

AVERNA SOLVES THE OFFSET PROBLEM IN PCB PRINTING



For Helmond-based technology leader Mutracx, accuracy is everything. The company – which is a spin-off from Océ, the global market leader in products and services for print and document management – specializes in the development of precision, inner-layer PCB printers, marketed under the trade name Lunarix. To enable early detection of printing errors and facilitate machine specification verification in-house, Mutracx asked Averno to develop a tailor-made measuring tool.*

CHALLENGE

While Mutracx has quickly made a name for itself in the PCB inner-layer production market with Lunarix – the world's first truly industrial inkjet application for PCBs – there are many challenges printing double-sided PCBs. For example, determining the offset between the front and the back of the board remains one of the industry's biggest challenges. If you get that offset wrong, it hits you on the bottom line, as calculation and production errors always lead to the immediate discarding of boards. So this problem can cause production slowdowns as well as a great deal of wasted resources and labor. Mutracx approached Averno to design and implement a sophisticated yet cost-effective solution to finally solve this common industry issue.

RESULTS

AVERNA'S SOLUTION, BASED ON PERFECTLY CALIBRATED FIXED AND MOVEABLE CAMERAS, HAS DRAMATICALLY IMPROVED MUTRACX'S PCB PRINTING RESULTS. IT IS 100% ACCURATE – UP TO 3 μ m, IN BOTH X AND Y DIMENSIONS – COMPACT FOR QUICK INTEGRATION INTO CLIENT PRODUCTION LINES, AND CAPTURES VALUABLE DATA FOR ANALYSIS AND TROUBLESHOOTING.

“This easy-to-use custom-made measurement solution from Avera helps us avoid wasting significant time and money. With this tool we guarantee quality for our customers.”*

MARTIEN TONNISSEN,
Production Manager
at Mutracx

TURNKEY SOLUTION GUARANTEES ACCURACY AND ELIMINATES WASTE

THE AVERNA SOLUTION

In the past, Mutracx PCBs went through several production phases before critical flaws could be ascertained, which resulted in downtime and wasted resources.

Based on its expertise in vision and precision handling and assembly systems, Avera proposed a solution that consists of both a fixed (bottom) and a moveable camera (top) to catch registration flaws much sooner in the production process.

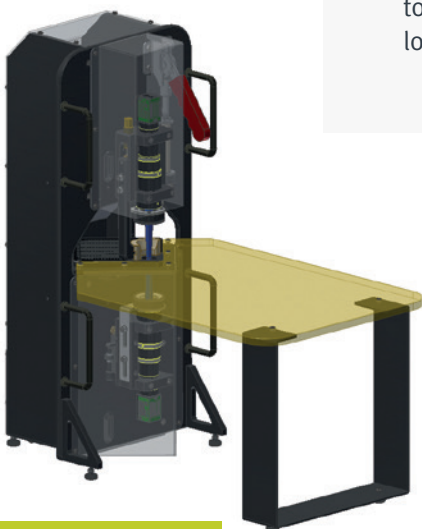
Accurate Measurements and Fast Error Detection

To ensure results are not influenced by the thickness of the board, the perfectly calibrated cameras – monochrome area scan units with a 5 µm pixel size and telecentric measuring lens – examine and measure both the top and bottom of the PCB and log all results.

Since the PCB measurements are key to higher quality and less waste, they are logged in a custom, user-centered LabVIEW software environment that provides multiple tools for crystal-clear analysis and problem-solving.

Now with the Avera system in place, Mutracx has the ideal turnkey solution to ensure both extremely accurate offset PCB printing and to correct problems long before they affect the bottom line.

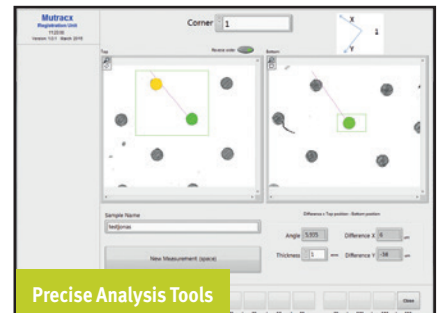
* Originally published by Test & Measurement Solutions.



Mutracx Solution Model



Calibration Vision Inspection



Precise Analysis Tools



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