CYBEROPTICS®

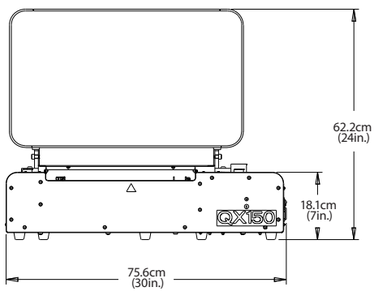
INSPECTION CAPABILITIES	QX150	QX150-M
Inspection Speed	150 cm²/sec	
Minimum Component Size	0402 mm (01005 in.)	
Board Length	50 mm to 330 mm (2.0 to 13.0 in.)	50 mm to 510 mm (2.0 to 20.0 in.)
Board Width	50 mm to 320 mm (2.0 to 12.5 in.)	50 mm to 320 mm (2.0 to 12.5 in.)
Component Height Clearance	35mm	
Lead Pitch	0.3 mm	
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 Defects	Solder bridge, opens, lifted leads, wettability, excess and insufficient solder, debris, and more	
Other Defects	Gold-finger contamination, pin-in-hole, bent pins, debris, and many others	
Component Measurement Categories	Component X, Y position and Rotation	
VISION SYSTEM & TECHNOLOGY		
Imagers	80 Megapixel sensor	
Image Transfer Protocol	PCIE	
Lighting	Strobe White Light (with dark/bright field)	
Resolution	12 um pixel size	
Image Processing	Statistical Appearance Modelling (SAM) Technology Option: Autonomous Image Interpretation (AI²) Technology	
Programming	Simple online or offline	
CAD Import	Any column-separated text file with ref designator, XY, Angle, Part no info; Valor process preparation	
SYSTEM SPECIFICATIONS		
Machine Interface	RS232 and Ethernet	
Power Requirements	100-120 VAC or 220-240 VAC, 50/60Hz, 2 amp max.	
System Dimensions	867 x 756 x 622 mm	1250 x 756 x 622 mm
Weight	≈65 kg (143.3 lbs.)	≈130 kg (287 lbs.)

OPTIONS

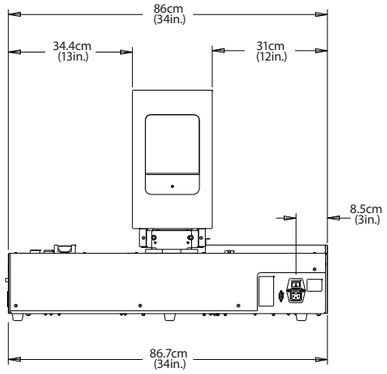
Barcode Reader, Rework station, SPC Software, Alignment Target, Light Curtain Sensor

QX150

FRONT



SIDE



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For information about other CyberOptics' offices and global support network, please visit www.cyberoptics.com

CYBEROPTICS®

QX150™ 2D AOI

Tabletop with In-Line Performance

Ideal for high-mix, low volume environment

3 YEAR WARRANTY*

*On standard parts only (excludes conveyor belts and other consumables); 1 year warranty on service

- World's fastest tabletop at 150cm²/sec
- True, in-line inspection capability with all-new SIM
- Higher resolution (12µm) for superior quality images
- Quick setup and fast programming with AI² technology
- Lowest false call rate and zero escapes
- 100% program compatibility with CyberOptics' in-line systems

QX150™ 2D AOI
Tabletop with In-Line Performance

www.cyberoptics.com

Specifications subject to change without notice.

ALL-NEW SIM WITH ENHANCED ILLUMINATION

The QX150™ is powered by an all-new SIM (Strobed Inspection Module) with enhanced illumination – designed to deliver true, in-line inspection performance. The SIM enables on-the-fly inspection making the QX150™ the fastest tabletop ever at 150cm²/sec.

A higher sensor resolution (12µm) offers crisp and clear images for more accurate defect review. And, as always, the SIM is calibration-free.

SIM (Strobe Inspection Module)

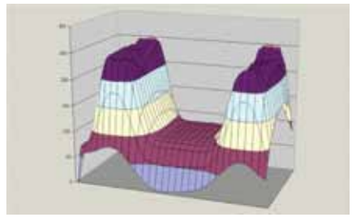
01005 component size inspection capability

INSPECT 'ANYTHING'

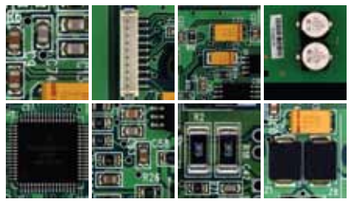
CyberOptics' AI² (Autonomous Image Interpretation) technology is a complete refactor of our proven Statistical Appearance Modeling techniques. AI² is all about keeping it simple - no parameters to adjust or algorithms to tune. And, you don't need to anticipate defects or pre-define variance either – AI² does it all for you.

Just draw a box, show a few good examples and you are ready to inspect just about anything. Add more images to the model and watch false call rates get even lower.

Measurement Technique	Inspection Performance	Programming Simplicity
CyberOptics' AI² Software	Lowest False Call Rate | Reliable and Repeatable Discrimination | Robust ✓	No complicated algorithms | Faster Programming | Lesser Examples ✓
Algorithm Based	✓	
Pattern Matching		✓



AI² Software:
Unique Image Processing Technique



Components Inspected/ Detected

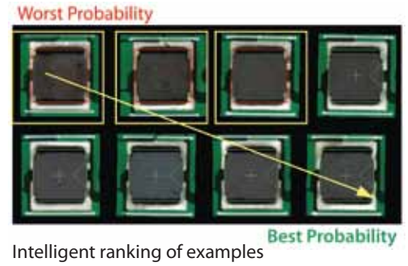
AI² – FASTER, SIMPLER AND SMARTER

With AI² technology, programming gets *even* faster – with a 90% reduction in examples required – so you get 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.



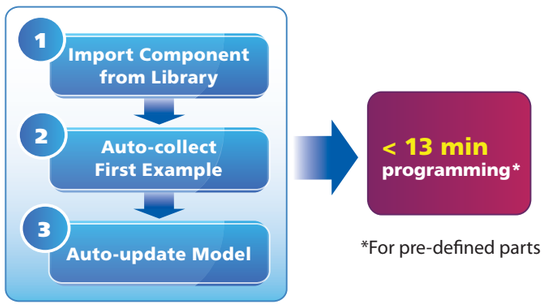
Intelligent ranking of examples

Active Pixel Marking

Scan to know about achieving Near-to-zero Setup Times using Modeling Techniques

PROGRAMMING IN 3 EASY STEPS

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.

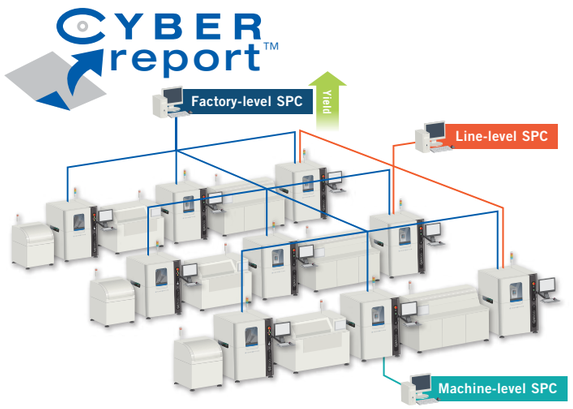


*For pre-defined parts

Simplified Programming Process

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.



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