

ADVANTECH US

For immediate release

Advantech US, Inc: Bridging the Chip to PCB Gap

Pittsburgh, PA, USA , Advantech US Inc., November 15, 2013 Advantech US has introduced a printing technology for the microelectronic industry to additively manufacture electronic sensors, devices, and circuits for fine features down to 5 μm in size. Like building blocks, this additive process deposits bulk materials, like metals, layer-by-layer to build components such as capacitors, resistors, and transistors.

Features and devices below 5 μm are typically the realm of Chips/VLSI. Features above 30 μm are the realm of traditional printed circuit and device technologies. The manufacturing processes of these two worlds have rarely intersected. Advantech US has developed a printing process that allows these worlds to merge.

The Advantech US process uses precision shadow masks combined with sub-micrometer registration with thermal, e-beam and sputter deposition techniques to additively print sensors, circuits, and devices on a variety of rigid and flexible substrates. This additive process reduces the complex etching processes, waste disposal and capital costs associated with photolithography. Finally, the use of bulk materials, not inks, takes full advantage of proven material properties and performance.

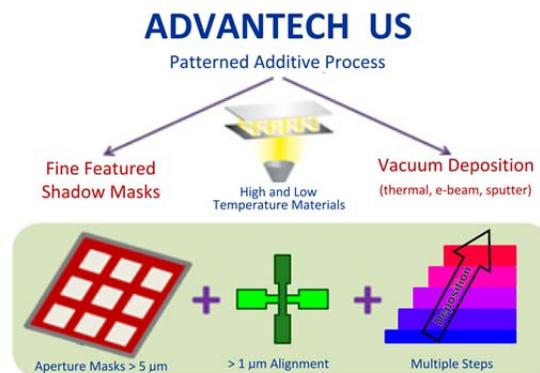


Figure 1: Advantech US Printing Process

The Advantech US process provides a green, efficient, cost-effective, in-line process in a small footprint.

(MORE)

This enabling technology lessens design and manufacturing complexity by reducing process steps and material handling. It provides the ability to generate features and devices to 5 µm on both rigid and flexible substrates.

“Our customers are seeking a solution to solve some of their fine-featured specifications – specifically for requirements between 5 µm and 50 µm using bulk metal, oxide and semiconductor materials,” says Whit Little, President and CEO of Advantech US, Inc. “Every customer has specific, customized requirements. We have found commercial applications in diverse manufacturing fields such as electronics, medical devices, display, and defense.”

The process also advances the fabrication of conducting lines, circuits and sensors down to 5 µm trace and space with 3 µm under development. Electronic components such as resistors, capacitors and transistors manufactured with this process are embedded directly into conducting lines, reducing design complexity, size and weight. The technology also reduces external component count and enables improved system performance, such as signal quality, by placing components closer to their optimal location on the board.

For more information, visit the Advantech US web site <http://www.advantechus.com> , [e-mail](mailto:slauer@advantechus.com) or call +1.412.706.5400.

Advantech US, Inc. is a Pittsburgh-based advanced manufacturer that has developed a novel additive manufacturing technology for microelectronics. Named one of the top Tech50 companies in the region for 2013, Advantech US was founded in 2004 by Active Matrix Display pioneer T. Peter Brody, [http://en.wikipedia.org/wiki/T. Peter Brody](http://en.wikipedia.org/wiki/T._Peter_Brody). The company holds over 30 patents in their fields of expertise and recently relocated to a 25,000 square foot facility that includes 9,000 square feet of clean space near the Pittsburgh International Airport. <http://www.advantechus.com>

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