30.976	64
R=S	0	0	1	0.9984	3.0016	6.0032	14.0032	37.9904	74.0352
R=S	0	1	1	0.9984	3.0016	6.0032	14.0032	37.9904	84.992
vsip_vramp.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
R=N	0	0	1	0.9984	1.9968	5.0048	9.0112	30.0032	49.0496
R=U	0	1	1	0.9984	3.0016	5.0048	11.008	33.9968	67.9936
R=S	0	1	1	2	4.9984	10.9952	36.096	89.088	173.056
R=S	0	1	1	3.0016	6.0032	13.056	37.12	74.752	186.368
vsip_vramp.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
R=N	0	1	1	2	4	7.0016	16	41.984	95.0272
R=U	0	1	1	2	3.0016	7.0016	13.0048	39.0144	77.0048
R=S	0	1	1	2	4	8.9984	18.9952	54.784	157.696
R=S	0	1	1	2	4	8.9984	28.928	45.9776	166.912
vsip_vramp.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
R=N	1	1	2	4	7.0016	15.0016	30.976	78.9504	185.958
R=U	1	1	2	4	7.0016	13.0048	26.0096	71.9872	149.094
R=S	1	1	2	4	8	16.9984	55.808	91.0336	206.848
R=S	1	1	2	4	7.0016	16.9984	35.0208	92.9792	231.424
vsip_vgather.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
X=N I=N Y=N	1	1	3.008	6.016	9.984	29.952	77.056	176.128	536.576
X=U I=U Y=U	1	1	3.008	4.992	9.984	33.024	62.976	176.128	520.192
X=S I=S Y=S	1	1	3.008	7.008	16	60.032	183.04	721.92	1484.8
X=S I=S Y=S	1	1	3.008	7.008	19.008	66.944	175.104	357.888	1505.28
vsip_vgather.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
X=N I=N Y=N	1	1	3.008	4.992	12.032	19.968	62.976	172.032	449.536
X=U I=U Y=U	1	1	3.008	4.992	9.984	29.952	76.032	173.056	518.144
X=S I=S Y=S	1	2	3.008	7.008	16	61.056	133.888	352.256	1361.92
X=S I=S Y=S	1	1	3.008	7.008	16	57.984	179.968	350.208	1515.52
vsip_vgather.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
X=N I=N Y=N	1	1	3.008	4.992	9.984	18.944	68.096	123.904	444.416
X=U I=U Y=U	1	1	3.008	4.992	12.032	19.968	60.928	126.976	346.112
X=S I=S Y=S	1	1	3.008	4.992	12.992	40.064	134.912	266.24	769.024
X=S I=S Y=S	1	1	3.008	4.992	12.992	39.04	148.992	271.872	886.784
vsip_vscatter.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
X=N Y=N I=N	1	2	3.008	6.016	11.008	33.024	67.072	187.904	361.472
X=U Y=U I=U	1	2	3.008	6.016	12.992	33.024	71.936	185.856	375.808
X=S Y=S I=S	1	2	3.008	7.008	14.976	50.944	140.032	306.176	880.64
X=S Y=S I=S	1	2	3.008	7.008	14.976	59.008	105.984	258.048	847.872
vsip_vscatter.i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
X=N Y=N I=N	1	2	3.008	6.016	11.008	34.944	67.072	187.904	359.424
X=U Y=U I=U	1	2	3.008	6.016	12.992	33.024	76.032	160.256	358.4
X=S Y=S I=S	1	2	3.008	7.008	14.976	61.056	108.032	258.048	881.664
X=S Y=S I=S	1	2	3.008	7.008	14.976	60.032	118.016	303.104	844.8
vsip_vscatter.si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
X=N Y=N I=N	1	2	3.008	6.016	11.008	34.944	66.048	160.256	320.512
X=U Y=U I=U	1	2	3.008	6.016	12.992	32	66.048	132.096	312.32
X=S Y=S I=S	1	2	3.008	6.016	12.992	36.992	121.088	224.768	490.496
X=S Y=S I=S	1	2	3.008	6.016	12.992	41.984	109.056	220.16	485.376

Boolean Vector Routines

vsip_vsumval_bl:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	0	1	1	2	4	8.9984	17.9968	45.0048	99.0208
A=U	0	1	1	2	4	8	16	43.9808	99.0208
A=S	0	1	1	2	4	12.0064	34.048	68.096	182.272
A=S	0	1	1	2	6.0032	12.0064	37.12	74.24	155.648
vsip_vsumval_f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	0	0	0	0	0.9984	1.9968	3.9936	7.9872	24.9856
A=U	0	0	1	0.9984	1.9968	5.0048	6.9888	26.0096	62.976
A=S	0	1	1	2	4.9984	10.9952	33.024	75.776	141.312
A=S	0	1	1	2	6.0032	10.9952	35.072	74.24	146.432
vsip_vsumval_i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	0	0	1	0.9984	3.0016	5.0048	10.0096	33.024	66.048
A=U	0	0	1	0.9984	3.0016	5.0048	10.0096	33.024	66.048
A=S	0	0	1	0.9984	3.0016	9.9968	30.976	69.12	125.952
A=S	0	0	1	0.9984	4	9.9968	20.992	57.856	131.072
vsip_vsumval_si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	0	0	1	0.9984	4	7.0016	10.0096	41.0112	64
