CODIUM

ONE OPERATOR MANAGES AOI ACROSS HIGH-MIX PRODUCTION

Codium needed to introduce AOI within a contractual eight-week delivery window across a changing mix of SMD, through-hole and hybrid boards, without adding a dedicated specialist. Horus brings the full product mix into one shared inspection environment and combines assisted program creation with operator-guided learning on the machine. The existing operator can manage AOI while inspection know-how remains in-house.

EIGHT-WEEK WINDOW	ONE PLATFORM	LEAN OPERATION
From incoming components to a validated, traceable board	SMD, through-hole and hybrid boards in one environment	One multi-skilled operator programs and runs AOI

THE CUSTOMER

Codium is a multi-client EMS producing SMD, through-hole and hybrid assemblies. Each customer project brings a different bill of materials, tolerance set and traceability requirement. Its lean production model depends on versatile operators and fast changeovers while maintaining consistent inspection quality.

THE CHALLENGE

- → **Delivery window** Codium works within an eight-week contractual window, from incoming components to a validated, traceable board. AOI programming could not become a separate bottleneck.
- → **Changing product mix** Small chips, large connectors and mixed-technology boards create new inspection requirements from one customer job to the next.
- → **Lean staffing** One operator already manages screen printing, pick-and-place, reflow and machine loading. A dedicated AOI programmer did not fit Codium's operating model.

WHY HORUS

Codium benchmarked several AOI suppliers against three requirements: coverage of its full product mix, faster program creation for new jobs and a workflow manageable by the existing operator. It chose Horus because one shared inspection environment supports SMD, through-hole and hybrid assemblies, from 0201 components to large connectors. Assisted programming supports program creation and validation, while Training Manager lets the operator guide neural-network learning directly on the machine using Codium's own production images. The resulting inspection know-how remains within Codium and can support future jobs.

ON THE LINE

One platform

Horus brings SMD, through-hole and hybrid boards, from 0201 components to large connectors, into the same inspection environment. Codium uses one programming approach across changing customer jobs.

One operator across the line

The same person who manages screen printing, pick-and-place, reflow and machine loading also programs and runs AOI. Codium did not need to create a separate specialist role.

Assisted programming and learning on the machine

For each new job, the operator creates and validates the AOI program with component-recognition and recipe assistance. When new component or defect examples appear, Training Manager lets the operator guide neural-network learning directly on Horus using Codium's own production images.

RESULTS

- → **Faster program ramp-up** Codium can bring AOI programming into its eight-week project cycle without turning setup into a separate bottleneck.
- → **Operating model preserved** The same multi-skilled operator manages AOI alongside the rest of the line; no separate specialist role was added.
- → **Know-how retained** Learning based on Codium's production examples remains available to the team and can support future jobs.

IN THEIR WORDS

> We chose Horus for its ability to integrate quickly into our existing production environment, without compromising on inspection precision. We benchmarked other solutions on the market: some are satisfactory for immediate use, but their potential for evolution is very limited. Horus stands out through a unique technology, with virtually unlimited room to grow, making it a lasting investment to support our expansion. This collaboration with Delvitech lets us raise our quality bar and meet our customers' growing expectations on traceability and reliability.

THOMAS & MATHIEU POINSOT | Managing Directors, Codium

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Explore Horus at delvi.tech/horus