AOI Software

Enables Smarter and Faster Inspection, Saving Time and Cost

AOISOFTWARE

CyberOptics Award-winning SQ3000™ AOI Software

The multi-award winning SQ3000 AOI software is a more powerful yet extremely simple software for AOI and SPI that is designed with an intuitive interface. Including multi-touch controls, 3D image visualization tools and ultra-fast programming capabilities that brings ease-of-use to a completely new level, which reduces training efforts and minimizes operator interaction - saving time and cost.

Intuitive, Easy-to-Use

- Speed programming and tuning with new capabilities including AutoTeach, AutoTune and AutoDefine for faster set-up and to simplify process.
- New body inspection settings and lead inspection settings; automatically teaches from the height map what parts are loaded based upon CAD data. Lead inspection settings include 3D area measurement.
- New gap inspection settings; blob analysis - looks at height in between leads beyond using an image.
- New AutoDefine Feature; automatically detects and adds inspection features including leads and gaps by drawing a box around the package or component.
- New AutoFeatureSet and AutoTune; adds body, leads and gaps inspection features to training set data. AutoTune sets nominals for the specific package.

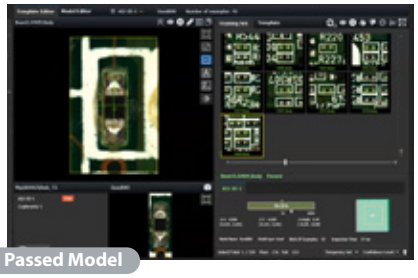
Faster, Smarter Programming

- Speed programming and performance with AI^2 (Autonomous Image Interpretation) technology for set-up in <13 minutes with a data-rich, pre-loaded library and automated scripts that collect and update models all on their own.
- Inspect the most comprehensive list of features and identify the widest variety of defects. AI^2 offers precise discrimination with just one panel inspection making it the perfect solution for high-mix and high-volume applications.

Gap Inspection Example

AutoDefine Example

Failed Model



Passed Model

Nordson TEST & INSPECTION

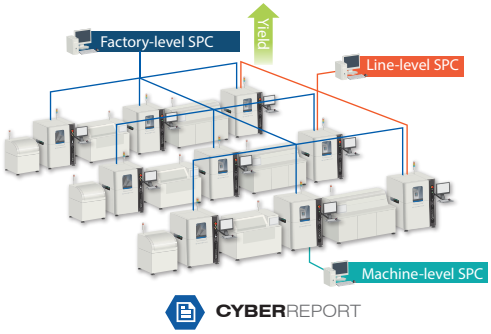
CYBEROPTICS

Powerful Value-Add Solutions

CyberOptics Software Solutions provides our customers and partners the best added-value possible for inspection and measurement in electronics manufacturing.

CyberCMM Software Suite (Add-on)

- Extensive suite of CMM tools for precise measurement of critical features
- Significantly speed measurements compared to traditional CMM systems, with high accuracy and repeatability
- Multi-process capable – 3D AOI, 3D AOM, 3D CMM



Fast, Scalable SPC Solution

- Attain effective process verification and control with traceability.
- Identify trends and enhance line yields with real-time monitoring tools for historical analysis and reporting.
- Achieve fast parsing and charting speed with the robust and scaleable software, while enabling an extremely compact database size.

Inspection Capabilities	
Component Types Inspected	Standard SMT (chips, J-lead, gull-wing, BGA, etc.), through-hole, odd-form, clips, connectors, header pins, and more
Component Defects	Missing, polarity, tombstone, billboard, flipped, wrong part, gross body and lead damage, and more
Solder Joint and Other Defects	Gold finger contamination, excess solder, insufficient solder, bridging, through-hole pins
3D Measurement Inspection	Lifted Lead, package coplanarity, polarity dimple and chamfer identification
Solder Paste Inspection	Height, area, volume, registration and bridge detection
Coordinate Measurement Capability (CyberCMM add-on)	Line / Distance / X,Y / Mid Line, Inter Point / Regression Shifted, Datum X,Y / LSF X,Y Offset, X,Y Offset / Value / Location / List of X,Y Values, Height / Local Height / Regression / Radius, Coplanarity/ Distance to plane / 2nd Order fitting, Difference / Absolute / 2sqrt / VC, Max / Min / Ave / Sigma / Plus / Minus / Multiple
Image Processing	Autonomous Image Interpretation (AI^2) Technology, Coplanarity and Lead Measurement
Measurement Gage R&R	<10% @ ±3σ
Programming Time	<13 minutes (for established libraries)
CAD Import	Any column-separated text file with ref designator, XY, Angle, Part no info; Valor process preparation
Supported Operating System	Windows XP, 7, 10 (32 & 64 bit)
CyberReport Specifications	
Recommended Hardware	2.8 GHz processor, 8 GB RAM, 2 TB hard disk space
Inspection Software Compatibility	• QX 6.7 and later • SPI v2.5 and later • SPI v5.3 and later • SQ v1.0 and later
Output Formats	PDF, CSV, BMP
Supported Operating System	• Windows XP, 7, 10 (32 & 64 bit) • Windows Server 2003, 2008, 2012 (32 & 64 bit)

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