A=U	0	1	1	0.9984	3.0016	5.0048	15.0016	30.976	64
A=S	0	0	1	0.9984	3.0016	6.0032	26.88	45.0048	103.424
A=S	0	0	1	2	4	8	13.0048	35.9936	116.736
vsip_valltrue_bl:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	0	0	0	0	0	0	0	0	0
A=U	0	0	0	0	0	0	0	0	0
A=S	0	0	0	0	0	0	0	0	0
A=S	0	0	0	0	0	0	0	0	0
vsip_vanytrue_bl:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N	0	0	0	0	0	0	0	0	0
A=U	0	0	0	0	0	0	0	0	0
A=S	0	0	0	0	0	0	0	0	0
A=S	0	0	0	0	0	0	0	0	0
vsip_vand_bl:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	1	1	2	8	14.976	41.984	84.992	195.584
A=U B=U R=U	1	1	2	3.0016	6.976	14.976	38.912	84.992	189.44
A=S B=S R=S	1	1	2	4.992	12.032	34.048	79.104	384	578.56
A=S B=S R=S	0	1	1	4.992	9.024	34.048	71.936	240.128	651.264
vsip_vand_i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	1	1	3.0016	6.0032	9.9968	39.936	94.208	192.512
A=U B=U R=U	1	1	2	3.0016	6.976	13.952	40.96	83.968	190.464
A=S B=S R=S	1	1	2	4.992	11.008	34.048	88.064	257.024	734.208
A=S B=S R=S	1	1	2	6.016	11.008	34.944	80.896	293.888	686.08
vsip_vand_si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	3.0016	6.976	13.952	36.096	89.088	169.984
A=U B=U R=U	1	1	1	2	4.9984	13.056	37.888	89.088	155.648
A=S B=S R=S	1	1	2	4	9.024	29.952	48.896	125.952	287.744
A=S B=S R=S	1	1	2	4	9.024	29.952	58.88	125.952	319.488
vsip_vnot_bl:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	0	1	1	2	6.0032	13.056	37.12	50.9952	122.88
A=U R=U	1	1	1	2	4.9984	8.9984	19.9936	50.9952	160.768
A=S R=S	1	1	2	3.0016	6.976	14.976	39.936	98.816	373.76
A=S R=S	1	1	2	4	8	18.048	46.08	147.968	362.496
vsip_vnot_i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	0	1	1	2	4.9984	6.0032	14.0032	39.9872	75.9808

A=U R=U	0	1	1	2	4.9984	9.9968	14.0032	50.9952	75.9808
A=S R=S	0	1	2	3.0016	8	25.984	34.048	128	377.856
A=S R=S	0	1	1	2	6.0032	12.0064	33.024	153.088	311.296
vsip_vnot_si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N R=N	1	1	2	3.0016	9.9968	20.992	24.0128	122.88	142.95
A=U R=U	1	1	2	3.0016	9.9968	19.9936	24.0128	105.472	142.95
A=S R=S	1	1	2	3.0016	10.9952	26.112	56.832	150.528	413.696
A=S R=S	1	1	2	3.0016	7.0016	17.9968	56.832	146.432	243.712
vsip_vor_bl:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	3.0016	4.9984	10.9952	33.024	64	132.096
A=U B=U R=U	0	1	1	2	6.976	25.984	41.984	64	176.128
A=S B=S R=S	1	1	2	6.016	12.032	34.048	75.008	177.152	704.512
A=S B=S R=S	1	1	1	4.992	9.024	29.056	60.928	221.184	559.104
vsip_vor_i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	3.0016	4.9984	9.9968	33.024	64	131.072
A=U B=U R=U	0	1	1	3.0016	8	9.9968	33.024	89.088	131.072
A=S B=S R=S	0	1	1	4.992	9.984	29.056	61.952	186.88	617.472
A=S B=S R=S	0	1	1	4.992	9.024	29.056	60.928	258.048	572.416
vsip_vor_si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	1	1	3.0016	6.976	8.9984	17.9968	39.0144	120.832	243.712
A=U B=U R=U	1	1	3.0016	6.976	8.9984	17.9968	58.88	159.744	221.184
A=S B=S R=S	1	1	3.0016	4.9984	13.952	27.904	98.816	180.224	432.128
A=S B=S R=S	1	1	3.0016	4.9984	13.952	27.904	76.8	249.856	438.272
vsip_vxor_bl:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	2	6.976	16	33.024	64	193.536
A=U B=U R=U	0	1	1	2	4.9984	14.976	39.936	64	131.072
A=S B=S R=S	1	1	2	6.016	12.032	34.048	101.888	176.128	678.912
A=S B=S R=S	1	1	1	4.992	9.024	29.056	65.024	175.104	563.2
vsip_vxor_i:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	3.0016	6.976	9.9968	38.912	64	132.096
A=U B=U R=U	0	1	1	2	6.976	13.952	33.024	94.208	132.096
A=S B=S R=S	0	1	1	4.992	9.984	18.944	60.928	188.928	578.56
A=S B=S R=S	0	1	1	4.992	9.024	29.056	61.952	334.848	571.392
vsip_vxor_si:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
A=N B=N R=N	0	1	1	3.0016	6.976	8.9984	37.12	50.0224	121.856
A=U B=U R=U	0	1	1	2	6.976	13.056	18.9952	89.088	120.832
A=S B=S R=S	0	1	1	2	6.976	24.064	48.896	126.976	214.016
