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Company Press Release

Ronnie Kenneth Joins Nova's Board of Directors

Rehovot, Israel, December 19, 2017 - Nova (Nasdaq: NVMI), a leading innovator and a key provider of metrology solutions for advanced process control used in semiconductor manufacturing, today announced that Ronnie (Miron) Kenneth, former Chief Executive Officer of Voltaire Technologies Ltd. (Nasdaq: VOLT) and former Chief Executive Officer of Pontis Ltd., has been appointed to the company's Board of Directors.

Mr. Kenneth is a veteran high-tech leader who served for ten years as Chairman and Chief Executive Officer at Voltaire, leading it to an initial public offering on Nasdaq in 2007. Following the company's merger with Mellanox Technologies Ltd. (Nasdaq: MLNX) in 2011, Mr. Kenneth became the Chief Executive Officer of Pontis Ltd., a privately-held company, until 2013. Mr. Kenneth currently serves as the Chairman of Teridion Technologies Ltd. and Varada Ltd., and he is a director of Allot Communications Ltd. (Nasdaq: ALLT) and Orbotech Ltd. (Nasdaq: ORBK).

"Ronnie brings a broad experience in leading technology companies. I am looking forward to adding his extensive experience in the high-tech industry to our board as Nova continues to expand. I have no doubt that Ronnie will be an important addition to our Board of Directors and will contribute to Nova's success." commented Dr. Micha Brunstein, Nova's Chairman of the Board.

"I am excited to join Nova and have the opportunity to contribute to its continued growth," added Mr. Kenneth. "Nova has already established a strong position in a rapidly expanding market, and I believe that this talented board will continue to chart a course of success for the company."

About Nova: Nova 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 efforts to complete and integrate current and/or future acquisitions; 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, 2016 filed with the Securities and Exchange Commission on March 3, 2017. 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.