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Company Press Release

Eli Fruchter Joins Nova's Board of Directors

Former EZchip Founder and CEO augments board with proven Semiconductor experience

Rehovot, Israel, August 8, 2016 - Nova Measuring Instruments (Nasdaq: NVMI), a leading innovator and a key provider of metrology solutions for advanced process control used in semiconductor manufacturing, today announced that Eli Fruchter, founder and former CEO of EZchip Semiconductor, has been appointed to the Company's Board of Directors.

Mr. Eli Fruchter founded EZchip Semiconductor, a supplier of highly integrated Network Processors, where he served as the Chief Executive Officer until February 2016 when the company was acquired by Mellanox (Nasdaq: MLNX) for approximately \$811 million. Prior to EZChip he co-founded LanOptics, a supplier of networking products, where he served as Co-General Manger. During his tenure he took LanOptics public in a successful initial public offering and the stock began trading on the Nasdaq. Mr. Frutcher was also among the founders of Adacom Technologies Ltd., a manufacturer of data communications products. Mr. Fruchter holds a B.Sc. degree in Electrical Engineering from the Technion - Israel Institute of Technology.

"Eli is a leader and pioneer in the technology industry and we are pleased to welcome him to Nova's board of directors," said Dr. Micha Brunstein, Chairman of Nova's Board. "We believe his wide experience in different segments of the industry, along with his proven leadership, will further strengthen our board's breadth of talent. I have no doubt his contribution will be extremely valuable as Nova continues to grow and evolve its process control solutions."

"Nova has established a unique and compelling position in a growing market, differentiating itself from competitors and enabling sustainable, profitable growth," added Mr. Fruchter. "I am excited to be a part of this team and look forward to helping the company to continue its growth and diversification."

About Nova: Nova Measuring Instruments 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.