

Zacks Small-Cap Research

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O2Micro International Ltd (NASDAQ: OIIM)

Another Record Quarter in Q2 and Demand Outstrips Capacity Again in Both Intelligent Lighting and Battery Management

Using an industry average value to trailing 12-month sales of 10.9 times and OIIM's \$95 m trailing 12-month revenue, we would calculate an enterprise value of \$1 billion, a market cap of \$1.1 billion and a price of **\$34.00 per share**.

OUTLOOK

O₂Micro 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, appliances and ebikes. It has turned profitable and cash flow positive this year and trades at an **enterprise value of \$194 million well below its peers**. The surge in demand for high end TVs and battery-operated devices is accelerating its growth and producing higher and higher margins with only industry component shortages throttling sales.

Current Price (07/30/21) **\$7.77**
Valuation **\$34.00**

SUMMARY DATA

52-Week High **\$10.60**
52-Week Low **\$2.11**
One-Year Return (%) **133**
Beta **0.7**
Average Daily Volume (sh) **111,136**

ADS Outstanding (mil) **28.4**
Market Capitalization (\$mil) **\$221**
Short Interest Ratio (days) **3.6**
Institutional Ownership (%) **35**
Insider Ownership (%) **11.3**

Annual Cash Dividend **\$0.00**
Dividend Yield (%) **0.00**

5-Yr. Historical Growth Rates
Sales (%) **8.3**
Earnings Per Share (%) **N/A**
Dividend (%) **N/A**

P/E using TTM EPS **17.0**
P/E using 2021 Estimate **17.0**
P/E using 2022 Estimate **13.2**

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

ZACKS ESTIMATES

Revenue

(in millions of \$)

	Q1	Q2	Q3	Q4	Year
	(Mar)	(Jun)	(Sep)	(Dec)	(Dec)
2019	12.8 A	14.3 A	16.0 A	17.9 A	61 A
2020	15.6 A	17.3 A	22.2 A	23.2 A	78 A
2021	23.2 A	26.2 A	26.9 E	27.0 E	103 E
2022					114 E

Earnings Per ADS

(non-GAAP EPS before non-recurring items)

	Q1	Q2	Q3	Q4	Year
	(Mar)	(Jun)	(Sep)	(Dec)	(Dec)
2019	-\$0.13 A	-\$0.08 A	-\$0.02 A	\$0.05 A	-\$0.18 A
2020	-\$0.00 A	\$0.03 A	\$0.12 A	\$0.13 A	\$0.29 A
2021	\$0.09 A	\$0.12 A	\$0.12 E	\$0.13 E	\$0.46 E
2022					\$0.59 E

Zacks Projected EPS Growth Rate - Next 5 Years % **12**

WHAT'S NEW

Q2 Revenues Grow 52% and Are Only Gated By Capacity

Friday O2Micro announced another quarterly revenue record at \$26 million and expects beat that number again in Q3. Revenue has now been growing sequentially since Q1 of 2020, all through the pandemic. The company is now solidly profitable with EBITDA at over an 18% margin and this should continue for the foreseeable future as demand for its products outstrips supply. The company continues to invest in capacity to meet this demand by adding testing capabilities and second and third source fabs causing an unusually high level of cap ex this year.

We are raising estimates for 2021 and 2022 based on its current book of business and the favorable forecasts for growth in the markets O2Micro serves. We had been using a conservative 11% revenue growth for 2022, but that is increasingly hard to justify as the company's end markets in lithium battery powered devices and high end TVs continue to easily beat that. Combined with increased capacity coming on, and demand outstripping supply, we feel we should raise that growth rate assumption to 15%. The unknowns at this point are whether end products will have shortages in other components limiting build, purchasing behavior changes after more than a year of lockdowns or TVs sales and/or DIY tools decline as lockdowns prove to have brought sales forward. Battery management is now the majority of sales and it is growing faster than the company average so growth rates should mathematically accelerate not decline.

For 2021 we are now looking for revenues of \$103 million and a non-GAAP ADSPS of \$0.46, and for 2022 revenues of \$119 million, (up 15%) with non GAAP ADSPS of \$0.59. This values the company at EV/2021 sales of 1.9 times with 29% ADSPS growth and a 2022 PE of 13.2 times. Fabless semiconductor peers are trading at 10.9 times EV/2021 estimated sales.

