

SEMICONDUCTOR UNIVERSE PRICES

Closing Prices as of 12/31/19

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Avg price chng %:	1Q	2Q	3Q	4Q	Year
	20.8%	2.5%	7.7%	14.4%	50.8%
Positive:	53	28	37	45	50
Negative:	4	28	20	12	7
No chng:	0	1	0	0	0

Total Companies: 57

Average P/E: 62.32
Average P/S: 4.65
Average P/B: 5.05

Index	Close	Change	%	1Q	2Q	3Q	4Q	Year
SOX	1,849.62	5.23	0.3%	20.8%	4.5%	6.8%	18.7%	60.1%
SMH	141.41	0.18	0.1%	21.8%	3.6%	8.1%	18.7%	62.0%
NASDAQ	8,972.60	26.61	0.3%	16.5%	3.6%	-0.1%	12.2%	35.2%
SP500	3,230.78	9.49	0.3%	13.1%	3.8%	1.2%	8.5%	28.9%
DJIA	28,538.44	76.30	0.3%	11.2%	2.6%	1.2%	6.0%	22.3%

* = SOX

Ticker	Close	Chng	%	52-week Range	1Q	2Q	3Q	4Q	Year	Day	Volume			Diluted Shs (mil)	Cap (\$mil)	Trailing 12-Month		
											Average	%				P/E	P/S	P/B
ACIA	67.81	0.08	0.1%	36.05 - 67.99	50.9%	-17.8%	38.7%	3.7%	78.4%	291,834	382,387	-23.7%	42.7	2,893	37.7	6.5	5.2	
* ADI	118.84	-0.02	0.0%	80.46 - 124.78	22.6%	7.2%	-1.0%	6.4%	38.5%	963,456	2,192,447	-56.1%	372.6	44,280	23.1	7.4	3.8	
AMBA	60.56	0.01	0.0%	33.88 - 67.15	23.5%	2.2%	42.4%	-3.6%	73.1%	489,588	699,302	-30.0%	34.8	2,107	89.1	9.5	4.7	
* AMD	45.86	0.34	0.7%	16.94 - 47.31	38.2%	19.0%	-4.5%	58.2%	148.4%	31,636,408	51,187,734	-38.2%	1,212.0	55,582	114.7	9.2	25.5	
AQSL	13.62	0.09	0.7%	8.21 - 14.16	13.0%	-18.9%	31.5%	10.9%	33.7%	73,928	108,574	-31.9%	25.0	341	11.1	0.8	1.0	
* AVGO	316.02	2.56	0.8%	230.33 - 331.20	18.3%	-4.3%	-4.1%	14.5%	24.3%	1,248,420	2,131,347	-41.4%	444.0	140,313	14.8	6.2	5.6	
CEVA	26.96	-0.14	-0.5%	21.17 - 33.16	22.0%	-9.7%	22.6%	-9.7%	22.0%	74,693	103,373	-27.7%	22.9	617	52.9	7.7	2.5	
CRUS	82.41	-0.95	-1.1%	31.25 - 83.60	26.8%	3.9%	22.6%	53.8%	148.4%	636,331	720,834	-11.7%	60.2	4,961	25.9	4.2	4.2	
* CY	23.33	0.01	0.0%	12.11 - 23.55	17.3%	49.1%	4.9%	0.0%	83.4%	2,871,180	3,855,958	-25.5%	390.4	9,108	19.9	4.0	4.3	
DIOD	56.37	0.97	1.8%	29.88 - 56.90	7.6%	4.8%	42.6%	8.7%	74.7%	893,054	333,470	167.8%	51.9	2,924	19.3	2.3	2.8	
DSPG	15.74	0.08	0.5%	10.71 - 16.30	25.6%	2.1%	-1.9%	11.8%	40.5%	99,328	125,977	-21.2%	24.4	384	60.5	3.4	2.5	
GSIT	7.09	0.02	0.3%	5.13 - 9.00	51.2%	10.3%	2.2%	-19.1%	37.9%	36,730	28,592	28.5%	23.0	163	709.0	3.1	1.7	
HIMX	2.66	0.16	6.4%	1.70 - 4.22	-7.0%	9.1%	-34.8%	17.2%	-22.4%	1,441,476	867,762	66.1%	172.5	459	neg	0.7	1.1	
IDCC	54.49	-0.24	-0.4%	47.02 - 74.03	-0.7%	-2.4%	-18.5%	3.8%	-18.0%	173,324	283,733	-38.9%	31.3	1,706	201.8	5.8	2.2	
