

SEMICONDUCTOR UNIVERSE PRICES

Closing Prices as of 12/31/18

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Avg price chng %:	1Q	2Q	3Q	4Q	Year
	-1.8%	4.1%	2.5%	2.5%	-18.1%
Positive:	29	35	22	22	12
Negative:	33	26	38	38	48
No chng:	0	0	0	0	0
Total Companies:	62	61	60	60	60

Index	Close	Change	%	1Q	2Q	3Q	4Q	Year
SOX	1,155.17	7.81	0.7%	6.1%	-1.1%	4.0%	-15.5%	-7.8%
SMH	87.28	0.43	0.5%	6.6%	-1.7%	3.9%	-18.0%	-10.8%
NASDAQ	6,635.28	50.76	0.8%	2.3%	6.3%	7.1%	-17.5%	-3.9%
SP500	2,506.85	21.11	0.8%	-1.2%	2.9%	7.2%	-14.0%	-6.2%
DJIA	23,327.46	265.06	1.1%	-2.5%	0.7%	9.0%	-11.8%	-5.6%

Average P/E: 21.77

Average P/S: 3.12

Average P/B: 3.40

* = SOX

Ticker	Close	Day		52-week Range	1Q	2Q	3Q	4Q	Year	Volume			Diluted Shs (mil)	Cap (\$mil)	Trailing 12-Month		
		Chng	%							Day	Average	%			P/E	P/S	P/B
ACIA	38.00	0.31	0.8%	24.72 - 47.26	6.2%	-9.5%	18.8%	-8.1%	4.9%	461,756	574,319	-19.6%	40.3	1,532	50.7	4.6	3.0
* ADI	85.83	0.37	0.4%	76.62 - 103.59	2.4%	5.3%	-3.6%	-7.2%	-3.6%	1,748,374	3,445,432	-49.3%	375.8	32,255	14.7	5.2	3.0
AMBA	34.98	-0.20	-0.6%	30.00 - 66.23	-16.6%	-21.2%	0.2%	-9.6%	-40.5%	412,552	712,753	-42.1%	34.2	1,195	22.1	4.3	2.8
* AMD	18.46	0.64	3.6%	9.04 - 34.14	-2.2%	49.2%	106.1%	-40.2%	79.6%	84,732,181	107,571,272	-21.2%	1,177.0	21,727	0.0	3.4	19.3
AOSL	10.19	-0.31	-3.0%	9.01 - 17.82	-5.6%	-7.8%	-18.3%	-12.4%	-37.7%	66,801	101,093	-33.9%	24.6	251	9.0	0.6	0.6
AQ	8.77	0.10	1.2%	7.08 - 18.49	38.6%	-26.2%	10.4%	-31.4%	-22.6%	210,205	227,060	-7.4%	34.4	302	neg	2.5	3.2
* AVGO	254.28	0.69	0.3%	197.46 - 274.26	-8.3%	3.0%	1.7%	3.1%	-1.0%	2,658,996	3,753,044	-29.2%	453.0	115,189	13.0	5.7	4.2
CEVA	22.09	-0.03	-0.1%	20.40 - 49.75	-21.6%	-16.6%	-4.8%	-23.2%	-52.1%	152,414	152,564	-0.1%	23.0	509	23.8	6.3	2.1
* CRUS	33.18	0.03	0.1%	31.47 - 55.13	-21.7%	-5.7%	0.7%	-14.0%	-36.0%	810,762	948,049	-14.5%	63.2	2,097	8.9	1.4	1.9
* CY	12.72	0.07	0.6%	11.75 - 18.87	11.3%	-8.1%	-7.0%	-12.2%	-16.5%	2,817,362	5,294,512	-46.8%	374.3	4,761	9.9	1.9	2.5
DIOD	32.26	0.19	0.6%	26.09 - 39.31	6.2%	13.2%	-3.4%	-3.1%	12.5%	166,928	347,242	-51.9%	50.8	1,638	17.6	1.4	1.9
DSPG	11.20	0.27	2.5%	10.15 - 13.45	-5.6%	5.5%	-4.4%	-5.9%	-10.4%	126,370	93,368	35.3%	24.1	270	46.7	2.2	1.9
GSIT	5.14	0.12	2.4%	4.62 - 8.94	-6.9%	1.5%	-8.2%	-25.5%	-35.4%	37,414	33,447	11.9%	21.8	112	neg	2.4	1.3
HIMX	3.43	-0.04	-1.2%	3.03 - 10.98	-40.9%	21.1%	-21.2%	-41.7%	-67.1%	2,060,361	2,845,547	-27.6%	172.5	592	18.2	0.8	1.3
