

## OVTI F3Q Exceeds on China and Tablet Strength Benefiting From a Smartphone Shift to Asia. Raising Estimates, Reiterate Buy.

Diluted Shares(mil):	58.9	Closing Price 2/27/14	FTE April	FY14	FY15	FY16
Market Cap(\$mil):	\$955	\$16.20	Revenue(\$mil)	\$1,418.0	\$1,429.8	\$1,577.5
Avg Volume(,000):	1,260		EPS <i>pf</i>	\$2.11	\$1.91	\$2.31
Net Cash/Share:	\$6.35	Recommendation/Target	Price/Sales	0.7	0.7	0.6
Tangible Book/Share:	\$15.72	Buy/\$30 from \$27.50	Price/EPS	7.7	8.5	7.0

OmniVision is a fabless semiconductor company that is a leading supplier of CMOS image sensors.

**Summary:** January-ended F3Q revenue declined by -11% sequentially on North American first-tier smartphone customer weakness, although exceeded expectations due to strength from tablets and Chinese smartphones. Excluding an investment gain, adjusted pro forma EPS of \$0.41 exceeded the high-end of the range of estimates due to the revenue upside. Revenue guidance for a seasonal decline of -22% to -13% is aggravated by continuing North American weakness, but also bettered expectations. Nevertheless, OVTI is well positioned to benefit with its highly competitive and cost-effective offerings to Chinese customers supplying emerging markets as smartphone growth matures in the US, Europe and Japan. I am raising my estimates and my 12-month target price back up to \$30 from to \$27.50 based on 1.2-times sales, and reiterate my Buy recommendation on the shares.

**F3Q Review:** Revenue declined by -11% sequentially to \$352M, but exceeded the high-end of guidance and expectations. Pro forma gross margin improved by 80 basis points to 19.9% due to on-going manufacturing cost savings. Gross margin was negatively impacted by -160 basis points due to obsolete inventory write-offs, down from -190 basis points the prior quarter. Pro forma EPS of \$0.69 included an investment gain of \$0.28. Adjusting for this one-time benefit, EPS of \$0.41 exceeded my estimate by a nickel and the high-end of the range by two cents. Cash increased by \$127M to \$393M and inventory dropped by \$48M to \$342M.

FYE April <i>pro forma, millions</i>	F3Q			Guidance	Consensus	Range
	Estimate	Actual	EPS Impact			
Revenue	\$325.0	\$352.0	\$0.08	\$310-340	\$327.0	324.1-335
Revenue Growth	-18.2%	-11.4%		-22-14.4%	-17.7%	-18.4-15.7%
Gross Margin	20.2%	19.9%	(\$0.01)			
Op Expense	\$43.7	\$43.3				
Interest/Other Inc	\$1.5	\$24.4	\$0.35			
Taxes	10.0%	21.0%	(\$0.09)	10%		
Shares	58.86	58.94				
Diluted EPS	\$0.36	\$0.69/\$0.41	\$0.33/\$0.05	\$0.28-\$0.44	\$0.35	\$0.29-\$0.39

Unit shipments fell by -9.7% to 214M from 237M the prior quarter on smartphone weakness, ASPs declined by -1.8% to \$1.64 from \$1.67 due to competitive price erosion across all markets, and OEM sales dropped to 80.3% from 84.1% of sales also due to that smartphone OEM. 2Mp+ sensors accounted for 44% of units up from 36% on 5Mp strength to smartphones and tablets; 1.3Mp decreased to 44% from 50% on North American smartphone weakness; and VGA fell to 12% from 14%. Mobile phones accounted for 52% of sales down from 60%, entertainment grew to 31% from 25% on continuing strength from tablets (5Mp/1.3Mp), and notebook PCs/webcams grew to 7% from 5% on a slight recovery from depressed levels (mostly 1.3Mp). Automotive and security remain healthy and grew by +10%, with Chinese security camera customers ramping 1.3Mp devices.

**Growth Opportunities:** OmniVision is well positioned in Asian markets to support Chinese handset OEMs serving mainstream and performance segments in China associated with the roll out of 4G LTE, as well as emerging markets migrating to 3G smartphones from feature phones in Asia, Africa and Latin America. It has already experienced growth of 5Mp, 4Mp and 2Mp devices to Chinese and Taiwanese customers, as well as steady shipments of 8Mp sensors. The company's new PureCel technology offers better performance including lower power, as well as lower cost: the 1/4-inch 5Mp has been launched, 8MP and 13Mp have been introduced and will ramp this quarter, and a 2Mp is forthcoming. Wafer-level technology is well suited for low-cost smartphones, and its infra-red technology offering depth of field is being used for machine vision applications including eye tracking, gesture recognition and virtually reality in automotive, consumer and mobile markets—including wearables such as glasses and watches. Its product diversification into liquid crystal on silicon (LCOS) displays was recently embraced by Google for its Tango project, among others. Management remains very bullish for the company's prospects in automotive, security and medical applications.

