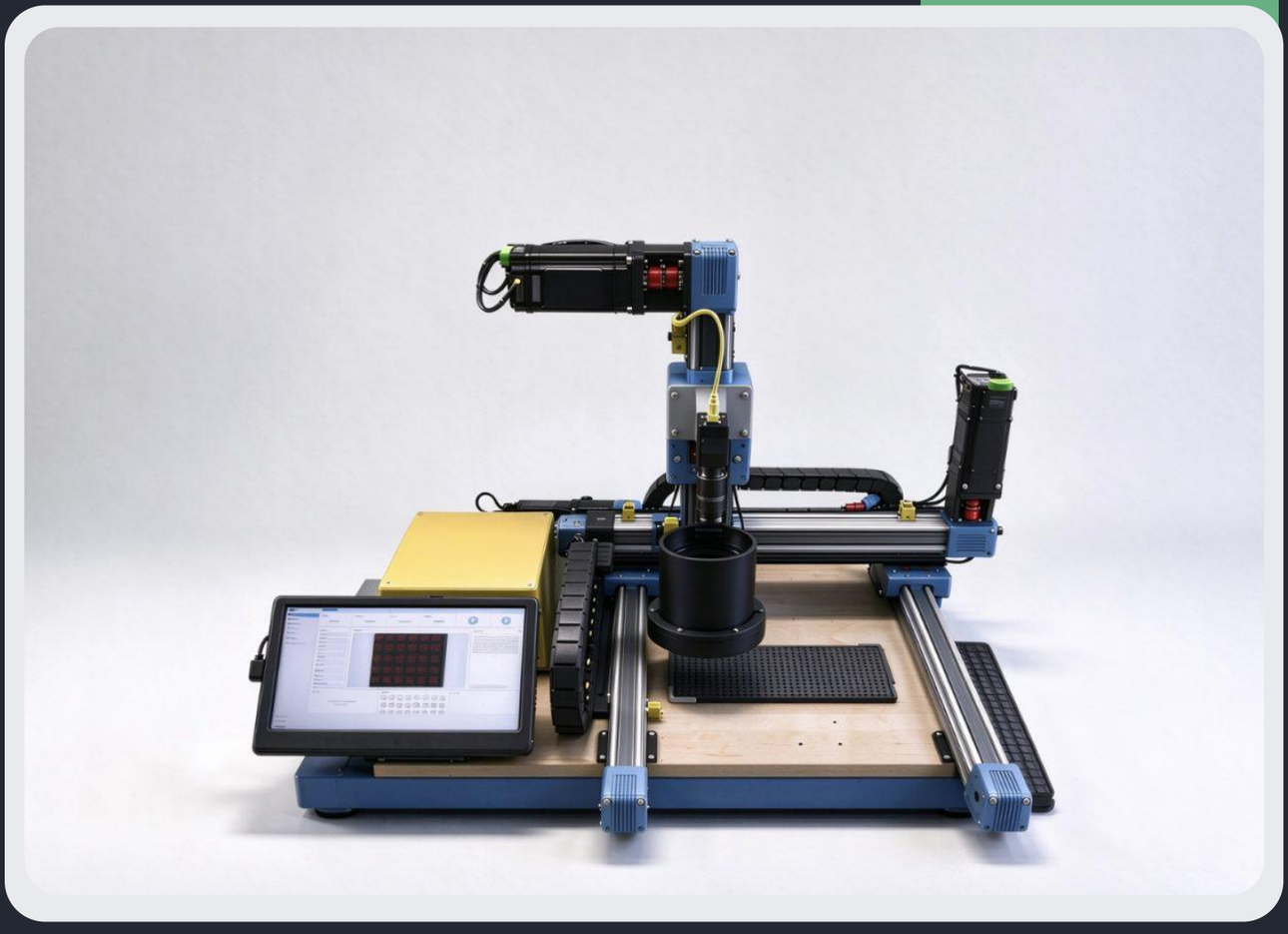
AI VISION / TRAY CHIP INSPECTION

Apexera Station

Orientation and Marking Inspection in a Single Capture

A compact benchtop system that combines precision imaging, automated XY motion and AI vision software for tray-loaded semiconductor chips.



25 s / tray

Dual inspection

Orientation + marking

CORE FEATURES

Simpler Chip Inspection

01

Orientation + Marking Inspection

Check chip orientation and surface markings in one image. Identify orientation errors, marking mismatches and missing chips before the next process.

02

Fast Changeovers by Chip ID

Load the saved tray, imaging range, template and inspection settings by specific chip ID to reduce setup time and manual configuration.

03

New-chip Setup on site

Create chip, tray and inspection templates with a guided workflow. No off-site model retraining is required. Capture multiple chips per image where appropriate.

04

Precise Tray Mapping

Match each result to its physical tray position. Locate OK, NG and empty slots by detailed row and column to review chip image and rejection reason.