A=S B=S R=S	0	1	1	2	6.976	13.952	48.896	125.952	205.824
Matrix Product									
vsip_vmprod_f:									
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2			
X=N A=N Y=N	2	3.9936	15.9744	167.936	770.048	24379.4			
X=U A=U Y=U	2	7.0016	26.0096	276.48	1982.46	29950			
X=S A=S Y=S	3.0016	16	78.848	753.664	7913.47	36700.2			
X=S A=S Y=S	3.0016	13.056	77.824	731.136	8069.12	36044.8			
vsip_vmprod_i:									
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2			
X=N A=N Y=N	4.992	17.024	84.992	770.048	3162.11	100598			
X=U A=U Y=U	4.992	17.024	84.992	765.952	3153.92	98631.7			
X=S A=S Y=S	4.992	18.944	126.976	1171.46	6709.25	113050			
X=S A=S Y=S	4.992	18.944	126.976	1193.98	6012.93	113705			
vsip_vmprod_si:									
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2			
X=N A=N Y=N	3.008	9.024	45.056	419.84	1695.74	25722.9			
X=U A=U Y=U	3.008	9.024	45.056	415.744	1695.74	25722.9			
X=S A=S Y=S	3.008	9.024	50.944	450.56	2580.48	42598.4			
X=S A=S Y=S	3.008	9.024	50.944	497.664	2580.48	37683.2			

vsip_mprodt.f:						
Type/(m*n*p)	16 ³	32 ³	64 ³	128 ³	256 ³	512 ³
A=N B=N R=N	24.0128	174.08	1359.87	10747.9	87451.2	848927
A=U B=U R=U	28.0064	203.162	1589.25	12582.9	104228	973079
A=S B=S R=S	37.0176	296.141	2306.87	22282.2	173434	1328760
A=S B=S R=S	37.0176	296.141	2316.7	21784.2	173644	1327080
vsip_mprodt.i:						
Type/(m*n*p)	16 ³	32 ³	64 ³	128 ³	256 ³	512 ³
A=N B=N R=N	34.048	245.76	1884.16	15335.4	122683	998244
A=U B=U R=U	34.048	245.76	1884.16	15335.4	121635	998244
A=S B=S R=S	34.048	258.048	2211.84	18087.9	156238	1291850
A=S B=S R=S	34.048	258.048	2211.84	17956.9	156238	1291850
vsip_mprodt.si:						
Type/(m*n*p)	16 ³	32 ³	64 ³	128 ³	256 ³	512 ³
A=N B=N R=N	38.912	286.72	2211.84	17694.7	140509	1677720
A=U B=U R=U	48.896	419.84	3260.42	26214.4	207618	1677720
A=S B=S R=S	48.896	421.888	3522.56	27918.3	231735	1862270
A=S B=S R=S	48.896	421.888	3522.56	27918.3	231735	1862270
vsip_cmprodt.f:						
Type/(m*n*p)	16 ³	32 ³	64 ³	128 ³	256 ³	512 ³
A=N B=N R=N	129.024	970.752	7733.25	61341.7	526385	4714400
A=U B=U R=U	137.216	1056.77	8454.14	67108.9	578814	4982830
A=S B=S R=S	165.888	1359.87	11272.2	115868	807404	7079990
A=S B=S R=S	165.888	1355.78	11305	108265	809501	7079990
vsip_cmprodt.i:						
Type/(m*n*p)	16 ³	32 ³	64 ³	128 ³	256 ³	512 ³
A=N B=N R=N	297.984	2441.22	19857.4	158073	1270870	10150200
A=U B=U R=U	297.984	2441.22	19857.4	158073	1275070	10167000
A=S B=S R=S	322.048	2781.18	22347.8	181666	1493170	12851300
A=S B=S R=S	322.048	2809.86	22249.5	184025	1491080	12851300
vsip_cmprodt.si:						
Type/(m*n*p)	16 ³	32 ³	64 ³	128 ³	256 ³	512 ³
A=N B=N R=N	174.08	1402.88	11141.1	89391.1	713032	5721030
A=U B=U R=U	174.08	1402.88	11124.7	89391.1	717226	5721030
A=S B=S R=S	174.08	1415.17	11812.9	95289.3	761266	6148850
A=S B=S R=S	174.08	1415.17	11812.9	96337.9	762315	6148850
vsip_cvmprod.f:						
Type/(m*n)	16 ²	32 ²	64 ²	128 ²	256 ²	512 ²
X=N A=N Y=N	4	13.952	96.768	526.336	6725.63	50462.7
X=U A=U Y=U	6.016	20.992	164.864	774.144	9256.96	62914.6
X=S A=S Y=S	8	35.968	253.952	3153.92	17776.6	75694.1
X=S A=S Y=S	8	35.968	256	3194.88	17612.8	75366.4
vsip_cvmprod.i:						
Type/(m*n)	16 ²	32 ²	64 ²	128 ²	256 ²	512 ²
X=N A=N Y=N	7.008	35.968	198.912	998.4	13885.4	102892
X=U A=U Y=U	7.008	35.968	198.912	999.424	11100.2	102892
X=S A=S Y=S	7.008	41.024	235.008	1474.56	19865.6	117637
X=S A=S Y=S	7.008	41.024	235.008	3000.32	21012.5	117309
vsip_cvmprod.si:						
Type/(m*n)	16 ²	32 ²	64 ²	128 ²	256 ²	512 ²
X=N A=N Y=N	9.00705	48.012	203.11	1278.27	5309.74	116028
X=U A=U Y=U	9.00705	48.012	203.11	1278.27	5309.74	116224
X=S A=S Y=S	9.00705	49.0107	230.15	1548.68	8210.44	137660
X=S A=S Y=S	9.00705	49.0107	228.921	1536.38	8357.93	137660
vsip_cmprodh.f:						
Type/(m*n*p)	16 ³	32 ³	64 ³	128 ³	256 ³	512 ³