**WLCSP Investment Gain:** The one-time \$0.28 per share gain resulted from an investment that OmniVision had previously made in a Chinese company, WLCSP, that went public. However, cash from a partial sale as part of that offering totaling \$15.1M does not yet appear on the balance sheet because the offering occurred late in the fiscal period. OmniVision sold 5.1M shares of WLCSP for \$15.9M as part of the offering for an accounting gain of \$9.7M. It still holds 30.3M shares or 13.3% of WLCSP, and the step-up in book value on the balance sheet from its original investment totaled \$14.1M. The \$9.7M gain on the sale, plus the \$14.1M book value increase accounts for the \$23.8M gain on the income statement. Subtract \$7.9M in taxes and you get the net \$15.9M, or \$0.28 per share. The book value for OmniVision's remaining holding is \$34.1M on the balance sheet, although this stake was worth \$195M based on the prior day's closing price of WLCSP.

**Raising Estimates:** Management guidance for F4Q includes: sales of \$275-305M; flat op ex; tax at \$2M; GAAP EPS of \$0.05-\$0.21; and pro forma EPS of \$0.19-\$0.35. A \$25.3M patent licensing deal with Cal Tech will be amortized over nine years as a \$600K quarterly charge to COGS, applying pressure to gross margin amid on-going cost reduction efforts. My F3Q estimate is slightly above the mid-point of guidance, and higher revenue and lower operating expenses trickle through my model. I am also introducing an FY16 estimate with this report.

FYE April pro forma, millions	F4Q		FY14		FY15		FY16
	Previous	Update	Previous	Update	Previous	Update	New
Revenue	\$279.5	\$295.0	\$1,375.4	\$1,418.0	\$1,372.2	\$1,429.8	\$1,577.5
Revenue Growth	-14.0%	-16.2%	-2.3%	0.7%	-0.2%	0.8%	10.3%
Gross Margin	20.0%	20.5%	19.2%	19.2%	21.8%	21.4%	22.0%
Op Expense	\$45.3	\$43.3	\$172.1	\$169.8	\$191.3	\$183.1	\$194.8
Interest/Other Inc	\$1.5	\$1.5	\$5.5	\$28.4	\$6.0	\$6.0	\$6.0
Taxes	10.0%	10.7%	-1.8%	5.7%	11.0%	11.0%	11.0%
Shares	59.14	59.19	58.54	58.57	59.85	59.90	61.00
Diluted EPS	\$0.18	\$0.28	\$1.69	\$2.11	\$1.69	\$1.91	\$2.31

**Even More Attractive Valuation:** Valuation tables for OVTI are shown on Page 7 of this report. The bottom table, Historical Valuation, captures the weekly averages since its IPO of trailing 12-month price-earnings, price-sales, and price-book ratios. Unfortunately, these historical averages are unrealistically high given the nature of equity markets at this time. The top table, Relative Valuation, measures OVTI against a set of peers in the current equity market environment and is considerably more relevant, in my opinion.

My first preference would be to choose a set of fables, ASSP (application-specific standard product) semiconductor companies with comparable sales, margin, market cap, and historical average price-sales ratios that would look very much like the peer group I chose for SIMG that includes AMCC, ENTR, OVTI, POWI and SIMO. This would support an argument to value OVTI at 2-times sales and price target of \$45. Unfortunately, I don't think most investors would buy such an argument primarily due to the depressed gross margin level at OVTI, but also due to the extreme magnitude of potential share price upside. Nevertheless, I reserve the right to introduce such a methodology in the future when OVTI's gross margin—and, quite possibly its share price—recover to higher levels.

Instead, I compiled a set of comparable peers whose current numerical magnitudes of sales, gross margin, market cap, and historical average price-sales ratios are more closely aligned. This was not a trivial exercise, and I could not come up with any peers that satisfied more than three out of those four criteria. The set of peers I generated as noted on Page 7 includes CODE, CY, DIOD, IRF, MX, RFMD and TQNT. I can justify this group on a quantitative basis at a very robust level. However, qualitatively I doubt I could dream up a more eclectic and motley crew in terms of product offerings, business models, corporate strategies, and corporate and product evolutionary lifecycles.

OVTI remains inexpensive any way that I look at it: price-sales, price-earnings, and even price-book where it is currently trading at 1.0-times book value. It is trading as the lowest or second lowest price-earnings ratios of its peers across all four years identified in the table, and has the lowest price-sales ratio of all its peers in terms of trailing, current and future years. My 12-month target price of \$30, back up from \$27.50, is based on 1.2-times FY14 sales which is now a bit below the average of its peers. Upside potential continues to significantly exceed downside risk at current price levels, in my opinion, and I continue to recommend OVTI as a Buy.

