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Lead-Free Manufacturers Rely on NEXX Systems' Stratus Plating Tool for Volume Production

Billerica, MA – July 13, 2010 – Technology leaders in the emerging lead-free bumping market are meeting “green” global policy requirements, such as ROHS, by using NEXX Systems' Stratus plating tool to produce their system-in-package (SiP) and 3D wafer-level packaging (3D WLP) devices. Among the various methods of solder bumping processes, electro-deposition is increasingly becoming the preferred method, especially for fine-pitch applications.. Bumping 300mm wafers poses challenges to traditional horizontal plating tools, resulting in plating thickness and alloy composition variations due to non-uniformities in boundary layer thickness. Furthermore, the electrochemical potential difference of Sn and Ag ions requires precise control of the plating chemistries to maintain specific alloy composition. Stratus' vertical plating design architecture along with ShearPlate™ agitation and MicroHole™ shield provides consistent and reliable fine pitch deposition of lead-free alloys that result in uniform alloy composition and thickness uniformity across wafer. The tendency to trap bubbles that result in solder voids that can occur in horizontal wafer orientations is avoided in Stratus vertical wafer handling architecture.

With 20-wafer plating capability, the Stratus accommodates process integration of TSV and lead-free micro-bumping without compromising on throughput. This process is quickly gaining popularity among customers for copper pillar and lead-free applications as it is increasingly important to maintain consistent alloy concentrations across wafers in a variety of packaging applications.

About NEXX Stratus/Apollo Product Families: Stratus provides industry-leading yield at what we believe is the lowest CoO for pattern plating and TSV applications. NEXX Systems' AquaTorr™, an advanced prewet system, enables high aspect ratio, void-free copper fill for TSVs. Innovative ShearPlate™ technology provides exceptional process with excellent across wafer uniformity and alloy composition.

The Apollo advanced sputter deposition system incorporates multi-wafer processing commonly used in cluster tools while avoiding the disadvantages of central handling. The Apollo, specifically designed for wafer level packaging offers faster, more economical PVD processing.

About NEXX Systems: NEXX Systems brings exceptional technical expertise to flip chip and advanced packaging. Our product lines provide the most efficient, yet affordable, systems of their kind: Apollo for multi-layer sputter deposition of metals, and Stratus for high throughput electro-deposition of metals. Additional information can be found at: www.nexxsystems.com.