ARCHER 10XT IS THE LATEST EVOLUTION OF KLA-TENCOR’S INDUSTRY LEADING ARCHER 10 OPTICAL OVERLAY METROLOGY SYSTEM.

Delivering improved metrology performance and Total Measurement Uncertainty (TMU) metrics, Archer 10XT also incorporates significant improvements in throughput, precision, and measurement (MAM) time. This system is one of the industry’s most competitive cost-of-ownership overlay solutions for 300-mm manufacturing at the sub-90-nm node. Archer 10XT includes a user-friendly GUI and advanced options for measuring low contrast wafers. It is supported by the centralized Recipe Database Manager (RDM) and Archer Analyzer automated overlay analysis software option, which enable recipe portability and commonality analysis, respectively.

PRODUCT DESCRIPTION

Improved TMU Metrics
A new optics system design, along with new hardware components and algorithm improvements, enables overlay measurement with 30% improved precision, plus better performance and repeatability, and reduces total measurement uncertainty (TMU) by 25%, over the previous generation system.

Increased Lot Per Hour Throughput
A new computer configuration, together with new focus board, wafer swapper, and newly designed algorithms, enables Archer 10XT to significantly improve system throughput in 300-mm and 200-mm production environments. Lot per hour (lp/h) throughput is increased from 24 lp/h to 29 lp/h in 300-mm, and from 26 lp/h to 29 lp/h in 200-mm environments. Wafer per hour (wph) rate is increased from 120 wph to 150 wph in the 300-mm environment.

Enhanced Cost of Ownership
With its improved performance and throughput, and established base platform, Archer 10XT provides an optimal cost of ownership solution for the lithography cell with minimum risk.

Recipe Database Manager (RDM)
By managing recipes offline, RDM increases overlay tool utilization, lowers CoO, and enables simpler and faster recipe creation while increasing reliability and traceability of measurement recipes. RDM Waferless, Imageless, and Automatic Recipe Creation (ARC) modes enable a full automation of the recipe creation process.

Archer Analyzer Optional Analysis Software
This fully automated, real-time overlay analysis software option incorporates advanced algorithms and data filters to analyze Archer 10XT results on-tool, helping to determine if a given wafer lot has met predetermined parameters and providing critical litho cell correctibles. Archer Analyzer provides mission-critical information, such as wafer lot dispositioning results and stepper correction data, that is essential for establishing advanced process control (APC) in advanced 300-mm fabs. This capability allows lithographers to reduce unnecessary rework and quickly address variations in lithography tool performance to minimize cycle time and yield loss. Archer Analyzer uses the same factory automation interface as the Archer 10XT system, enabling easy integration into a 300-mm fab network.
KLA-TENCOR: ACCELERATING YIELD
KLA-Tencor's portfolio of solutions includes the industry's broadest fleet of advanced inspection and metrology systems, which enables customers to capture yield-critical defect and metrology data. It also includes the sophisticated software to turn that data into quick corrective action. Finally, it includes the expertise to help customers rapidly understand and resolve complex manufacturing problems so they can reap the financial and market rewards associated with faster time to market and increased product yields.

KLA-TENCOR SERVICE/SUPPORT
Customer service and support are an integral part of KLA-Tencor's yield optimization solution. Our vast customer support organization services our worldwide installed base and is responsible for much of the support of our customers following shipment of equipment and software. This support includes secure on-line monitoring, on-site repair, telephone support, system installation, relocation services and selected post-sales applications.

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