pro forma EPS	F4Q	FY14	FY15	Revenue (12 est)	F4Q	FY14	FY15
Tokeneke-revised	\$0.28	\$2.11	\$1.91	Tokeneke-revised	\$295.0	\$1,418.0	\$1,429.8
Tokeneke-previous	\$0.18	\$1.69	\$1.69	Tokeneke-previous	\$279.5	\$1,375.4	\$1,372.2
Consensus-previous	\$0.22	\$1.72	\$1.43	Consensus-previous	\$284.3	\$1,390.0	\$1,370.0
Highest Est-previous	\$0.33	\$1.87	\$2.00	Highest Est-previous	\$325.0	\$1,520.0	\$1,590.0
Lowest Est-previous	\$0.13	\$1.60	\$0.70	Lowest Est-previous	\$261.0	\$1,360.0	\$1,150.0

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**Income Statement**

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dollars in thousands, except per share data  
fiscal year ends April

	FY2014 est								FY2015					FY2016				
	FY2011	FY2012	FY2013	Q1A	Q2A	Q3A	Q4	FY2014	Q1	Q2	Q3	Q4	FY2015	Q1	Q2	Q3	Q4	FY2016
Revenue	956,476	897,730	1,407,929	373,688	397,249	352,023	295,000	1,417,960	295,000	362,850	417,278	354,686	1,429,813	354,686	407,889	440,520	374,442	1,577,536
COGS	676,494	646,782	1,159,993	307,555	321,398	281,892	234,525	1,145,370	233,640	285,926	327,563	277,364	1,124,493	276,655	318,153	343,605	292,065	1,230,478
Gross Profit	279,982	250,948	247,936	66,133	75,851	70,131	60,475	272,590	61,360	76,924	89,715	77,322	305,320	78,031	89,736	96,914	82,377	347,058
R&D	78,964	97,368	97,001	23,908	25,187	26,660	26,660	102,415	27,593	28,559	28,559	28,559	113,270	29,558	30,593	30,593	30,593	121,337
SG&A	54,491	52,858	59,462	14,470	14,904	14,360	14,360	58,094	14,791	15,235	15,235	15,235	60,494	15,692	16,162	16,162	16,162	64,178
Stk Crg/Write-off	774	9,286	9,286	2,321	2,322	2,321	2,321	9,285	2,321	2,321	2,321	2,321	9,284	2,321	2,321	2,321	2,321	9,284
Operating Expenses	134,229	159,512	165,749	40,699	42,413	43,341	43,341	169,794	44,705	46,114	46,114	46,114	183,048	47,571	49,076	49,076	49,076	194,800
Operating Income	145,753	91,436	82,187	25,434	33,438	26,790	17,134	102,796	16,655	30,810	43,600	31,207	122,272	30,460	40,659	47,838	33,301	152,258
Interest/Other	2,768	(1,107)	348	(608)	3,127	24,409	1,500	28,428	1,500	1,500	1,500	1,500	6,000	1,500	1,500	1,500	1,500	6,000
Pre-tax Income	148,521	90,329	82,535	24,826	36,565	51,199	18,634	131,224	18,155	32,310	45,100	32,707	128,272	31,960	42,159	49,338	34,801	158,258
Taxes	151	4,464	4,645	(6,901)	1,630	10,774	2,000	7,503	1,997	3,554	4,961	3,598	14,110	3,516	4,638	5,427	3,828	17,408
Minority Interest	32	9,643	1,140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Income	148,402	95,508	79,030	31,727	34,935	40,425	16,634	123,721	16,158	28,756	40,139	29,109	114,162	28,444	37,522	43,911	30,973	140,850
EPS-basic	\$2.68	\$1.69	\$1.48	\$0.58	\$0.63	\$0.72	\$0.30	\$2.23	\$0.29	\$0.51	\$0.70	\$0.51	\$2.01	\$0.49	\$0.65	\$0.75	\$0.53	\$2.43
