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Nova Unveils New Generation of Dimensional Metrology Solutions

Rehovot, Israel – December 20, 2017 – Nova (Nasdaq: NVMI), a leading innovator and a key provider of metrology solutions for advanced process control used in semiconductor manufacturing, today launched two new optical metrology solutions as part of its advanced dimensional metrology portfolio. The new platforms, which include Nova i550 integrated metrology and Nova T600MMSR stand-alone metrology, are targeted to enhance Nova's OCD capabilities in the most advanced Memory and Logic production lines.

The new i550 integrated platform extends metrology performance by using newly designed optical metrology head to enable better precision and accuracy when measuring complex 3D devices. The newly designed integrated platform also delivers a significant boost in productivity to support the growing needs for high sampling multi-site measurement schemes required in the most advanced production lines, while enabling new disruptive modeling that incorporates machine learning and training capabilities. The i550 platform has been qualified with major process equipment vendors and has demonstrated superior dimensional metrology performance on 3D and thin film applications at leading Integrated Circuit (IC) manufacturers.

The new T600MMSR (Multi-Measurement Spectral Reflectometry) enhances Nova's stand-alone metrology performance by adding unique channels of information to its newly designed optical unit. The new platform is complemented with unique software algorithms for smart channels optimization to enable more accurate and faster solutions. The newly introduced system has demonstrated superior precision and accuracy that delivers breakthrough metrology capabilities for 3D devices and contributes to significant reduction in time-to-solution. The T600MMSR has been qualified by multiple leading IC manufacturers and is being deployed in their advanced R&D and production lines.

"This new state-of-the-art dimensional metrology portfolio expands upon our metrology innovation leadership and bolsters our competitive advantage in the advanced process control domain," commented Dr. Udi Cohen, Nova's Dimensional Metrology Division Head. "These breakthrough, innovative solutions will better assist our customers and contribute to their long-term success. The new add-ons to our advanced Dimensional Metrology portfolio solidify our growing position at the most advanced technology nodes, and are evidence of our strategy to tightly couple hardware and software solutions under one fleet for better process control and yield improvement."

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 in 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.