



NEWS RELEASE

Product News: Onto Innovation Announces New Inspection Platform for Leading-Edge Process Control and Device Reliability

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Onto Innovation's latest inspection advances have resulted in multiple orders from a top 3 OSAT and a top 3 image sensor manufacturer

WILMINGTON, Mass.--(BUSINESS WIRE)-- Onto Innovation Inc. (NYSE: ONTO) today announced the availability of its new Dragonfly® G3 inspection platform designed to meet the most advanced 2D and 3D sensitivity requirements for advanced packaging and specialty device manufacturers. The first Dragonfly G3 system was delivered to a leading OSAT partner in the fourth quarter of 2020. Orders received from a leading CMOS image sensor (CIS) manufacturer will be shipped in the first quarter of 2021 along with additional evaluation units to logic and memory customers.

The Dragonfly G3 platform includes a newly designed optical system with sub-micron resolution, greatly improving 2D defect detection capability in either bright field, dark field or Clearfind® illumination modes. In addition to greater sensitivity, the system scans more than 30% faster than the previous platform. It also utilizes a redesigned 3D metrology system called the LT-200, using a revolutionary dual head design that improves the 3D bump measurement throughput up to 50%. Onto Innovation software further differentiates this solution with Discover® Defect software, which provides a process control suite in real time for an expanding range of complex applications in 5G, high-performance computing, and complex DRAM packages.

Dr. Ju Jin, vice president and general manager of Onto Innovation's inspection business said, "This new suite of products provides our leading-edge customers with the technology they need to develop and produce high



performance products in two rapidly growing markets: high-end specialty devices; and advanced system-in-packages also referred to as chiplets. In these markets we have seen rapid reductions in feature sizes. These reductions require more sensitive tools providing repeatable and accurate data.

“The growing specialty device market, which includes next-generation power devices, RF filters, amplifiers, CIS and lidar sensors, now requires process control equipment beyond the capabilities of legacy systems in order to detect smaller and new defect types,” Jin continued. “The capabilities of the new Dragonfly platform were an important factor in our recent win at a second high-end CIS manufacturer. The incumbent tools were unable to see these low contrast defects of interest on critical layers. Our new optical resolution demonstrated that it was able to detect these defects repeatably at high volume manufacturing speed to improve yield.”

Kevin Heidrich, senior vice president of marketing added, “The advanced packaging market is exploding with a wide variety of packaging technologies and architectures. Manufacturers now require a single comprehensive system, that can handle 2D and 3D inspection and detect flaws that may cause early life failure. Our sub-micron sensitivity is critical for complex packaging designs requiring redistribution lines (RDL) approaching 1µm design rules. The Dragonfly G3 system is also enhanced by updated Clearfind technology. With new optics and advanced image processing algorithms, the new version of Clearfind can find a greater range of photoresist and chemical residues at faster speeds. Clearfind technology continues to expand in the market with more IDMs, foundries and OSATS adopting it to control their fan-out and pad-to-pad bonding processes. This exclusive technology is only available from Onto Innovation and is becoming inevitable for chip reliability, not just yield control.”

Kevin continued, “In addition to faster and more accurate data acquisitions, customers want to make real time and data-driven decisions. Our release of TrueADC® AI, which includes our proprietary multi-engine deep learning approach with the Dragonfly G3 platform, provides a complete solution for our customers. This solution has improved upon the rate of misclassifications by 30-50% while still outperforming manual classification rates by over 400%. This solution results in higher quality yield, and less scrap, complementing factory environmental missions around the world.”

With its increased scale, Onto Innovation is supporting customers with timely solutions to achieve their leading-edge product development and production. By working collaboratively with our customers, the new Dragonfly G3 inspection platform has already demonstrated it meets current and near future requirements for both 2D inspection and 3D metrology.

About Onto Innovation Inc.

Onto Innovation is a leader in process control, combining global scale with an expanded portfolio of leading-edge technologies that include: Un-patterned wafer quality; 3D metrology spanning chip features from nanometer scale

transistors to large die interconnects; macro defect inspection of wafers and packages; elemental layer composition; overlay metrology; factory analytics; and lithography for advanced semiconductor packaging. Our breadth of offerings across the entire semiconductor value chain helps our customers solve their most difficult yield, device performance, quality, and reliability issues. Onto Innovation strives to optimize customers' critical path of progress by making them smarter, faster and more efficient. Headquartered in Wilmington, Massachusetts, Onto Innovation supports customers with a worldwide sales and service organization. Additional information can be found at www.ontoinnovation.com.

Safe Harbor Statement

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 (the "Act") which include: Onto Innovation's business momentum and future growth; the benefit to customers of Onto Innovation's products; Onto Innovation's ability to both deliver products and services consistent with our customers' demands and expectations and strengthen its market position; as well as other matters that are not purely historical data. Onto Innovation wishes to take advantage of the "safe harbor" provided for by the Act and cautions that actual results may differ materially from those projected as a result of various factors, including risks and uncertainties, many of which are beyond Onto Innovation's control. Such factors include, but are not limited to, the length, severity and potential business impact of the COVID-19 pandemic, the Company's ability to leverage its resources to improve its position in its core markets; its ability to weather difficult economic environments; its ability to open new market opportunities and target high-margin markets; the strength/weakness of the back-end and/or front-end semiconductor market segments; fluctuations in customer capital spending and any potential impact as a result of the novel coronavirus situation. Additional information and considerations regarding the risks faced by Onto Innovation are available in Onto Innovation's Form 10-K report for the year ended December 31, 2019 and other filings with the Securities and Exchange Commission. As the forward-looking statements are based on Onto Innovation's current expectations, the Company cannot guarantee any related future results, levels of activity, performance or achievements. Onto Innovation does not assume any obligation to update the forward-looking information contained in this press release.

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