Shares-basic	55,324	56,667	53,529	54,611	55,584	55,913	56,193	55,575	56,474	56,756	57,040	57,325	56,898	57,611	57,900	58,189	58,480	58,045
EPS-diluted	\$2.49	\$1.60	\$1.41	\$0.55	\$0.60	\$0.69	\$0.28	\$2.11	\$0.27	\$0.48	\$0.67	\$0.48	\$1.91	\$0.47	\$0.62	\$0.72	\$0.50	\$2.31
Shares-diluted	59,664	59,510	56,094	57,509	58,649	58,936	59,193	58,572	59,474	59,756	60,040	60,325	59,898	60,611	60,900	61,189	61,480	61,045
GAAP EPS	\$2.11	\$1.13	\$0.71	\$0.42	\$0.47	\$0.54	\$0.12	\$1.54	\$0.12	\$0.31	\$0.48	\$0.31	\$1.21	\$0.29	\$0.42	\$0.52	\$0.32	\$1.56
<b>Margin Analysis</b>																		
Gross Margin	29.3%	28.0%	17.6%	17.7%	19.1%	19.9%	20.5%	19.2%	20.8%	21.2%	21.5%	21.8%	21.4%	22.0%	22.0%	22.0%	22.0%	22.0%
R&D	8.3%	10.8%	6.9%	6.4%	6.3%	7.6%	9.0%	7.2%	9.4%	7.9%	6.8%	8.1%	7.9%	8.3%	7.5%	6.9%	8.2%	7.7%
SG&A	5.7%	5.9%	4.2%	3.9%	3.8%	4.1%	4.9%	4.1%	5.0%	4.2%	3.7%	4.3%	4.2%	4.4%	4.0%	3.7%	4.3%	4.1%
Stk Chrg/Write-off	0.1%	1.0%	0.7%	0.6%	0.6%	0.7%	0.8%	0.7%	0.8%	0.6%	0.6%	0.7%	0.6%	0.7%	0.6%	0.5%	0.6%	0.6%
Operating Income	15.2%	10.2%	5.8%	6.8%	8.4%	7.6%	5.8%	7.2%	5.6%	8.5%	10.4%	8.8%	8.6%	8.6%	10.0%	10.9%	8.9%	9.7%
Pre-tax Income	15.5%	10.1%	5.9%	6.6%	9.2%	14.5%	6.3%	9.3%	6.2%	8.9%	10.8%	9.2%	9.0%	9.0%	10.3%	11.2%	9.3%	10.0%
Tax Rate	0.1%	4.9%	5.6%	-27.8%	4.5%	21.0%	10.7%	5.7%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%
Net Income	15.5%	10.6%	5.6%	8.5%	8.8%	11.5%	5.6%	8.7%	5.5%	7.9%	9.6%	8.2%	8.0%	8.0%	9.2%	10.0%	8.3%	8.9%
<b>Qtr-to-Qtr Growth</b>																		
Revenue				11.1%	6.3%	-11.4%	-16.2%		0.0%	23.0%	15.0%	-15.0%		0.0%	15.0%	8.0%	-15.0%	
Operating Expenses				2.0%	4.2%	2.2%	0.0%		3.1%	3.2%	0.0%	0.0%		3.2%	3.2%	0.0%	0.0%	
Operating Income				29.2%	31.5%	-19.9%	-36.0%		-2.8%	85.0%	41.5%	-28.4%		-2.4%	33.5%	17.7%	-30.4%	
Pre-tax Income				25.3%	47.3%	40.0%	-63.6%		-2.6%	78.0%	39.6%	-27.5%		-2.3%	31.9%	17.0%	-29.5%	
Net Income				81.7%	10.1%	15.7%	-58.9%		-2.9%	78.0%	39.6%	-27.5%		-2.3%	31.9%	17.0%	-29.5%	
EPS				78.6%	8.0%	15.2%	-59.0%		-3.3%	77.1%	38.9%	-27.8%		-2.7%	31.3%	16.5%	-29.8%	
<b>Year-to-Year Growth</b>																		
Revenue	58.6%	-6.1%	56.8%	44.8%	1.8%	-16.9%	-12.3%	0.7%	-21.1%	-8.7%	18.5%	20.2%	0.8%	20.2%	12.4%	5.6%	5.6%	10.3%
Operating Expenses	13.7%	18.8%	3.9%	-1.8%	-2.2%	5.6%	8.6%	2.4%	9.8%	8.7%	6.4%	6.4%	7.8%	6.4%	6.4%	6.4%	6.4%	6.4%
Operating Income	387%	-37.3%	-10.1%	188%	49.9%	-14.6%	-13.0%	25.1%	-34.5%	-7.9%	62.7%	82.1%	18.9%	82.9%	32.0%	9.7%	6.7%	24.5%
Pre-tax Income	340%	-39.2%	-8.6%	203%	59.0%	62.3%	-5.9%	59.0%	-26.9%	-11.6%	-11.9%	75.5%	-2.2%	76.0%	30.5%	9.4%	6.4%	23.4%
Net Income	374%	-35.6%	-17.3%	174%	88.3%	28.5%	-4.7%	56.5%	-49.1%	-17.7%	-0.7%	75.0%	-7.7%	76.0%	30.5%	9.4%	6.4%	23.4%
EPS	320%	-35.5%	-12.2%	163%	80.5%	23.1%	-9.0%	49.9%	-50.8%	-19.2%	-2.5%	71.7%	-9.8%	72.7%	28.0%	7.3%	4.4%	21.1%