A=N B=N R=N	84.992	647.168	5111.81	40632.3	348127	3170890
A=U B=U R=U	93.184	708.608	5603.33	44302.3	381682	3338670
A=S B=S R=S	117.248	905.216	7569.41	76546	534774	4647290
A=S B=S R=S	116.224	901.12	7569.41	71303.2	534774	4647290
vsip_cmprodh.i:						
Type/(m*n*p)	16 ³	32 ³	64 ³	128 ³	256 ³	512 ³
A=N B=N R=N	220.16	1699.84	13762.6	109314	872415	6979320
A=U B=U R=U	220.16	1699.84	13762.6	109314	878707	6979320

A=S B=S R=S	224.256	1933.31	15401	122946	1006630	8724150
A=S B=S R=S	224.256	1949.7	15269.9	126616	1006630	8724150
vsip_cmprodh_si:						
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3
A=N B=N R=N	128	991.232	7847.94	63045.6	502268	4026530
A=U B=U R=U	128	991.232	7831.55	63045.6	504365	4018140
A=S B=S R=S	128	1003.52	8323.07	66322.4	529531	5117050
A=S B=S R=S	179.968	1474.56	12288	100532	790626	6383730
vsip_mvprod.f:						
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2
A=N X=N Y=N	1	1.9968	9.0112	52.0192	274.842	1753.09
A=U X=U Y=U	1	4	16.9984	96.0512	358.81	2211.84
A=S X=S Y=S	2	8	43.008	272.384	1036.29	3325.95
A=S X=S Y=S	2	8	44.032	266.24	1044.48	3325.95
vsip_mvprod_i:						
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2
A=N X=N Y=N	2	8	46.08	204.8	868.352	3080.19
A=U X=U Y=U	2	8	46.08	208.896	847.872	3080.19
A=S X=S Y=S	2	11.008	52.992	271.36	1114.11	3866.62
A=S X=S Y=S	2	9.024	60.928	271.36	1126.4	3850.24
vsip_mvprod_si:						
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2
A=N X=N Y=N	3.008	9.024	50.944	235.52	962.56	3244.03
A=U X=U Y=U	3.008	9.024	48.896	228.352	888.832	3244.03
A=S X=S Y=S	3.008	9.024	48.128	263.168	1073.15	3620.86
A=S X=S Y=S	3.008	9.024	60.928	259.072	1007.62	3670.02
vsip_mprod.f:						
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3
A=N B=N R=N	7.9872	54.0672	442.368	4666.16	39636.2	1275070
A=U B=U R=U	9.0112	69.0176	565.248	6094.85	52114.2	1551890
A=S B=S R=S	14.0032	120.013	1004.34	12412.5	116392	2181040
A=S B=S R=S	14.0032	120.013	1005.98	12373.2	122683	2172650
vsip_mprod_i:						
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3
A=N B=N R=N	34.048	245.76	1884.16	32768	273678	17280500
A=U B=U R=U	34.048	245.76	1884.16	32505.9	273678	16861100
A=S B=S R=S	34.048	260.096	2605.06	51380.2	583008	19713200
A=S B=S R=S	34.048	260.096	2605.06	51380.2	590348	19545500
vsip_mprod_si:						
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3
A=N B=N R=N	38.912	286.72	2211.84	35651.6	286261	10318000
A=U B=U R=U	38.912	286.72	2211.84	35520.5	287310	9479130
A=S B=S R=S	38.912	288.768	2555.9	38535.2	440402	12079600
A=S B=S R=S	38.912	288.768	2572.29	38404.1	440402	12750700
vsip_cmprod.f:						
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3
A=N B=N R=N	66.048	520.192	4554.75	38273	572522	6291460
A=U B=U R=U	74.24	581.632	5111.81	44040.2	750780	7449080
A=S B=S R=S	99.84	798.72	7438.34	80478.2	1140850	10804500
A=S B=S R=S	99.84	798.72	7405.57	75759.6	1168110	10804500
vsip_cmprod_i:						
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3
A=N B=N R=N	143.872	1159.17	12582.9	123994	4257220	51002700
A=U B=U R=U	143.872	1159.17	11124.7	124387	4865390	51925500
A=S B=S R=S	145.92	1390.59	14811.1	187433	4791990	57797500
A=S B=S R=S	145.92	1402.88	13729.8	187433	5022680	57713600
vsip_cmprod_si:						
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3
A=N B=N R=N	179.968	1466.37	11649	127009	1033900	48737800
A=U B=U R=U	179.968	1466.37	11649	126878	2894070	49660600
A=S B=S R=S	179.968	1476.61	12501	158597	1897920	56287600
A=S B=S R=S	179.968	1476.61	12402.7	159908	1677720	56035900
vsip_cmvpprod.f:						
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2

A=N X=N Y=N	3.008	9.024	46.08	202.752	1056.77	5275.65
A=U X=U Y=U	4	12.992	70.912	288.768	1413.12	6569.98
A=S X=S Y=S	5.008	20.992	137.984	925.696	2506.75	10797.1
