

Inspection Capabilities		QX150i	QX100i
Typical Scanning Speed	200 cm²/sec (31 in.²/sec)		
Minimum Component Size	0402 mm (01005 in.)		
Board Length	Min. 50 mm (2 in.)/ Max. 400 mm (15.7 in.)	Min. 50 mm (2 in.)/ Max. 410 mm (16.1 in.)	
Board Width	Min. 50 mm (2 in.)/ Max. 308 mm (12 in.)		
Component Height Clearance (max)*	Top: 35 mm (1.37 in.) Bottom: 23mm (0.90 in.)	Top: 30 mm (1.18 in.) Bottom: 25mm (0.98 in.)	
Board Edge Clearance (min)	3.0 mm (0.125 in.) – bottom side only		
Component Types Inspected	Standard SMT (chips, J-lead, gull-wing, BGA, etc.), through-hole, odd-form, clips, connectors, header pins, and others		
Component Defect Categories	Missing, polarity, tombstone, billboard, flipped, wrong part, gross body and lead damage, and others		
Solder Joint Defects Categories	Solder bridge, opens, lifted leads, wettability, excess and in sufficient solder, debris, and others		
Other Items Detected	Gold-finger contamination, pin-in-hole, bent pins, debris, and many others		
Component Measurement Categories	Component X, Y position and Rotation		
Measurement Gage R&R	< 10% (down to 0402 mm components)		
Vision System			
Imagers	80 Megapixel Sensor	40 Megapixel Sensor	
Image Transfer Protocol	PCIe		
Lighting	Strobe White Light (with dark/bright field)		
Resolution	12 µm pixel size	17 µm pixel size	
Image Processing	Statistical Appearance Modeling (SAM™ ) Technology. Option: Autonomous Image Interpretation (AI²) Technology		
Programming	Simple inline or offline		
CAD Import	Any column separated text file (Standard information required – ref. designator, XY, Angle, Part no.,)		
System Specifications			
Conveyor Height	Adjustable to 840 – 990 mm (33.1 – 38.9 in.)		
Machine Interface	SMEMA, RS232 and Ethernet		
Power Requirements	100-120 VAC or 220-240 VAC, 50/60 hz, 10-15 amps		
System Dimensions	100 x 88.6 x 132.1 cm (W x D x H)		
Weight	~219 kgs (483 lbs.)		
Machine Installation	<1 hour		
Options			
SPC Software, Offline Defect Rework Station, Sensor Alignment Target, Barcode Readers (1D/2D)			

\*QX150i SN4000-40007 height clearance (top) is 30mm

# QX150i™ 2D AOI

High Value, Flexible Inspection for All Applications



SMT China Vision Award  
for QX150i

Ideal for  
Selective Solder and  
Pre-Reflow Applications



Contact CyberOptics today for more information  
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QX150i™ 2D AOI

# QX150i™ Intelligent Sensing Technology

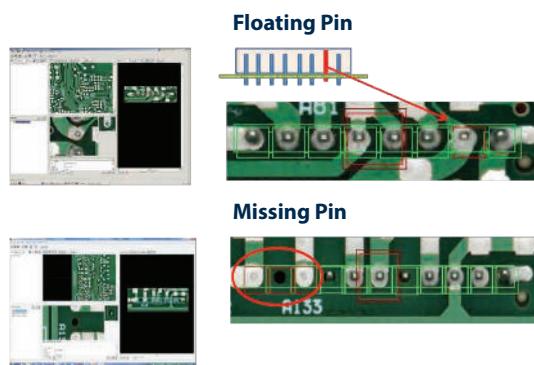
The SIM (Strobed Inspection Module) is the core engine behind every QX150i™ system enabling 'on-the-fly' high performance inspection. Designed and manufactured exclusively by CyberOptics, the SIM is absolutely calibration-free and illuminates only when needed – reducing cost of ownership and power consumption.

An all-new SIM on the QX150i™ is designed with enhanced illumination - delivering the best 01005 and solder joint inspection performance ever. With an 80 Megapixel sensor and higher resolution (12 µm), you get crisp, perfect quality images for more accurate defect review.