## OmniVision Technologies

## Financial Summary

(dollars in thousands)

Fiscal year ends April

	FY10	FY11	FY12	FY13	3QF13	4QF13	1QF14	2QF14	3QF14
<b>Assets</b>									
Cash and equivalents	234,023	379,379	290,492	190,171	194,841	190,171	196,748	207,171	308,927
Short-term investments	99,555	87,505	40,515	22,164	25,460	22,164	43,773	58,427	84,113
Net accounts receivable	<u>74,261</u>	<u>142,606</u>	<u>107,793</u>	<u>166,517</u>	<u>171,926</u>	<u>166,517</u>	<u>174,529</u>	<u>170,871</u>	<u>134,706</u>
<b>Quick Assets</b>	407,839	609,490	438,800	378,852	392,227	378,852	415,050	436,469	527,746
Inventories	133,993	106,873	291,340	430,315	373,335	430,315	426,556	390,275	342,153
Other	<u>11,370</u>	<u>14,608</u>	<u>12,625</u>	<u>16,010</u>	<u>11,759</u>	<u>16,010</u>	<u>9,874</u>	<u>10,728</u>	<u>25,790</u>
<b>Current Assets</b>	553,202	730,971	742,765	825,177	777,321	825,177	851,480	837,472	895,689
Property, plant and eqt, net	121,547	115,446	144,792	160,630	162,182	160,630	160,310	157,400	156,208
Long-term investments	92,121	104,616	128,940	139,746	132,866	139,746	145,066	145,643	154,044
Goodwill and intangibles	5,330	71,014	79,255	67,031	70,264	67,031	63,860	60,956	79,957
Other assets	<u>25,493</u>	<u>12,111</u>	<u>7,205</u>	<u>34,430</u>	<u>21,901</u>	<u>34,430</u>	<u>37,397</u>	<u>37,413</u>	<u>32,964</u>
<b>Total Assets</b>	797,693	1,034,158	1,102,957	1,227,014	1,164,534	1,227,014	1,258,113	1,238,884	1,318,862
<b>Liabilities and Shareholders Equity</b>									
Current portion of long-term debt	4,286	4,323	3,146	3,769	3,739	3,769	3,791	3,809	3,830
Accounts payable	85,487	102,519	159,860	188,261	152,347	188,261	180,858	127,019	149,016
Deferred revenue	10,661	16,594	10,115	15,493	16,199	15,493	24,399	24,791	20,252
Other liabilities	<u>19,506</u>	<u>25,483</u>	<u>36,403</u>	<u>43,178</u>	<u>35,660</u>	<u>43,178</u>	<u>43,662</u>	<u>42,271</u>	<u>59,879</u>
<b>Current Liabilities</b>	119,940	148,919	209,524	250,701	207,945	250,701	252,710	197,890	232,977
Long-term debt	45,428	41,916	39,337	35,709	35,735	35,709	35,652	35,586	32,246
Deferred tax liability/other	<u>95,353</u>	<u>91,998</u>	<u>93,217</u>	<u>95,395</u>	<u>90,529</u>	<u>95,395</u>	<u>86,558</u>	<u>87,457</u>	<u>90,364</u>
<b>Total Liabilities</b>	260,721	282,833	342,078	381,805	334,209	381,805	374,920	320,933	355,587
Minority interest	3,390	0	0	0	0	0	0	0	0
Common stock	441,142	533,847	578,978	620,406	614,444	620,406	630,894	640,508	655,979
Retained earnings	270,253	394,735	460,584	503,486	494,564	503,486	526,547	552,850	583,410
Other/Treasury Stock	<u>(177,813)</u>	<u>(177,257)</u>	<u>(278,683)</u>	<u>(278,683)</u>	<u>(278,683)</u>	<u>(278,683)</u>	<u>(274,248)</u>	<u>(275,407)</u>	<u>(276,114)</u>
<b>Total Shareholders Equity</b>	<u>533,582</u>	<u>751,325</u>	<u>760,879</u>	<u>845,209</u>	<u>830,325</u>	<u>845,209</u>	<u>883,193</u>	<u>917,951</u>	<u>963,275</u>
<b>Total Liabilities and Equity</b>	797,693	1,034,158	1,102,957	1,227,014	1,164,534	1,227,014	1,258,113	1,238,884	1,318,862
<b>Sales and Income</b>									
Revenue	602,991	956,476	897,736	1,407,929	423,513	336,215	373,688	397,249	352,023
COGS	457,646	678,459	649,719	1,163,815	352,027	277,486	308,527	322,383	282,891
Net income	6,724	124,482	65,849	42,902	21,308	8,922	23,061	26,303	30,560
<b>Other</b>									
Capital Expenditures	13,516	10,313	24,186	35,323	10,197	5,415	7,100	2,401	
Depreciation and Amortization	6,403	20,564	29,771	32,524	8,463	6,766	7,349	8,182	
Shares (weighted average diluted)	53,002	59,664	58,233	53,671	53,930	54,061	57,509	55,732	56,186
Employees (units)	1,450	1,465	1,796	2,057					
Stock Repurchased				0					
<b>Ratios</b>									
<b>Liquidity</b>									
Quick Ratio	3.40	4.09	2.09	1.51	1.89	1.51	1.64	2.21	2.27
Current Ratio	4.61	4.91	3.55	3.29	3.74	3.29	3.37	4.23	3.84
<b>Leverage</b>									
Debt Ratio	0.33	0.27	0.31	0.31	0.29	0.31	0.30	0.26	0.27
Long-term Debt/Capital	0.18	0.13	0.12	0.11	0.11	0.11	0.10	0.10	0.09
<b>Asset Management</b>									
Fixed Asset Turnover	5.01	8.07	6.90	9.22	10.71	8.33	9.31	10.00	8.98
Total Asset Turnover	0.82	1.04	0.84	1.21	1.45	1.12	1.20	1.27	1.10
Receivables DSO	44	54	43	43	37	45	42	39	34
Inventory Days	105	57	161	133	95	140	124	109	109
Inventory Turnover	3.83	5.63	3.26	3.23	3.65	2.76	2.88	3.16	3.09
Revenue/Employee	434	656	551	731					
<b>Profitability</b>									
Gross Margin	24.1%	29.1%	27.6%	17.3%	16.9%	17.5%	17.4%	18.8%	19.6%
Net Margin	1.1%	13.0%	7.3%	3.0%	5.0%	2.7%	6.2%	6.6%	8.7%
Return on Assets	0.9%	13.6%	6.2%	3.7%	7.3%	3.0%	7.4%	8.4%	9.6%
Return on Equity	1.3%	19.4%	8.7%	5.3%	10.5%	4.3%	10.7%	11.7%	13.0%
<b>Per Share Data</b>									
Book Value/Share	\$10.07	\$12.59	\$13.07	\$15.75	\$15.40	\$15.63	\$15.36	\$16.47	\$17.14
Tangible Book/Share	\$9.97	\$11.40	\$11.71	\$14.50	\$14.09	\$14.39	\$14.25	\$15.38	\$15.72
Cash/Share	\$6.29	\$7.83	\$5.68	\$3.96	\$6.55	\$6.51	\$6.70	\$7.38	\$9.74
Net Cash/Share	\$5.36	\$7.05	\$4.95	\$3.22	\$3.35	\$3.20	\$3.50	\$4.06	\$6.35
Earnings/Share	\$0.13	\$2.09	\$1.13	\$0.80	\$0.40	\$0.17	\$0.40	\$0.47	\$0.54