DAILY OPERATION WORKFLOW

Intuitive Inspection Workflow

01

Load

Select Chip ID

02

Inspect

Orientation + marking

03

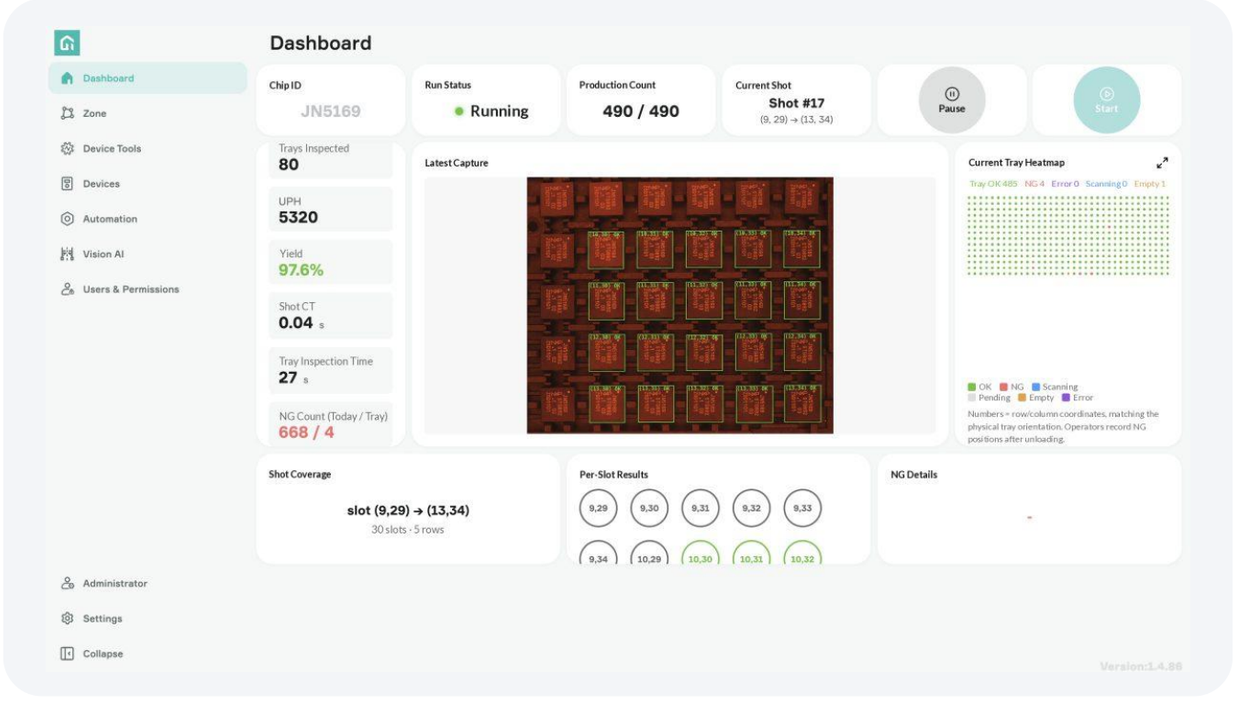
Locate

Find NG positions

04

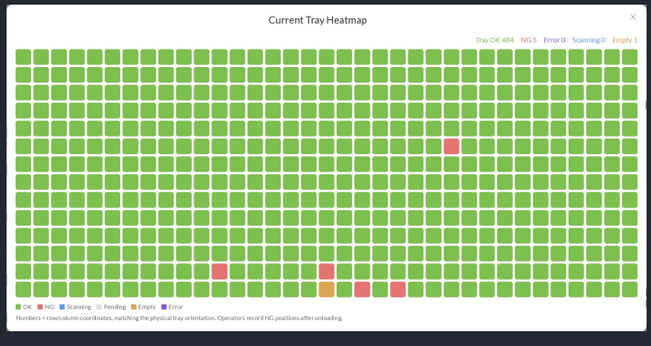
Monitor

View production data



Inspection images, tray status and production data in one view

Clear NG locations



Map results to physical tray slots.

Review NG types and chip images.

OK : pass NG : reject Empty : no chip

PERFORMANCE & COMPATIBILITY

System Specifications

25 s
Inspection time per tray

0.04 s
Inspection cycle time (CT)

Product	Apexera Station
System type	Benchtop tray chip inspection
Inspection tasks	Orientation, marking, presence
Minimum chip size	4 × 4 mm
Supported tray	JEDEC standard
Miss rate	≤ 0.1%
False reject rate	≤ 0.5%
Imaging ranges	1×1, 2×1, 1×2, 2×3 and more
Configuration	Saved settings by Chip ID
Results	1:1 tray map and NG details

APPLICATIONS

Inspection before the next process

01 Chip Programming Stations

Verify tray-loaded chips for correct orientation and markings. Locate exceptions for review and sorting.

02 SMT / EMS Incoming Inspection

Check orientation and markings before the next process. Identify incorrect markings and empty slots.

Straightforward Deployment and Operation

- **Multiple chip types**

Inspect different chip sizes and shapes on trays.

- **Simplified maintenance**

Set optics and Z axis at commissioning. Fine-tune XY as needed.

- **Live production monitoring**

Review inspection results and production data in one interface.

Book a demo or sample evaluation

Tell us about your chips, trays and inspection needs.

sales@apexera.com https://apexera.com/apexera-station/