SCIENSCOPE
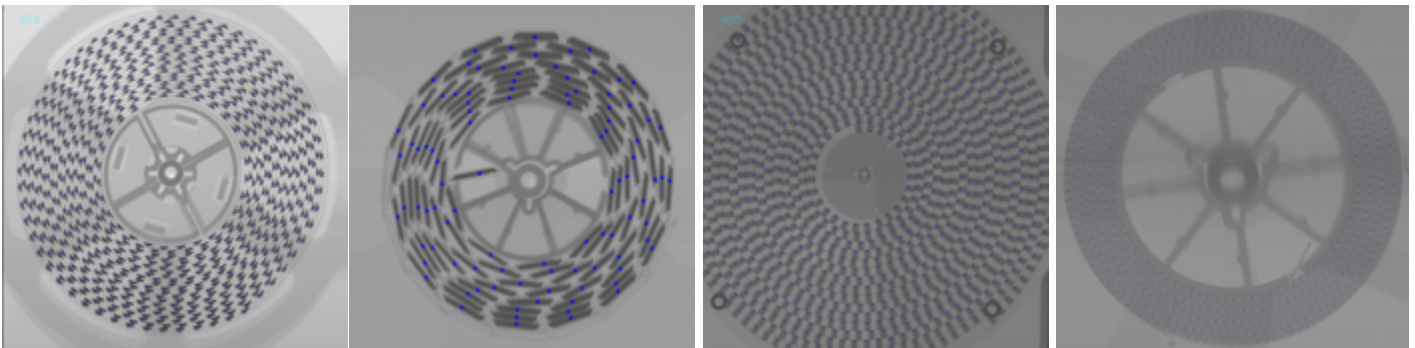## We Sell Solutions

AXI 5100c
## X-Ray component counter

Introduction

Accurate component count is vital for inventory management and production efficiency. Currently, this is a time consuming, labor intensive process. Most machines require an operator load, and run through each individual reel to count the components. The count is then manually recorded. Counting using x-ray technology and intelligent algorithms can take as little as 7 seconds for an entire reel, and can interface directly with inventory management software to transfer the count instantly. It's less than the time normally needed to load a reel on a manual counter. The result is less time and labor to count, and more error proof recording of the results.

The Scienscope AXI 5100c is an automated, fast, accurate component counting machine designed to increase productivity.

Concept

The Scienscope AXI 5100c uses micro-focus x-ray technology and a high resolution digital image detector for accurate counting of standard SMT or TH components. A wide range of components including 01005s and tall components are supported without changing hardware thanks to an industrial motion control system that can set the x-ray tube and image detector to various heights and magnifications automatically.

Components are counted in the reels and a large database of common component types is included. New component types are easy to add through a graphic, intuitive interface.
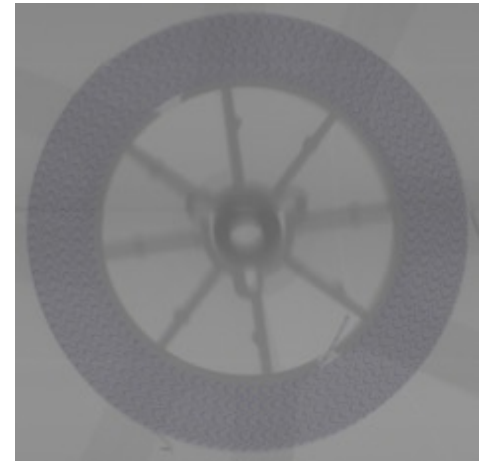
Simple interface/operation

Operation couldn't be easier – insert the reel and close the door. The machine starts counting automatically. No need to position the reel or set parameters. A built in mapping camera locates the reel and moves the tube and detector to the correct location.

Configurations

Batch

The standard machine is an offline system with a table for placing the reels on. It is accessed through the front door. Once you close the door the machine automatically starts.

Inline (Hybrid)

If complete automation is the requirement, it can be configured with a wide flat belt conveyor or a rail conveyor to move the reels in and out of the machine automatically.   Special carrying trays are supported and Scienscope can also develop the entire handling system to get the reels into the storage tower, or we can directly communicate with various handling systems via industry standard SMEMA interface, or other special protocols.

The inline system can also be used in batch mode by accessing through the front door.