For Q3 2021, O2Micro expects revenues between \$26.2 million and \$27.5 million or a midpoint of \$26.9 million, which would be growth of 21% year over year. Battery management revenues increased approximately 104% in Q2 and look to double again in Q3, gated only by the company's ability to get product produced and delivered. Market trends continue to point to acceleration. In fact, even in intelligent lighting the company could be selling more product if it were able to produce more of the products in demand.

Looking at the last four quarters and the approximate split, revenues break out:

	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Yr-Yr Grow
Revenues	\$15.6	\$17.3	\$22.2	\$23.2	\$23.2	\$26.2	
Consumer	7.0	8.3	9.6	9.8	8.6	9.4	14%
Computer	0.9	1.0	1.3	0.7	0.7	0.5	-49%
Industrial	7.6	8.0	11.3	12.5	14.2	16.2	104%
Communications	0.0	0.0	0.0	0.0	0.0	0.0	0%

Industrial, which we assume is battery management, is between 60% and 63% of sales and is growing much faster than the rest of the company. If this continues, which at this point we have no reason to think it would not, the total revenue growth of the company should continue to accelerate by virtue of simple math. Sales of battery-run products such as vacuum cleaners, power tools, garden tools, and e-bikes continue to increase. The company is well embedded in the major suppliers who it reveals as: Bissell, Black & Decker, Bosch, Dyson, Electrolux, Hitachi, Lexy, LG, Makita, Murata, Panasonic, Philips, Samsung, Shark, TTI, and Toshiba. In addition, energy density and production capacity continue to

expand leading to even more applications in the future. This quarter Industrial more than doubled and consumer (mostly TVs) grew 14%.

The company has invested heavily in R&D over the years and it is reaping rewards. This year's focus has been to increase capacity by investing in testing equipment and qualifying more fabs to be second and third sources, as the company needs to produce more to meet demand. This quarter it spent \$3.5 million on cap ex which includes expensive wafer starts, that produce more volume six to nine months later. In 2022, the company will need to spend less, which should also increase cash generation and increase operating margins.

In the near future, the company will show ramping sales on mini-LED technology. O2Micro start by booking sales to tablet manufacturers and then move to the TV business. Management believes the mini LED business will be a "major, major growing business over the next five years." This technology is the future and ultimately all monitors and TVs will be built using mini-LEDs. O2Micro is the leader in this and is currently working with Japanese and Korean pioneers on designs.

Figure 1. Samsung QN Series TV with Mini-LEDs



Source: Zacks Investment Research

Q2 Results

Revenues were \$26.2 million compared with \$17.3 million in Q2 a year ago, up 52%. For Q2, the gross margin was 51.5% compared to 51.2% a year ago and 51.6% in Q1 2021 within its typical range. The company said to expect the Q3 2021 gross margin to again be in the range of 50-52%.

Reported total operating expenses were \$10.2 million in the quarter compared to \$8.4 million a year ago and up from \$9.6 in Q1 2021. The company went from 370 employees in Q1 to 289 in Q2, 298 in Q3 303 in Q4, 327 in Q1 2021 and is now at 341. R&D expense increased to \$4.7 million up from \$4.1 million in

2020. SG&A was \$5.5 million up from \$4.3 million in Q2 2020. The company initiated several expansion projects, which are incurring additional expenses for a few quarters. These include: implementing a ISO26262 SGS quality program, 2nd source foundries qualification tape out, and expanding the packaging and test facilities supply chain to ensure on time delivery.

Operating income in Q2 was \$3.3 million versus \$482,000 last year. Adding back depreciation and amortization (\$1 million) and stock-based compensation (\$442,000,) and adding the rental income, the adjusted **EBITDA looks to be \$4.8 million** (or 18.2%) compared to \$1.8 million in Q2 2020.

Total other income was \$133,000 versus \$160,000 last year. Last year included a \$1.1 million unrealized gain on the company holding in Excelliance MOS as well as a one-time charge of \$1.2 million. In Q4 O2Micro sold all of its remaining shares of Excelliance MOS stock.

The company reported a GAAP net income of \$3.2 million versus last year's \$380,000. This yielded a fully diluted GAAP EPS of \$0.10 versus \$0.01 a year ago.

Non-GAAP income was \$3.6 million, versus \$805,000 last year. This yielded a **non-GAAP EPS of \$0.12, versus \$0.03 last year.**

ADS outstanding were 28.4 million and fully diluted they stood at 31.1 million compared with 27.7 million a year ago.