**OmniVision Technologies**

**Sales Analysis**

	FY08	FY09	FY10	FY11	FY12	FY13	FY2011				FY2012				FY2013				FY14		
							1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
<b>Product Metrics</b>																					
Units Shipped (mil)	425.0	327.0	475.0	682.0	614.0	855.0	134.0	185.0	194.0	169.0	171.0	153.0	143.0	147.0	166.0	249.0	252.0	188.0	208.0	237.0	214.0
Unit growth (calculated)	70.0%	-23.1%	45.3%	43.6%	-10.0%	39.3%	7.2%	38.1%	4.9%	-12.9%	1.2%	-10.5%	-6.5%	2.8%	12.9%	50.0%	1.2%	-25.4%	10.6%	13.9%	-9.7%
ASP	\$1.88	\$1.55	\$1.27	\$1.40	\$1.46	\$1.65	\$1.44	\$1.29	\$1.37	\$1.53	\$1.61	\$1.42	\$1.29	\$1.48	\$1.55	\$1.56	\$1.68	\$1.79	\$1.79	\$1.67	\$1.64
ASP change		-17.5%	-18.2%	10.5%	4.3%	12.6%	14.3%	-10.4%	6.2%	11.7%	5.2%	-11.8%	-9.2%	14.7%	4.7%	0.6%	7.7%	6.5%	0.0%	-6.7%	-1.8%
VGA and smaller		71.5%	66.6%	54.6%	52.6%	20.8%	57%	60%	56%	45%	45%	53%	59%	55%	32%	21%	16%	17%	14%	14%	12%
1.3-megapixel		12.8%	9.9%	12.8%	18.5%	40.5%	10%	12%	11%	18%	18%	23%	19%	14%	31%	48%	45%	33%	39%	50%	44%
2-megapixel and greater		17.8%	23.2%	32.6%	28.8%	38.7%	33%	28%	33%	37%	37%	24%	22%	31%	37%	31%	39%	50%	47%	36%	44%
<b>By Market</b>																					
Cell Phone				65.0%	56.0%	59.0%	66%	66%	72%	65%	62%	60%	52%	52%	48%	59%	61%	65%	63%	60%	52%
Digital Camera																					
Security/Surveillance																					
Entertainment							6%	11%	10%	11%	14%	20%	28%	28%	27%	29%	26%	17%	22%	25%	31%
PC Camera/notebook							19%	15%	11%	15%	15%	9%	8%	11%	15%	6%	7%	8%	7%	5%	7%
PDA																					
Automotive/other							9%														
<b>Total</b>							100%	92%	93%	91%	91%	89%	88%	91%	90%	94%	94%	90%	92%	90%	90%
<b>By Territory</b>																					
UK																					4521
Taiwan	55,924	41,154					4,582	8,391	11,035		6,348	4,719	2,984		6,218	7,474	6,210		8,191		
Japan	4,686	4,410	7,961	11,546	46,108	57,604					12,895				13,796	18,626	15,246	9,936	15,511	28,259	
China	666,344	383,875	504,940	614,891	520,452	955,378	127,452	166,421	166,706	154,312	159,276	137,387	112,079	111,710	175,106	265,433	278,923	235,916	278,911	305,918	
Korea	3,125	4,670	5,406	199,747	147,390	275,105	36,698	42,642	55,116	65,291	69,252	22,016	12,659	43,463	48,819	64,954	96,163	65,169	56,137	47,624	
Malaysia	55,015	36,358	21,890	66,827	50,887	60,243	19,175	14,927	19,793	12,932	13,940	15,106	12,895	8,946	7,858	27,839	15,364	9,182			
US	12,810	33,912	3,513	16,203	61,766	3,997	1,231	731	6,686	7,555		13,450	22,646	25,670				3,997	1,421	1,340	
ROW	1,634	2,937	59,283	47,262	71,127	55,602	3,933	6,348	6,341	18,178	14,360	25,241	21,930	28,758	6,267	5,811	11,607	31,917	13,517	9587	
<b>Total (,000)</b>	799,538	507,316	602,993	956,476	897,730	1,407,929	193,071	239,460	265,677	258,268	276,071	217,919	185,193	218,547	258,064	390,137	423,513	356,117	373,688	397,249	
<b>By Channel</b>																					
OEM & VARs	66.8%	58.0%	51.5%	75.3%	78.1%	81.2%	68.4%	73.9%	80.2%	76.9%	77.2%	79.0%	79.2%	77.4%	72.5%	85.2%	85.2%	78.4%	81.6%	84.1%	80.3%
Distributors	33.2%	42.0%	48.5%	24.7%	21.9%	18.8%	31.6%	26.1%	19.8%	23.1%	22.8%	21.0%	20.8%	22.6%	27.5%	14.8%	14.8%	21.6%	18.4%	15.9%	19.7%
<b>By Customer</b>																					
LG Innotec				17.6%	15.2%	18.0%	15.1%	13.6%	17.6%		23.0%	11.9%	11.8%		17.2%	15.8%	21.8%				
WPI (HK distributor)	19.9%	22.4%	27.0%	13.8%	13.5%	11.7%	16.5%	14.5%	11.1%		14.0%		13.7%		16.0%						
unidentified OEM							12.9%					11.0%	10.7%			14.7%	13.9%		12.4%	11.7%	
unidentified OEM													10.2%			12.6%	12.2%		11.5%	10.8%	
unidentified Disti													11.6%						11.4%	10.8%	
Nam Tai (cell)																					
Primax (Motorola cell)																					
X-10 (security)																					
Creative Labs (PC)																					
Concord (DSC)																					
Aiptek (DSC)																					
Foundate/Lite-On (cell)																					
unidentified (cell)																					
unidentified (cell)																					
Foxconn	15.0%	10.4%	11.2%			10.7%															
Cowell						10.3%															
Sanshin (OEM)																					
SiDa (distributor)																					
Top 5		59.5%	60.0%	55.0%	52.0%	57.7%										58.6%				51.6%	