A=S X=S Y=S	5.008	20.992	139.008	708.608	2609.15	10059.8
vsip_cmvprod.i:						
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2
A=N X=N Y=N	7.008	35.968	145.92	609.28	2453.5	9863.17
A=U X=U Y=U	7.008	35.968	145.92	609.28	2457.6	9912.32
A=S X=S Y=S	7.008	40	166.912	680.96	2859.01	12386.3
A=S X=S Y=S	7.008	40	165.888	704.512	2850.82	12337.2
vsip_cmvprod.si:						
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2
A=N X=N Y=N	8	40	168.96	686.08	2756.61	11157.5
A=U X=U Y=U	8	40	168.96	686.08	2772.99	11141.1
A=S X=S Y=S	8	41.024	175.104	718.848	2949.12	11911.2
A=S X=S Y=S	8	41.024	175.104	736.256	2940.93	11911.2
vsip_cmprodj.f:						
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3
A=N B=N R=N	44.032	387.072	3391.49	28704.8	427819	4739560
A=U B=U R=U	48.128	428.032	3833.86	33161.2	495976	5620370
A=S B=S R=S	71.936	593.92	5636.1	61210.6	880804	8355050
A=S B=S R=S	71.936	593.92	5586.94	57409.5	879755	8321500
vsip_cmprodj.i:						
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3
A=N B=N R=N	161.024	1251.33	13336.6	131072	3628070	51422200
A=U B=U R=U	161.024	1251.33	11812.9	131072	3533700	51589900
A=S B=S R=S	164.096	1484.8	15482.9	192676	4582280	57713600
A=S B=S R=S	164.096	1501.18	14319.6	195297	5106570	60146300
vsip_cmprodj.si:						
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3
A=N B=N R=N	178.944	1454.08	11649	141558	1153430	51841600
A=U B=U R=U	178.944	1454.08	11649	141558	2705330	52009400
A=S B=S R=S	179.968	1480.7	12943.4	171704	1824520	58133100
A=S B=S R=S	179.968	1474.56	12894.2	175636	2485130	58049200
Matrix Transpose						
vsip_mtrans.bl:						
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2
A=N R=N	3.0016	8	33.9968	385.024	2850.82	44892.2
A=U R=U	3.0016	8	33.024	385.024	2646.02	45219.8
A=S R=S	3.0016	13.056	77.824	968.704	6520.83	52428.8
A=S R=S	3.0016	13.056	76.8	991.232	6299.65	51773.4
vsip_mtrans.f:						
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2
A=N R=N	2	3.9936	20.992	151.962	1048.58	7372.8
A=U R=U	3.0016	8.9984	39.0144	206.848	1073.15	18382.8
A=S R=S	4.992	20.992	102.912	1073.15	5218.3	32210.9
A=S R=S	4.992	20.992	102.912	968.704	5324.8	32309.2
vsip_mtrans.i:						
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2
A=N R=N	3.0016	8	33.9968	385.024	3072	45875.2
A=U R=U	3.0016	8	33.024	385.024	1753.09	42598.4
A=S R=S	3.0016	13.952	78.848	1036.29	6586.37	52428.8
A=S R=S	3.0016	13.952	78.848	935.936	6037.5	52428.8
vsip_mtrans.si:						
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2
A=N R=N	1	4	14.0032	191.488	749.568	10534.9
A=U R=U	1	4	14.0032	192.512	753.664	10141.7
A=S R=S	1	4	32	205.824	1814.53	15286.3
A=S R=S	1	4	32	242.688	1798.14	14516.2
vsip_cmtrans.f:						
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2
A=N R=N	1	4	37.12	189.44	1413.12	7438.34
A=U R=U	3.008	9.024	66.048	294.912	1368.06	18022.4
A=S R=S	5.008	30.976	189.952	1505.28	6840.32	32440.3

A=S R=S	5.008	33.984	178.944	1484.8	6840.32	32440.3			
vsip_cmtrans.i:									
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2			
A=N R=N	3.008	8	43.008	397.312	2023.42	43089.9			
A=U R=U	3.008	8	62.976	414.72	2023.42	44400.6			
A=S R=S	3.008	14.016	111.104	1382.4	10199	51118.1			
A=S R=S	3.008	14.016	114.944	1392.64	10362.9	51609.6			
vsip_cmtrans.si:									
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2			
A=N R=N	2	8	60.928	395.264	1634.3	22282.2			
A=U R=U	2	8	51.968	402.432	1609.73	26542.1			
A=S R=S	2	9.984	73.984	709.632	3715.07	43745.3			
A=S R=S	2	9.984	75.008	690.176	3715.07	45056			
vsip_cmherm.f:									
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2			
A=N R=N	3.0016	8.9984	53.76	215.04	3121.15	19202			
A=U R=U	4.992	17.024	84.992	319.488	4915.2	26214.4			
A=S R=S	10.016	45.056	305.152	1974.27	12451.8	54394.9			
