

FabGuard FDC

Fabwide, Process Specific

FabGuard FDC combines on-line Fault Detection and Classification (FDC) capabilities with powerful tools for fab engineers to readily analyze virtually any aspect of process and equipment behavior. No other system provides greater capability to guard against wafer loss, reduce unscheduled tool downtime and improve yield.

Regardless of wafer size or product geometry, timely information is key to fab productivity and competitiveness. Increasing pressure to reduce costs makes it critical to maximize fab productivity by reducing the number of scrapped wafers and by maximizing equipment utilization. The challenges of today's semiconductor manufacturing are met by one FabGuard system that enables the collective experience of statisticians and engineers tasked with maintaining cutting edge fab productivity. FabGuard FDC is built on the principle that process and equipment knowledge is crucial to smooth fab operations.

FabGuard FDC Expert System Learns Your Process and Recognizes Problems

SPC rules are frequently employed as a first line of defense to prevent product loss. FabGuard FDC offers an additional level of protection - a trainable Expert System FDC builder. Fab engineers can train FabGuard FDC to recognize new problems as they appear and automatically detect them when they occur again. The problem solving know-how of fab engineers can be easily translated into FabGuard FDC recipes that monitor any process step on any chamber on any tool. Running in parallel with SPC-based tool interdiction, FabGuard FDC Expert System capability allows process and equipment engineers to train FabGuard to recognize problems that SPC methods may not detect. Engineers in the fab have the learned expertise to keep the equipment running and the wafer process on track. FabGuard FDC Expert Systems allow engineering know-how to be



programmed into FabGuard FDC for an added wafer protection and fault identification.

FabGuard FDC Fabwide

The FabGuard FDC system is deployable and sustainable at the factory level for real-time Statistical Process Control (SPC) on all wafer process equipment. A single user interface allows engineers to sort, display and analyze tool and process data with extreme flexibility and ease.

- Fab engineers are provided with powerful tool-based data visualization and the ability to analyze all aspects of equipment and process behavior.
- Process engineers can readily determine relationships between equipment state and wafer outcome.
- Equipment engineers can quickly diagnose tool problems to reduce unscheduled downtime. Process chambers can be compared and matched.

Scaleability, Sustainability

Data is archived and analysis results are stored in a Microsoft ®SQL or Oracle ® database. Hardware redundancy is eliminated through a tool-based system that is easily scaleable from one tool to several hundred tools across an entire fab. FDC engineers can sort through and view all information through a single, easy-to-use interface. The consistent format improves the learning curve and facilitates the sharing of information among different fab groups. Alarming, reporting and tool interdiction can be configured to the specific needs of user groups and equipment circumstances. INFICON has drawn upon its experience in leading fabs worldwide to create system templates that pay for themselves as quickly as they are deployed.

The unique combination of real-time SPC and expert systems capabilities make FabGuard FDC the most powerful system available for detecting problems to prevent wafer loss and reduce unscheduled equipment downtime.



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