UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM 6-K

Report of Foreign Private Issuer Pursuant to Rule 13a-16 or 15d-16 under the Securities Exchange Act of 1934

For the Month of March 2010

CAMTEK LTD. (Translation of Registrant's Name into English)

Ramat Gavriel Industrial Zone
P.O. Box 544
Migdal Haemek 23150
ISRAEL
(Address of Principal Corporate Offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F x Form 40-F o

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities and Exchange Act of 1934.

Yes o No x

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

CAMTEK LTD. (Registrant)

By: /s/ Mira Rosenzweig

Mira Rosenzweig, Chief Financial Officer

Dated: March 8, 2010

Camtek Ltd.

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INVESTOR RELATIONS

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CAMTEK ANNOUNCES FOURTH QUARTER AND FULL YEAR 2009 RESULTS CONTINUED IMPROVEMENT IN REVENUES 39% year-over-year revenue increase

SURPASSES NON-GAAP BREAKEVEN IN FOURTH QUARTER 2009

MIGDAL HAEMEK, Israel – March 8, 2010 – Camtek Ltd. (NASDAQ and TASE: CAMT), today announced its financial results for the fourth quarter and year ended December 31, 2009.

Main Quarterly Financial Highlights

- Sequential revenue increase of 19% in fourth quarter and year-over-year increase in fourth quarter of 39% to \$17.2 million.
- Reached profitability on non-GAAP basis: non-GAAP operating income of \$0.8 million and non-GAAP net income of \$0.5 million.
 - GAAP operating loss of \$3.2 million and GAAP net loss of \$4 million.
- Cash and cash equivalents balance increased by \$2 million during the quarter, ending the year with net cash of \$15.8 million.

Results on a non-GAAP basis, exclude the following items: (i) Expenses with respect to the acquisition of SELA and Printar; (ii) certain inventory write-down; and (iii) share based compensation expenses. A reconciliation between the GAAP and non-GAAP results appears in the tables at the end of this press release.

Fourth Quarter Financial Results

Revenues for the fourth quarter of 2009 increased 39% to \$17.2 million, compared to \$12.4 million in the fourth quarter of 2008. Revenues were also stronger sequentially, increasing by 19% compared with \$14.5 million in the third quarter of 2009.

Gross profit on a GAAP basis for the fourth quarter was \$3.7 million (22% of revenues), compared to gross profit of \$3.0 million (24% of revenue) in the fourth quarter of 2008. On a non-GAAP basis, gross profit for the fourth quarter of 2009 totaled \$7.3 million (43% of revenues).

During the fourth quarter of 2009, the Company recorded an inventory write-down of \$3.2 million consisting of (i) \$2.6 million due to a strategic decision by the Company to discontinue certain old products; and (ii) \$0.6 million resulting from a write down of software purchased from a former single source supplier which has been replaced by internally developed software, compared to \$1.0 million inventory write down in the fourth quarter of 2008.

On a GAAP basis, the operating loss in the fourth quarter of 2009 was \$3.2 million, compared to an operating loss of \$5.6 million in the fourth quarter of 2008. Non-GAAP operating income for the fourth quarter of 2009 reached \$0.8 million.

On a GAAP basis, net loss in the fourth quarter of 2009 was \$4.0 million, or a loss of \$0.14 per share, compared to a net loss of \$5.5 million, or a loss of \$0.19 per share, in the fourth quarter of 2008. Non-GAAP net income for the fourth quarter of 2009 totaled \$0.5 million, or \$0.02 per share.

Cash and cash equivalents as of December 31, 2009, increased by \$2 million in the quarter and totaled \$15.8 million compared to \$13.8 million at the end of the prior quarter. The increase in cash during the quarter resulted primarily from a decrease in inventory, an increase in revenues and improved collections.

Full Year 2009 Results Summary

Revenues for the full year of 2009 were \$53.5 million, compared to \$75.5 million reported in 2008. Gross profit on a GAAP basis for 2009 was \$17.5 million (33% of revenues), compared to \$27.8 million (37% of revenues) in 2008. Gross profit on a non-GAAP basis in 2009, was \$21.1 million (39% from revenues).

On a GAAP basis, the operating loss in 2009 was \$10.5 million, compared to an operating loss of \$9.8 million in 2008. Non-GAAP operating loss in 2009 was \$6.4 million.

On a GAAP basis, operating loss in 2009 includes an inventory write-down of \$4.2 million consisting of the above mentioned write downs items and additional \$1.0 million of other inventory write-off which was not excluded in the non-GAAP figures, compared to a \$4.1 million inventory write down in 2008.

Net loss on a GAAP basis for 2009 was \$11.8 million, compared to a net loss of \$9.6 million for 2008. Net loss on a non-GAAP basis for 2009, was \$7.1 million.

