

Shipping Over \$4M Worth of Equipment into China



Advantech U.S. is excited to announce that we are shipping over \$4M worth of equipment into China in the 2nd and 3rd quarters of 2017. This equipment has been sold to a factory near Shanghai that makes shadow masks as part of the supply chain for Organic Light Emitting Diodes (OLED) display manufacturing in Asia.

The manufacturing process for OLED mobile displays requires that the Red, Green Blue (RGB) color organic materials are deposited through a shadow mask or stencil, and lined up pixel by pixel, with extreme precision in the micrometer (thousandth of a millimeter) scale. These next generation OLED displays are used in mobile phones sold by Samsung and others with Apple rumored to be introducing an OLED iPhone in 2017.

This equipment uses technology invented and developed by Advantech U.S.'s Mechatronics Center of Excellence located at our headquarters in Pittsburgh, PA. Over the past two years, Advantech U.S. has increased its already significant portfolio of trade secrets and applied for six patents related to the technologies used in the field of OLED display manufacturing. These technologies have been developed and integrated into three Mechatronic equipment systems:

1) INSPECTION / REPAIR:

- CAPS® or Clogged Aperture Scanner tool for shadow mask inspection
- LARS® or Laser Repair Station for repair of shadow masks
- CD tool to measure critical dimension of shadow mask apertures
- PPA tool to measure pixel positional accuracy across the array

2) A2M2® - AUTOMATED ALIGNMENT AND MASK MOUNTING:

- This tool aligns shadow masks and laser welds them to a cell frame used in the manufacturing process

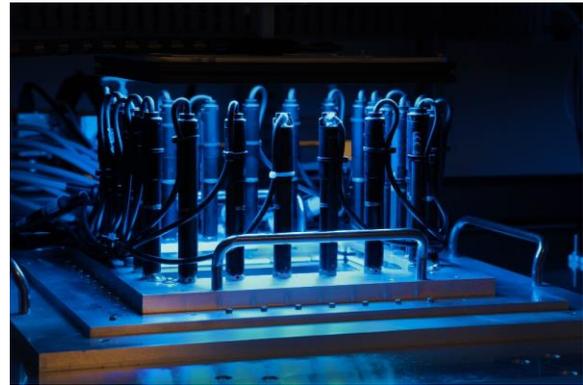
3) MMAS® - MULTIPLE MASK ALIGNMENT SYSTEM:

- This tool aligns and laser welds several cell frames to a larger mask frame to produce a large area

ADVANTECH US

Inventors of **amax**
Evaporation Printing

A key element of this equipment is the Advantech U.S. patented Fly Eyes® technology. The Fly Eyes compound camera system is arrayed like the eyes of a fly. And, like a fly, each camera is a functioning eye in itself – with an array of them together creating a broad field of vision. The advantage of this system is that it replaces a complex motion system and makes measurements across an array simultaneously creating a fast data acquisition time.



Advantech U.S. has received requests for quotation for the next generation of these Mechatronic systems. The approximate value is \$4-5M with order confirmation expected in the 2nd and 3rd quarter for delivery in late 2017 and early 2018.

These Mechatronics systems are also used by the Embedded Electronics Center of Excellence at Advantech U.S. to make the next generation of precision embedded electronics devices for the aerospace and defense industries, consumer electronics and other display applications...

*Contact us today to learn more!
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