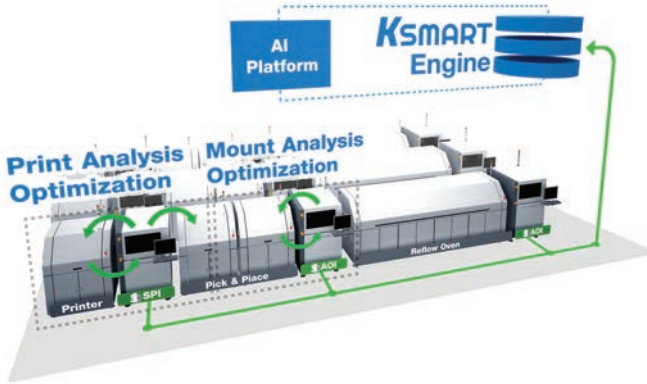# The True Smart Factory Solution

KSMART

"The factory of the future begins with the Smart Factory of today."

I WHAT IS KSMART?

"KSMART is your comprehensive solution for seamless Smart Factory connectivity and your portal to Industry 4.0."

The KSMART smart factory solution suite, represents a revolution in process optimization to ensure the highest standards of quality and reliability on the factory line. KSMART collects inspection and measurement data from all equipment through its KSMART hub to utilize anywhere in the network through a highly-intuitive user interface for defect detection, real-time optimization, enhanced decision making and traceability to improve metrics, increase board quality and lower costs by eliminating variance, false calls and escapes.
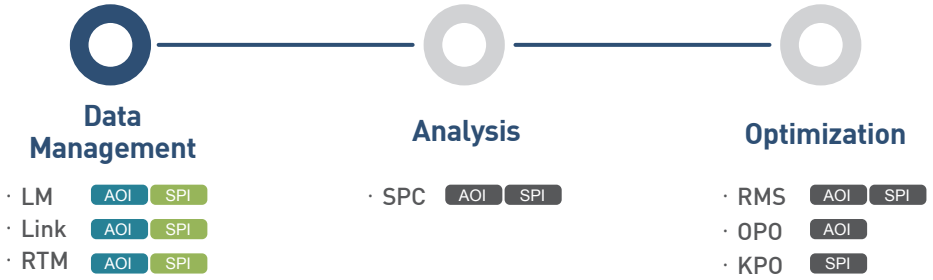
From extensive data management offerings through LM@KSMART, Link@KSMART, RTM@KSMART, and in-depth analysis of that data through SPC@KSMART, to the comprehensive optimization solutions of RMS@KSMART, OPO@KSMART, KPO@KSMART, KSMART integrates 3D solder paste inspection (SPI) systems and 3D automated optical inspection (AOI) in ways that lead to Industry 4.0 realization.

I WHY CHOOSE KOH YOUNG TECHNOLOGY?

"Koh Young Technology's KSMART solution provides the power of true connectivity to pave the way for Industry 4.0 with smart, data-driven analytics."

Koh Young has pioneered true 3D measurement technology making it the most advanced equipment of its kind. We've been working with printer and mounter partners to achieve total communication and streamline the surface mount line to realize a zero-defect future. Our ability to generate reliable measurement data has given rise to our industry-leading, measurement-based KSMART analysis and optimization solutions. With quality control capabilities and a full lineup of integrated inspection systems, KSMART ties everything together: SPI, AOI and production machines with AI powered production analysis for fully-automated control that boosts productivity while minimizing costs.

KSMART's Process Flow

Data Management
- LM `AOI` `SPI`
- Link `AOI` `SPI`
- RTM `AOI` `SPI`

Analysis
- SPC `AOI` `SPI`

Optimization
- RMS `AOI` `SPI`
- OPO `AOI`
- KPO `SPI`

Data Management

"Processed data is information, analyzed data is insight, and KSMART's data management modules provide the key to efficient production, and the highest standards of quality and reliability."

LM@KSMART – Library Manager

- Deploys optimized programs and inspection conditions to all KY AOI to seamlessly program, deploy, move, delete, compare, and backup variant programs for all connected machines.

- Offers traceable management of changes via user level Identification (ID).

- Maximizes productivity by centralizing & optimizing all programming resources in a single management system.

Link@KSMART - SPI & AOI Connectivity

- Connects all systems within a line to consolidate inspection results for review to find correlations between processes.

- Streamlines production with regular data-based review, diagnosis and optimization of printing, pick-and-place and reflow processes via linked inspection results.