Cash and cash equivalents as of December 31, 2009, decreased by \$0.1 million from \$15.9 million at December 31, 2008. During the year the company generated positive operating cash flow of \$3.9 million and repaid loans in the amount of \$3.6 million.

Roy Porat, Camtek's General Manager, commented, "This quarter we again strongly grew our top line and we achieved profit on a non-GAAP basis. Our tight expense control coupled with a continued increase in orders, has enabled us to end 2009 in a stronger position." Continued Mr. Porat, "As we move into 2010, our business is primed for growth. We are enjoying a recovery in the two industries that we operate in, particularly the semiconductor industry. Our expected new growth engines that we recently acquired, SELA and Printar, also represent significant potential for us and we are very excited with regard to their prospects as we move through 2010 and beyond. Looking ahead, we are cautiously optimistic. We are seeing a continued improvement in orders and we believe 2010 will be a stronger year for Camtek. For the first quarter, which is normally seasonally weak, we expect revenues of between \$16-18 million. We also expect to increase our operating expenses in both sales and marketing as well as R&D, in order to capitalize on a number of current strategic opportunities for both our legacy businesses as well as our new growth engines. Our overall goal remains to build Camtek into a larger and more profitable business, by increasing our addressable markets by providing customers new products and offering that are synergetic with our overall business."

Conference Call

Camtek will host a conference call today, March 8, 2010, at 10:00 am ET. Roy Porat, General Manager of Camtek Israel and Mira Rosenzweig, Chief Financial Officer will host the call and will be available to answer questions after presenting the results.

To participate, please call one of the following telephone numbers at least 10 minutes before the start of the call.

US: 1 888 668 9141 at 10:00 am Eastern Time Israel: 03 918 0644 at 5:00 pm Israel Time

International: +972 3 918 0644

For those unable to participate, the teleconference will be available for replay on Camtek's website at http://www.camtek.co.il/ beginning 24 hours after the call.

ABOUT CAMTEK LTD.

With headquarters in Migdal Ha'Emek Israel, Camtek Ltd., designs, develops, manufactures, and markets automatic optical inspection systems and related products. Camtek's automatic inspection systems are used to enhance both production processes and yield for manufacturers in the printed circuit board industry, the high density interconnect substrate industry and the semiconductor manufacturing and packaging industry. This press release is available at www.camtek.co.il

This press release may contain projections or other forward-looking statements regarding future events or the future performance of the Company. These statements are only predictions and may change as time passes. We do not assume any obligation to update that information. Actual events or results may differ materially from those projected, including as a result of changing industry and market trends, reduced demand for our products, difficulties surrounding the timely development of our new products and their adoption by the market, increased competition in the industry, price reductions, litigation risks, as well as due to risks identified in the documents filed by the Company with the SEC.

Use of Non-GAAP Measures

This press release provides financial measures for net income and basic and diluted earnings per share that exclude certain items and are therefore not calculated in accordance with generally accepted accounting principles (GAAP). Management believes that these non-GAAP financial measures provide meaningful supplemental information regarding our performance that enhances management's and investors' ability to evaluate the Company's net income and earnings per share and to compare it with historical net income and earnings per share.

The presentation of this non-GAAP financial information is not intended to be considered in isolation or as a substitute for the financial information prepared and presented in accordance with GAAP. Management uses both GAAP and non-GAAP measures when evaluating the business internally and therefore felt it is important to make these non-GAAP adjustments available to investors.

CAMTEK LTD. and its subsidiaries

Consolidated Balance Sheets

1	In	thousands)	١
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	2009 U.S. D	nber 31, 2008 ollars (In sands)
Assets		
Current assets		
Cash and cash equivalents	15,802	15,949
Accounts receivable, net	18,712	18,156
Inventories	14,176	9,792
Due from affiliates	344	414
Other current assets	1,691	1,929
Deferred tax asset	39	39
Total current assets	50,764	46,279
Fixed assets		
Cost	26,017	23,624
Less - Accumulated depreciation	10,623	7,976
Fixed assets, net	15,394	15,648
Long term inventory	4,661	21,653
Deferred tax asset	127	127
Other assets, net	460	453
Intangible assets (*)	9,017	575
	14,265	22,808
Total assets	80,423	84,735
Liabilities and shareholders' equity		,,,,,,,
Current liabilities		
Short term loan	_	1,500
Accounts payable –trade	4,494	5,240
Due to affiliates	-	294
Convertible loan – current portion	1,666	1,667
Other current liabilities	12,945	11,254
Total current liabilities	19,105	19,955
Long term liabilities	17,103	17,733
Convertible loan, net of current portion	_	1,666
Liability for employee severance benefits	487	399
Other long term liabilities (*)	9,810	-
Other long term matrices ()	10,297	2,065
Total liabilities	29,402	22,020
Total Habilities	29,402	22,020
Shareholders' equity		
Ordinary shares NIS 0.01 par value, authorized 100,000,000 shares,		
issued 31,328,119 in 2009 and 31,227,484 in 2008,		
outstanding 29,235,743 in 2009 and 29,135,108 in 2008	132	132

