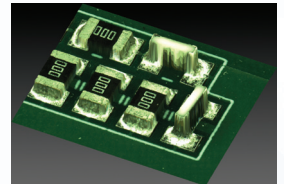


CYBEROPTICS®

SQ3000™ 3D AOI

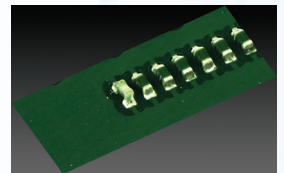
The Ultimate in Speed and Accuracy



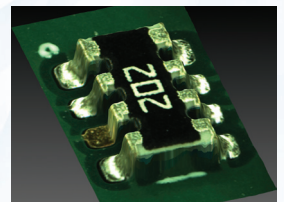
Billboard



Bridged Leads



Flipped Component



Insufficient Solder



Lifted Leads



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

Fastest 3D Inspection in the Industry

- Maximizes ROI and line utilization with architecturally faster sensor
- Microscopic image quality at production speed, enabled by Multi-reflection Suppression (MRS) technology

Easy-to-Use with Simple Intuitive Interface

- Superior quality 3D image visualization with touch control
- Reduces training & labor costs
- Faster programming and minimal tuning

Ultimate 3D Inspection Results

- Inhibits reflection issues with advanced MRS sensing
- Generates high precision images of the entire PCB in full color with 3D fusing algorithms
- Simpler and faster inspection with AI² using 2D/3D images
- Delivers precision accuracy, GR&R, lowest false call rates and zero escapes
- Accurate pin height/package coplanarity measurement

SQ3000™

INSPECTION CAPABILITIES

Inspection Speed	40 cm ² /sec (2D+3D)
Minimum Component Size	0402 mm (01005 in.)
PCB Size	510 x 510 mm (20 x 20 in.)
Component Height Clearance	50mm (Top)
PCB Thickness	0.3 – 5 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 and Other Defects	Gold finger contamination, excess solder, insufficient solder, bridging, through-hole pins
3D Measurement Inspection	Lifted Lead, package co-planarity, polarity dimple and chamfer identification
Measurement Gage R&R	<10% @ ±3σ (±80μm process tolerance)
Z Height Accuracy	1μm on certification target
Z Height Measurement Range	6mm at spec, 24mm capability

VISION SYSTEM & TECHNOLOGY

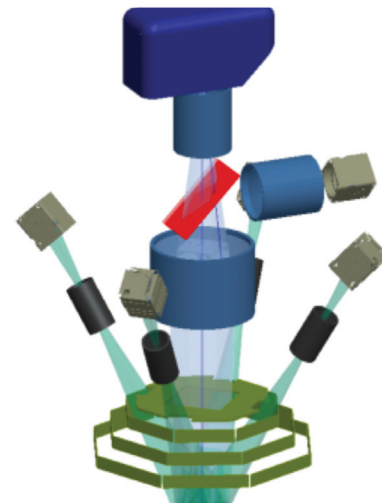
Imagers	Multi-3D sensors
Resolution	Sub 10 μm
Image Processing	Autonomous Image Interpretation (AI ²) Technology
Programming Time	<15 minutes (for established libraries)
CAD Import	Any column-separated text file with ref designator, XY, Angle, Part no info; Valor process preparation

SYSTEM SPECIFICATIONS

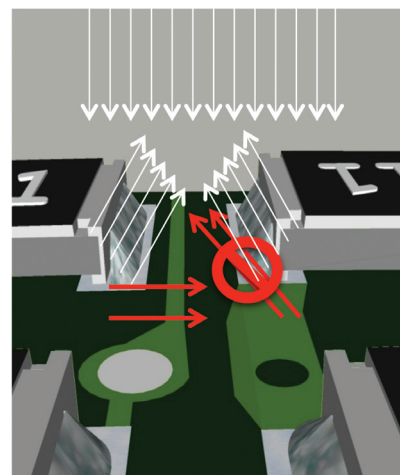
Machine Interface	SMEMA, RS232 and Ethernet
Power Requirements	100-120 VAC or 220-240 VAC, 50/60Hz, 10 amp max.
System Dimensions	110 x 127 x 139 cm (W x D x H)
Weight	≈965 kg (2127 lbs.)

OPTIONS

Barcode Reader, Rework station, SPC Software, Alignment Target



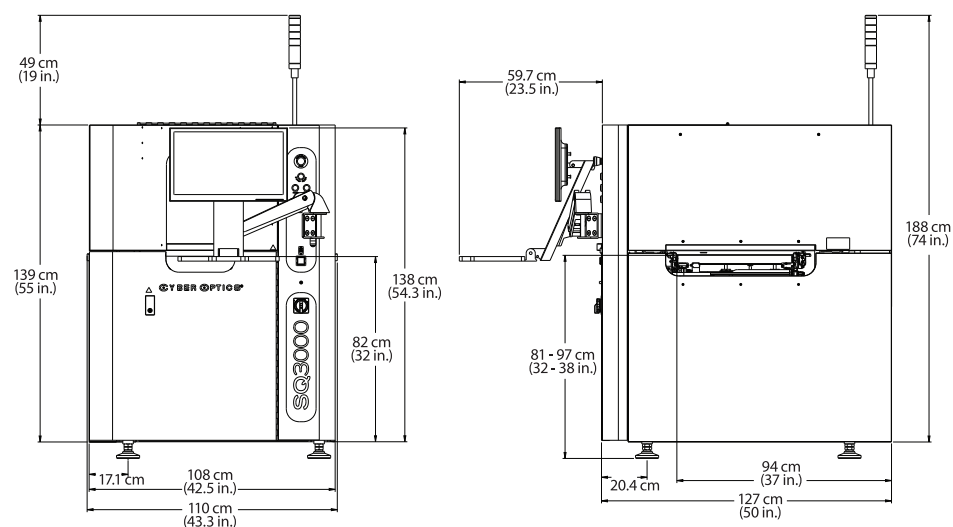
Multi-view 3D Sensors



Multiple Reflection Suppression (MRS) Technology

FRONT

SIDE



SQ3000™ 3D AOI

The Ultimate in Speed and Accuracy

www.cyberoptics.com

Specifications subject to change without notice.

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