INFN	7.94	0.20	2.6%	2.80 - 8.08	8.8%	-32.9%	87.3%	45.7%	99.0%	4,039,930	2,319,498	74.2%	182.1	1,446	neg	1.1	3.4	
* INTC	59.85	0.23	0.4%	42.86 - 60.48	14.4%	-10.9%	7.6%	16.1%	27.5%	14,431,413	18,579,154	-22.3%	4,433.0	265,315	12.9	3.8	3.6	
IOTS	8.50	0.05	0.6%	4.28 - 11.97	37.5%	34.7%	5.0%	-0.7%	93.2%	517,272	416,667	24.1%	32.4	275	neg	2.3	4.3	
IPHI	74.02	-0.54	-0.7%	29.56 - 77.67	36.0%	14.5%	21.9%	21.2%	130.2%	292,722	802,196	-63.5%	48.2	3,569	46.8	10.2	10.3	
LSCC	19.14	0.06	0.3%	6.71 - 21.58	72.4%	22.3%	25.3%	4.7%	176.6%	1,182,348	1,258,862	-6.1%	138.9	2,659	37.5	6.6	8.6	
* MCHP	104.72	-0.27	-0.3%	66.16 - 106.16	15.4%	4.5%	7.2%	12.7%	45.6%	1,547,887	1,982,264	-21.9%	255.3	26,735	17.5	5.0	5.0	
* MLNX	117.18	-0.08	-0.1%	78.86 - 121.13	28.1%	-6.5%	-1.0%	6.9%	26.8%	316,864	406,847	-22.1%	56.7	6,649	18.8	5.4	4.3	
MOSY	1.77	0.04	2.6%	1.48 - 5.16	5.2%	0.0%	-27.7%	-30.2%	-46.9%	81,244	63,659	27.6%	2.2	4	neg	0.3	0.7	
* MPWR	178.02	-0.37	-0.2%	107.44 - 183.46	16.6%	0.2%	14.6%	14.4%	53.1%	272,013	372,266	-26.9%	45.8	8,159	46.5	13.3	11.1	
MRAM	5.26	-0.02	-0.4%	4.90 - 9.83	36.5%	-14.9%	-6.0%	-14.2%	-6.2%	184,345	66,903	175.5%	17.3	91	neg	2.3	5.0	
* MRVL	26.56	0.15	0.6%	15.70 - 28.38	22.9%	20.0%	4.6%	6.4%	64.1%	3,868,942	7,554,602	-48.8%	679.3	18,042	35.9	6.6	2.5	
MTSI	26.60	-0.14	-0.5%	12.33 - 27.84	15.2%	-9.5%	42.1%	23.7%	83.3%	276,931	483,230	-42.7%	66.7	1,774	neg	3.6	5.7	
* MU	53.78	0.57	1.1%	30.75 - 56.11	30.3%	-6.6%	11.0%	25.5%	69.5%	13,290,893	19,944,564	-33.4%	1,138.0	61,202	14.2	3.0	1.7	
MX	11.61	-0.01	-0.1%	5.75 - 13.80	19.2%	39.9%	-2.0%	14.5%	87.0%	124,449	327,407	-62.0%	45.5	528	129.0	0.7	neg	
* MXIM	61.51	-0.12	-0.2%	47.83 - 65.73	4.6%	12.5%	-3.2%	6.2%	21.0%	1,456,102	1,782,709	-18.3%	274.4	16,878	27.8	7.6	9.5	
MXL	21.22	-0.10	-0.5%	16.47 - 28.70	45.1%	-8.2%	-4.5%	-5.2%	20.6%	317,182	418,642	-24.2%	72.5	1,538	25.3	4.6	3.7	
NLST	0.30	0.00	-0.3%	0.25 - 0.67	37.5%	-35.3%	-15.1%	10.4%	-16.7%	1,705,992	1,209,590	41.0%	148.1	44	neg	1.7	neg	
NPPTN	8.82	0.06	0.7%	3.26 - 9.00	-2.9%	-33.5%	45.7%	44.8%	36.1%	547,906	764,365	-28.3%	50.1	441	neg	1.3	2.9	
* NVDA	235.30	2.98	1.3%	127.69 - 241.81	34.5%	-8.5%	6.0%	35.2%	76.3%	5,771,068	8,470,337	-31.9%	618.0	145,415	50.1	14.5	13.0	
* NXPI	127.26	-0.29	-0.2%	71.56 - 129.50	20.6%	10.4%	11.8%	16.6%	73.7%	957,832	2,932,689	-67.3%	283.5	36,078	91.6	4.0	3.8	
OIIM	1.76	0.07	4.1%	1.16 - 1.97	13.2%	-19.0%	-3.2%	31.3%	16.6%	39,491	57,615	-31.5%	26.4	46	neg	0.8	0.6	
* ON	24.38	0.09	0.4%	15.57 - 24.70	24.6%	-1.8%	-4.9%	26.9%	47.7%	2,449,934	4,880,482	-49.8%	412.3	10,052	14.3	1.8	3.1	