Balance Sheet

On June 30, 2020, the company had \$37.4 million in cash and equivalents (or \$1.66 per ADS), down \$277,000 sequentially. Net cash generated by operating activities in the quarter was \$3.6 million. Capital expenditures were **\$3.5 million** versus \$2.4 million in Q1 2021. Depreciation and amortization was \$1 million yielding EBITDA of \$4.8 million or 18.2% of sales.

Revenue Percentages By Market

	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021
Consumer	44-46	47-49	42-44	41-43	36-38	35-37
Computer	5-7	5-7	5-7	2-4	2-4	1-3
Industrial	48-50	45-47	50-52	53-55	60-62	61-63
Communications	0	0	0	0	0	0

VALUATION

Company Has Significant Upside As Operating Margins Improve

The company trades at a fully diluted **enterprise value of \$194 million** and is generating cash. At the end of Q2 2021, the company had \$47.4 million (or \$1.66 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 easily worth more than \$10 million. Plus it also owns other real estate in China and Taiwan.

Were we to use the current average enterprise value to trailing twelve-month sales of 10.9 times and apply it to OIIM's trailing 12-month \$95 million revenues, we would calculate an enterprise value of \$1

billion. Adding to it \$47.4 million in cash and equivalents gives us a market cap of \$1.1 billion or **\$34.00 per share** using fully diluted shares.

As it is now generating profits, we can even look at the stock on a PE basis. It currently trades at 13.2 times 2022 estimated EPS and we expect 29% EPS growth from 2021 to 2022 or a PE to growth of 0.5 times.

Competitors	EV	TTM Sales	EV/Sales
MPWR	16,340	844	19.3
CREE	11,010	921	11.9
MCHP	49,280	5,300	9.3
MXIM	25,010	2,460	10.2
TXN	171,120	15,420	11.1
CRUS	4,780	1,370	3.5
Average			10.9

Looking at O2 Micro from an M&A prospective we can look at other fabless semiconductor transactions.

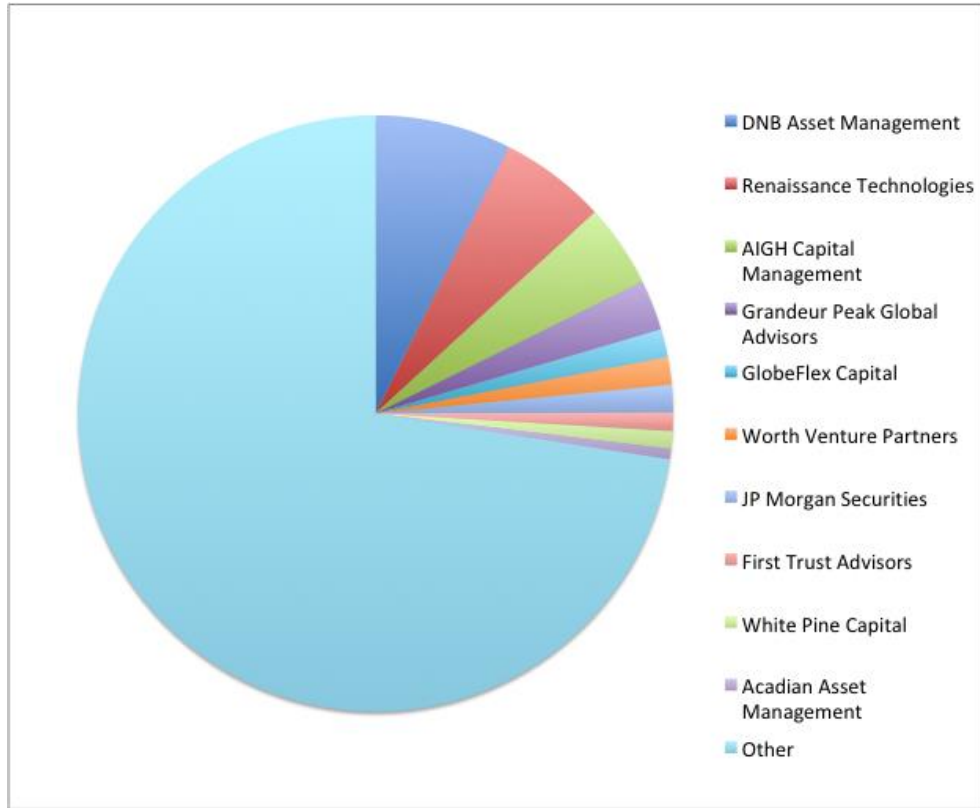
On February 8, 2021, Japan's Renesas Electronics bought Dialog Semiconductor for €4.9 billion (\$5.9 billion) in cash. In its last 12 months it generated \$1.4 billion in sales making that 4.2 times sales. Last year Dialog bought Adesto for \$500 enterprise value when it was expected to report FY2019 sales of \$118 million, also at 4.2 times sales.

