LSI Logic Orders Multiple Copper Systems From Applied Materials for Next-Generation Chips

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SANTA CLARA, Calif.--(BUSINESS WIRE)--June 28, 2000--

Copper Wiring Equipment Set Targeted

for LSI Logic's Copper Device Development

Applied Materials, Inc. announced that LSI Logic has ordered its Copper Wiring Equipment Set to create next-generation copper-based chip designs. The equipment set includes the Endura(R) Electra(TM) Barrier/Seed system, the Electra Cu(TM) Integrated ECP (ElectroChemical Plating) system, and the Mirra Mesa(TM) CMP (chemical mechanical polishing) system. The systems are expected to be shipped to LSI Logic's R&D center in Santa Clara, California, in the second and third calendar quarters of 2000.

Richard Schinella, vice president, Process R&D at LSI Logic, said, "Given Applied Materials' depth of copper processing knowledge and the preliminary results we've seen from our evaluations of these systems, we anticipate being able to quickly ramp our new integrated copper/low k interconnect technology from development into production. Applied Materials has done an excellent job of developing these systems to work together for optimal productivity and performance. Also important is the extendibility these systems can provide us as we move rapidly to future copper device generations."

The copper metallization sequence begins with the Endura Electra Barrier/Seed system, which deposits the tantalum-based barrier layer and copper seed layer as a sequential process under vacuum. Applied Materials' Barrier/Seed system is the industry's leading tool for these processes and is used by nearly all of the major chipmakers engaged in copper manufacturing and development.

Following the barrier and copper seed layers, Applied Materials' Electra Cu Integrated ECP system deposits the bulk copper fill layer. This advanced copper electroplating system offers leading-edge process chemistry, process control and system productivity. Integrated edge cleaning capability and a proprietary rapid thermal anneal chamber eliminate the need for additional standalone tools and prepare the wafer for subsequent processing steps.

The final copper metallization step is performed by the market-leading Mirra Mesa CMP system which polishes the copper to provide a planar film surface. The Mirra Mesa system combines state-of-the-art wafer planarization and cleaning capabilities to deliver the industry's highest wafer output per square foot. A selection of new copper polishing processes advance the system's capabilities to provide across-the-wafer uniformity and precise control of erosion and copper dishing.

"LSI Logic is moving rapidly into copper technology for their advanced chip designs and we are pleased to be working with them to implement our Copper Wiring Equipment Set into their process flow," noted Dr. Fusen Chen, vice president and general manager of Applied Materials' Cu, Al Systems and Modules Product Group. "For many customers, supplying standalone systems is no longer enough -- we also need to help shorten their development times by solving critical integration issues between systems. The Copper Wiring Equipment Set is an excellent example of how we can help LSI move forward more quickly in its ramp to volume copper production."

Applied Materials, Inc. is a Fortune 500 global growth company and the world's largest supplier of wafer fabrication systems and services to the global semiconductor industry. Applied Materials is traded on the Nasdaq National Market System under the symbol "AMAT." Applied Materials' web site is http://www.appliedmaterials.com.

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