Zacks Small-Cap Research

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O2Micro International Ltd (OIIM-NASDAQ)

Continued TV Panel Shortages Challenge Sequential Improvement

Using an industry average value to trailing 12-month sales of 5.6 times, and applying it to OIIM's $60 m trailing 12-month revenue, we would calculate an enterprise value of $288, a market cap of $387 m and a price of **$15.00 per share.**

Current Price (10/31/17)	$2.00
Valuation	**$15.00**

OUTLOOK

O_2Micro International is a fabless semiconductor firm that designs, develops and markets high performance integrated circuits primarily for power management and battery management for TV backlighting, LED lighting, and portable tools and appliances. It has had declining revenues and losses for the past few years, but has reported revenue growth in the last five quarters. The company trades at an enterprise value of $5.2 million, below the value of its non-cash assets.

SUMMARY DATA

52-Week High	**$2.74**
52-Week Low	**$1.48**
One-Year Return (%)	**13.3**
Beta	**0.11**
Average Daily Volume (sh)	**51,285**
Shares Outstanding (mil)	**25.7**
Market Capitalization ($mil)	**$51.4**
Short Interest Ratio (days)	**1.0**
Institutional Ownership (%)	**39**
Insider Ownership (%)	**8**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**-11.5**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**N/M**
P/E using 2017 Estimate	**N/M**
P/E using 2018 Estimate	**N/M**
Zacks Rank	**N/A**

Risk Level	**Above Average**
Type of Stock	**Small-Value**
Industry	**Elec Comp-Semis**

ZACKS ESTIMATES

Revenue
(in millions of $)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2015	13.1 A	14.7 A	13.7 A	13.4 A	55 A
2016	13.0 A	13.2 A	14.4 A	15.9 A	57 A
2017	15.0 A	14.5 A	15.5 A	15.5 E	61 E
2018					66 E

Earnings per Share
(EPS is non-GAAP earnings before non-recurring items)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2015	-$0.11 A	-$0.09 A	-$0.07 A	-$0.10 A	-$0.37 A
2016	-$0.08 A	-$0.06 A	-$0.04 A	$0.01 A	-$0.16 A
2017	-$0.04 A	-$0.04 A	-$0.04 A	-$0.05 E	-$0.17 E
2018					-$0.09 E

Zacks Projected EPS Growth Rate - Next 5 Years % **N/A**

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WHAT'S NEW

Continued TV Panel Shortages Dash Hope of Sequential Improvement

O2Micro reported Q3 2017 revenues of $15.5 million slightly higher than expected and up 7% from last year. Guidance for revenue for the fourth quarter is sequentially flat, plus or minus five percent which, at the midpoint is down year over year. The company continues to be hurt by the shortage in panels for high-end TVs and fingerprint recognition IC chips constraining customer's production. While this quarter was on target, the revenue shortfall expected for Q4 is exacerbated by an increase in operating expenses both sequentially and year over year. The company had expected much better revenues in Q3 and Q4 and ramped spending on R&D, which has increased operating losses. This spending was not wasted but has resulted in more design wins that should contribute to better revenues in 2018. We are cutting revenue and earnings estimates accordingly as orders refuse to rebound.

The company continues to project cash breakeven at $15.5 - 17 million in quarterly revenues and profitability at $17-19 million. Guidance for Q4 revenues is sequential plus or minus 5% of Q3 results. Expenses should be similar, and without the currency gain of $296,000 reported in Q3, we expect losses will be up sequentially.

Gross margin was 50.3%, down both sequentially (from 50.9%) and year over year (from 52.6%) due to product mix and a high percent of new products.

Operating expenses in the quarter were $9.5 million versus $8.7 million last year. The company is taking action to improve logistics and could be reducing expenses in that area.

Operating losses increased to $1.7 million in 2017 from $1.1 million, clearly going in the wrong direction and even up sequentially as expenses increased more than revenues.

Non-GAAP net income was a loss of $985,000 versus a loss of $938,000 last year but included currency translation gain of $296,000 versus a currency loss of $303,000 a year ago. The company reported non-GAAP EPS loss of $0.04 flat with last year.