* IDCC	66.43	0.27	0.4%	62.34 - 85.85	-3.3%	9.9%	-1.1%	-17.0%	-12.8%	390,154	279,325	39.7%	35.6	2,367	18.4	5.1	2.3
* IDTI	48.43	0.10	0.2%	26.96 - 49.25	2.8%	4.3%	47.5%	3.0%	62.9%	1,713,681	2,432,830	-29.6%	135.2	6,548	29.0	7.5	10.4
INFN	3.99	0.07	1.8%	3.54 - 12.39	71.6%	-8.6%	-26.5%	-45.3%	-37.0%	2,454,098	3,475,584	-29.4%	152.3	608	neg	0.8	1.0
* INTC	46.93	0.18	0.4%	42.04 - 57.60	12.8%	-4.6%	-4.9%	-0.8%	1.7%	20,490,405	30,163,317	-32.1%	4,648.0	218,131	10.7	3.2	3.1
IOTS	4.40	0.10	2.3%	3.51 - 10.80	14.7%	13.5%	-29.2%	-26.1%	-31.8%	230,063	271,763	-15.3%	21.5	95	neg	1.5	2.9
IPHI	32.15	0.04	0.1%	23.65 - 42.34	-17.8%	8.3%	16.5%	-15.4%	-12.2%	439,281	637,254	-31.1%	44.9	1,443	38.7	4.8	3.8
LSCC	6.92	0.11	1.6%	5.05 - 8.90	-3.6%	17.8%	22.0%	-13.5%	19.7%	1,041,927	1,251,361	-16.7%	129.5	896	25.6	2.3	3.4
* MCHP	71.92	0.28	0.4%	60.70 - 104.20	4.0%	-0.4%	-13.2%	-8.9%	-18.2%	1,574,132	4,082,321	-61.4%	252.2	18,138	12.4	4.3	3.5
MLNX	92.38	0.48	0.5%	58.40 - 99.14	12.6%	15.7%	-12.9%	25.8%	42.8%	290,052	717,630	-62.4%	54.6	5,045	21.1	4.9	4.1
MOSY	0.17	0.00	2.7%	0.12 - 2.23	7.2%	47.1%	-60.6%	-75.9%	-85.0%	733,993	4,178,404	-82.4%	8.4	1	neg	0.1	0.2
* MPWR	116.25	1.25	1.1%	101.99 - 152.21	3.0%	15.5%	-6.1%	-7.4%	3.5%	255,997	463,096	-44.7%	44.7	5,193	32.6	9.3	8.5
MRAM	5.61	0.02	0.4%	5.30 - 11.48	0.7%	18.1%	-13.9%	-27.0%	-25.2%	126,314	63,139	100.1%	16.9	95	neg	2.1	3.0
* MRVL	16.19	0.54	3.5%	14.34 - 25.18	-2.2%	2.1%	-10.0%	-16.1%	-24.6%	12,796,012	11,616,021	10.2%	575.3	9,314	12.8	3.7	1.2
MTSI	14.51	-0.49	-3.3%	13.07 - 38.36	-49.0%	38.8%	-10.6%	-29.6%	-55.4%	540,867	836,893	-35.4%	65.6	952	17.7	1.6	1.4
* MU	31.73	0.16	0.5%	28.39 - 64.66	26.8%	0.6%	-13.7%	-29.8%	-22.8%	21,392,110	33,671,262	-36.5%	1,179.0	37,410	2.5	1.2	1.1
MX	6.21	-0.22	-3.4%	5.94 - 13.35	-3.5%	6.8%	-3.4%	-37.3%	-37.6%	268,315	239,156	12.2%	45.7	284	8.0	0.4	neg
* MXIM	50.85	0.72	1.4%	46.64 - 74.94	15.2%	-2.6%	-3.9%	-9.8%	-2.7%	2,021,912	4,261,751	-52.6%	283.9	14,436	18.8	5.8	7.5
MXL	17.60	-0.03	-0.2%	14.87 - 28.06	-13.9%	-31.5%	27.5%	-11.5%	-33.4%	341,941	652,938	-47.6%	70.5	1,241	11.9	2.8	3.1
NLST	0.36	-0.02	-5.3%	0.10 - 1.10	-24.9%	-23.6%	148.2%	-17.8%	17.1%	533,085	1,255,060	-57.5%	91.7	33	neg	0.9	neg
NPTN	6.48	0.07	1.1%	4.95 - 9.48	4.1%	-9.1%	33.2%	-21.9%	-1.5%	338,782	717,804	-52.8%	44.7	289	neg	1.0	1.7
