

PRESS RELEASE

ASMPT introduces AERO PRO high-performance wire bonder

Maximum precision and flexibility for modern fine-wire bonding

Billerica (USA), July 9, 2025 – ASMPT, the world's leading provider of hardware and software solutions for semiconductor and electronics manufacturing, introduces its latest high-performance wire bonder: the AERO PRO. Developed for high-density semiconductor designs, the AERO PRO delivers the highest bonding accuracy and exceptional speed for wires with diameters of 0.5 mil ($\approx 12.7\mu\text{m}$). Thanks to integrated real-time monitoring and preventive maintenance functions, the system is ideally suited for use in intelligent, networked production environments.

Mobile devices, the automobile industry, medical technology, 5G/6G communication and industrial electronics require ever more compact and powerful systems, which in turn need high-precision wire connections in minimal space. To accommodate complex designs such as system-in-package (SiP) and multi-chip modules (MCMs) as well as applications like ball grid arrays (BGAs), land grid arrays (LGAs), memory modules or quad flat packages (QFPs) with external leads, the AERO PRO supports mixed-wire bonding. The versatile machine processes wires with diameters ranging from 0.5 to 2.0 mil (≈ 12.7 to $50.8\mu\text{m}$) and lengths ranging from 0.2 to 8.0 mm – ideal for fine-pitch bonding on high-density substrates measuring up to 105×300 mm.



AERO PRO, the innovative wire bonding solution for high-quality IC contacting

Optimized for precise bonding processes

For uniform 22-µm bond balls, the AERO PRO employs the innovative and patented X-POWER 2.0 transducer (“AEROducer”), a newly developed lightweight and vibration-optimized ultrasonic transducer made of composite materials that transfers the energy with great precision in X and Y directions. The mechanism of the XY table is designed for maximum stability and durability. It features software-supported calibrations, including a precisely controlled, friction-free wire clamp, and is optimized for greater bond cycles without compromising quality.

Intelligent automation

The AERO PRO supports AI-supported setups and process monitoring with the AERO EYE real-time monitoring system, AERO Diagnostics, and AERO Predictive Maintenance for performance forecasting. The continuous monitoring of quality and maintenance requirements increases both yield and operational efficiency. The AERO PRO is fully automation-capable and can be seamlessly integrated into automated guided vehicle (AGV) systems, rail-guided vehicle (RGV) systems, ceiling conveyor (OHT) systems, and manufacturing execution systems (MES).

More performance in a smaller footprint

The new wire bonder from ASMPT also impresses with its high efficiency in terms of space and resource requirements. Thanks to various improvements, the production output per unit area (UPH/floor space) has increased by 38% compared to the previous model. At the same time, the consumption of CDA (clean dry air) has been reduced by 40 liters per minute – a significant contribution to reducing operating costs and sustainability on the factory floor.

About ASMPT Limited (“ASMPT”)

ASMPT Limited is a leading global supplier of hardware and software solutions for the manufacture of semiconductors and electronics. Headquartered in Singapore, ASMPT’s offerings encompass the semiconductor assembly & packaging, and SMT (surface mount technology) industries, ranging from wafer deposition to the various solutions that organize, assemble and package delicate electronic components into a vast range of end-user devices, which include electronics, mobile communications, computing, automotive, industrial and LED (displays). ASMPT partners with customers very closely, with continuous investments in R&D helping to provide cost-effective, industry-shaping solutions that achieve higher productivity, greater reliability, and

enhanced quality. ASMPT is a founding member of the Semiconductor Climate Consortium.

To learn more about ASMPT, please visit www.asmpt.com.

About ASMPT Semiconductor Solutions (“ASMPT SEMI”)

ASMPT SEMI is the leading provider of forward-looking solutions for advanced packaging and semiconductor assembly. With its commitment to innovation and customer satisfaction, ASMPT SEMI offers a comprehensive range of products and services that meet the evolving needs of the microelectronics industry. Expert knowledge covers areas such as flip-chip and wafer-level packaging, advanced interconnect technologies, and more. ASMPT SEMI's state-of-the-art solutions enable customers to achieve higher performance, greater reliability, and improved cost-efficiency in the manufacturing of their semiconductor devices.

For more information about ASMPT SEMI, visit semi.asmpt.com.

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