At September 30, 2017, the company had $46.2 million in cash and equivalents (or $1.80 per ADS.) The company burned $810,000 in cash in the quarter. The company expects to be cash flow breakeven in the second half of next year, but not for the full year.

Business Units

I**ntelligent lighting** continued to be affected by the shortage of large panels for some of its customers in Q3, and the shortage is expected to continue into Q4. This shortage combined with potentially strong orders in November for Bachelor's Day, or Double 11, in China could impacted the expected seasonality in Q1 and lead to better Q1 sales than is typical.

Computers continue to suffer with the decline in notebooks, but smartphones are taking up the slack as customers roll out production volumes of product. The company expects this segment to grow in 2018 after years of decline. Computer notebook revenues continues to decline. They are unfortunately the majority of the revenues in this 15-20% segment of the company's revenues. Tablets and smartphones, while a smaller part of this sector, continue to grow and win design ins and are now reaching production volumes. Smartphone makers continue to suffer a shortage of chips which has impeded the roll out of new models.

Battery management is the company's second largest sector and fastest growing. It continues its excellent growth as the industry increases it use of lithium ion batteries. Examples of end use products are power tools, e-bikes, e-vehicles, and vacuums. We are most excited about the portable power tools market. Although the global power tools market is expected to expand at a CAGR of only 5.2% from 2017-2025, to

reach $ 45.2 billion by 2025, cordless power tools are expected to grow at a CAGR of 6.63%. Internet connected power tools should grow far faster. While there are now Bluetooth connected tool batteries that work with an app, the industry is moving to more highly sophisticated Internet of Things applications. These tool connected by Wi-Fi or cellular, will in the future not only be able to track the location of tools, so they don't "walk off the job," but record when it is used, by whom it is used, as well as where it has been used. It will be able it integrate to accounting and payroll applications and do remote diagnostics. This seems to be one of the truly useful IoT uses-- a portable market with higher ticket equipment and workers that could be anywhere and doing anything. Even now, the tools on the market with Bluetooth capability can allow owners to disable the use of the tool through a smartphone app. More features will surely follow. New generations of tools will allow OIIM to sell higher end product at higher cost to this market as its chips do more for customers.

Figure 1. Black and Decker SMARTECH™ 20V MAX* Lithium Cordless Drill/Driver



SMARTECH iOS and Android compatible app enables Bluetooth® controls allowing remote battery locking/unlocking, battery locate, state of charge and programmable alerts and reminders.