* NVDA	133.50	-0.15	-0.1%	124.46 - 292.76	19.7%	2.3%	18.6%	-52.5%	-31.0%	11,628,503	16,504,525	-29.5%	626.0	83,571	19.0	7.0	9.5
NXPI	73.28	1.15	1.6%	67.62 - 125.93	-0.1%	-6.6%	-21.8%	-14.3%	-37.4%	3,739,129	5,152,485	-27.4%	347.0	25,428	26.1	2.7	1.9
OIIM	1.51	0.07	4.9%	1.30 - 2.40	-18.5%	35.3%	25.0%	-34.3%	-9.5%	43,626	42,751	2.0%	26.5	40	0.0	0.7	0.5
* ON	16.51	0.18	1.1%	14.55 - 27.10	16.8%	-9.1%	-17.1%	-10.4%	-21.2%	2,985,432	7,090,535	-57.9%	444.3	7,335	9.8	1.3	2.4
PI	14.55	0.02	0.1%	9.95 - 28.48	-42.2%	69.8%	12.3%	-41.4%	-35.4%	185,316	278,613	-33.5%	21.3	310	neg	2.7	3.0
POWI	60.98	0.53	0.9%	47.35 - 80.50	-7.1%	6.9%	-13.5%	-3.5%	-17.1%	145,045	234,353	-38.1%	30.0	1,829	20.9	4.2	3.4
PXLW	2.90	-0.06	-2.0%	2.60 - 7.05	-38.9%	-6.7%	24.9%	-35.7%	-54.2%	275,523	256,015	7.6%	35.7	104	145.0	1.4	2.5
* QCOM	56.91	0.10	0.2%	48.56 - 76.50	-13.4%	1.3%	28.3%	-21.0%	-11.1%	8,877,184	16,601,630	-46.5%	1,487.0	84,625	15.3	3.7	3.7
* QRVQ	60.73	-0.06	-0.1%	56.33 - 86.84	5.8%	13.8%	-4.1%	-21.0%	-8.8%	809,082	1,455,262	-44.4%	129.5	7,865	11.6	2.6	1.7
QTNA	14.35	0.21	1.5%	12.00 - 19.41	12.3%	13.4%	18.7%	-22.2%	17.6%	379,362	318,754	19.0%	39.4	565	47.8	3.0	3.0
QUIK	0.73	-0.03	-3.5%	0.56 - 2.22	-12.6%	-24.3%	-13.0%	-26.6%	-57.8%	561,717	204,699	174.4%	85.8	63	neg	5.3	2.8
RMBS	7.67	-0.04	-0.5%	7.17 - 14.63	-5.6%	-6.6%	-13.0%	-29.7%	-46.1%	1,418,384	767,909	84.7%	107.7	826	9.6	2.1	0.7
* SIMO	34.50	-0.26	-0.7%	31.73 - 61.85	-9.1%	9.9%	1.5%	-35.8%	-34.9%	219,903	463,725	-52.6%	36.2	1,249	11.5	2.3	2.3
SLAB	78.81	0.31	0.4%	73.13 - 110.70	1.8%	10.8%	-7.8%	-14.2%	-10.7%	192,192	296,259	-35.1%	44.2	3,483	21.1	4.1	3.3
SMI	4.28	-0.06	-1.4%	3.74 - 8.33	-22.9%	-1.5%	-16.5%	-21.2%	-50.0%	96,024	245,762	-60.9%	1,068.1	4,571	26.8	1.4	0.9
SMTC	45.87	0.65	1.4%	31.30 - 60.55	14.2%	20.5%	18.2%	-17.5%	34.1%	382,908	498,758	-23.2%	68.9	3,160	26.7	5.4	4.5
SQNS	0.78	-0.02	-2.5%	0.75 - 2.61	-12.0%	21.4%	-30.4%	-45.1%	-59.2%	182,302	183,103	-0.4%	94.5	74	neg	1.6	8.1
STM	13.88	0.02	0.1%	12.85 - 26.43	2.1%	-0.8%	-17.1%	-24.3%	-36.4%	2,212,085	4,111,470	-46.2%	908.0	12,603	10.4	1.3	2.1
* SWKS	67.02	-0.20	-0.3%	62.71 - 115.98	5.6%	-3.6%	-6.1%	-26.1%	-29.4%	1,311,221	2,281,125	-42.5%	182.8	12,251	9.4	3.2	3.0
TSEM	14.74	-0.24	-1.6%	13.56 - 36.08	-21.0%	-18.2%	-1.1%	-32.3%	-56.7%	403,258	731,927	-44.9%	107.9	1,590	7.8	1.2	1.4
* TSM	36.91	-0.23	-0.6%	35.22 - 46.57													