Additional paid-in capital	60,297		60,149	
Retained earnings (accumulated losses)	(7,510)	4,332	
	52,919		64,613	
Treasury stock, at cost (2,092,376 in 2009 and in 2008)	(1,898)	(1,898)
Total shareholders' equity	51,021		62,715	
Total liabilities and shareholders' equity	80,423		84,735	

^(*) mainly relate to Printar and SELA acquisitions based on preliminary study. Changes may occur upon completion of the final purchase price allocation study.

Camtek Ltd.

Consolidated Statements of Operations

(in thousands, except share data)

	Year ended				Three months ended December 31,			
	December 31, 2009 2008				2009	eme	2008	
	U.S. dollars			U.S. dol		ollars		
Revenues	53,521	53,521 75,463			17,222		12,399	
Cost of revenues	36,039	36,039 47,615			13,489	9,386		
Gross profit	17,482		27,848		3,733		3,013	
Research and development costs	10,319		12,801		2,771		3,288	
Selling, general and administrative expenses	17,667		24,834		4,181		5,322	
	27,986		37,635		6,952		8,610	
Operating loss	(10,504)	(9,787)	(3,219)	(5,597)
Financial income (expenses), net	(952)	1,000		(599)	702	
Loss before income taxes	(11,456)	(8,787)	(3,818)	(4,895)
Income tax	(386)	(770)	(166)	(570)
Net loss	(11,842)	(9,557)	(3,984)	(5,465)

Net loss per ordinary share:

Basic	(0.40))	(0.32))	(0.14))	(0.18)	
Diluted	(0.40)	(0.32))	(0.14))	(0.18)	

Weighted average number of ordinary shares outstanding:

Basic	29,218	29,916	29,234	30,212
Diluted	29,218	29,916	29,234	30,212

RECONCILIATION OF GAAP TO NON-GAAP RESULTS

(in thousands, except share data)

Reported net loss attributable to Camtek Ltd. on GAAP	Year ended December 31, 2009 2008 U.S. dollars				Dec 2009	chs ended er 31, 2008 ollars		
basis	(11,842)	(9,557)	(3,984)	(5,465)
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Acquisition of Sela and Printar related expenses(1)	1,264		-		1,164		-	
Inventory write -downs (2)	3,213		-		3,213		-	
Share-based compensation	148		271		-		67	
Write off of Other assets	102		-		102		-	
Non-GAAP net (loss) income	(7,117)	(9,286)	495		(5,397)
Gross margin on GAAP basis	33	%	37	%	22	%	24	%
Reported gross profit on GAAP basis	17,482		27,848		3,733		3,013	
Inventory write off (2)	3,213		-		3,213		-	
Non GAAP gross margin	39	%	37	%	43	%	24	%
Non-GAAP gross profit	21,093		27,848		7,343		3,013	
Reported Operating loss attributable to Camtek Ltd. on								
GAAP basis	(10,504)	(9,787)	(3,219)	(5,597)
Acquisition of Sela and Printar related expenses(1)	678		-		678		-	
Inventory write off (2)	3,213 148		-		3,213		-	
Share-based compensation			271		-		67	
Write off of Other assets			-		102		-	
Non-GAAP Operating (loss) income)	(9,516)	774		(5,530)

⁽¹⁾ During the twelve months and three months ended December 31, 2009, the Company recorded acquisition expenses of \$1.3 million and 1.2 million, respectively, consisting of: (1) inventory written-up to fair value in purchase accounting charges of \$0.4 million, for both periods. This amount recorded under cost of revenues line item. (2) Revaluation adjustments of \$0.6 million and \$0.5 million of contingent consideration and certain future liabilities recorded at fair value recorded under finance expenses line item (3) Restructuring expenses of \$0.2 million related to the integration of the acquired operations, mainly the abandonment of certain rented properties, recorded under general and administrative expenses line item. (4) \$0.1 million amortization of intangible assets acquired recorded under cost of revenues line item.

⁽²⁾ In the fourth quarter of 2009 and during the year ended December 31, 2009 the company recorded inventory write downs in the amount of \$2.6 million due to a strategic decision by the Company to discontinue certain old products and an additional amount of \$0.6 million, for both periods from a write down of software purchased from a former single source supplier which has been replaced by internally developed software.