

Numnio

AI Copilots for Manufacturing — Product Overview (2026)

The problem

Factories generate enormous amounts of data — camera feeds, PLC telemetry, sensor streams — but most of it is never used. Quality inspection relies on manual sampling, maintenance is reactive, and yield drift is caught late. Traditional CV systems require months of retraining for every new defect class, and dashboards only show *what* happened, never *why* or *what to do*.

The product

Numnio is a three-module AI copilot platform that turns existing factory data into operator-ready decisions:

- **VisualInspect** — sub-second defect detection on existing cameras, with plain-language defect explanations (cause, severity, suggested fix).
- **PredictOps** — anomaly detection across vibration / temperature / power telemetry, with root-cause analysis and auto-drafted maintenance briefs.
- **YieldPilot** — real-time yield monitoring with setpoint recommendations, rationale, and one-click MES application.

How we use Claude

Numnio is developed with Claude — from first prototype to production. Our team relies on Claude across the development workflow:

Capability	Use
Capability	How we use it
Claude Code	Writing, reviewing, and refactoring platform code and ML pipelines

Design assistance	Architecture and data pipeline design; trade-off analysis
Docs & testing	API docs, test plans, and specs
Prototyping	Fast experiments and proofs of concept

Architecture

Edge gateways capture camera and PLC data and run a lightweight local screen. Ambiguous frames and events are escalated to the Numnio AI layer, which returns schema-validated JSON (defect type, severity, confidence, cause, action) into the customer's existing systems.

Pilot results

- 99.2% defect detection rate on pilot line (vs. 93% manual sampling)
- <400ms frame-to-alert latency
- 40% reduction in unplanned downtime during pilot programs
- Average yield improvement of 12%

Deployment

- Numnio Cloud (regional data processing)
- BYO cloud (AWS / GCP Terraform module)
- On-prem / air-gapped deployments

Use cases

- Electronics assembly — solder defect detection and root-cause analysis
- Automotive parts — surface finish inspection
- Food & beverage — foreign object detection and line efficiency
- Heavy industry — motor and bearing failure prediction