VALUATION

Company Has Significant Upside If It Can End Cash Burn

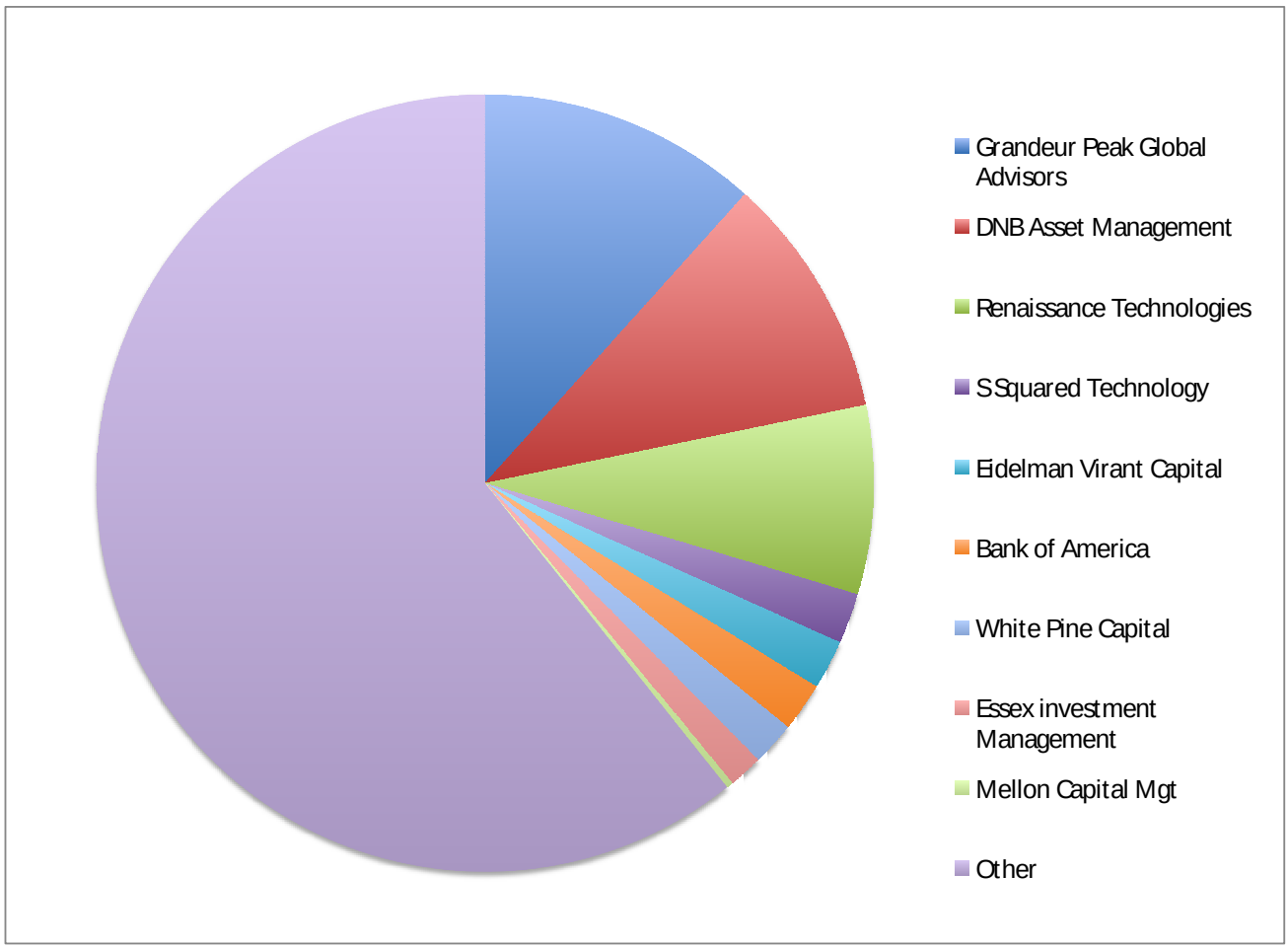
The company trades at an enterprise value of $5.2 million. At the end of Q3 2017, the company had $46.2 million (or $1.80 per ADS) in cash and equivalents, no debt, and valuable real estate in China and California. In California it owns a 37,180 square foot building where it has its USA operations, which was bought for $4.6 million in May 2004 and believe it is now worth approximately $7 million. It also owns other real estate in China. It also has long-term investments in other companies. Activists had tried to encourage a transaction with an acquirer but the company has no interest in a sale and due to restrictions it is difficult to force one.

Two of the comparable companies we had been using, Intersil and Linear Technology, were acquired at very high valuations. Intersil was acquired by Renesas for $3.2 billion at a valuation of 5.9xs the company's trailing $542.1 million in revenue. Analog Devices acquired linear Technology for $14.8 billion. This is 9.9 times its trailing four quarters of revenue of $1.5 billion.

Were we to use the average enterprise value to trailing twelve-month sales of 5.6 times and apply it to OIIM's trailing 12-month $60.9 million revenues, we would calculate an enterprise value of $341 million. Adding to it $46.2 million in cash gives us a market cap of $387 million or **$15.06 per share**. We believe that once the company shows sustainable revenue growth and cash breakeven, the market should afford it a valuation closer to this price. However, in the next two quarters it may be difficult for the company to show revenues growth due to the continued component shortages in the industry.

