

STRATUS

Advanced Electrodeposition System

Stratus provides industry-leading yield at the lowest cost of ownership for pattern plating and TSV applications. Innovative ShearPlate™ technology eliminates the complex process tuning and process drift adjustment required by competing multi-zone anode fountain tools. ShearPlate technology solves the fundamental problem of production electrodeposition by separating the control of electric field and fluid flow. **Stratus** is the technology leader for TSV, solder bumping, copper pillar, UBM, and other advanced packaging applications.

Stratus' ShearPlate technology controls the fluid boundary layer at the wafer surface, providing several advantages. A uniform and thin boundary layer is essential for TSV and pattern plating to achieve deposition uniformity and a wide chemical operating window. In **Stratus**, the wafer fluid flow is independent of anode fluid flow, so chemistry breakdown at the anode and, thus, chemistry costs are minimized without use of expensive membrane separation hardware. Strong agitation at the wafer surface, combined with the wafer vertical orientation, avoids yield loss due to bubble entrapment.

Stratus' hardware avoids the maintenance costs of competing tools. Only a single motion axis – the ShearPlate motion – is required in the process modules, and this is fully supported by magnetic bearings. Competing tools have multiple axes of motion, with mechanical bearings, all of which add maintenance costs, robot teach time, and reliability problems.

Stratus' vertical architecture, offering multiple metals with up to 20 metal plating positions, provides both system flexibility and high throughput. This configuration, combined with sufficient rinse/dry and pretreatment capacity, provides more than twice the throughput of competing tools.

The **Stratus'** modular architecture permits a system layout optimized to your process and throughput requirements — from R&D systems to a multi-metal, high throughput production system.

- **Better process yield and stability**
- **Twice the throughput**
- **Lowest cost of consumables**
- **Easier maintenance**

The **Stratus** is offered in two models for fully automated production: S300 for 200/300 mm wafers and S200 for 100/150/200 mm wafers; and two configurations, FX offering up to 10 plating cells, and DX offering up to 4.



Stratus S200



Stratus S300