This year, AMD plans to buy Xilinx for [\\$35 billion](#) in stock. In its most recent four quarters it did \$3.05 billion in sales making this 11.5 times sales.

In May 2018, Microchip Technology bought Microsemi for \$10.15 billion, which was a valuation of 5.5 times its trailing twelve-month revenues of \$1.845 billion. Two other 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 was 9.9 times its trailing four quarters of revenue of \$1.5 billion.

OWNERSHIP

As of December 31, 2020, the aggregate number of ordinary shares beneficially owned by directors and management was 269,445,850 (5,388,917 ADS). This number includes options to purchase 94,339,350 ordinary shares (1,886,787 ADS) under the 2005 Share Option Plan and 2015 Share Incentive Plan exercisable within 60 days of December 31, 2020.



RISKS

- O₂Micro has high exposure to the global demand for TVs, particularly those sold in China. It is dependent on free dimming and high power LED lighting, 4K and 8K and other high end TVs and monitors, lithium ion battery powered tools and appliances, and IoT to give it revenue and margin growth.
- In 2020, two customers accounted for 25% of revenues and their loss could cause a meaningful decline in revenues. 90% of revenues were from China.
- The company is still somewhat affected by the proliferation of the coronavirus in China as their production and most of their customers are located in China and sell to the Chinese market. Right now is unknown how restrictions and health concerns will affect commerce and the supply chain in both the short and long term.
- There are chip shortages in throughout the industry, which could affect O₂Micro's customers' ability to complete building products, which could suppress orders for O₂Micro's products.
- Given its large number of patents, litigation risk is a possibility as the company enforces its patents.

