Next-Generation Fault Detection Offers Full Trace Analysis Overcoming the Limitations of Legacy FDC Systems

To realize the full potential of smart manufacturing, customers can no longer afford to count on legacy FDC systems alone for accurate fault detection. Traditional FDC relies solely on summary trace data from sensors for fault detection. As a result, small changes in sensor behavior can go undetected, resulting in a potentially catastrophic impact on yield. In addition, modeling FDC systems is a highly time-consuming proposition. BISTel's new Dynamic Fault Detection (DFD) system overcomes these challenges by offering full trace data coverage and increases productivity by eliminating the need for timely and costly modeling. DFD is a bridge to smart factory manufacturing because it can also integrate seamlessly to legacy FDC systems.

Accurate Fault Detection

Sensor trace data contains a wealth of information that helps manufacturers quickly identify potential yield

Comparison : **Traditional FDC vs Dynamic Fault Detection**

	Traditional FDC	Dynamic Fault Detection
Model Creation, Validation & Deployment	7-10 weeks	< 1 week
Model Maintenance	Ongoing	None Required
Typical Alarms Rate	100-500/chamber-day	<50/chamber-day
% of Number of Sensors Coverage	50-60%	100% as default
Trace Segment Coverage	20-40%	100%

Per Recipe/Tool Type

- Real-time monitoring improves product quality and yield
- The elimination of SPC modeling increases engineering productivity
- Reduce risk of yield impacting events
- Shorten production ramp-up time for new products

- Dynamic modeling adapts to natural system changes
- Full sensor trace analysis captures all abnormal signals
- Intelligent alarming reduces overall alarms
- Data behavior analytics enables system drift detection
- Flexible system deployment options: on premise or on cloud