Accuracy and Repeatability

An inaccurate count is dangerous because other operations rely on the count being correct. The AXI 5100c count accuracy is >99% for all supported component types. Whether the components are tightly wound or loose on the reel, you can always be sure the count will be correct.
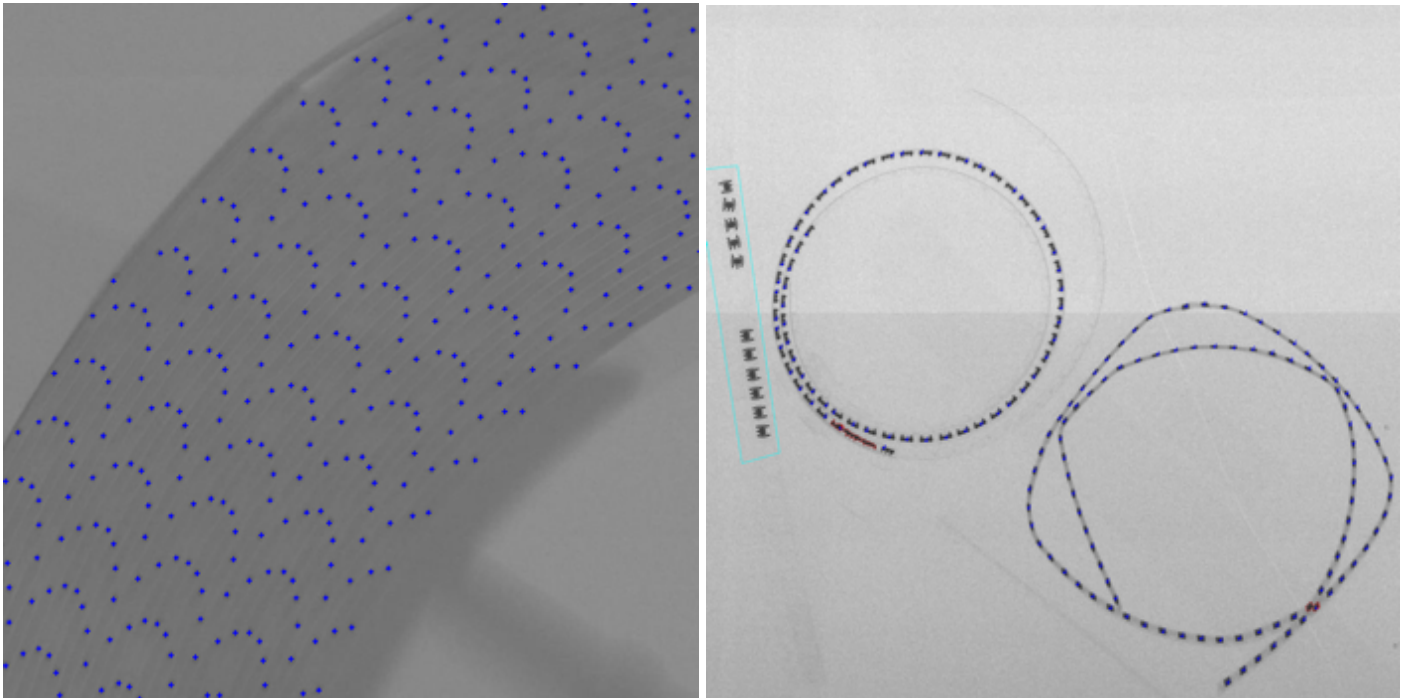
Manual counting of components requires hours spent on menial tasks and leaves open the possibility of miscounts resulting in machine down-time, inaccurate inventory management, and ultimately profit margin. Seamless and Flexible automation means more up-time on the assembly line and more productive use of time = bigger profit margin

Machine Specifications

General	
Dimensions	1224mm (L) x 1224mm (W) x 1490mm (H) 49" (L) x 49" (W) x 58.5" (H)
Weight	1300 kg (2866 lbs)
Power	110-230 VAC 50/60 Hz 1.8 kW
Air	70-85 psi

Technical: X-Ray	
X-Ray Source	Micro-Focus, closed tube
Operating Voltage	90kV
Tube current	.256mA
Minimum focal spot	5 micron

Technical: Image detector	
Image detector	Line Scan
Resolution	8k
Gray level	16 bit (65,536)

Technical: operation	
Reel sizes	Up to 16"
Minimum component size	01005"
Maximum reel size	16"
Count accuracy	>99%
Cycle time	Average less than 15 seconds. Can be as low as 7 seconds per reel (7" reel)
Conveyor	SMEMA
Barcode reader	1d and 2d

Key features
Scans components in reels, ESD bags, storage tubes, etc.
Adjustable magnification
Auto location of reels
Offline or inline with belt or rail conveyor
Can connect with component storage units
Can handle