INCOME STATEMENT

	March Q1 20	June Q2 20	Sept Q3 20	Dec Q4 20	March Q1 21	June Q2 21	Sept Q3 21E	Dec Q4 21E	2019	2020	2021E	2022E
REVENUE												
Net Revenue	15.6	17.3	22.2	23.2	23.2	26.2	26.9	27.0	60.9	78.3	103.3	118.8
Yr-to-yr Gr.	22%	21%	39%	30%	49%	52%	21%	16%		29%	32%	15%
OPERATING EXPENSES												
Cost of goods sold	7.5	8.4	10.7	11.3	11.2	12.7	13.0	13.1	29.0	38.0	50.0	57.5
Gross Margin	8.1	8.9	11.5	11.9	12.0	13.5	13.9	13.9	32.0	40.4	53.3	61.3
% of Sales	51.9%	51.2%	51.8%	51.3%	51.6%	51.5%	51.6%	51.6%	52.5%	51.6%	51.6%	51.6%
R&D	4.1	4.1	4.1	3.9	4.6	4.7	4.7	4.7	19.1	16.2	18.6	20.0
SG&A	4.5	4.3	4.3	4.4	5.1	5.5	5.6	5.6	19.3	17.5	21.7	23.5
One-time expenses & Adj.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tot Operating Exp.	8.7	8.4	8.4	8.3	9.6	10.2	10.3	10.3	38.4	33.7	40.3	43.5
Operating Income	(0.6)	0.5	3.1	3.7	2.4	3.3	3.6	3.7	(6.4)	6.7	12.9	17.8
Operating margin	-4%	3%	14%	16%	10%	13%	13%	14%	-10%	9%	13%	15%
Interest income	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.3	0.2
Net gain recognized on LT investments	(1.1)	1.1	(0.2)	0.1	0.0	0.0	0.0	0.0	0.8	(0.1)	0.0	0.0
Foreign exchange loss	0.0	(0.1)	(0.1)	(0.1)	0.0	(0.1)	0.0	0.0	(0.2)	(0.2)	0.0	0.0
Gain on sale of real estate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Government grants	0.0	0.0	0.0	0.7	0.1	0.0	0.0	0.0	0.2	0.8	0.1	0.0
Other (rent) - net	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.6	0.5	0.5	0.5
One-time charge	0.0	(1.2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(1.2)	0.0	0.0
Total other Income	(0.764)	0.2	0.1	0.9	0.4	0.1	0.2	0.2	2.5	0.4	0.8	0.7
Pretax Income	(1.3)	0.6	3.2	4.6	2.7	3.4	3.8	3.9	(3.9)	7.1	13.8	18.6
Pretax margin	-8.6%	3.7%	14.3%	19.7%	11.7%	13.0%	14.1%	14.3%	-6.3%	9.0%	13.3%	15.6%
Taxes	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.3	1.2	0.9	1.0	1.2
Tax Rate	-15.4%	40.8%	8.0%	4.7%	9.0%	7.4%	6.9%	7.0%	-30.3%	13.3%	7.5%	6.5%
GAAP Net Income	(1.5)	0.4	2.9	4.4	2.5	3.2	3.5	3.6	(5.0)	6.1	12.7	17.4
Non-GAAP Net Income	(0.0)	0.8	3.4	4.0	2.9	3.6	3.8	3.9	(4.8)	8.2	14.2	18.8
GAAP ADSPS-Basic	(\$0.06)	\$0.01	\$0.11	\$0.16	\$0.09	\$0.11	\$0.12	\$0.13	(\$0.19)	\$0.23	\$0.45	\$0.61
GAAP ADSPS-Fully dil.	(\$0.06)	\$0.01	\$0.10	\$0.14	\$0.08	\$0.10	\$0.11	\$0.12	(\$0.19)	\$0.21	\$0.41	\$0.54
Non-GAAP	(\$0.00)	\$0.03	\$0.12	\$0.13	\$0.09	\$0.12	\$0.12	\$0.13	(\$0.18)	\$0.29	\$0.46	\$0.59
Yr-to-yr Gr.	-99%	-135%	-677%	148%	-5813%	299%	4%	-3%	-1%	-255%	60%	29%
ADS Out	26.7	27.0	27.0	27.2	28.0	28.4	28.4	28.4	26.3	27.0	28.3	28.4
Fully diluted ADS	26.7	27.7	28.9	30.7	31.4	31.1	31.1	31.1	26.3	28.7	31.1	32.0
Yr-to-yr Gr.	-1%	5%	10%	13%	18%	12%	7%	1%	-1%	9%	8%	3%
EBITDA	\$0.445	\$1.83	\$4.63	\$5.10	\$3.87	\$4.76	\$5.08	\$5.15	(\$3.53)	\$12.01	18.86	\$23.76
Margin	2.9%	10.6%	20.8%	22.0%	16.7%	18.2%	18.9%	19.1%	-5.8%	15.3%	18.3%	20.0%

