

NOVA MEASURING INSTRUMENTS LTD  
Form 6-K  
May 10, 2010

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UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, DC 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER  
PURSUANT TO RULE 13a-16 OR 15d-16 OF  
THE SECURITIES EXCHANGE ACT OF 1934

May 10, 2010

Commission File No.: 000-30688

NOVA MEASURING INSTRUMENTS LTD.  
(Translation of registrant's name into English)

Building 22 Weizmann Science Park, Rehovot  
P.O.B 266  
Israel  
(Address of principal executive offices)

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

Form 20-F  S    Form 40-F  F

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

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

Yes  F    No  S

Attached hereto and incorporated by way of reference herein is a press release issued by the Registrant and entitled "Nova Announces Productivity Enhancement Packages".

#### SIGNATURES

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.

NOVA MEASURING INSTRUMENTS LTD.  
(Registrant)

Date: May 10, 2010

By: /s/ Dror David

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Dror David  
Chief Financial Officer

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### Nova Announces Productivity Enhancement Packages

Packages extend the useful lifetime of about 1000 200mm and 300mm integrated metrology systems installed base

REHOVOT, Israel, May 10, 2010 - Nova Measuring Instruments Ltd. (NASDAQ: NVMI) provider of leading edge stand-alone metrology and the market leader of integrated metrology solutions to the semiconductor process control market, today announced the availability of productivity enhancement packages. The packages elevate the metrology performance and increase the sampling rate of wafers being processed to enable tighter process control. Customers also enjoy the benefit of improved cost of ownership, by extending tool lifetime to advanced technology nodes, increasing throughput and reducing consumables costs.

The basic productivity package provides the following benefits:

- Up to 40% reduction in cycle time, enabling 100% sampling to increase process CPk
- Up to 30% improvement in precision and long term stability
- 3-times longer lamp lifetime, reducing tool maintenance costs

The second package is the Optical CD productivity package, which expands the measurement capabilities of a thin film integrated metrology tool to Optical CD applications, addressing the increase in application complexity and pattern densities experienced by customers as they migrate existing capacity to next generation technology nodes.

“The introduction of productivity enhancement packages is evidence of our commitment to protect our customers’ investment in Nova’s metrology,” said Ziv Barzilay, Director of Global Services at Nova. “As semiconductor manufacturers ramp up following the downturn, they deploy existing equipment to its maximal capacity. By expanding the performance envelope of integrated metrology, our customers achieve higher utilization and better yield at advanced technology nodes. We already shipped productivity packages to leading memory manufacturers in two continents and the interest we see is high. Going forward we will continue to develop more enhancements for our installed base which will be announced as they become available later this year.”

About Nova: Nova Measuring Instruments Ltd. develops, produces and markets advanced integrated and stand alone metrology solutions for the semiconductor manufacturing industry. Nova is traded on the NASDAQ & TASE under the symbol NVMI. The Company's website is [www.nova.co.il](http://www.nova.co.il).

This press release contains forward-looking statements within the meaning of safe harbor provisions of the Private Securities Litigation Reform Act of 1995 relating to future events or our future performance, such as statements regarding trends, demand for our products, expected deliveries, transaction, expected revenues, operating results, earnings and profitability. Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied in those forward looking statements. These risks and other factors include but are not limited to: our dependency on a single integrated process control product line; the highly cyclical nature of the markets we target; our inability to reduce spending during a slowdown in the semiconductor industry; our ability to respond effectively on a timely basis to rapid technological changes; risks associated with our dependence on a single manufacturing facility; our ability to expand our manufacturing capacity or marketing efforts to support our future growth; our dependency on a small number of large customers and small number of suppliers; risks related to our intellectual property; changes in customer demands for our products; new product offerings from our competitors; changes in or an inability to execute our business strategy; unanticipated manufacturing or supply problems; changes in tax requirements; changes in customer demand for our products; risks related to currency fluctuations; unanticipated consequences of the global economic crisis and risks related to our operations in Israel. We cannot guarantee future results, levels of activity, performance or achievements. The matters discussed in this press release also involve risks and uncertainties summarized under the heading "Risk Factors" in Nova's Annual Report on Form 20-F for the year ended December 31, 2009 filed with the Securities and Exchange Commission on March 26, 2010. These factors are updated from time to time through the filing of reports and registration statements with the Securities and Exchange Commission. Nova Measuring Instruments Ltd. does not assume any obligation to update the forward-looking information contained in this press release.

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