	Competitors	EV	TTM Sales	EV/Sales
Microsemi	**MSCC**	7,880	1,790	4.4
Monolithic Power Systems	**MPWR**	4,760	423	11.3
Cree Inc.	**CREE**	3,010	1,460	2.1
Microchip Technology	**MCHP**	23,920	3,580	6.7
Maxim	**MXIM**	13,510	2,300	5.9
Texas Instruments	**TXN**	95,700	14,180	6.7
Cirrus Logic	**CRUS**	3,420	1,600	2.1
	Average			5.6

OWNERSHIP



RISKS

- O_2Micro has exposure several stagnant markets such as standard TVs and declining markets such as notebooks and smaller monitors. It is depending on free dimming and high power LED lighting, 4K TVs, battery management, and successful penetration of and volume sales to the smartphone market to give it meaningful revenue and margin growth. At present the high-end TV and smartphone markets have been supply constrained, limiting O2Micro's ability to grow in these markets.

- It may be difficult for the company to capture market share in smartphones and tablets as a new entrant in an established field competing primarily with giant Texas Instruments and other larger firms.

- The firm is currently not at GAAP breakeven, is still cash flow negative, and has only started to stabilize revenues after years of declines.

- Given its large number of patents, litigation risk is a possibility as the company enforces its patents.

PROJECTED INCOME STATEMENT

	March Q1 16	June Q2 16	Sept Q3 16	Dec Q4 16	March Q1 17	June Q2 17	Sept Q3 17	Dec Q4 17E	2015	2016	2017E	2018E
REVENUE												
Net Revenue	13.0	13.2	14.4	15.9	15.0	14.5	15.5	15.5	54.8	56.6	60.5	66.0
Yr-to-yr Gr.	-1%	-10%	6%	19%	15%	10%	7%	-2%	-14%	3%	7%	9%
OPERATING EXPENSES												
Cost of goods sold	6.6	6.5	6.8	7.3	7.1	7.1	7.7	7.8	27.1	27.3	29.7	32.0
Gross Margin	6.3	6.7	7.6	8.6	7.9	7.4	7.8	7.8	27.7	29.2	30.9	34.0
% of Sales	48.8%	50.7%	52.6%	54.1%	52.7%	50.9%	50.3%	50.1%	50.5%	51.7%	51.0%	51.5%
R&D	3.8	3.8	4.0	4.1	4.1	4.5	4.7	4.7	17.8	15.6	17.9	18.8
SG&A	4.9	5.0	4.7	4.9	5.1	4.4	4.9	4.9	23.3	19.5	19.3	19.6
One-time expenses & Adj.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Tot Operating Exp.	8.6	8.8	8.7	9.0	9.1	8.9	9.5	9.6	42.3	35.1	37.2	38.4
Operating Income	(2.3)	(2.1)	(1.1)	(0.4)	(1.2)	(1.6)	(1.7)	(1.8)	(14.6)	(5.9)	(6.3)	(4.4)
Interest income	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7	0.3	0.3	0.4
Foreign exchange loss	(0.2)	(0.3)	0.2	0.4	(0.2)	0.1	0.3	0.0	0.7	0.1	0.1	0.0
Gain on sale of real estate	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.8	1.7	0.0	0.0
Other (rent) - net	0.2	0.2	0.2	0.3	0.1	0.2	0.2	0.2	0.7	0.9	0.7	0.8
Gain/loss on long term investments	0.0	0.4	0.5	0.0	0.0	0.0	0.0	0.0	(5.0)	0.9	0.0	0.0
Total other Income	0.1	0.4	2.7	0.7	0.0	0.4	0.6	0.3	(2.0)	3.9	1.2	1.1
Pretax Income	(2.2)	(1.7)	1.6	0.4	(1.2)	(1.2)	(1.1)	(1.5)	(16.6)	(1.9)	(5.1)	(3.3)
Pretax margin	-16.8%	-13.1%	11.2%	2.2%	-8.3%	-8.3%	-7.4%	-9.9%	-30.3%	-3.4%	-8.5%	-5.0%
Taxes	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	4.6	1.1	0.9	0.7
Tax Rate	-9.2%	-13.7%	17.5%	96.6%	-18.0%	-19.1%	-20.0%	-13.0%	-28.0%	-54.9%	-17.2%	-20.0%
GAAP Net Income	(2.4)	(2.0)	1.3	0.0	(1.5)	(1.4)	(1.4)	(1.7)	(21.2)	(3.0)	(6.0)	(4.0)
Non-GAAP Net Income	(2.0)	(1.8)	(0.9)	0.4	(1.0)	(1.1)	(1.0)	(1.3)	(9.7)	(4.4)	(4.4)	(2.4)
GAAP EPS-Basic	($0.09)	($0.08)	$0.05	$0.00	($0.06)	($0.06)	($0.05)	($0.07)	($0.82)	($0.12)	($0.23)	($0.16)
GAAP EPS-Fully dil.	($0.09)	($0.08)	$0.05	$0.00	($0.06)	($0.06)	($0.05)	($0.07)	($0.82)	($0.12)	($0.23)	($0.16)
Non-GAAP	**($0.08)**	**($0.06)**	**($0.04)**	**$0.01**	**($0.04)**	**($0.04)**	**($0.04)**	**($0.05)**	**($0.37)**	**($0.16)**	**($0.17)**	**($0.09)**
Share Out	25.7	25.7	25.6	25.6	25.8	25.9	25.7	25.6	26.0	25.6	25.8	25.2
Fully diluted shares	25.7	25.7	25.9	26.1	25.8	25.9	25.7	25.6	26.0	25.6	25.8	25.2
Yr-to-yr Gr.	-3%	-2%	0%	2%	1%	1%	-1%	-2%	-4.5%	-1.5%	0.5%	-2.1%