A=S R=S	10.016	45.056	305.152	1882.11	11878.4	54394.9			
Other Matrix Routines									
vsip_gemp.f:									
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3			
A=N B=N R=N	13.0135	93.0525	756.704	7724.28	72014.7	1974900			
A=U B=U R=U	16.0078	117.007	960.621	9886.29	85537.1	2402590			
A=S B=S R=S	22.9944	188.869	1577.29	18318.1	185540	3195060			
A=S B=S R=S	22.9944	188.869	1574.83	18121.6	163527	3182480			
vsip_gems.f:									
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2			
A=N C=N	2.00097	5.99813	27.9849	109.022	638.776	3955.5			
A=U C=U	2.99906	11.0366	44.1462	173.514	847.607	4962.8			
A=S C=S	5.99813	24.9522	99.041	776.973	2297.14	9139.42			
A=S C=S	5.99813	24.9522	99.041	638.776	2303.28	9114.85			
vsip_cgemp.f:									
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3			
A=N B=N R=N	125.952	962.56	8257.54	68419.6	952107	10099900			
A=U B=U R=U	137.216	1089.54	9371.65	80216.1	1275070	11844700			
A=S B=S R=S	167.936	1380.35	12746.8	133693	1881150	11542700			
A=S B=S R=S	119.808	925.696	8486.91	82313.2	1241510	11542700			
vsip_cgems.f:									
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2			
A=N C=N	4	14.016	59.904	245.76	1486.85	6324.22			
A=U C=U	5.008	19.008	80.896	343.04	1712.13	8568.83			
A=S C=S	10	41.984	244.992	1372.16	6103.04	19824.6			
A=S C=S	10	41.984	247.04	1218.56	6307.84	19824.6			
vsip_vouter.f:									
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2			
X=N Y=N R=N	1	1.9968	5.9904	33.9968	133.939	1340.21			
X=U Y=U R=U	1	3.0016	10.0096	66.048	253.952	1720.32			
X=S Y=S R=S	2	6.976	36.096	197.632	1466.37	7487.49			
X=S Y=S R=S	2	6.0032	37.12	147.456	1593.34	6848.51			
vsip_cvouter.f:									
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2			
X=N Y=N R=N	4.992	14.976	83.968	350.208	1826.82	8585.22			
X=U Y=U R=U	6.016	18.944	98.816	448.512	2039.81	10158.1			
X=S Y=S R=S	8	34.048	197.12	1449.98	6823.94	27557.9			
X=S Y=S R=S	8	34.048	197.12	1167.36	6766.59	27590.7			
Decompose/Solve									
vsip_lud_create.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
	1.00169	2.00337	2.00097	2.00097	1.99618	1.99618	2.00001	3.00194	2.99426
vsip_lud_destroy.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384

	0	0	0	0	0.9984	0	0	0.9984	1.00045
vsip_lud.f:									
Type/(n*n)	16^2	32^2	64^2	128^2	256^2	512^2			
A=N	23.04	122.88	837.12	7301.12	23306.2	205947			
A=U	22.08	122.24	847.36	4300.8	26419.2	237240			
A=S	25.92	133.12	896	4700.16	24494.1	216924			
A=S	25.92	133.12	906.24	4966.4	24821.8	216596			
vsip_lud_getattr.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
	0	0	0	0	0	0	0	0	0
vsip_clud_create.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
	1	1	1	0.9984	0.9984	0.99968	1.00096	2.00192	1.9968
vsip_clud_destroy.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
	0	0	0	0	0	0	0	1.00172	1.00049
vsip_clud.f:									
Type/(n*n)	16^2	32^2	64^2	128^2	256^2	512^2			
A=N	91.8913	507.681	3500.99	20668.1	118296	918610			
A=U	90.9316	507.681	3485.63	18579.8	126404	924506			
A=S	90.9316	515.359	4199.65	18933	117989	919347			
A=S	91.8913	515.359	4215	19178.6	120753	920821			
vsip_clud_getattr.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
	0	0	0	0	0	0	0	0	0
vsip_covsol.f:									
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3			
A=N XB=N	139.008	636.928	3653.63	30933	169869	2793410			
A=U XB=U	141.056	655.36	3850.24	33030.1	198181	3439330			
A=S XB=S	137.984	559.104	2916.35	20054	148898	1526730			
A=S XB=S	139.008	561.152	2932.74	20054	148898	1526730			
vsip_ccovsol.f:									
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3			
A=N XB=N	266.24	1308.67	8241.15	59899.9	400556	4907340			
A=U XB=U	266.24	1308.67	8241.15	60162	492831	4949280			
A=S XB=S	268.8	1316.86	8470.53	61079.6	447742	4957670			
A=S XB=S	268.8	1316.86	8454.14	60948.5	461373	4949280			