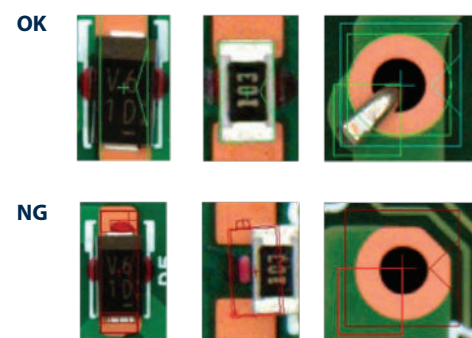


SIM (Strobe Inspection Module)

## Selective Soldering Inspection



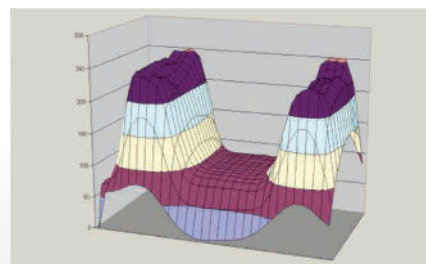
## Pre-Reflow Inspection



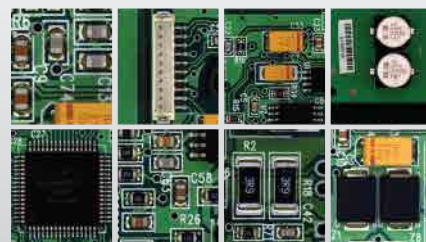
## Inspect 'Anything'

CyberOptics' AI² (Autonomous Image Interpretation) technology is designed for both low volume high mix, and high volume low mix Applications, and builds on the proven success of our Statistical Appearance Modeling technology. AI² is all about keeping it simple - no parameters to adjust or algorithms to tune. And, you don't need to anticipate defects or pre-define variance either – AI² does it all for you.

Just draw a box, show a few good examples and you are ready to inspect just about anything. Simply add good examples to the AI² model and the false call rates reduce significantly providing a very robust inspection solution.



AI² Software:  
Unique Image Processing Technique



Components Inspected/ Detected



## 3-Easy-Steps Programming

Our latest software improvements take programming to a whole, new level – zero to production ready in **less than 13 minutes!** All this is made possible, with an all-new data-rich, pre-loaded library and automated scripts that collect examples and update models – all on their own.



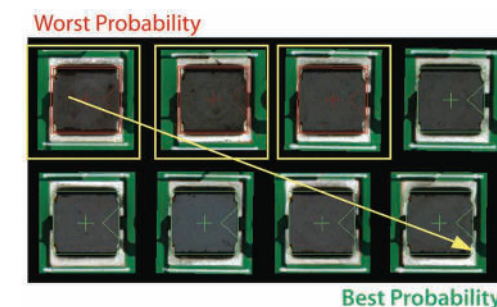
Simplified Programming Process

\*For pre-defined parts

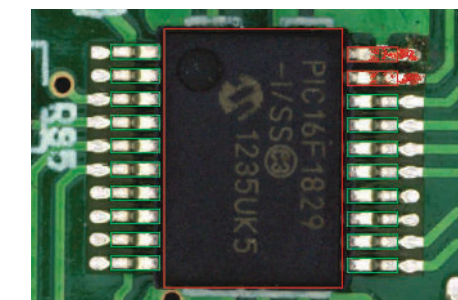
## AI² - Faster, Simpler, and Smarter

With AI² technology, programming gets even faster – with a 90% reduction in examples required to create a complete production ready programme – you will achieve superior defect detection and low false call rates even with just **one example**. This means significantly lower tuning time and quality results with one panel inspection. Perfect for those high-mix or low volume applications!

With its unique ability to 'ignore' bad examples in a model, AI² offers precise discrimination even with excessive variance and minimizes effects of outlier examples. Plus, it is a lot simpler with full support for unsupervised and semi-automatic model training. And, examples are pre-sorted so you can select and clear the ones you don't need – very quickly. The pixel marking feature highlights defective spots, so you can identify genuine defects instantly.



Intelligent Ranking of Examples



Active Pixel Marking

## Fast, Scalable SPC Solution

CyberReport™ offers full-fledged machine-level to factory-level SPC capability with powerful historical analysis and reporting tools delivering complete traceability for process verification and yield improvement. CyberReport™ is easy to setup and simple to use while providing fast charting with a compact database size.

