



## ESI Receives Significant Asia Order for Recently-Released Flex PCB Laser Via Drilling Solution

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***CapStone's innovative technology substantially increases throughput and yield at top-ten flex PCB manufacturer; enabling them to gain competitive advantage***

PORTLAND, Ore. - February 12, 2019 - Electro Scientific Industries (ESI), a division of MKS Instruments, Inc. (NASDAQ:MKSI) and an innovator in laser-based manufacturing solutions for the micro-machining industry, today announced an order for its recently-released CapStone™ laser drilling solution for processing flexible printed circuits (FPC). The order follows an extensive on-site system evaluation at Compeq Manufacturing, Huizhou, China, where CapStone delivered exceptional throughput and performance. Similar evaluations are underway at other major manufacturers where systems have already been qualified for production.

"Our testing and evaluation process for CapStone has been rigorous and extensive", said Cathay Wu, director, purchasing, Material Division, Compeq. "We have processed thousands of panels over the last few months with the CapStone system. We evaluated the system on a wide range of applications and material stacks, as well as numerous via types and sizes-in both panel and roll-to-roll processes-and achieved excellent yield. CapStone showed significant increases in throughput and savings in cost-per-panel, and has met or exceeded our expectations. We look forward to leveraging CapStone for a number of applications and taking advantage of its throughput and yield to stay competitive in this very demanding market."

"Capstone offers twice the throughput of our previous-generation system while maintaining yields, increasing uptime and significantly reducing maintenance costs," said John Williams, ESI's vice president of marketing. "These all translate directly into greater productivity and lower cost per panel. In the simplest analysis, doubling throughput doubles return on investment and halves the payback period."

"Since we put our first CapStone systems in the field, we have processed over a hundred thousand panels," Williams continued. "All systems are currently qualified and running in high-volume production. Given the cost-driven nature of the printed circuit board (PCB) processing industry, and CapStone's extraordinary value proposition, the system continues to generate significant interest and early customer adoption. We are looking forward to finalizing the placement of additional systems as the market learns what CapStone can do."

Developed by ESI, a leader in flex PCB laser drilling solutions, the CapStone system is optimized to process the FPCs widely used in consumer electronics, such as smartphones and other handheld devices. Building on the proven ESI platform, CapStone's new laser technology and control capabilities deliver breakthrough performance at twice the throughput of the previous-generation model, and with equivalent accuracy and precision in critical parameters such as via diameter and placement.

CapStone systems are available now, either directly from ESI or through ESI channel partners world-wide. For more information, please visit: [www.esi.com](http://www.esi.com).

### **About MKS Instruments**

MKS Instruments, Inc. is a global provider of instruments, subsystems and process control solutions that measure, monitor, deliver, analyze, power and control critical parameters of advanced manufacturing processes to improve process performance and productivity for our customers. Our products are derived from our core competencies in pressure measurement and control, flow measurement and control, gas and vapor delivery, gas composition analysis, residual gas analysis, leak detection, control technology, ozone generation and delivery, power, reactive gas generation, vacuum technology, lasers, photonics, sub-micron positioning, vibration control and optics. We also provide services relating to the maintenance and repair of our products, installation services and training. Our primary served markets include the semiconductor, industrial technologies, life and health sciences, research and defense. Additional information can be found at [www.mksinst.com](http://www.mksinst.com).

### **About ESI**

As a world leader in applied laser technology, ESI's manufacturing systems are designed to enable manufacturers of electronic components and devices to optimize their production capabilities and commercialize technologies through laser processing. ESI's primarily laser-based systems deliver more control, greater flexibility and more precise processing of a wider range of materials. The result is higher production quality, faster throughput, and higher yields. This enables manufacturers to more easily address new and more-challenging customer requirements, consistently meet aggressive production goals and better control processing costs. A division of MKS Instruments, ESI is headquartered in Portland, Oregon, with global operations from the Pacific Northwest to the Pacific Rim. More information is available at [www.esi.com](http://www.esi.com).

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### **SAFE HARBOR FOR FORWARD-LOOKING STATEMENTS**

Statements in this release regarding the acquisition of ESI by MKS, future financial and operating results, benefits and synergies of the transaction, future opportunities for the combined company and any other statements about MKS' or ESI's managements' future expectations, beliefs, goals, plans or prospects constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Any statements that are not statements of historical fact (including statements containing the words "will," "projects," "intends," "believes," "plans," "anticipates," "expects," "estimates," "forecasts," "continues" and similar expressions) should also be considered to be forward-looking statements. These statements are only predictions based on current assumptions and expectations. Actual events or results may differ materially from those in the forward-looking statements set forth herein. Among the important factors that could cause actual events to differ materially from those in the forward-looking statements are: litigation relating to the transaction; unexpected costs, charges or expenses resulting from the transaction; the risk that disruption from the transaction materially and adversely affects the respective businesses and operations of MKS and ESI; the ability of MKS to realize the anticipated synergies, cost savings and other benefits of the transaction, including the risk that the anticipated benefits from the transaction may not be realized within the expected time period or at all; competition from larger or more established companies in the companies' respective markets; MKS' ability to

successfully grow ESI's business; potential adverse reactions or changes to business relationships resulting from the announcement, pendency or completion of the transaction; the ability of MKS to retain and hire key employees; legislative, regulatory and economic developments, including changing conditions affecting the markets in which MKS operates, including the fluctuations in capital spending in the semiconductor industry and other advanced manufacturing markets, the economy in general as well as fluctuations in net sales to MKS' and ESI's existing and prospective customers; the challenges, risks and costs involved with integrating the operations of ESI and the companies we have previously acquired; potential fluctuations in quarterly results, the terms of our term loan and the terms of the financing incurred in connection with the transaction; dependence on new product development; rapid technological and market change; acquisition strategy; manufacturing and sourcing risks; volatility of stock price; international operations; financial risk management, and the other factors described in MKS' most recent Annual Report on Form 10-K for the fiscal year ended December 31, 2017 filed with the SEC and in ESI's Annual Report on Form 10-K for the fiscal year ended March 31, 2018 and in each Company's most recent quarterly report filed with the SEC. MKS and ESI are under no obligation to, and expressly disclaim any obligation to, update or alter these forward-looking statements, whether as a result of new information, future events or otherwise after the date of this press release.