vsip_ellsqsol.f:									
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3			
A=N XB=N	645.12	3420.16	25428	166986	1222640	12683600			
A=U XB=U	645.12	3420.16	25460.7	167248	1459620	12717100			
A=S XB=S	650.24	3440.64	25952.3	169345	1176500	12666800			
A=S XB=S	650.24	3440.64	25985	168821	1233130	12767500			
vsip_lusol.f:									
Type/(n*p)	16^2	32^2	64^2	128^2	256^2	512^2			
XB=N	31.04	149.76	837.12	6072.32	48087	680919			
XB=U	32.96	163.84	957.44	7362.56	59760.6	861307			
XB=S	36.96	177.28	952.32	6778.88	50954.2	830505			
XB=S	36.96	177.28	952.32	6830.08	50708.5	837550			
vsip_clusol.f:									
Type/(n*p)	16^2	32^2	64^2	128^2	256^2	512^2			
XB=N	214.08	1149.44	7183.36	52101.1	387154	4701550			
XB=U	214.08	1149.44	7193.6	52162.6	397394	4702860			
XB=S	215.04	1163.52	7255.04	52162.6	391250	4722850			
XB=S	215.04	1163.52	7357.44	51998.7	390922	4730390			
vsip_chold_create.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
	0	0	0	0	0	0.99968	1.00096	0.9984	1.00045
vsip_chold_destroy.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
	0	0	0	0	0	0	0	0	0

vsip_chold.f:										
Type/(n*n)	16^2	32^2	64^2	128^2	256^2	512^2				
A=N	32.96	126.976	640	4771.84	28590.1	204145				
A=U	34.88	130.56	660.48	5283.84	30638.1	228393				
A=S	40	152.32	757.76	6983.68	35143.7	424018				
A=S	40	152.32	757.76	6901.76	35061.8	425329				
vsip_chold_getattr.f:										
Type/n	64	128	256	512	1024	2048	4096	8192	16384	
	0	0	0	0	0	0	0	0	0	
vsip_cholsol.f:										
Type/(n*p)	16^2	32^2	64^2	128^2	256^2	512^2				
XB=N	39.04	179.2	960	6860.8	53616.6	850493				
XB=U	40	193.28	1090.56	8263.68	66723.8	1019900				
XB=S	40.96	197.12	1090.56	7454.72	53166.1	637501				
XB=S	40.96	197.12	1090.56	7464.96	53166.1	700088				
vsip_cchold_create.f:										
Type/n	64	128	256	512	1024	2048	4096	8192	16384	
	0.99865	0.99865	1.00057	0.99865	0.99865	1.00019	0.99865	1.00172	1.00049	
vsip_cchold_destroy.f:										
Type/n	64	128	256	512	1024	2048	4096	8192	16384	
	0	0	0	0	0	0	0	0	0	
vsip_cchold.f:										
Type/(n*n)	16^2	32^2	64^2	128^2	256^2	512^2				
A=N	44	186.88	1269.76	11069.4	69058.6	447119				
A=U	44	186.24	1059.84	11130.9	68894.7	447611				
A=S	44	190.72	1098.24	11253.8	69427.2	448430				
A=S	44	190.72	1070.08	11202.6	68935.7	448430				
vsip_cchold_getattr.f:										
Type/n	64	128	256	512	1024	2048	4096	8192	16384	
	0	0	0	0	0	0	0	0	0	
vsip_ccholsol.f:										
Type/(n*p)	16^2	32^2	64^2	128^2	256^2	512^2				
XB=N	252.16	1292.8	7726.08	53350.4	412058	5311040				
XB=U	252.16	1294.08	7736.32	53493.8	451215	5393610				
XB=S	252.16	1308.16	7874.56	56852.5	441795	5446700				
XB=S	252.16	1308.16	7843.84	56504.3	458179	5369690				
vsip_qrd_create.f:										
Type/n	64	128	256	512	1024	2048	4096	8192	16384	
	2	2	2	3.0016	3.0016	1.9968	9.0112	9.0112	10.0045	
vsip_qrd_destroy.f:										
Type/n	64	128	256	512	1024	2048	4096	8192	16384	
	1	1	1	0.9984	0.9984	0.99968	9.0112	9.984	11.9808	
vsip_qrd.f:										
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2				
A=N	72	353.28	2178.56	20602.9	91340.8	1558280				
A=U	72	353.28	2178.56	20643.8	98345	1790940				
A=S	66.08	232.96	1182.72	8325.12	67338.2	524288				
A=S	64.96	232.96	1208.32	8232.96	67133.4	524124				
vsip_qrd_getattr.f:										
Type/n	64	128	256	512	1024	2048	4096	8192	16384	
	0	0	0	0	0	0	0	0	0	
vsip_qrsol.f:										
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3				
A=N XB=N	49.92	264.192	1422.13	10145	79586.9	1233130				
A=U XB=U	52.992	292.864	1626.93	12307.7	99195.3	1543500				
A=S XB=S	66.048	303.104	1671.17	11337.7	80216.1	1056960				
A=S XB=S	66.048	303.104	1671.17	11259.1	87241.5	1090520				
vsip_qrdprodq.f:										
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3				
A=N C=N	10.0096	95.0272	745.472	7549.75	68367.2	1962930				