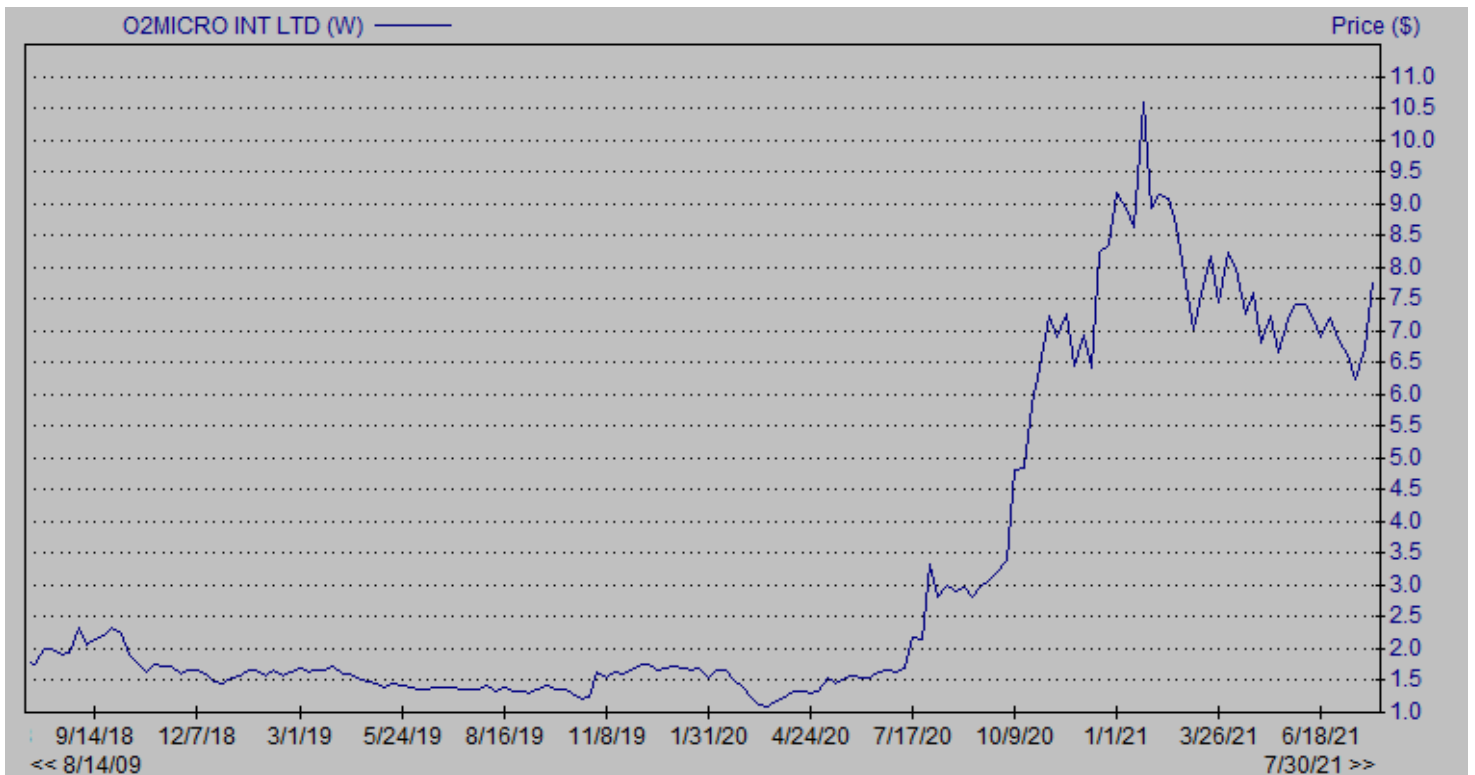
BALANCE SHEET

	June 30, 2021	March 31, 2021	Qtr-to-Qtr % Change	June 30, 2019	Yr-to-Yr % Change
CURRENT ASSETS					
Cash and cash equivalents	\$21,856	\$20,105	8.7%	\$12,676	72.4%
Restricted cash	38	37	2.7%	36	5.6%
Short-term investments	25,497	27,525	-7.4%	28,684	-11.1%
Accounts receivable, net	16,555	17,436	-5.1%	11,730	41.1%
Inventories	16,005	14,748	8.5%	12,416	28.9%
Prepaid expenses and other current assets	4,229	3,292	28.5%	1,505	181.0%
Total current assets	84,180	83,143	1.2%	67,047	25.6%
LONG-TERM INVESTMENTS	992	992	0.0%	3,327	-70.2%
PROPERTY AND EQUIPMENT, NET	22,113	19,456	13.7%	15,150	46.0%
OTHER ASSETS	4,397	3,918	12.2%	5,484	-19.8%
Total other assets	27,502	24,366	12.9%	23,961	14.8%
TOTAL ASSETS	111,682	107,509	3.9%	91,008	22.7%
CURRENT LIABILITIES					
Notes and accounts payable	10,132	9,850	2.9%	7,834	29.3%
Income tax payable	220	360	-38.9%	318	-30.8%
Lease liabilities	1,018	1,047	-2.8%	644	58.1%
Accrued expenses and other current liabilities	5,317	5,167	2.9%	5,090	4.5%
Total current liabilities	16,687	16,424	1.6%	13,886	20.2%
OTHER LONG-TERM LIABILITIES					
Accrued pension liabilities	152	169	-10.1%	193	-21.2%
Deferred tax liabilities	651	634	2.7%	629	3.5%
Lease liabilities	1,979	2,149	-7.9%	1,752	13.0%
Other liabilities	69	67	3.0%	66	4.5%
Total long-term liabilities	2,851	3,019	-5.6%	2,640	8.0%
Total liabilities	19,538	19,443	0.5%	16,526	18.2%
SHAREHOLDERS EQUITY					
Ordinary shares	33	33	0.0%	33	0.0%
Additional paid-in capital	142,569	142,342	0.2%	142,928	-0.3%
Accumulated deficits	(41,628)	(44,579)	-6.6%	(53,987)	-22.9%
Accumulated other comprehensive income	5,925	5,540	6.9%	4,573	29.6%
Treasury stock	(14,755)	(15,270)	-3.4%	(19,063)	-22.6%
Total shareholders equity	92,144	88,066	4.6%	74,484	23.7%
TOTAL LIABILITIES AND SHAREHOLDERS EQUITY	111,682	107,509	3.9%	91,008	22.7%
Cash and equivalents	\$47,353	\$47,630	-0.6%	\$41,360	14.5%
Change in cash and equivalents	(277)	(176)	57.4%	(3,343)	-91.7%
DSO	58	66	-12.1%	59	-1.7%
Inventory Days	109	109	0.0%	119	-8.4%