2/28/14

**OmniVision Technologies**

**Company Summary**

<u>Products</u>			<u>Technology</u>	<u>Markets</u>		<u>Suppliers</u>	<u>Competitors</u>
<b>CMOS Image Sensors</b>			<b><u>Pixel Generation</u></b>	<b><u>Market</u></b>	<b><u>CY11 Share</u></b>	<b><u>Image Sensor Fabs</u></b>	<b><u>CMOS</u></b>
<b><u>Resolution</u></b> <i>(megapixels)</i>	<b><u>Optical Format</u></b> <i>(in inches)</i>	<b><u>Pixel Size</u></b> <i>(in microns)</i>	PureCel	PC/webcams	44%	TSMC	Aptina
			OmniBSI-2	Camera Phones	21%	Powerchip	Samsung
Native HD	1/18"	1.1	OmniBSI	Security	47%		Sharp
High Res HD	1/13"	1.34	OmniPixel3-HS	Automotive	23%	<b><u>Color Filter</u></b>	Sony
16 Mp	1/10"	1.4	<i>(HS = high-sensitivity)</i>	Medical	44%	VisEra (TSMC joint vent.)	STMicro
14 Mp	1/9"	1.75	OmniPixel3	<b><u>Entertainment*</u></b>	<b><u>57%</u></b>		Toshiba
12 Mp	1/7"	2.0	OmniPixel2	<b><u>Total CMOS:</u></b>	<b><u>25%</u></b>	<b><u>Wafer Probe</u></b>	
10 Mp	1/6"	2.2	OmniPixel			KYEC	<b><u>CCD</u></b>
9 Mp	1/5"	2.5	CameraCubeChip	<b><u>Applications</u></b>		THEPI	Panasonic
8 Mp	1/4"	3.0		Cell Phone Handsets			Sharp
5 Mp	1/3"	3.18	<b><u>Wafer Fab Line-Widths</u></b>	Digital Still Cameras		<b><u>Package Assembly</u></b>	Sony
3 Mp	1/2.3"	3.6	65 nm	Security Cameras		Lingsen (ceramic)	
2 Mp (1080)		4.2	0.11-micron	Surveillance Cameras		Tong Hsing (ceramic)	
1.3 Mp (720)		6.0	0.13-micron	PC Cameras		XinTec (investment)(CSP)	
VGA			0.18-micron	Video Games*		OSC (OVTI-owned)	
CIF			0.25-micron	Toys*			
analog				Automobiles			
				Tablets*			
				Digital TVs			
				Portable Media Players*			
				Camcorders			
				Medical			
<b>CameraCubeChip</b>							
<b>Companion Chips</b>							
USB controllers							
Host Processors							
image processing/compression							