BALANCE SHEET

	Sept 30, 2017	June 30, 2017	Sept-Jun % Change	Sept 30, 2016	Yr-to-Yr % Change
CURRENT ASSETS					
Cash and cash equivalents	$25,176	$28,850	-12.7%	$27,426	-8.2%
Restricted cash	34	34	0.0%	32	6.3%
Short-term investments	21,000	18,640	12.7%	25,642	-18.1%
Accounts receivable, net	8,966	8,815	1.7%	6,597	35.9%
Inventories	10,539	10,023	5.1%	8,502	24.0%
Prepaid expenses and other current assets	1,382	1,830	-24.5%	1,393	-0.8%
Total current assets	**67,097**	**68,192**	-1.6%	**69,592**	-3.6%
LONG-TERM INVESTMENTS	4,245	4,245	0.0%	4,253	-0.2%
PROPERTY AND EQUIPMENT, NET	13,880	14,030	-1.1%	13,841	0.3%
OTHER ASSETS	2,552	1,962	30.1%	2,108	21.1%
Total other assets	20,677	20,237	2.2%	20,202	2.4%
TOTAL ASSETS	87,774	88,429	-0.7%	89,794	-2.2%
CURRENT LIABILITIES					
Notes and accounts payable	4,031	4,132	-2.4%	3,771	6.9%
Income tax payable	371	274	35.4%	266	39.5%
Deferred tax liabilities	0	0	0.0%	921	-100.0%
Accrued expenses and other current liabilities	4,346	3,495	24.3%	3,131	38.8%
Total current liabilities	8,748	7,901	10.7%	8,089	8.1%
OTHER LONG-TERM LIABILITIES					
Accrued pension liabilities	289	291	-0.7%	277	4.3%
Deferred tax liabilities	826	940	-12.1%	0	NM
Other liabilities	86	86	0.0%	84	2.4%
Total long-term liabilities	1,201	1,317	-8.8%	361	232.7%
Total liabilities	9,949	9,218	7.9%	8,450	17.7%
SHAREHOLDERS EQUITY					
Ordinary shares	33	33	0.0%	33	0.0%
Additional paid-in capital	142,621	142,253	0.3%	142,388	0.2%
Retained earnings (accumulated deficits)	(45,638)	(44,263)	3.1%	(41,384)	10.3%
Accumulated other comprehensive income	5,081	5,209	-2.5%	5,334	-4.7%
Treasury stock	(24,272)	(24,021)	1.0%	(25,027)	-3.0%
Total shareholders equity	77,825	79,211	-1.7%	81,344	-4.3%
TOTAL LIABILITIES AND SHAREHOLDERS EQUITY	87,774	88,429	-0.7%	89,794	-2.2%
Cash and equivalents	$46,176	$47,490	-2.8%	$53,068	-13.0%
Change in cash and equivalents	(1,314)	(3,006)	-56.3%	$5,565	-123.6%
Market value	51,436,000	50,695,400	1.5%	59,265,200	-13.2%
Enterprise value	5,226,000	3,171,400	64.8%	6,165,200	-15.2%
DSO	52	49	6.1%	42	23.8%
Inventory Days	120	124	-3.2%	116	3.4%