ANNUAL CASH FLOW

	2020	2019	2018	2017
OPERATING ACTIVITIES				
Net loss	\$ 6,127	\$ (5,039)	\$ 2,088	\$ (6,145)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation and amortization	3,225	1,780	1,641	1,667
Stock-based compensation	1,414	1,462	1,421	1,589
Other income - government grants	(817)			
Loss on asset write-off		0	0	0
Inventory write-downs	405	1,359	1,328	642
Net gain recognized on LT investments	79	(788)	(9,916)	0
Gain on sale of long-term investments	0	(500)	0	(20)
Impairment loss on long-term investments	0	0	0	0
Gain on disposal of property & eqt, net	(189)	2	(6)	(137)
Deferred income taxes	(5)	(133)	(155)	40
Other, net	0	0	0	0
Changes in operating assets and liabilities:				
Accounts receivable, net	(6,095)	1,053	(2,204)	(1,979)
Inventories	(4,197)	133	(2,286)	(697)
Prepaid expenses and other current assets	(1,276)	981	(1,031)	(139)
Deferred charges	(3,836)	(571)	(983)	(553)
Operating lease right of use assets	(169)	(1,477)	0	0
Notes and accounts payable	3,128	285	2,122	(1,869)
Income tax payable	(339)	198	72	161
Government grants	817			
Accrued expenses and other current liabilities	808	661	(105)	186
Operating lease liabilities	197	1,494	0	0
Accrued pension liabilities	(33)	(42)	(20)	13
Other liabilities	3	3	(1)	3
Net cash used in operating activities	(753)	861	(8,035)	(7,238)
Acquisition of:				
Short-term investments	(4,491)	(34,649)	(11,197)	(8,505)
Long-term investments	0	0	0	0
Property and equipment	(2,476)	(1,672)	(1,272)	(704)
Decrease (increase) in:				
Restricted assets	0	0	0	0
Restricted cash	0	0	0	0
Other assets	(47)	6	(12)	22
Proceeds from:				
Sale of short-term investments	11,418	4,953	22,540	12,635
Sale of long-term investments	3,124	7,061	2,582	0
Return of capital from LT investment	0	0	0	1,163
Sale of real estate	0	2,169	0	0
Disposal of property and equipment	331	1	16	145
Net cash provided by investing activities	7,859	(22,131)	12,657	4,756
FINANCING ACTIVITIES				
Acquisition of treasury stock	(146)	(510)	(451)	(708)
Proceeds from:				
Exercise of stock options	476	7	10	29
Issuance of ordinary shares under the ESP Plan	77	109	86	84
Net cash used in financing activities	407	(394)	(355)	(595)
EFFECTS OF CHANGES IN FOREIGN EX RATE	545	(53)	(374)	268
NET CHANGE IN CASH AND CASH EQUIV.	8,058	(21,717)	3,893	(2,809)
CASH & CASH EQUIV. AT BEGINNING OF YR	10,731	32,448	28,555	31,364
CASH & CASH EQUIVALENTS AT END OF YR	18,789	10,731	32,448	28,555
Cash paid for tax	\$ 1,223	\$ 1,171	\$ 1,218	\$ 818
Cash Flow	10,239	(1,857)	(3,599)	(2,364)
Free cash flow	8,094	(3,528)	(4,855)	(3,068)

HISTORICAL STOCK PRICE



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