Spotfire® Industry Pro for High-Tech Manufacturing

Investigate complex manufacturing systems with confidence

Synthesize multi-domain manufacturing data into a shared visual decision layer, empowering engineers to understand variation faster and translate insights into measurable improvements in yield, quality, and operational performance.

Manufacturing data spans MES, inspection, metrology, equipment, and test systems, each capturing a different view of production. For engineers, the challenge is connecting these perspectives to understand how variation propagates across processes, tools, and products. Instead of fixing that fragmentation, AI is adding to it: another set of standalone tools that can flag an anomaly but can't see the surrounding process, so nobody can trust the root cause it points to. Without connected context, identifying root causes is slow, fragmented, and often delayed.

A decision layer built for high-tech manufacturing

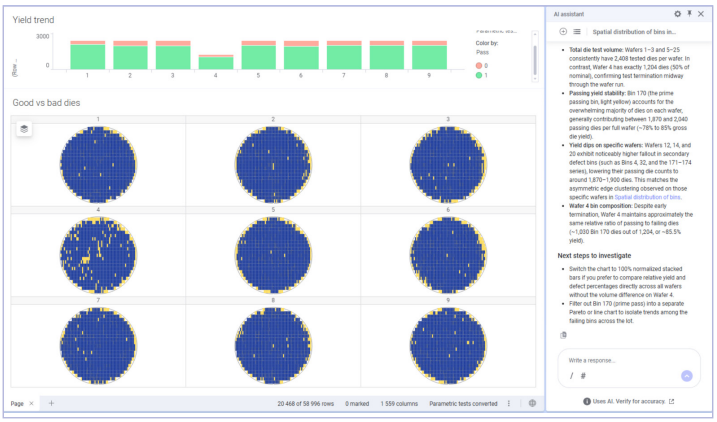
Spotfire® Industry Pro sits above domain-specific tools, augmenting them, not replacing them. By connecting manufacturing data and enabling interactive exploration across spatial, temporal, and hierarchical relationships, it brings MES, inspection, metrology, equipment, and test signals into a shared visual decision layer where variation can be traced across processes, tools, and products.

AI works inside that decision layer rather than alongside it, so findings arrive with the process, equipment, and test context an engineer needs to judge them.

The result: engineers investigate faster, surface root causes earlier, and drive measurable improvements in yield, quality, and performance.

AI where the analysis happens

Spotfire AI runs inside the analytical environment where the evidence lives, so an engineer can trace a finding back to the wafer, the tool, and the process step it came from rather than simply accept it.



Experts work with it in two complementary ways, both on the same governed foundation:

- **In conversation** — ask questions in natural language and get guidance on the next analytical step, without leaving the visual context. For example, ask why a lot deviates from its cohort, or which process steps track with a defect signature, and get guidance on where to look next, without leaving the visual context.
- **Through agents** — Insight Agents carry out a defined analytical goal: watching inspection and equipment data for drift, running an established root-cause pattern across a full lot history, and returning findings with the supporting evidence attached.

Because both run on a shared foundation, teams can build agents around their own manufacturing workflows, encoding the diagnostic logic a yield engineer already applies lot by lot, and running it continuously across the fab.

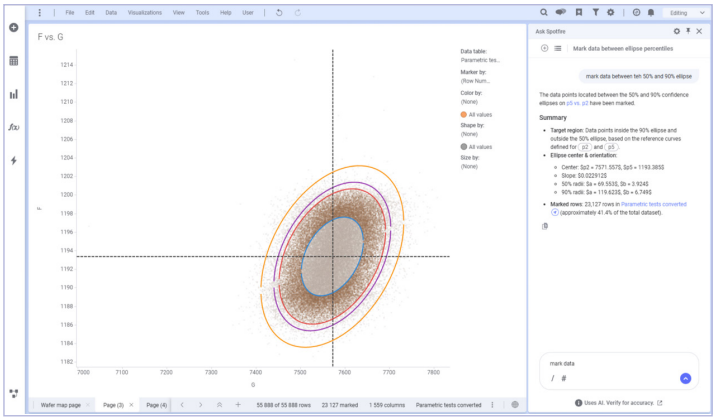
Supporting critical manufacturing decisions

Spotfire Industry Pro brings this decision-layer approach to four key manufacturing decision areas:

Product Optimization

Built for high-stakes product quality, test efficiency, and performance decisions.

Product performance is shaped by complex interactions between materials, process conditions, and test environments. Spotfire brings test systems, process data, inspection results, and engineering analyses together in one environment, helping engineers identify performance drivers, evaluate trade-offs, and improve outcomes more effectively.



Key decisions supported:

- Package test yield optimization
- Product test time reduction
- Product failure analysis

Find out more

Operational Excellence

Built for high-stakes production performance, uptime, and operational decision-making.

Manufacturing operations depend on tightly coordinated equipment, processes, and schedules, where small disruptions propagate quickly. Spotfire connects equipment sensors, control systems, production metrics, and maintenance records in one visual environment, helping teams detect risk earlier and respond with confidence.

Key decisions supported:

- Predictive maintenance
- Overall Equipment Effectiveness (OEE)
- Operational analytics

Find out more

Process Integrity

Built for high-stakes process stability, control, and continuous improvement.

Manufacturing processes are influenced by hundreds of variables across tools, chambers, recipes, and production steps. Spotfire lets engineers explore process behavior across spatial, temporal, and multivariate dimensions, enabling earlier detection of deviations and more effective control.



Key decisions supported:

- Advanced process control
- Process yields
- Root cause analysis of scraps
- Process characterization
- Process design interactions

Find out more

Yield Improvement

Built for high-stakes yield optimization, defect analysis, and quality decisions.

Yield and quality performance depend on understanding how variation propagates across wafers, lots, tools, and process steps. Spotfire brings inspection, metrology, electrical test, and reliability data together, enabling faster identification of defect patterns and more effective resolution of quality issues.



Key decisions supported:

- Assembly pick map
- Kill ratio & yield prediction
- Reliability testing
- Failure analysis/root cause determination

Find out more

Built to extend across the value chain

Manufacturing analysis is often constrained by volume. Teams sample lots, narrow the parameter set, or wait on extracts, because analyzing a full production history is too slow to stay interactive, and sampled analysis is how a marginal defect signature goes unseen.

Spotfire pushes computation to where the data already lives, including cloud data platforms and enterprise sources, so engineers can investigate complete datasets across wafers, lots, tools, and process steps without moving data and without giving up interactivity. Investigation stays iterative at any scale.

The same decision-layer approach that unifies process, equipment, and test insight in one fab applies wherever fragmented data slows high-stakes decisions, across test and assembly, between sites, and out to global operations. Spotfire Industry Pro is built to bring disciplines together in one environment, wherever the data lives and whoever needs to act on it.

Trusted by leading manufacturing organizations

High-tech manufacturers rely on Spotfire Industry Pro to turn fragmented data into faster, more confident decisions:

Renesas	Integrates data from fabs, test, and assembly in real time for interactive analysis and faster, more confident decisions.
Brembo	Achieved a 25% revenue increase with improved production efficiency.
STMicroelectronics	Runs 1,500+ reports in production, maximizing operational efficiency.
Keysight Technologies	Cut data loading from hours to seconds, improving customer experience with analytics-based product insights.

Spotfire®

Ready to bring visual industrial analytics to your manufacturing operations?

Learn more at **www.spotfire.com/industry/manufacturing**
Talk to an expert today at **www.spotfire.com/contact-us**

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