PI	25.86	-0.07	-0.3%	14.00 - 40.24	15.2%	70.8%	7.7%	-16.1%	77.7%	427,940	301,221	42.1%	22.9	591	neg	4.0	5.8	
POWI	98.91	0.01	0.0%	55.80 - 102.38	14.7%	14.6%	12.8%	9.4%	62.2%	134,855	168,244	-19.8%	29.9	2,954	43.2	7.4	5.2	
PXLW	3.92	0.45	13%	2.76 - 5.01	35.2%	-24.7%	25.4%	5.9%	35.2%	1,048,548	269,811	288.6%	38.1	149	neg	2.0	3.0	
* QCOM	88.23	-0.20	-0.2%	49.10 - 94.11	0.2%	33.4%	0.3%	15.7%	55.0%	5,172,264	8,460,577	-38.9%	1,211.0	106,847	24.9	5.5	21.8	
* QRVO	116.23	0.02	0.0%	54.73 - 118.49	18.1%	-7.1%	11.3%	56.8%	91.4%	745,726	1,590,337	-53.1%	119.4	13,878	19.5	4.5	3.3	
QUIK	6.00	0.38	6.8%	2.81 - 16.66	-16.8%	-5.7%	-38.9%	21.9%	-41.6%	125,059	45,549	174.6%	8.3	50	neg	4.7	3.1	
RMBS	13.78	0.07	0.5%	7.55 - 14.83	36.2%	15.2%	9.0%	5.0%	79.6%	629,368	571,075	10.2%	114.0	1,570	344.4	4.0	1.6	
* SIMO	50.71	0.68	1.4%	30.86 - 50.87	14.9%	12.0%	-20.3%	43.5%	47.0%	97,833	272,763	-64.1%	35.3	1,790	20.7	4.2	3.2	
* SLAB	115.98	-0.14	-0.1%	74.01 - 117.39	2.6%	27.9%	7.7%	4.2%	47.2%	155,985	254,607	-38.7%	44.6	5,176	35.3	6.2	4.8	
SMICY	7.58	0.12	1.6%	-	18.2%	6.9%	14.5%	22.4%	77.1%	-	35,755	-	1,156.8	8,769	50.5	2.9	1.6	
SMTC	52.90	0.36	0.7%	39.54 - 57.96	11.0%	-5.6%	1.2%	8.8%	15.3%	626,126	378,320	65.5%	67.3	3,561	31.5	6.3	5.2	
SQNS	3.00	0.01	0.3%	1.68 - 5.20	41.2%	-19.2%	-2.5%	-13.6%	-3.8%	112,102	75,380	48.7%	23.8	71	neg	2.5	neg	
STM	26.91	-0.02	-0.1%	12.00 - 27.79	7.0%	18.7%	9.8%	39.1%	93.9%	818,193	2,037,852	-59.9%	900.1	24,222	22.8	2.6	3.7	
* SWKS	120.88	-0.15	-0.1%	60.12 - 122.89	23.1%	-6.3%	2.6%	52.5%	80.4%	1,171,298	2,065,806	-43.3%	172.2	20,816	19.6	6.2	5.0	
TSEM	24.06	0.23	1.0%	13.57 - 25.15	12.3%	-4.8%	22.0%	25.1%	63.2%	244,501	425,055	-42.5%	107.6	2,589	20.1	2.1	2.0	
* TSM	58.10	0.25	0.4%	34.21 - 59.71	11.0%	-4.4%	18.7%	25.0%	57.4%	2,949,498	6,928,702	-57.4%	5,186.0	301,307	28.5	9.0	5.9	
* TXN	128.29	0.63	0.5%	88.68 - 132.20	12.2%	8.2%	12.6%	-0.7%	35.8%	2,812,863	4,567,562	-38.4%	950.0	121,876	23.8	8.3	13.6	
UMC	2.68	-0.01	-0.4%	1.69 - 2.81	5.0%	17.6%	-5.4%	28.2%	49.7%	284,642	609,786	-53.3%	2,341.6	6,275	46.3	1.4	1.0	
VSH	21.29	-0.13	-0.6%	14.36 - 22.94	2.6%	-10.6%	2.5%	25.8%	18.2%	939,136	921,026	2.0%	145.0	3,087	12.5	0.4	2.1	
* XLNX	97.77	0.09	0.1%	82.56 - 141.60	48.9%	-7.0%	-18.7%	1.9%	14.8%	1,672,322	3,205,309	-47.8%	255.3	24,961	25.9	7.5	9.3	
XPER	18.50	0.10	0.5%	17.71 - 25.84	27.2%	-12.0%	0.4%	-10.5%	0.6%	742,958	388,676	91.2%	52.2	966	24.7	2.3	1.7	