ANNUAL CASH FLOW

	12 Months Ended December 31,			
	2016	2015	2014	2013
OPERATING ACTIVITIES				
Net loss	$ (2,986)	$ (21,095)	$ (15,057)	$ (19,099)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation and amortization	1,682	2,446	3,718	4,685
Stock-based compensation	1,606	1,912	2,120	2,609
Loss on asset write-off	0	0	82	
Inventory write-downs	1,527	913	1,538	900
Gain on sale of long-term investments	(948)	(8)	(436)	
Impairment loss on long-term investments	0	4,953	83	
Gain on disposal of property and equipment, net	(1,726)	(738)	(428)	(106)
Deferred income taxes	(1,231)	1,989	78	41
Other, net			(36)	(1)
Changes in operating assets and liabilities:				
Accounts receivable, net	(2,008)	1,592	3,235	(1,251)
Inventories	(1,140)	(1,933)	(2,963)	(200)
Prepaid expenses and other current assets	(6)	191	130	510
Deferred charges	(375)	(416)	(985)	(1,366)
Notes and accounts payable	996	1,202	(2,038)	413
Income tax payable	(2,065)	1,595	412	(124)
Accrued expenses and other current liabilities	(1,064)	(1,039)	577	(1,083)
Accrued pension liabilities	(4)	(11)	(12)	(25)
Other liabilities	(56)	(168)	(346)	(8,893)
Net cash used in operating activities	(7,798)	(8,615)	(10,328)	(22,990)
Acquisition of:				
Short-term investments	(28,797)	(7,128)	(22,346)	(15,496)
Long-term investments	0			(250)
Property and equipment	(673)	(724)	(1,004)	(743)
Decrease (increase) in:				
Restricted assets				10,000
Restricted cash	0	132	(1)	1
Other assets	40	82	116	108
Proceeds from:				
Sale of short-term investments	18,331	16,755	34,333	52,131
Sale of long-term investments	5,999	537	1,304	
Disposal of property and equipment	3,837	3,205	1,982	166
Net cash provided by investing activities	(1,263)	12,859	14,384	45,917
FINANCING ACTIVITIES				
Acquisition of treasury stock	(619)	(3,233)	(4,965)	(8,279)
Proceeds from:				
Exercise of stock options	2	31	44	25
Issuance of ordinary shares under the Employee Stock Purchase Plan	73	180	258	335
Net cash used in financing activities	(544)	(3,022)	(4,663)	(7,919)
EFFECTS OF CHANGES IN FOREIGN EXCHANGE RATE	(262)	(1,092)	(617)	(613)
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(9,867)	130	(1,224)	14,395
CASH AND CASH EQUIVALENTS AT BEGINNING OF THE YEAR	41,199	41,069	42,293	27,898
CASH AND CASH EQUIVALENTS AT END OF THE YEAR	31,332	41,199	41,069	42,293
SUPPLEMENTAL DISCLOSURES OF CASH FLOWS				
Cash paid for tax	$ 4,349	$ 1,068	$ 697	$ 1,064
Cash Flow	(2,076)	(9,628)	(8,420)	(10,971)
Free cash flow	(2,749)	(10,352)	(9,424)	(11,714)

HISTORICAL STOCK PRICE



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