A=U C=U	12.0064	104.038	832.307	8231.32	74973.2	1962930				
A=S C=S	18.9952	168.96	1287.78	11809.6	99090.4	2239760				

A=S C=S	18.9952	168.96	1287.78	11744.1	98146.7	2256540			
vsip_qrdsolr.f:									
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3			
A=N XB=N	20.992	134.963	717.619	4875.88	37119.6	522610			
A=U XB=U	32	142.95	814.285	5858.92	46242.2	651795			
A=S XB=S	37.12	166.093	845.414	5688.52	41628.5	619918			
A=S XB=S	37.12	166.093	845.414	5675.42	41838.2	609852			
vsip_cqrd_create.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
	2	2	2	3.0016	1.9968	8.9984	9.0112	9.984	20.992
vsip_cqrd_destroy.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
	1	1	1	0.9984	0.9984	6.0032	6.9888	9.0112	10.0045
vsip_cqrd.f:									
Type/(m*n)	16^2	32^2	64^2	128^2	256^2	512^2			
A=N	224	1063.68	6743.04	49705	309166	3355610			
A=U	224	1063.68	6743.04	49705	328745	3342170			
A=S	224	1068.8	6789.12	50339.8	299909	3335290			
A=S	224	1066.88	6771.2	50104.3	293806	3302690			
vsip_cqrd_getattr.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
	0	0	0	0	0	0	0	0	0
vsip_cqrsol.f:									
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3			
A=N XB=N	251.904	1294.34	7766.02	53215.2	415236	5603590			
A=U XB=U	251.904	1294.34	7733.25	54526	404750	5653920			
A=S XB=S	251.904	1310.72	7798.78	55050.2	408945	5586810			
A=S XB=S	251.904	1310.72	7798.78	55836.7	419430	5586810			
vsip_cqrdprodq.f:									
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3			
A=N C=N	117.248	847.872	6815.74	56885.2	664797	7868510			
A=U C=U	119.808	851.968	6815.74	57147.4	679477	7918850			
A=S C=S	123.904	888.832	7045.12	59768.8	719323	7902070			
A=S C=S	123.904	892.928	7045.12	59768.8	675283	7902070			
vsip_cqrdsolr.f:									
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3			
A=N XB=N	134.144	679.936	3997.7	27000.8	201117	2483030			
A=U XB=U	134.144	679.936	3997.7	27787.3	203424	2466250			
A=S XB=S	135.168	692.224	4030.46	28311.6	205940	2483030			
A=S XB=S	135.168	692.224	4030.46	29360.1	204472	2483030			
Special Solvers									
vsip_toepsol.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
T=N B=N W=N X=N	159	552.96	2072	8006.08	31370.2	126336	521475	2119910	8531920
T=U B=U W=U X=U	159	552.96	2072	8024	31459.2	126986	523067	2129120	8576900
T=S B=S W=S X=S	159	554	2612	8577.92	38819.8	163252	666647	2811240	12281400
T=S B=S W=S X=S	160	554	2611.04	8576.96	39056	163300	666609	2780860	12295400
vsip_llsqsol.f:									
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3			
A=N XB=N	237.056	1191.94	8486.91	58196	333447	5301600			
A=U XB=U	240.128	1216.51	8716.29	61603.8	371196	6157240			
A=S XB=S	211.968	868.352	7340.03	42467.3	295698	2650800			
A=S XB=S	215.04	860.16	7340.03	42467.3	295698	2650800			
vsip_ctoeepsol.f:									
Type/n	64	128	256	512	1024	2048	4096	8192	16384
T=N B=N W=N X=N	394	1440	5481.92	21427.2	87434.2	355843	1442440	5807680	23463600
T=U B=U W=U X=U	395.04	1440.96	5484.16	21429.1	87708.2	357174	1448300	5826520	23606000
T=S B=S W=S X=S	396	1444.96	5918.08	26503.7	111063	452692	1894860	8129910	34145000
T=S B=S W=S X=S	396.96	1444.96	5912	26497.3	111020	451991	1901010	8153430	34149300
vsip_ccovsol.f:									
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3			
A=N XB=N	266.24	1308.67	8241.15	59899.9	400556	4907340			

A=U XB=U	266.24	1308.67	8241.15	60162	492831	4949280
A=S XB=S	268.8	1316.86	8470.53	61079.6	447742	4957670
A=S XB=S	268.8	1316.86	8454.14	60948.5	461373	4949280
vsip_ellsqsol.f:						
Type/(m*n*p)	16^3	32^3	64^3	128^3	256^3	512^3
A=N XB=N	645.12	3420.16	25428	166986	1222640	12683600
A=U XB=U	645.12	3420.16	25460.7	167248	1459620	12717100
A=S XB=S	650.24	3440.64	25952.3	169345	1176500	12666800
A=S XB=S	650.24	3440.64	25985	168821	1233130	12767500