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Nova Receives over \$20 Million in Orders from several Foundry Customers

Majority of orders will be delivered during the third quarter of 2016

Rehovot, Israel, May 4, 2016 – Nova Measuring Instruments (Nasdaq: NVMI), a leading innovator and key provider of metrology solutions for advanced process control used in semiconductor manufacturing, announced today that several foundry customers recently placed orders exceeding \$20 million in aggregate for its Optical CD and X-Ray metrology solutions.

The orders were received during the last five weeks and include Nova's integrated and stand-alone optical metrology toolset combined with NovaMARS advanced modeling solution, and Nova's advanced X-Ray metrology solution, which combine X-Ray Photoelectron Spectroscopy (XPS) and X-Ray Fluorescence (XRF) for materials and thin-film measurements. The tools will support manufacturing in multiple technology nodes of 10nm and above.

"We are delighted with these significant orders received from various leading foundries, which are ramping up production capacity to meet the demand for leading-edge devices as well as for the emerging market related to the Internet of Things (IoT)," stated Eitan Oppenheim, Nova's President and CEO. "The recent booking stream represents another proof for our strong position in the foundry segment which is based on our continuous innovation and the increasing value we bring to our customers. These recent wins validate the unique value proposition of our combined Optical and X-Ray portfolio that better addresses our customers' growing demand for metrology convergence."

About Nova: Nova Measuring Instruments Ltd. delivers continuous innovation by providing advanced metrology solutions for the semiconductor manufacturing industry. Deployed with the world's largest integrated-circuit manufacturers, Nova's products deliver state-of-the-art, high-performance metrology solutions for effective process control throughout the semiconductor fabrication lifecycle. Nova's product portfolio, which combines high-precision hardware and cutting-edge software, supports the development and production of the most advanced devices in today's high-end semiconductor market. Nova's technical innovation and market leadership enable customers to improve process performance, enhance products' yields and accelerate time to market. Nova acts as a partner to semiconductor manufacturers from its offices around the world. Additional information may be found at www.novameasuring.com.

Nova is traded on the NASDAQ & TASE under the symbol NVMI.

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, but are not limited to, anticipated growth opportunities and projections about our business and its future revenues, expenses 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. Factors that may affect our results, performance, circumstances or achievements include, but are not limited to, the following: our dependency on three product lines; our dependency on a small number of large customers and small number of suppliers; the highly cyclical and competitive nature of the markets we target and we operate in; 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; our ability to recognize the benefits of ReVera acquisition and risks that the acquisition may disrupt current plans and operations and impact relationships with customers, distributors and suppliers; our dependency on PEMs; risks related to exclusivity obligations and non-limited liability that may be included in our commercial agreements and arrangements; our ability to retain our competitive position despite the ongoing consolidation in our industry; risks related to our dependence on our manufacturing facilities; risks related to changes in our order backlog; risks related to the worldwide financial instabilities; risks related to our intellectual property; new product offerings from our competitors; unanticipated manufacturing or supply problems; risks related to government programs we participate in; risks related to taxation; changes in customer demand for our products; risks related to currency fluctuations, risks related to acquisitions we may pursue 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, 2015 filed with the Securities and Exchange Commission on February 29, 2016. 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.