- Provides 3-Point Review including SPI, Pre-AOI and Post-AOI images, trend charts and inspection results to correlate between printing, placement and reflow results.

RTM@KSMART - Real-Time Monitoring

- Displays real-time statistics so line performance can be monitored in real-time.

- Enables a single operator to monitor multiple lines and dozens of machines, which allows operators to focus on other critical line tasks.

- Tracks various machines in the factory, showing the best performing machine yield and top five defects list, plus charts reflecting yield, availability, X-bar, and sigma all in one page.

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Analysis

"Koh Young presents our cutting-edge Smart Factory AI platform for fully-automated process optimization to harness the power of true connectivity."
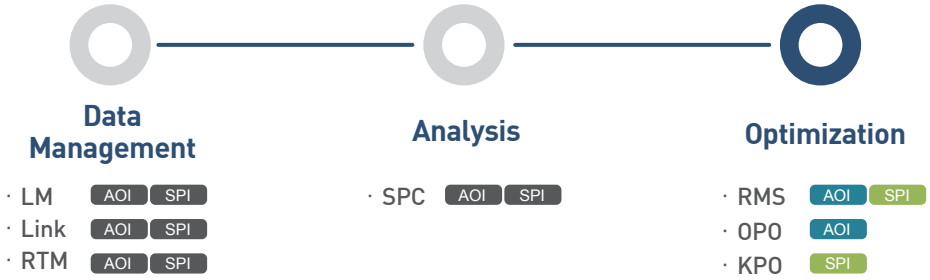
SPC@KSMART – Statistical Process Control

- Provides a cross-platform multi-line process analysis application that includes production performance analysis by product.

- Provides detailed inspection results with visual graphics and accumulated statistics through deep inspection data analysis tools, including charts, histograms, and more.

- Instantly analyzes data visualized with relevant indicators to compare board performance and identify process deviations.

- Comprehensive and extensible cross-platform modules make it easy to maintain, control and upgrade new features via the SPC page.

- Provides a straightforward visualization of real-time production and inspection results of all lines.

- Offers charts and graphs relating to refined analysis results from production, including configurable charts for user-specific parameters.

- Drills down to a single component level to identify the root cause to minimize false calls or tighten tolerance levels to prevent future escapes, as well as evaluate and optimize default settings.

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- KPO `SPI`

Optimization

"KSMART presents the opportunity to finally realize a fully automated and advanced manufacturing facility through a comprehensive infrastructure for autonomous process optimization."

RMS@KSMART – Remote Monitoring System

· Takes defect reviewers off of the production floor while providing realtime remote access to each piece of equipment throughout the network.

· Provides direct control from a web browser at a remote location to review all data, machine status indications including yield and availability, and systems.

OPO@KSMART - Offline Program Optimizer

· Allows operators to load and debug identified defects and enables measurement-based fine-tuning through simulations with accumulated historical data from all lines.

· Simulates the results of any adjustments without affecting production and deploys new settings to all machines in the production line.

KPO@KSMART - KSMART Process Optimizer

· Uses machine learning technologies to help process engineers optimize processes through AI analysis of real-time printing information with SPI measurement data to calculate the recommended parameters for each screen printer.

· Provides a real-time alarm for printing quality issues and alerts for printer H/W engagement, print ready status, and to prevent print quality problems.

· Provides a verification tool for printing results following the application of recommended parameters.

"The gap between the digital and physical
world is closing fast, replaced by an entirely
new way of manufacturing."
CONTACT US TODAY
to see how Koh Young can help your business.

Koh Young Headquarters

TEL +82-2-6343-6000
E-mail kohyoung@kohyoung.com

Koh Young Suzhou Ltd.(China)

TEL +86-512-6255-8900
E-mail info-china@kohyoung.com

Japan Koh Young Co., Ltd.

TEL +81-566-93-5207
E-mail info-japan@kohyoung.com

Koh Young America Inc.

TEL +1-480-403-5000
E-mail america@kohyoung.com

Koh Young SE Asia Pte. Ltd.

TEL +65-6634-2814
E-mail kohyoungsea@kohyoung.com

Koh Young Europe GmbH

TEL +49-6188-99-35-663
E-mail europe@kohyoung.com

KOH YOUNG TECHNOLOGY INC.

14th & 15th Floor, Halla Sigma Valley Building, 53, Gasan Digital 2-ro, Geumcheon-gu, Seoul 08588 Korea
T +82.2.6343.6000   F +82.2.6343.6001   E info@kohyoung.com

www.kohyoung.com