**OmniVision**

**Valuation**

**Relative Valuation**

Company	Ticker	Price 2/27/14	52-Week		CY EPS				CY P/E				Shares (mil)	CAP (\$ mil)	Price-Sales			FY Ends	
			Low	High	2011	2012	2013	2014	2011	2012	2013	2014			TTM	Cur FY	Nxt FY		
OmniVision *	OVTI	16.20	12.06	20.48	1.30	2.15	1.70	2.29	12.5	7.5	9.5	7.1	59	955	0.7	0.7	0.6	Apr	
Spansion	CODE	16.17	9.70	16.60	0.99	0.76	1.37	1.86	16.3	21.3	11.8	8.7	59	952	1.0	0.7	0.7	Dec	
Cypress Semiconductor	CY	9.77	8.61	13.23	0.55	0.40	0.51	0.66	17.8	24.4	19.2	14.8	166	1,620	2.2	2.2	2.1	Dec	
Diodes	DIOD	23.53	17.78	28.46	0.56	1.06	1.46	1.90	42.0	22.2	16.1	12.4	48	1,127	1.4	1.3	1.2	Dec	
International Rectifier	IRF	26.94	17.62	28.19	-1.01	0.09	0.91	1.18	NM	NM	29.6	22.8	72	1,945	1.9	1.8	1.6	Jun	
MagnaChip	MX	15.08	14.35	23.89	2.23	1.29	2.49	0.00	6.8	11.7	6.1	NM	37	565	0.7	0.7	0.6	Dec	
RF Micro Devices	RFMD	7.00	4.40	7.18	0.10	0.40	0.40	0.56	70.0	17.5	17.5	12.5	288	2,015	1.7	1.8	1.6	Mar	
TriQuint	TQNT	12.20	4.45	12.59	0.18	0.08	0.46	0.66	67.8	NM	26.5	18.5	160	1,954	2.2	2.1	1.9	Dec	
Average									36.8	19.4	18.1	14.9				1.6	1.5	1.4	

\* Tokeneke estimate  
Source: consensus as of 2/27/14

**Historical Valuation**

Company	Ticker	Price 2/27/14	Trailing 12-month					
			Price/Earnings		Price/Sales		Price/Book	
			Current	Historical*	Current	Historical*	Current	Historical*
OmniVision	OVTI	\$16.20	7.5		0.7		1.0	
			<b>Average</b>	62.0	<b>Average</b>	2.5	<b>Average</b>	2.6
			<b>High</b>	1129.0	<b>High</b>	8.2	<b>High</b>	12.2
			<b>Low</b>	4.6	<b>Low</b>	0.5	<b>Low</b>	0.5

\* weekly since 2000

### **The Company**

Tokeneke Research is an independent research firm specializing in semiconductor industry business issues, providing fundamental research focused on US equities across all market capitalizations within the sector to investors. The company was founded in 2005 and is based in Connecticut.

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- *Monthly Newsletter:* A summarized review of noteworthy industry business developments, sales statistics, and sector equity market performance, as well as a near-term and annual outlook for sector business fundamentals and share prices. This report typically includes two pages of text and a handful of recurring charts and tables. It is intended for relatively broad-based distribution.
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### **My Background**

I have an electrical engineering background, nearly 12 years of semiconductor industry experience, and was on Wall Street for nearly eight years where I was selected as the Best On The Street semiconductor analyst for 2002 by The Wall Street Journal, and third-rated Best of the Best across all sectors.

I obtained my undergraduate BS degree in electrical engineering from the University of Washington, and my MBA from Santa Clara University. My industry experience consists of nearly 12 years in various technical sales and marketing roles at four different semiconductor firms located in Silicon Valley beginning with Advanced Micro Devices in 1984, followed by two small start-up companies, and ending at Cirrus Logic where I supported the firm's Japanese market development. I joined Fahnstock & Co. as a senior semiconductor analyst in 1996 and was recruited by Needham & Co. in April 2000.

My formal coverage list as a sell-side analyst included the following equities: AMD, ALSC, ALTR, ARTI, ATML, CUBE, CY, ESST, GNSS, INTC, ISSI, LSI, MOSY, MU, OIIM, OVTI, RMTR, SIII, SMSC, STEC, SVTG, TDFX, TSRA, TXN, and ZRAN.

—**Dan K. Scovel**  
*Semiconductor Analyst*

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